

**NORTH AMERICAN ELECTRIC RELIABILITY
CORPORATION**

2017 BUSINESS PLAN AND BUDGET FILING

ATTACHMENT 1

SUMMARY TABLES FOR NERC AND REGIONAL ENTITY

PROPOSED 2017 BUDGETS AND ASSESSMENTS

NERC'S Proposed Budget by Program¹

NERC Program	2016 Budget for Statutory Functions	2017 Budget for Statutory Functions
Reliability Standards	\$ 8,193,116	\$ 8,100,282
Compliance Monitoring and Enforcement and Organization Registration and Certification		
Compliance Assurance	\$ 9,420,903	\$ 7,858,599
Compliance Analysis, Certification and Registration	\$ 4,632,871	\$ 3,646,289
Compliance Enforcement	\$ 5,293,298	\$ 5,800,647
Reliability Assessments and Performance Analysis		
Reliability Assessments and System Analysis	\$ 6,342,917	\$ 7,535,594
Performance Analysis	\$ 3,575,811	\$ 4,908,855
Training, Education and Operator Certification	\$ 3,912,231	\$ 3,757,501
Reliability Risk Management		
Event Analysis	\$ 5,355,795	\$ 5,446,206
Situation Awareness	\$ 3,692,197	\$ 4,032,862
E-ISAC	\$ 16,767,525	\$ 18,515,341
Total Budget	\$ 67,186,665	\$ 69,602,175

¹Does not include the proposed provision for Working Capital reserve funding

Proposed Budget for Statutory Activities of NERC, each Regional Entity and WIRAB¹

	2016 Budget for Statutory Functions	2017 Budget for Statutory Functions
NERC	\$ 67,186,665	\$ 69,602,175
FRCC	\$ 7,261,527	\$ 7,177,854
MRO	\$ 11,354,641	\$ 11,226,668
NPCC	\$ 15,072,997	\$ 15,147,054
RF	\$ 19,367,209	\$ 19,908,939
SERC	\$ 15,866,845	\$ 17,482,403
SPP RE	\$ 10,095,820	\$ 10,865,511
TRE	\$ 11,782,215	\$ 12,167,256
WECC	\$ 27,384,956	\$ 26,796,928
WIRAB	\$ 1,370,274	\$ 1,229,080
Total Budget	\$ 186,743,149	\$ 191,603,868

¹Does not include the proposed provision for Working Capital reserve funding

Proposed Assessments for Statutory Activities of NERC and each Regional Entity

	Assessments for Statutory Functions 2016		Allocation to Canada 2016		Assessments for Statutory Functions 2017		Allocation to Canada 2017	
NERC	\$	57,081,445	\$	5,135,852	\$	59,856,314	\$	5,353,026
FRCC	\$	6,628,457	\$	-	\$	6,163,896	\$	-
MRO	\$	10,891,562	\$	1,820,475	\$	10,494,345	\$	1,777,059
NPCC	\$	14,349,196	\$	5,389,980	\$	14,255,060	\$	5,360,364
RFC	\$	19,367,209	\$	-	\$	19,560,881	\$	-
SERC	\$	13,730,986	\$	-	\$	15,706,023	\$	-
SPP RE	\$	8,626,751	\$	-	\$	9,092,553	\$	-
TRE	\$	9,560,448	\$	-	\$	9,595,256	\$	-
WECC ¹	\$	26,272,132	\$	3,095,583	\$	26,183,452	\$	2,994,332
Total Budget	\$	166,508,186	\$	15,441,890	\$	170,907,780	\$	15,484,781

¹ Includes assessments for WECC and WIRAB

**NORTH AMERICAN ELECTRIC RELIABILITY
CORPORATION**

2017 BUSINESS PLAN AND BUDGET FILING

ATTACHMENT 2

**NORTH AMERICAN ELECTRIC RELIABILITY
CORPORATION**

PROPOSED 2017 BUSINESS PLAN AND BUDGET

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

2017 Business Plan and Budget

Final

August 10, 2016

RELIABILITY | ACCOUNTABILITY



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About NERC

Overview

The North American Electric Reliability Corporation (NERC) is a not-for-profit entity organized under the New Jersey Nonprofit Corporation Act. NERC’s mission is to improve and ensure the reliability of the Bulk Power System (BPS)¹ in North America. NERC’s area of responsibility spans the continental United States and portions of Canada and Mexico. Entities under NERC’s jurisdiction are the users, owners, and operators of the BPS—a system that serves the needs of over 340 million people, includes installed electricity production capacity of approximately 1,200 gigawatts, operates 475,000 miles of high-voltage transmission (100 kV and above), and is comprised of assets worth more than one trillion dollars.

Electric Reliability Organization (ERO)

The Federal Energy Regulatory Commission (FERC or Commission) certifies and has oversight of NERC as the electric reliability organization (ERO) within the United States to establish and enforce reliability standards for the U.S. portion of the BPS, pursuant to Section §215 of the Federal Power Act (§215). As of June 18, 2007, FERC granted NERC the legal authority to enforce reliability standards with all U.S. users, owners, and operators of the BPS and made compliance with those standards mandatory and enforceable. Equivalent relationships have been sought and, for the most part, realized in Canada and Mexico.

International Relations

Prior to adoption of §215 in the United States, the Canadian provinces of Ontario (in 2002) and New Brunswick (in 2004) adopted all NERC reliability standards that were approved by the NERC Board of Trustees (Board) as mandatory and enforceable within their respective jurisdictions through market rules. Reliability legislation is in place, or NERC has memoranda of understanding with, provincial authorities in Ontario, New Brunswick, Nova Scotia, Québec, Manitoba, Saskatchewan, British Columbia, and Alberta, and with the National Energy Board of Canada (NEB). NERC’s standards are mandatory and enforceable in Ontario and New Brunswick as a matter of provincial law. Manitoba has adopted legislation, and standards are also mandatory. In addition, NERC has been designated as the “electric reliability organization” under Alberta’s Transmission Regulation, and certain reliability standards have been approved in that jurisdiction; others are pending. NERC reliability standards are now mandatory in British Columbia and Nova Scotia. NERC and the Northeast Power Coordinating Council (NPCC) have been recognized as standards-setting bodies by the Régie de l’énergie of Québec, and Québec has the framework in place for reliability standards to become mandatory. NEB has made reliability standards mandatory for international power lines between the U.S. and Canada.

In Mexico, the Comisión Federal de Electricidad has signed the Western Electricity Coordinating Council’s (WECC’s) reliability management system agreement, which applies only to Baja California Norte.

Membership and Governance

An 11-member Board of Trustees (the Board), comprised of 10 independent trustees and NERC’s president and chief executive officer serving as the management trustee, governs NERC. The Board has formed several committees to facilitate oversight of the organization in the areas of finance and audit, governance and human resources, compliance, standards oversight and technology, nominations and, most recently, enterprise-wide risk.

¹ NERC’s standards, compliance and enforcement activities are focused on the [Bulk Electric System \(BES\)](#), which is comprised of certain BPS facilities.

Membership in NERC is open to any person or entity that has an interest in the reliability of the North American BES. Membership is voluntary and affords participants the opportunity to engage in the governance of the organization through election to the Member Representatives Committee (MRC).² More than 600 entities and individuals are members of NERC.

Scope of Oversight

As the international, multijurisdictional ERO in North America, NERC is authorized to:

- Propose, support the development of, monitor compliance with, and enforce mandatory reliability standards for the North American BPS, subject to regulatory oversight and approvals from FERC in the United States and applicable authorities in Canada;
- Conduct near-term and long-term reliability assessments of the North American BPS;
- Certify BPS operators as having and maintaining the necessary knowledge and skills to perform their reliability responsibilities;
- Maintain situational awareness of events and conditions that may threaten BPS reliability;
- Coordinate efforts to improve physical security and cybersecurity for the BPS of North America;
- Conduct detailed analyses and investigations of system disturbances and unusual events as well as measure ongoing system trends to determine root causes, uncover lessons learned, and issue relevant findings as advisories, recommendations, guidelines, and essential actions to the industry to mitigate and control risks to reliability; and
- Identify and prioritize risks to reliability and use a broad toolkit to mitigate and control risks to reliability, including the potential need for new or modified reliability standards, improved compliance monitoring and enforcement methods, or other initiatives.

Delegated Authorities

In executing its responsibility, NERC delegates certain authorities to eight regional reliability entities (Regional Entities or the Regions) to perform aspects of the ERO functions described through delegation agreements. FERC has approved delegation agreements between NERC and the eight Regional Entities (Florida Reliability Coordinating Council (FRCC), Midwest Reliability Organization (MRO), Northeast Power Coordinating Council, Inc. (NPCC), ReliabilityFirst, SERC Reliability Corporation (SERC), Southwest Power Pool Regional Entity (SPP RE), Texas Reliability Entity, Inc. (Texas RE), and the Western Electricity Coordinating Council (WECC)). These agreements describe the authorities delegated and responsibilities assigned to the Regional Entities in the United States to address, among other things: (1) developing regional reliability standards, (2) monitoring compliance with and enforcement of mandatory reliability standards (both North American-wide and regional), (3) certifying registered entities and registering owners, operators, and users of the BES, (4) assessing reliability and analyzing performance, (5) training and education, (6) event analysis and reliability improvement, and (7) situation awareness and infrastructure security. NERC expects Regional Entities whose territories and geographic footprints extend into Canadian provinces and Mexico to perform equivalent functions in those jurisdictions.

² The [Member Representatives Committee](#) (MRC) comprises 28 voting representatives elected from the 12 membership sectors. The MRC elects the independent trustees and, along with the Board, votes on amendments to the Bylaws. The MRC also provides policy advice and recommendations to the Board on behalf of stakeholders with respect to annual budgets, business plans, and other matters pertinent to the purpose and operation of the organization.

ERO Enterprise Operating Model

The collective network of leadership, experience, judgment, skills, and technologies shared among NERC and the eight Regional Entities is referred to as the ERO Enterprise (the Enterprise). In 2014, a common operating model, Improving Coordinated Operations across the ERO Enterprise,³ was developed to define how NERC and the Regional Entities achieve excellence in the oversight and execution of statutory functions by collaborating to mitigate reliability risks. The model also defines the division of the roles and responsibilities for NERC and the Regional Entities to efficiently and effectively execute services performed as the collective Enterprise. In 2015, implementation of this model progressed with oversight plans developed for Compliance Monitoring and Enforcement programs, and Registration. Further, NERC and the Regional Entities deepened their coordination activities to identify, prioritize and address risks to reliability.

NERC has unique responsibilities within the Enterprise to design the oversight of program areas; develop operational oversight and leadership; set qualifications and expectations for the performance of delegated activities; and assess, train, and give feedback to corresponding regional programs. NERC also reviews and provides input to the annual Regional Entity business plans and budgets, including but not limited to review of resource allocations, staffing capacity assessments, and program performance assessments. NERC input and review occurs before regional board approval.

Similarly, the Regional Entities have a mirrored set of responsibilities that include being responsive to the design of the operational model, providing input into the overall development of each ERO program area, providing training and development to meet ERO qualifications, being receptive to feedback from the ERO, and making responsive adjustments. Regional Entities also have an obligation to meet professional standards of independence and objectivity, and provide the best available expertise for addressing risks.

With due recognition and awareness of the distinction between individual roles, responsibilities, and corporate status, NERC and the Regional Entities are continually refining their individual and collective operating and governance practices in support of an agreed-upon set of strategic goals and objectives that are designed to ensure the ERO fulfills its statutory obligations.

Statutory and Regulatory Background

NERC's authority as the ERO in the United States is based on Section 215 of the Federal Power Act, as added by the Energy Policy Act of 2005,⁴ and the Commission's regulations and orders issued pursuant to Section 215. In Canada, NERC's authorities are established by the memoranda of understanding and regulations previously mentioned.

Funding

Section 215 of the Federal Power Act and the Commission's regulations specify procedures for NERC's funding in the United States. NERC's annual business plan and budget is subject to Commission approval in the United States. Once approved, NERC's annual funding is provided through assessments to load-serving entities. These assessments are allocated on a net-energy-for-load (NEL) basis. Equivalent funding mechanisms are provided in Canada, subject to the specific laws and regulations of each province.

The Regional Entities' funding requirements are addressed separately in their respective business plans and budgets, which must be reviewed and approved by NERC and FERC in the United States. Assessments for the Regional Entity budgets are included in the overall NERC assessments to load-serving entities.

³ [Improving Coordinated Operations Across the ERO Enterprise](#)

⁴ This was codified in section 215 of the Federal Power Act, 16 United States C. 824o.

Introduction and Executive Summary

TOTAL RESOURCES (in whole dollars)				
	2017 Budget	U.S.	Canada	Mexico
Statutory FTEs	189.88			
Non-statutory FTEs				
Total FTEs	189.88			
Statutory Expenses	\$ 66,921,632			
Non-Statutory Expenses	\$ -			
Total Expenses	\$ 66,921,632			
Statutory Inc (Dec) in Fixed Assets	\$ 2,680,543			
Non-Statutory Inc (Dec) in Fixed Assets	\$ -			
Total Inc (Dec) in Fixed Assets	\$ 2,680,543			
Statutory Funding of Reserves	\$ 530,402			
Non-Statutory Funding of Reserves				
Total Working Capital Requirement	\$ 530,402			
Proceeds from Financing Activities	\$ 19,083			
Total Statutory Funding Requirement	\$ 70,151,660			
Total Non-Statutory Funding Requirement	\$ -			
Total Funding Requirement	\$ 70,151,660			
	TOTAL	US	CANADA	MEXICO
Statutory Funding Assessments	\$ 59,856,314	\$ 54,326,337	\$ 5,353,026	\$ 176,951
Non-Statutory Fees				
NEL	4,514,633,135	3,983,687,261	518,227,758	12,718,116
NEL%	100.00%	88.24%	11.48%	0.28%

Strategic Goals and Metrics

The ERO Enterprise strategic plan⁵ and framework is informed by the following activities completed in 2015: (1) NERC's State of Reliability Report; (2) the Reliability Issues Steering Committee's (RISC's) ERO Reliability Risk Priorities Report and Supplemental Technical Summary, which includes identified risk profiles; and (3) input from the NERC Board and Regional Entity Boards. In 2015, these inputs were used by ERO Enterprise leadership to:

- **Update ERO Enterprise Longer-term Strategic Planning Considerations** – The ERO Enterprise makes any necessary adjustments to its longer-term strategic planning considerations, which takes into consideration Bulk Electric System (BES) reliability issues over a 5 to 15-year planning horizon.
- **Update the Three-year ERO Enterprise Strategic Goals** – The ERO Enterprise makes any necessary adjustments to its strategic goals for the next three years.
- **Develop Annual ERO Enterprise Metrics** – The ERO Enterprise develops annual metrics to measure the ERO Enterprise's progress in attaining the strategic goals.
- **Develop Annual Business Plans and Budgets** – Working collaboratively, NERC and each of the Regional Entities develop annual business plans and budgets (BP&Bs) that reflect the resources necessary to support achievement of the goals set forth in the strategic plan.

Evolving Reliability Risks

Over the past five years, NERC has transformed its activities towards being more risk-based, ensuring that the right activities are focused on the most pertinent risks to the reliable operation of the bulk power system. The RISC is an advisory committee to the Board, providing key insights, priorities, and high-level leadership for issues of strategic importance to BPS reliability. The 2015 RISC report presents the results of their continued work to define and prioritize risks, and offer recommendations to the Board to inform the development of NERC's risk strategy. The report recommendations are considered as the Strategic Plan, Goals and supporting activities are updated for the coming years. In 2015, the RISC recommended a high level of focus and priority in the following areas:

- **Regulatory Uncertainty (Markets, states, and federal/provincial)**
These risks arise where the impacts from regulatory initiatives are uncertain in their extent, timing, and potential reliability considerations. These uncertainties are accentuated by the interplay among these three arenas, each of which reflects policy, regulatory, and legislative dimensions which may not include sufficient reliability coordination.
- **Resources (Changing resource mix, inadequate planning coordination, and ineffective resource planning)**
This set of evolving risks reflects interdependent aspects from the continued and accelerated rapid transformation of the resource mix. As part of the increased and accelerated integration of new types of variable, renewable, and distributed energy resources, planners must ensure that sufficient Essential Reliability Services (ERSs) and operator flexibility are available to maintain reliability.
- **Resiliency: Cyber security**
These risks reflect aspects of resilience related to potential cyber disruptions of the BPS. As cyber aspects evolve, they require more assertive and flexible approaches to provide adequate assurances of reliability.

⁵ [ERO Enterprise Strategic Plan 2016-2019](#)

2016-2019 Strategic Goals

The ERO Enterprise has five strategic goals, adopted by the NERC Board in November 2015, enabling the Enterprise to successfully carry out its mission as further described in the Strategic Plan. For each goal, a detailed description and activities that contribute to its success are provided below, followed by additional information about the allocation of NERC's resources toward achievement of the goal. The associated metrics in support of these goals have been approved for 2016⁶; updated strategic goals and associated metrics will be finalized later in 2016 for the 2017 year, with opportunities for stakeholder feedback prior to their approval. At this time it is not anticipated that these updates will have a material impact on NERC's overall budget or resource allocation among operating areas for 2017. However, the updates may potentially affect priorities and workload within particular departments and will inform resource planning and allocation for the 2018 budget year.

Goal 1

Timely and Risk-Responsive Reliability Standards

Reliability standards establish threshold requirements for assuring the BES is planned, operated, and maintained to minimize risks of cascading failures, avoid damage to major equipment, or limit interruptions of bulk electric supply. Reliability standards are clear, timely, responsive to reliability risks and cost-effective.

Contributing Activities

- Conduct periodic reviews and assessment of whether the reliability standard is properly structured for emerging risks.
- Assess reliability standards compared to the BES risk profile; address the most important unmitigated risks, including applicable high-impact, low-frequency risks.
- Develop and implement ERO Enterprise feedback loops to identify and address gaps or ambiguities in reliability standards, including the evaluation of significant BES events (including all category 3 and above).
- Develop and implement procedures for assessing the cost impact of reliability standards.

Goal 2

Objective and Risk-informed Compliance Monitoring, Enforcement, and Organization Certification and Registration

The ERO Enterprise is a strong enforcement authority that is independent, without conflict of interest, objective, and fair, and promotes a culture of reliability excellence through risk-informed compliance monitoring, enforcement, certification, and registration. The ERO Enterprise retains and refines its ability to use standards enforcement when warranted and imposes penalties and sanctions commensurate with risk.

Contributing Activities

- Consistently register and deregister entities based on risk to the BES and the BES definition.
- Evaluate the certification program for effectiveness and implement consistently across the ERO Enterprise.
- Develop Compliance Oversight Plans for registered entities that address the relevant risks.

⁶ See [2016 ERO Enterprise and Corporate Metrics](#) for details.

- Focus Compliance Monitoring and Enforcement activities on the most significant risks to the BES.
- Process non-compliance using the appropriate method, considering the risk to the BES.
- Implement Compliance Monitoring and Enforcement consistently, timely, and transparently to industry.

Goal 3

Identification and Mitigation of Significant Current Risks to Reliability

The ERO Enterprise identifies the most significant risks to reliability, provides assurance for mitigating reliability risks, and promotes a culture of reliability excellence. The ERO Enterprise supports the Electricity Information Sharing and Analysis Center (E-ISAC), the Cybersecurity Risk Information Sharing Program (CRISP), reliability assessments, situational awareness, and physical security and cybersecurity preparedness.

Contributing Activities

- Perform reliability data-grounded analyses and sustain independent, technical assessments of proposed regulatory rules or proposed statutes (state, provincial, or federal) as well as significant market rules to determine potential impacts to reliability.
- Maintain a BES risk profile to prioritize and rank reliability risks.
- Develop project plans and business case assessments for high-priority risks including cost and practicality of assessment; implement or facilitate initiatives to address high-priority risks.
- Integrate risk data sources, such as event analysis, Transmission Availability Data System, Generating Availability Data System, and relay misoperations as well as other occurrences (e.g., AC equipment failures) to provide lessons learned, recommendations, identified risks, and their mitigation to promote reliability.
- Analyze system performance and significant events (e.g., sampling of Category 2 events in addition to assessing all Category 3 and above) to identify gaps in reliability standards, compliance effectiveness, registration, and risk controls effectiveness, as well as the development of lessons learned or other information sharing activities that promote BES reliability.
- Enhance communications among the E-ISAC, the Telecommunications Information Sharing and Analysis Center, and Natural Gas Information Sharing and Analysis Center.
- Facilitate the availability, sharing and value of physical security and cybersecurity threat and vulnerability information, analytics, and analysis.

Goal 4

Identification and Assessment of Emerging Risks to Reliability

The ERO Enterprise identifies, evaluates, studies and independently assesses emerging risks to reliability.

Contributing Activities

- Develop sufficiency/adequacy guidelines for ERS including emerging risks. Include consideration of the range of reliability attributes based on a diverse resource mix and load behavior, such as ramping, fast regulation, reserve services, and interdependent sector performance.
- Enhance reliability assessments to reflect changing resource mix behavior, including distributed energy resources and ERS, with probabilistic approaches, considering the variable and energy-limited nature of the resource shifts.

- Evaluate the impacts on BES recovery and restoration plans including consideration of distributed resources.

Goal 5

Effective, Efficient, and Collaborative ERO Enterprise

The ERO Enterprise improves transparency, consistency, quality, efficiencies, cost-effectiveness, and timeliness of results and operates as a collaborative enterprise.

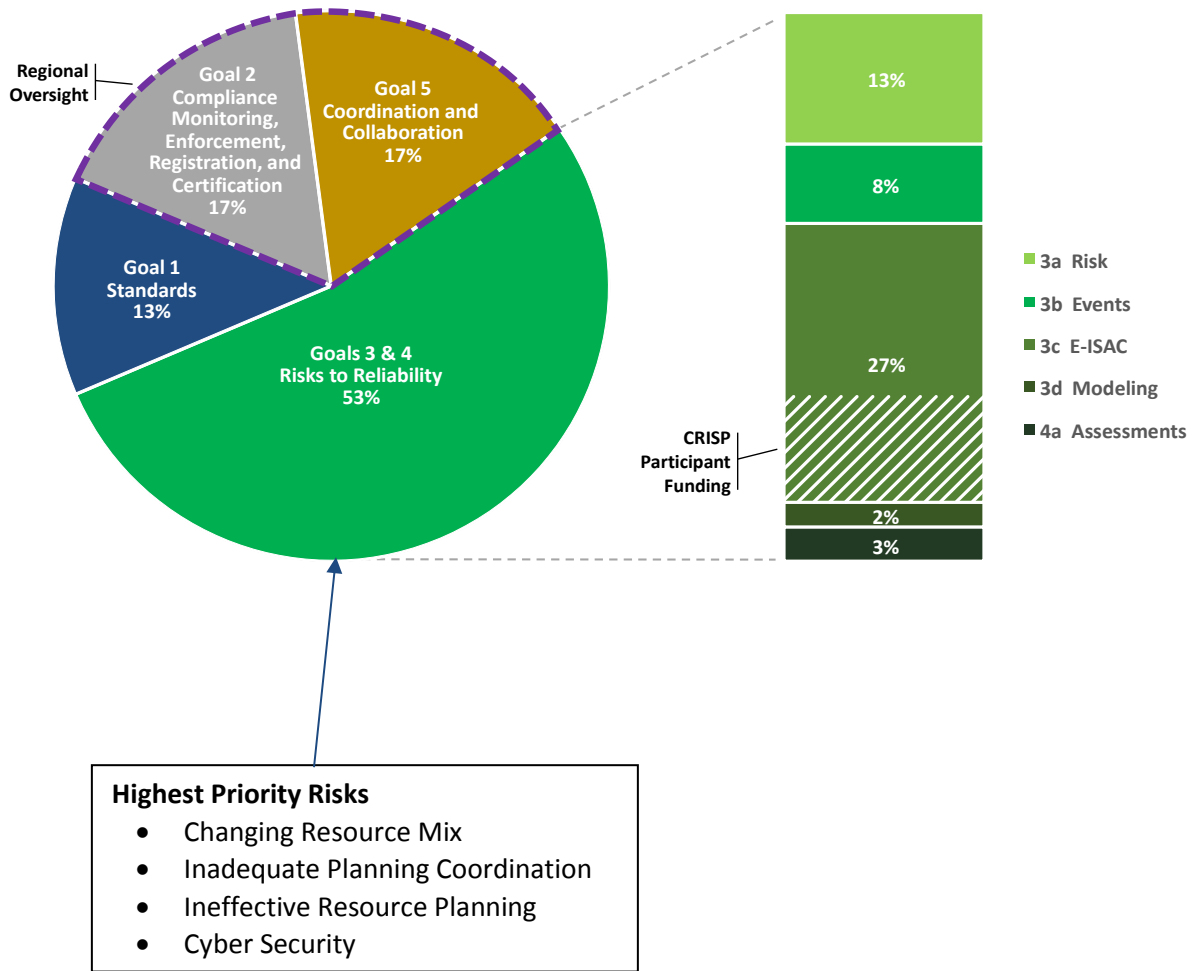
Contributing Activities

- Articulate a shared vision of reliability excellence and support and inspire stakeholders continent-wide, including in international jurisdictions, in working to attain that vision.
- Engage the support and expertise of stakeholders in prioritizing and resourcing reliability initiatives.
- Communicate expectations clearly and foster collaboration to deliver important results in advancing system reliability.
- Acquire, engage, and retain highly qualified talent with requisite technical expertise to execute the ERO Enterprise's statutory functions.
- Understand and manage ERO Enterprise internal risks.
- Processes and procedures are consistent, effective, and efficient.
- Clearly delineate ERO Enterprise roles and responsibilities using the ERO Enterprise Operating Model to mature the collaborative processes.

Allocation of NERC Resources to Strategic Goals and Risk Priorities

The charts below provide an overview of the allocation of NERC's 2017 resources associated with each strategic goal, as well as the RISC priorities. Using FTEs and funding as a guide, the charts reflect the relative amount of total NERC resources (people and dollars) focused on supporting each of the five strategic goals noted above. Obviously many NERC departments work on multiple activities that further multiple goals, and precision in forecasting all activities supporting each goal is not feasible. However, these charts provide a general picture regarding how the company's resources are allocated.

NERC Resource Allocation to Strategic Goal Areas



Ongoing Focus on Cost Control and Efficiency

NERC and the Regional Entities continue to work collaboratively to improve efficiency, evaluate resources, and leverage combined skillsets to improve various ERO Enterprise activities and control costs. This collaboration and the resulting efficiencies can be found in a number of areas, including but not limited to:

- **ERO Enterprise IT Investments:** NERC and the Regional Entities, working collaboratively under the oversight of NERC’s Standards Oversight and Technology Committee, have developed a long-term enterprise information technology program resulting in a number of enterprise tools. The goals is to enhance operations and reduce costs at the regional and registered entity level. For example, enterprise tools have helped and will further facilitate efficiency of registration and data submittals, improved consistency in registered entity resources devoted to compliance, and improved overall reliability through information sharing on Events Analysis and Situation Awareness.
- **Enforcement:** NERC has worked closely with Regional Entities to streamline enforcement staff in connection with the development of more efficient and risk-based enforcement mechanisms.

- **Standards:** As standards development has matured, NERC management has reallocated Standards staff towards more critical activities like cyber security and analytical capabilities.
- **Legal:** As a result of the aforementioned efficiencies and the maturity of NERC's and ERO Enterprise's business processes, the legal department has reduced its resource requirements, reallocating limited resources to more critical priorities without increasing the company's overall staffing requirements.
- **Forums:** As further described in the quarterly forum reports to the NERC Board of Trustees, NERC and the Regional Entities continue to leverage the transmission and generation forums to jointly address risks to reliability to mitigate their impacts on the reliable operation of the BES.
- **Industry:** The Enterprise continues to collaborate with, and rely on, industry resources and expertise through the various standing committees, working groups and task forces which are critical to both identifying and supporting key initiatives and priorities.

2017 Key Business Planning Assumptions

As part of the annual business planning process, NERC and the Regional Entities developed a set of common business planning assumptions supporting the development their respective business plans and budgets. The Regional Entities used these assumptions to evaluate their projected workloads and determine resource levels and allocation required to complete necessary tasks and meet the obligations of their Regional Delegation Agreements. These common business planning assumptions are set forth in Exhibit A.

Application of Section 215 Criteria

In its order approving NERC's *2013 Business Plan and Budget*, FERC required NERC to establish criteria for determining whether its proposed activities are eligible for funding under Section 215. In an order dated April 19, 2013, FERC approved NERC's proposed criteria, with certain modifications.⁷ Exhibit B summarizes the major activities NERC proposes to undertake in 2017 and the approved Section 215 criteria applicable to such activities.

Overview of 2017 Budget and Funding Requirements

NERC's 2017 combined expense and fixed asset (capital) budget is approximately \$69.6M, which represents an increase of approximately \$2.4M (3.6%) from the 2016 budget. Total expenses are increasing approximately \$1.0M (1.5%) over 2016. The total fixed asset (capital) budget, excluding depreciation,⁸ is approximately \$4.4M, an increase of \$461k over 2016. Approximately \$8.3M (11.9%) of NERC's 2017 budget is related to CRISP. In the absence of CRISP, the 2017 budget would increase \$2.1M (3.5%) over 2016. As further explained in Section A – Electricity Information Sharing and Analysis Center (E-ISAC), the majority of the NERC CRISP budget will be funded by participating utilities, with only a small portion funded through assessments. A comparative statement of activities presenting NERC's 2017 budget with and without CRISP is set forth later in this section.

NERC's proposed 2017 assessment is approximately \$59.9M, which represents an increase of approximately \$2.8M (4.9%) from 2016 and reflects the proposed release of \$1.1M of funds from the Assessment Stabilization Reserve to reduce 2017 assessments. The balance in the Assessment Stabilization Reserve, from which NERC proposes to release \$1.1M to reduce 2017 assessments, includes \$500k of Penalty collections during the 12 months ended June 30, 2016, which NERC proposes to deposit

⁷ North American Electric Reliability Corporation, Order on Compliance, 143 FERC ¶ 61,052 (2013).

⁸ NERC and the Regional Entities budget Depreciation as an Operating Expense with an equal and offsetting credit against budgeted Fixed Asset Additions; as a result, the budgets do not include depreciation in the funding requirements.

in the Assessment Stabilization Reserve. Without the proposed release of funds from the Assessment Stabilization Reserve to offset assessments (as further discussed below), NERC's total average assessments would increase \$3.9M (6.8%) over 2016. One of the primary differences between NERC's current 2017 budget increase of 3.6% and the 6.8% 2017 assessment increase (unadjusted) results from eliminating the one-time application of the Penalty funds collected during the 12 months ended June 30 preceding the budget year to offset U.S. assessments in 2017; instead, NERC proposes that these Penalty funds be deposited in the Assessment Stabilization Reserve and that a larger amount, \$1.1M, be released from the Assessment Stabilization Reserve to reduce assessments. This loss of penalty offsets from the Penalties collected during the 12 months ended June 30, 2016 will not impact Canadian or Mexican assessments since U.S. penalty funds are only used to reduce U.S. assessments.⁹ Other factors contributing to the difference between the proposed assessment increase and the unadjusted assessment increase include debt assumptions and projected reserve requirements, all of which impact assessments in the United States, Canada, and Mexico.

As a long-term strategy to stabilize assessments and align budget and assessment increases more closely, NERC has undertaken a multi-year strategy to manage assessment increases. NERC's policy *Accounting, Financial Statement and Budgetary Treatment of Penalties Imposed and Received for Violations of Reliability Standards* and NERC Rule of Procedure (ROP) §1107.2 specifies that penalties received during the period July 1 through the following June 30 are to be used in the subsequent budget period to offset assessment billings. However, ROP §1107.4 provides for exceptions or alternatives to this treatment if approved by the Commission. In February 2015, NERC's Board approved an amendment to the company's Working Capital and Operating Reserve Policy.¹⁰ Among the approved changes to this policy was the creation of an Assessment Stabilization Reserve.¹¹ This reserve was established to address the strategic goal of more closely aligning annual budget and assessment increases and to provide resources to better manage year-to-year assessment increases. The eventual goal is to narrow the gap between annual percentage changes in NERC's budget and annual changes in assessments, that results from year-to-year variations in penalty collections.

NERC proposes (1) to deposit the \$500k of Penalties collected during the period July 1, 2015 – June 30, 2016, in the Assessment Stabilization Reserve, and (2) to release \$1.1M from the Assessment Stabilization Reserve to reduce 2017 assessments. As a result, NERC proposes an overall average 2017 assessment increase of 4.9%, which reflects the proposed release of \$1.1M from the Assessment Stabilization Reserves to offset U.S. assessments. The allocation of assessments to Canadian entities will depend on the final determination and allocation of certain compliance and enforcement costs to Canadian entities pursuant to NERC's policy on the allocation of compliance costs.¹²

⁹ Accounting, Financial Statement and Budgetary Treatment of Penalties Imposed and Received for Violations of Reliability Standards, December 8, 2008 and as amended August 15, 2013

¹⁰ [NERC's Working Capital and Operating Reserve Policy](#). NERC filed a petition with FERC on March 6, 2015 for approval of this policy; the Commission conditionally approved the revised policy in an order issued June 18, 2015, in Docket No. RR15-8-000. *North American Electric Reliability Corporation, Order Conditionally Accepting Revisions to Working Capital and Operating Reserve Policy*, 151 FERC ¶ 61,225 (2015). On August 14, 2015, NERC submitted a compliance filing to the June 18, 2015 order with a modification to the policy, which the Commission accepted by letter order dated September 18, 2015 (Docket No. RR15-8-001).

¹¹ In accordance with the approved Working Capital and Operating Policy, this reserve may be funded with penalty funds and surplus operating reserves. The actual amount of the contribution, as well as releases from the fund to reduce assessments, is determined annually as part of NERC's business plan and budget process, based on recommendation by the Board's Finance and Audit Committee and requiring both Board and FERC approval.

¹² Expanded Policy on Allocation of Certain Compliance and Enforcement Costs, July 29, 2008.

The following table provides a high-level year-over-year comparison of the major categories of expenses, total budget, and FTEs.

Statement of Activities and Fixed Assets Expenditures 2016 and 2017 Budgets						
STATUTORY						
	2016	2016	Projection v	2017	2017 Budget v	
	Budget	Projection	2016 Budget	Budget	2016 Budget	% Over
			Over(Under)		Over (Under)	(Under)
Funding						
NERC Assessments	\$ 57,081,445	\$ 57,081,445	\$ (0)	\$ 59,856,314	\$ 2,774,868	4.9%
Penalty Sanctions	1,439,000	1,439,000	-	1,100,000	(339,000)	
Third-Party Funding (CRISP)	6,830,738	7,335,757	505,019	6,990,447	159,709	
Testing Fees	1,867,972	1,867,972	-	1,921,900	53,928	
Services & Software	50,000	50,000	-	50,000	-	
Workshops	230,000	269,201	39,201	230,000	-	
Interest	3,000	35,898	32,898	3,000	-	
Total Funding (A)	\$ 67,502,155	\$ 68,079,475	\$ 577,320	\$ 70,151,660	\$ 2,649,505	3.9%
Expenses						
Personnel Expenses	\$ 37,283,807	\$ 37,288,967	\$ 5,161	\$ 38,641,331	\$ 1,357,525	3.6%
Meeting Expenses	3,620,286	3,646,564	26,278	3,372,886	(247,400)	-6.8%
Operating Expenses	24,903,515	25,947,939	1,044,424	24,800,690	(102,825)	-0.4%
Other Non-Operating Expenses	110,000	100,668	(9,332)	106,725	(3,275)	-3.0%
Total Expenses	\$ 65,917,608	\$ 66,984,139	\$ 1,066,531	\$ 66,921,632	\$ 1,004,024	1.5%
Fixed Assets						
Depreciation	\$ (2,641,943)	\$ (2,558,606)	\$ 83,336	\$ (1,691,457)	\$ 950,486	
Computer & Software CapEx	2,447,000	2,362,402	(84,598)	2,572,000	125,000	
Equipment CapEx	1,464,000	1,545,797	81,797	1,800,000	336,000	
Inc(Dec) in Fixed Assets	1,269,057	1,349,593	80,535	2,680,543	1,411,486	
TOTAL BUDGET	\$ 67,186,665	\$ 68,333,732	\$ 1,147,067	\$ 69,602,175	\$ 2,415,510	3.6%
FTEs	192.5	188.6	(3.9)	189.9	(2.6)	-1.3%

NERC's 2017 budget and funding requirements reflect the resources necessary to support achievement of the goals and objectives set forth in the Strategic Plan. The 2017 budget is comprised of both operating and capital (fixed asset) costs. Operating costs generally include personnel, consulting, office space, software licensing, third-party data management, and communications and other customary services to support office operations. Fixed asset (capital) costs primarily reflect investments in equipment and software to support operations, including investments in the development of software applications and infrastructure to facilitate improved business processes and efficiency.

Key Budget Assumptions

Key assumptions used in the development of NERC's 2017 budget include the following:

- Maintaining FTEs at a similar level as 2016. Management routinely reviews resource allocation to ensure that the appropriate amount and type of resources are being dedicated to key priorities and activities. As operations in some areas become more efficient and/or major initiatives are completed, resources are redeployed to priority areas. For example, as work on reliability standards reduced as regulatory obligations were addressed, it was possible to reallocate some of those resources to support additional compliance assurance, reliability risk assessment, and security needs without increasing the company's overall FTE budget.
- Applying a 6.0% reduction to FTEs (vacancy rate) to account for attrition and hiring delays. This assumption is based on a review and analysis of historic attrition and vacancy rates, as well as the time it takes to recruit and onboard new staff. This is reduction in the historical vacancy rate

assumptions and reflects the ongoing management focus on recruiting and retaining appropriate resources.

- Market-based compensation for personnel. Executive and staff compensation and benefits are established based on guidelines established by NERC's Corporate Governance and Human Resources Committee and comprehensive market compensation and benefit information provided by a leading nationally recognized compensation and benefits consulting firm, as well as other available data. An updated market study was completed in late 2015 under the oversight of NERC's Corporate Governance and Human Resources Committee.
- Anticipating market increases in medical and dental benefit plan costs. Medical and dental premium cost estimates are based on market data provided by the company's benefits consultant. Current 2017 budget estimates are in the upper end of the range provided by NERC's benefits consultant. This estimate will continue to be evaluated prior to finalization of the recommended 2017 budget. No other changes to retirement or other benefit plans have been assumed for 2017.
- In 2015, the Electricity Subsector Coordinating Council (ESCC)¹³ presented its recommendations resulting from a review of the E-ISAC operations performed that year. These recommendations included a request to evaluate and potentially enhance the user interface and underlying functionality of the E-ISAC portal. In 2015, the ESCC established a Member Executive Committee (MEC) to provide guidance with respect to various E-ISAC matters, including improvements to the E-ISAC portal. As part of an approved 2016 work plan, the E-ISAC staff worked closely with the MEC to develop a business case and funding estimates for these improvements. A power point presentation summarizing the business case, funding estimate and additional detail regarding the portal improvement project is attached as Exhibit F.

The 2017 E-ISAC budget includes \$1M for the portal enhancements (\$250,000 of which is allocated to CRISP) for the portal project. The annual impact of the proposed \$1M investment on assessments will be approximately \$250,000 since projects of this nature are typically financed through NERC's capital financing program and funded over a three year period. The MEC has provided written comments in support of this investment.¹⁴

- Meeting and travel expenses are being held flat based on a review of 2015 and 2016 costs. The company has undertaken a number of significant efforts over the past several years to reduce travel and meeting expenses. For example, the company has worked closely with Regional Entities to share meeting space where possible, which has helped reduce meeting costs.
- Contractor and consulting expenses are developed on a department-by-department basis and reflect both known and anticipated expenses, based on historic and current information.

¹³ The Electricity Subsector Coordinating Council (ESCC) serves as the principal liaison between the federal government and the electric power sector, with the mission of coordinating efforts to prepare for, and respond to, national-level disasters or threats to critical infrastructure. The ESCC includes utility CEOs and trade association leaders representing all segments of the industry. Its counterparts include senior Administration officials from the White House, relevant Cabinet agencies, federal law enforcement, and national security organizations.

¹⁴ MEC's comments are available on [NERC's website](#)

The following table summarizes total year-over-year contractor and consulting costs by department.

Consultants & Contracts	2016 BUDGET	2017 BUDGET	2017 vs 2016
			Budget
Compliance Assurance	200,000	50,000	(150,000)
Event Analysis	56,000	-	(56,000)
Compliance Investigation, Registration and Certification	50,000	-	(50,000)
Reliability Assessments and System Analysis	575,000	525,000	(50,000)
Performance Analysis	509,039	528,082	19,044
Situation Awareness	1,211,475	1,295,850	84,375
E-ISAC	663,335	899,835	236,500
CRISP	5,888,594	5,888,594	-
System Operator Certification	327,600	219,800	(107,800)
Continuing Education, Training & Education	348,200	360,800	12,600
General & Administrative	95,000	15,000	(80,000)
Information Technology	2,094,671	2,312,787	218,116
Human Resources	550,000	575,000	25,000
Finance and Accounting	297,000	457,000	160,000
TOTAL CONSULTANTS AND CONTRACTS	12,865,914	13,127,749	261,835

The Compliance Assurance department will require ongoing, though significantly reduced, consulting support for implementation of compliance assurance reform initiatives. Contract and consulting expenses for Reliability Assessment and System Analysis and for Performance Analysis are largely for software and services supporting reliability data management and analysis. Situation Awareness costs are primarily related to licenses and services supporting Situation Awareness for FERC, NERC, and the Regional Entities (SAFNR), and other reliability information and notification (e.g., alerts) systems.

E-ISAC consulting costs for 2017 include support for GridEx and analytical tools. Approximately \$6M of the total E-ISAC contract and consulting costs are CRISP related (as shown separately in the table above) and funded by CRISP participants.

Training, Education, and Operator Certification contract and consulting costs include the cost of operator certification, training, and continuing education programs, and training NERC personnel. It also includes cost for supporting compliance and enforcement (risk-based CMEP) and other training initiatives.

Information Technology (IT) contract and consulting support is primarily for systems and software maintenance and support services, including costs for enhancements to and maintenance of enterprise applications. Costs associated with IT security programs and the ongoing implementation and support of a document management program are also included. Software development costs are primarily budgeted under fixed (capital) assets and are discussed further below.

Human Resources contract and consulting costs are primarily for employee training, various surveys, compensation studies, and consulting services to support improvements in human resource information systems.

Finance and Accounting costs are primarily for audit and consulting services to support the Enterprise Risk Management and Internal Control audit plan and Compliance and Certification Committee (CCC) audit plan, as well as consulting services to implement new financial reporting tools and review insurance strategy and solutions.

Fixed Asset (Capital) Budget and Capital Financing

NERC's 2017 capital budget is approximately \$4.4M (excluding depreciation), which represents an increase of approximately \$461k from 2016. The table below provides a summary of the major capital budget components.

NERC CAPITAL BUDGET	<u>2016</u>	<u>2017</u>
ERO Application Development	\$ 1,500,000	\$ 700,000
E-ISAC Portal Development		1,000,000
Document Management	465,000	335,000
Hardware (Storage, servers, laptops)	955,000	991,000
Other Equipment	535,000	885,000
Disaster Recovery	200,000	150,000
NERC Software licenses	256,000	311,000
Total Capital Budget	<u>\$ 3,911,000</u>	<u>\$ 4,372,000</u>

NERC has budgeted \$2.2M (both operating expenses and capital expenditures) in 2017 for services related to the planning, design, and implementation of software applications supporting the development of enterprise tools for common NERC and Regional Entity operations. These ERO Enterprise related costs include \$700k in capital expenditures and \$1.5M in other IT operating costs. Senior management from NERC and the Regional Entities refined and updated the ERO Enterprise's long-term IT architecture and data management plans and the specific applications that will be under development in 2017. Section A, Information Technology department, below, offers further detail regarding updates to the Enterprise IT Strategy; the current status of the development of Enterprise IT applications; and projects that will be under development in 2017. The proposed \$2.2M budget for 2017 related to enterprise application development and support is less than the 2017 projection presented in NERC's *2016 Business Plan and Budget* due primarily to the decision to delay the development of a replacement for the current compliance monitoring and enforcement reporting and tracking system (CRATS) to 2018. Further information regarding the ERO Enterprise application development plan and budget is contained in Section A – Information Technology department. NERC's 2017 capital budget also includes ongoing funding for IT security, disaster recovery, data storage, replacement of servers and laptops, and software license costs.

The 2017 budget projection assumes that approximately \$1.5M of the total \$4.4M capital budget will be financed through the capital financing program that was described and put in place as part of NERC's *2014 Business Plan and Budget*. Further information regarding capital financing may be found in Exhibit D.

Working Capital and Operating Reserves

Management is proposing an overall reserve budget of \$7.8M for Working Capital, the four categories of Operating Reserves and the Assessment Stabilization Reserve under the company's Working Capital and Operating Reserve Policy. This represents a decrease of \$1.1M (11.9%) from the total reserve amounts included in NERC's approved 2016 budget. While individual categories reflect increases and decreases resulting from operating needs and uses, the 2017 budget does not reflect additional working capital requirements in total. Pursuant to the company's Working Capital and Operating Reserve Policy, funds reserved for future liabilities are now budgeted under a separate reserve category entitled Future Obligation Reserve. This reserve is primarily comprised of existing funds and is budgeted to be \$2.6M for 2017. The second category of operating reserves is the System Operating Certification Reserve. The 2017 System Operator Certification Reserve is budgeted at \$714k and comprised of existing funds. The third category of operating reserves is the CRISP Operating Reserve, which represents funds dedicated to support CRISP. Similar to 2016, these reserves are established pursuant to a CRISP budget agreed to and funded entirely by utilities participating in CRISP. These reserves have no impact on assessments and they are segregated from other reserves pursuant to the terms of the CRISP agreements. The CRISP reserves are projected to be \$500k in the 2017 budget.

The fourth category of operating reserves is the Operating Contingency Reserve. This reserve includes funds for expenditures that were not anticipated at the time the company's budget was prepared or for which the timing was uncertain. NERC's current policy on Operating Contingency Reserves requires a reserve target of 3.5–7.0%, except as otherwise approved by the Board after review and recommendation by the NERC Finance and Audit Committee. This percentage is calculated against NERC's total budget for operating and capital expenditures, less those costs related to CRISP and System Operator Certification, each of which has a separate reserve category. For this draft of the 2017 budget, management is recommending an Operating Contingency Reserve of approximately \$2.2M, or 3.7% of total budgeted operating and capital costs, excluding CRISP and System Operator costs, which is slightly less than the minimum recommended in the policy but within the discretion of the NERC Board of Trustees to approve, upon review and recommendation of NERC's Finance and Audit Committee.

In addition to the four categories of operating reserves and as previously discussed, the company's amended Working Capital and Operating Reserve Policy also provides for an Assessment Stabilization Reserve. To date, this reserve has been funded entirely by previously received penalties and is projected to have a balance of \$2.7M as of January 1, 2017, including the proposed deposit of \$500k of Penalties received during the period July 1, 2015 – June 30, 2016 (subject to requisite approvals). For purposes of the company's *2017 Business Plan and Budget*, management proposes the release of \$1.1M in Assessment Stabilization Reserve funds to offset assessments. The use of \$1.1M to offset assessments in 2017 yields an average increase of 4.9% over the 2016 assessments. The remaining balance of \$1.7M in the Assessment Stabilization Reserve will be used to reduce assessments in one or more future periods, subject to review and approval by the NERC Board and the Commission in the applicable year's business plan and budget. A further discussion of the use of this remaining Assessment Stabilization Reserve balance may be found below in the section entitled 2018-2019 Projections.

Department Budget and FTE Comparisons

The following tables set forth a 2016–2017 total budget comparison by department. The amounts shown below reflect all direct and indirect departmental costs, including fixed asset costs. Costs incurred for general and administrative and other overheads are considered indirect, and are allocated to the statutory departments based on the ratio of that department's budgeted FTEs to total budgeted FTEs.

2016–2017 Total Budget by Department

Total Budget	Budget 2016	Budget 2017	Change 2017 Budget v 2016 Budget	% Change
Reliability Standards	8,193,116	8,100,282	(92,834)	-1.1%
Compliance Assurance	9,420,903	7,858,599	(1,562,305)	-16.6%
Compliance Analysis, Certification and Registration	4,632,871	3,646,289	(986,582)	-21.3%
Compliance Enforcement	5,293,298	5,800,647	507,349	9.6%
Reliability Assessments and Performance Analysis				
Reliability Assessments and System Analysis	6,342,917	7,535,594	1,192,677	18.8%
Performance Analysis*	3,575,811	4,908,855	1,333,044	37.3%
Reliability Risk Management				
Event Analysis	5,355,795	5,446,206	90,411	1.7%
Situation Awareness	3,692,197	4,032,862	340,664	9.2%
E-ISAC	16,767,525	18,515,341	1,747,816	10.4%
Training, Education and Operator Certification	3,912,231	3,757,501	(154,731)	-4.0%
Total Budget	67,186,665	69,602,175	2,415,511	3.6%

*Internally managed under Reliability Risk Management Department

The decreases in the Compliance Analysis, Certification and Registration, and Compliance Assurance departments' costs are primarily due to the transfer of resources from these departments as part of the ongoing process of internal reorganization to better align resources to support strategic goals and risk priorities. The increase in the Reliability Assessment and Performance Analysis program area¹⁵ and Event Analysis department budget are due to the reallocation of resources to those areas to further support increased reliability risk assessment and analysis resource priorities. The increase in the Situation Awareness department budget is primarily due to enhancement or modification of reliability-related situation awareness and monitoring tools. The increase in the E-ISAC department budget is primarily due to planned enhancements to the E-ISAC portal and to the 2017 GridEx (which was not held in 2016).

The following table presents a 2017 versus 2016 comparison of budgeted FTEs by department and reflects 2016 personnel additions, interdepartmental transfers, and attrition assumptions. The number of FTEs represents the number of employees employed full time during the year, plus the number of employees employed part time (less than full schedule) or during a portion of the year converted to a full-time basis. Headcount represents the total number of personnel employed during the year, regardless of the length of their employment during that year. FTEs will be less than headcount, unless there are no part-time employees or employees who are employed less than a full year. The company's 2017 personnel budget is based upon existing headcount and associated compensation and benefit costs, as well as assumptions on the number and cost of new hires and the assumed vacancy rate, all within an overall FTE budget. An average vacancy rate is applied to each position and its associated costs to arrive at an overall personnel cost budget. The vacancy rate represents an adjustment, which is applied in the calculation of budgeted personnel costs to account for attrition and for variations from the budget assumptions on the timing of new hires.

¹⁵ The Reliability Assessment and Performance Analysis program area has been reorganized into two separate departments: (1) Reliability Assessments and System Analysis; and (2) Performance Analysis. The Performance Analysis department is internally managed by the Vice President of Reliability Risk Management.

2016–2017 Year-Over-Year Comparison of FTEs by Department

Total FTE's by Program Area	Budget 2016	Budget 2017	Change from 2016 Budget	% Change from 2016
STATUTORY				
Operational Programs				
Reliability Standards	17.98	17.16	(0.8)	-4.6%
Compliance Assurance	19.36	15.51	(3.9)	-19.9%
Compliance Analysis, Certification and Registration	10.14	7.52	(2.6)	-25.8%
Compliance Enforcement	12.22	13.16	0.9	7.7%
Reliability Assessments and System Analysis	11.75	14.10	2.3	20.0%
Performance Analysis	6.92	9.40	2.5	35.9%
Event Analysis	11.06	11.28	0.2	2.0%
Situation Awareness	5.53	5.64	0.1	2.0%
E-ISAC	18.90	19.74	0.8	4.4%
Training, Education and Operator Certification	7.38	7.05	(0.3)	-4.4%
Total FTEs Operational Programs	121.24	120.56	(0.7)	-0.6%
Administrative Programs				
General & Administrative	17.52	16.92	(0.6)	-3.4%
Legal and Regulatory	12.22	11.28	(0.9)	-7.7%
Information Technology	22.13	23.27	1.1	5.1%
Human Resources	2.77	2.82	0.0	1.8%
Finance and Accounting	16.60	15.04	(1.6)	-9.4%
Total FTEs Administrative Programs	71.23	69.33	(1.9)	-2.7%
Total FTEs	192.47	189.88	(2.5)	-1.3%

*Reflects 2017 additions and transfers between departments, anticipated timing of 2017 hires, and assumes 6% attrition in all programs

Total FTEs in the Administrative Programs is decreasing by 1.9 FTE (2.7%), reflecting reallocation of resources among the various departments. The increase in Information Technology FTEs is due to the reallocation of personnel to strengthen project management oversight over NERC and ERO Enterprise software application development and implementation.

The NERC 2017 organizational chart can be found in Appendix 1. The difference between the number of positions reflected in the 2017 organizational chart and total 2017 budgeted FTEs is due to assumptions regarding vacancy rates and timing of new hires.

The following pages include a statement of activities comparing the 2016 budget and the proposed 2017 budget, followed by a statement of activities comparing the 2016 budget and the proposed 2017 budget with and without CRISP.

Introduction and Executive Summary

Statement of Activities and Fixed Assets Expenditures 2016 and 2017 Budgets

STATUTORY

	2016		Variance 2016 Projection v 2016		Variance 2017 Budget v 2016		% Inc 2017 over 2016
	Budget	Projection	Budget Over(Under)	2017 Budget	Budget Over(Under)		
Funding							
ERO Funding							
NERC Assessments	\$ 57,081,445	\$ 57,081,445	\$ (0)	\$ 59,856,314	\$ 2,774,868		4.9%
Penalty Sanctions	1,439,000	1,439,000	-	1,100,000	(339,000)		
Total NERC Funding	\$ 58,520,445	\$ 58,520,445	\$ (0)	\$ 60,956,314	\$ 2,435,868		
Third-Party Funding (CRISP)	6,830,738	7,335,757	505,019	6,990,447	159,709		
Testing Fees	1,867,972	1,867,972	-	1,921,900	53,928		
Services & Software	50,000	50,000	-	50,000	-		
Workshops	230,000	269,201	39,201	230,000	-		
Interest	3,000	35,898	32,898	3,000	-		
Miscellaneous	-	202	202	-	-		
Total Funding (A)	\$ 67,502,155	\$ 68,079,475	\$ 577,320	\$ 70,151,660	\$ 2,649,505		3.9%
Expenses							
Personnel Expenses							
Salaries	\$ 28,842,336	\$ 29,052,918	\$ 210,581	\$ 30,073,438	\$ 1,231,102		
Payroll Taxes	1,871,367	1,830,724	(40,643)	1,847,130	(24,237)		
Benefits	3,579,280	3,390,190	(189,090)	3,643,806	64,526		
Retirement Costs	2,990,823	3,015,135	24,312	3,076,956	86,134		
Total Personnel Expenses	\$ 37,283,807	\$ 37,288,967	\$ 5,161	\$ 38,641,331	\$ 1,357,525		3.6%
Meeting Expenses							
Meetings	\$ 1,096,500	\$ 1,194,500	\$ 98,000	\$ 1,071,500	\$ (25,000)		
Travel	2,203,786	2,190,184	(13,602)	2,203,786	(0)		
Conference Calls	320,000	261,880	(58,120)	97,600	(222,400)		
Total Meeting Expenses	\$ 3,620,286	\$ 3,646,564	\$ 26,278	\$ 3,372,886	\$ (247,400)		-6.8%
Operating Expenses							
Consultants & Contracts	\$ 12,865,914	\$ 13,972,958	\$ 1,107,044	\$ 13,127,749	\$ 261,835		
Office Rent	3,054,287	3,224,287	170,000	3,117,009	62,722		
Office Costs	3,795,572	3,740,288	(55,284)	4,359,340	563,768		
Professional Services	2,509,300	2,414,300	(95,000)	2,468,135	(41,165)		
Miscellaneous	36,500	37,500	1,000	37,000	500		
Depreciation	2,641,943	2,558,606	(83,336)	1,691,457	(950,486)		
Total Operating Expenses	\$ 24,903,515	\$ 25,947,939	\$ 1,044,424	\$ 24,800,690	\$ (102,825)		-0.4%
Total Direct Expenses	\$ 65,807,608	\$ 66,883,471	\$ 1,075,863	\$ 66,814,907	\$ 1,007,299		1.5%
Indirect Expenses	\$ -	\$ 0	\$ 0	\$ 0	\$ 0		
Other Non-Operating Expenses	\$ 110,000	\$ 100,668	\$ (9,332)	\$ 106,725	\$ (3,275)		-3.0%
Total Expenses (B)	\$ 65,917,608	\$ 66,984,139	\$ 1,066,531	\$ 66,921,632	\$ 1,004,024		1.5%
Change in Assets	\$ 1,584,548	\$ 1,095,336	\$ (489,211)	\$ 3,230,028	\$ 1,645,481		
Fixed Assets							
Depreciation	\$ (2,641,943)	\$ (2,558,606)	83,336	\$ (1,691,457)	\$ 950,486		
Computer & Software CapEx	2,447,000	2,362,402	(84,598)	2,572,000	125,000		10.5%
Furniture & Fixtures CapEx	-	-	-	-	-		
Equipment CapEx	1,464,000	1,545,797	81,797	1,800,000	336,000		
Leasehold Improvements	-	-	-	-	-		
Allocation of Fixed Assets	\$ (0)	\$ (0)	\$ 0	\$ 0	\$ 0		
Inc(Dec) in Fixed Assets (C)	1,269,057	1,349,593	80,535	2,680,543	1,411,486		
TOTAL BUDGET (=B + C)	\$ 67,186,665	\$ 68,333,732	\$ 1,147,067	\$ 69,602,175	\$ 2,415,510		3.6%
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)¹	\$ 315,490	\$ (254,257)	\$ (569,747)	\$ 549,485	\$ (716,491)		
FTEs	192.5	188.6	(3.9)	189.88	(2.6)		-1.3%

¹The budgeted change in working capital reflects both a reduction in excess working capital and operating reserves and the assumptions related to capital financing. Refer to Table B-1 on page 81 for a complete analysis of the Working Capital and Operating Reserve balance.

Introduction and Executive Summary

Statement of Activities and Fixed Assets Expenditures 2016 and 2017 Budgets

STATUTORY

	2016 Budget	2016 CRISP Budget	2016		2017 Budget	2017 CRISP Budget	2017		Variance 2017 Budget v 2016 Budget w/out CRISP Over(Under)	% Inc 2017 over 2016
			Budget w/out CRISP	CRISP			Budget w/out CRISP	CRISP		
Funding										
ERO Funding										
NERC Assessments	\$ 57,081,445	\$ 1,108,641	\$ 55,972,805	\$ 59,856,314	\$ 1,275,681	\$ 58,580,633	\$ 2,607,828	4.7%		
Penalty Sanctions	1,439,000	33,572	1,405,428	1,100,000	26,243	1,073,757	(331,671)			
Total NERC Funding	\$ 58,520,445	\$ 1,142,213	\$ 57,378,232	\$ 60,956,314	\$ 1,301,923	\$ 59,654,390	\$ 2,276,158			
Third-Party Funding (CRISP)	6,830,738	6,830,738	\$ -	6,990,447	6,990,447	\$ -	-			
Testing Fees	1,867,972	-	1,867,972	1,921,900	-	1,921,900	53,928			
Services & Software	50,000	-	50,000	50,000	-	50,000	-			
Workshops	230,000	-	230,000	230,000	-	230,000	-			
Interest	3,000	68	2,932	3,000	70	2,930	(2)			
Miscellaneous	-	-	-	-	-	-	-			
Total Funding (A)	\$ 67,502,155	\$ 7,973,019	\$ 59,529,136	\$ 70,151,660	\$ 8,292,440	\$ 61,859,220	\$ 2,330,084	3.9%		
Expenses										
Personnel Expenses										
Salaries	\$ 28,842,336	\$ 592,724	\$ 28,249,612	\$ 30,073,438	\$ 603,432	\$ 29,470,007	\$ 1,220,394			
Payroll Taxes	1,871,367	32,899	1,838,469	1,847,130	32,329	1,814,801	(23,668)			
Benefits	3,579,280	50,247	3,529,034	3,643,806	68,375	3,575,431	46,398			
Retirement Costs	2,990,823	65,802	2,925,021	3,076,956	64,236	3,012,721	87,700			
Total Personnel Expenses	\$ 37,283,807	\$ 741,671	\$ 36,542,135	\$ 38,641,331	\$ 768,371	\$ 37,872,960	\$ 1,330,825	3.6%		
Meeting Expenses										
Meetings	\$ 1,096,500	\$ 30,000	\$ 1,066,500	\$ 1,071,500	\$ 30,000	\$ 1,041,500	\$ (25,000)			
Travel	2,203,786	37,455	2,166,331	2,203,786	37,455	2,166,331	(0)			
Conference Calls	320,000	2,000	318,000	97,600	2,237	95,363	(222,637)			
Total Meeting Expenses	\$ 3,620,286	\$ 69,455	\$ 3,550,831	\$ 3,372,886	\$ 69,692	\$ 3,303,194	\$ (247,637)	-7.0%		
Operating Expenses										
Consultants & Contracts	\$ 12,865,914	\$ 5,888,594	\$ 6,977,320	\$ 13,127,749	\$ 5,888,594	\$ 7,239,155	\$ 261,835			
Office Rent	3,054,287	-	3,054,287	3,117,009	-	3,117,009	62,722			
Office Costs	3,795,572	304,027	3,491,545	4,359,340	305,683	4,053,657	562,112			
Professional Services	2,509,300	175,000	2,334,300	2,468,135	175,000	2,293,135	(41,165)			
Miscellaneous	36,500	250	36,250	37,000	250	36,750	500			
Depreciation	2,641,943	-	2,641,943	1,691,457	5,297	1,686,159	(955,783)			
Total Operating Expenses	\$ 24,903,515	\$ 6,367,871	\$ 18,535,644	\$ 24,800,690	\$ 6,374,824	\$ 18,425,865	\$ (109,779)	-0.6%		
Total Direct Expenses	\$ 65,807,608	\$ 7,178,997	\$ 58,628,611	\$ 66,814,907	\$ 7,212,888	\$ 59,602,019	\$ 973,409	1.7%		
Indirect Expenses	\$ -	\$ 650,361	\$ (650,361)	\$ 0	\$ 687,169	\$ (687,169)	\$ (36,809)			
Other Non-Operating Expenses	\$ 110,000	\$ -	\$ 110,000	\$ 106,725	\$ -	\$ 106,725	\$ (3,275)	-3.0%		
Total Expenses (B)	\$ 65,917,608	\$ 7,829,358	\$ 58,088,250	\$ 66,921,632	\$ 7,900,057	\$ 59,021,575	\$ 933,325	1.6%		
Change in Assets	\$ 1,584,548	\$ 143,662	\$ 1,440,886	\$ 3,230,028	\$ 392,383	\$ 2,837,645	\$ 1,396,759			
Fixed Assets										
Depreciation	\$ (2,641,943)	\$ -	\$ (2,641,943)	\$ (1,691,457)	\$ (5,297)	\$ (1,686,159)	\$ 955,783			
Computer & Software CapEx	2,447,000	100,000	2,347,000	2,572,000	350,000	2,222,000	(125,000)			
Furniture & Fixtures CapEx	-	-	-	-	-	-	-			
Equipment CapEx	1,464,000	-	1,464,000	1,800,000	-	1,800,000	336,000			
Leasehold Improvements	-	-	-	-	-	-	-			
Allocation of Fixed Assets	\$ (0)	\$ 43,105	\$ (43,105)	\$ 0	\$ 47,681	\$ (47,681)	\$ (4,575)			
Inc(Dec) in Fixed Assets (C)	1,269,057	143,105	1,125,952	2,680,543	392,383	2,288,160	1,162,208	103.2%		
TOTAL BUDGET (=B + C)	\$ 67,186,665	\$ 7,972,463	\$ 59,214,202	\$ 69,602,175	\$ 8,292,440	\$ 61,309,735	\$ 2,095,533	3.5%		
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)¹	\$ 315,490	\$ 556	\$ 314,934	\$ 549,485	\$ -	\$ 549,485	\$ 234,551			
FTEs	192.47	2.8	189.71	189.88	2.8	187.06	(2.6)	-1.4%		

Projections for 2018–2019

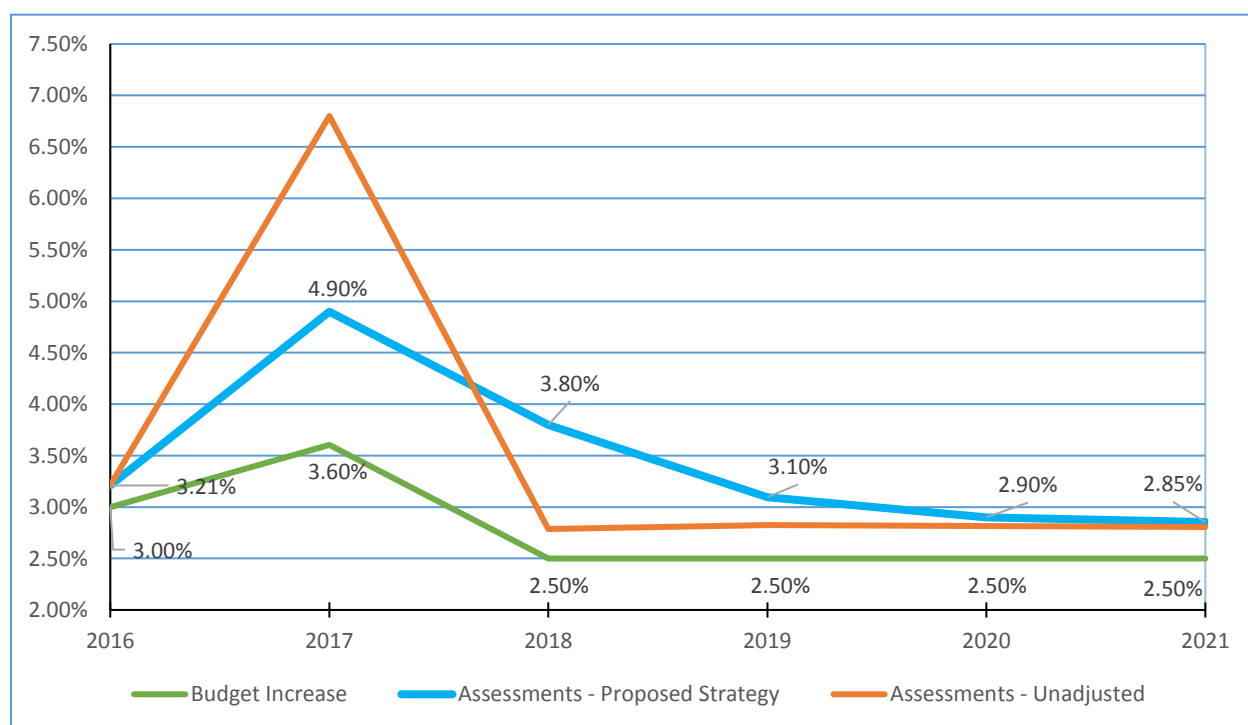
Management has developed preliminary operating and fixed asset (capital) projections for 2018 and 2019. The significant assumptions considered in preparing these projections include:

- No increases in total FTEs over the 2017 budget
- Personnel and benefit cost increases per FTE are consistent with the 2017 budget assumptions
- Operating costs, including contractor and consulting expenses, are slightly higher due to increases in costs for rent, maintenance costs associated with software applications supporting ERO Enterprise Operations, and ongoing implementation of improved budgeting and financial reporting tools.

- Debt service repayment obligations in connection with the company’s Capital Financing Program are consistent with the projected Enterprise IT Applications capital forecast
- No increase in CRISP-related expenditures, except for personnel and benefit cost increases as noted above

Assessments are projected to increase by gradually declining percentages during the next three years as NERC implements an assessment stabilization strategy. The goal of this strategy is to align budgeted costs and assessment increases more closely so that the year-to-year variations in receipt of penalties will not cause large variations in future assessments. Currently, NERC projects assessments to increase 4.5% in 2017, 3.8% in 2018, and 3.1% in 2019 with declining releases each year from the Assessment Stabilization Reserve to meet these targets. A summary of these projections and reserve releases is shown in the table below. An annual budget increase of 2.5% was used for modeling purposes and is subject to change. The assessment stabilization strategy is also depicted in the graph below, showing the assumed budget increases, unadjusted assessment increases, and implementation of the assessment stabilization strategy.

Year	Budget	Assessment	----- Assessment Stabilization Reserve -----		
	Increase	Increase	Additions	Uses	Balance
2016	3.00%	3.21%	\$ 3,710,000	\$ (1,439,000)	\$ 2,271,000
2017	3.60%	4.90%	500,000	(1,100,000)	1,671,000
2018	2.50%	3.80%	500,000	(410,000)	1,761,000
2019	2.50%	3.10%	-	(270,000)	1,491,000



The model does not assume any penalties beyond those NERC currently expects to receive in 2016 and 2017 and assumes that the NERC Board and the Commission will approve the contribution to the Assessment Stabilization Reserve of the \$500k in penalty funds which NERC is scheduled receive in 2017 under the terms of an existing settlement agreement. While the current balance of the Assessment Stabilization reserve is substantial and there could be unexpected receipt of additional penalties

subsequent to June 30, 2016 (in addition to the \$500k scheduled to be received in May 2017), funds in the Assessment Stabilization Reserve could be used, with Board and Commission approval, to stabilize future years' assessments in the event of unexpected budget increases, an anticipated ERO system development projects, or other one-time costs.¹⁶

¹⁶ The company's Working Capital and Operating Reserve Policy requires that in determining the amount of the Assessment Stabilization Reserve that is released each year, the NERC Finance and Audit Committee and Board is to review a three-year forecast of assessments, as well as the availability of funding for the Assessment Stabilization Reserve from surplus funds and penalty funds. The actual contributions to and releases from the Assessment Stabilization Reserve in any year must be approved by the Board and the Commission as part of NERC's annual business plan and budget process, with opportunity for review and input by stakeholders.

Introduction and Executive Summary

Statement of Activities and Fixed Assets Expenditures 2017 Budget & Projected 2018 and 2019 Budgets

	2017 Budget	2018 Projection	\$ Change 18 v 17	% Change 18 v 17	2019 Projection	\$ Change 19 v 18	% Change 19 v 18
Funding							
ERO Funding							
NERC Assessments	\$ 59,856,314	\$ 62,143,946	\$ 2,287,633	3.8%	\$ 64,088,553	\$ 1,944,607	3.1%
Assessment Stabilization Reserve - Penalties	1,100,000	410,000	(690,000)	-62.7%	-	(410,000)	-100.0%
Total NERC Funding	\$ 60,956,314	\$ 62,553,946	\$ 1,597,633	2.6%	\$ 64,088,553	\$ 1,534,607	2.5%
Third-Party Funding (CRISP)	6,990,447	6,990,447	-	0.00%	6,990,447	-	0.00%
Testing Fees	1,921,900	1,921,900	-	0.00%	1,921,900	-	0.00%
Services & Software	50,000	50,000	-	0.00%	50,000	-	0.00%
Workshops	230,000	230,000	-	0.00%	230,000	-	0.00%
Interest	3,000	3,000	-	0.00%	3,000	-	0.00%
Miscellaneous	-	-	-	-	-	-	-
Total Funding (A)	\$ 70,151,660	\$ 71,749,293	\$ 1,597,633	2.3%	\$ 73,283,900	\$ 1,534,607	2.1%
Expenses							
Personnel Expenses							
Salaries	\$ 30,073,438	\$ 31,035,788	\$ 962,350	3.2%	\$ 31,966,862	\$ 931,074	3.0%
Payroll Taxes	1,847,130	1,869,296	22,166	1.2%	1,893,597	24,301	1.3%
Benefits	3,643,806	3,887,941	244,135	6.7%	4,152,321	264,380	6.8%
Retirement Costs	3,076,956	3,141,573	64,616	2.1%	3,264,094	122,521	3.9%
Total Personnel Expenses	\$ 38,641,331	\$ 39,934,598	\$ 1,293,267	3.3%	\$ 41,276,874	\$ 1,342,276	3.4%
Meeting Expenses							
Meetings	\$ 1,071,500	\$ 1,081,500	\$ 10,000	0.9%	\$ 1,071,500	(10,000)	-0.9%
Travel	2,203,786	2,203,786	-	0.0%	2,203,786	-	0.0%
Conference Calls	97,600	97,600	-	0.0%	97,600	-	0.0%
Total Meeting Expenses	\$ 3,372,886	\$ 3,382,886	\$ 10,000	0.3%	\$ 3,372,886	\$ (10,000)	-0.3%
Operating Expenses							
Consultants & Contracts	\$ 13,127,749	13,595,592	467,844	3.6%	14,367,077	771,485	5.7%
Office Rent	3,117,009	3,099,048	(17,961)	-0.6%	3,104,557	5,509	0.2%
Office Costs	4,359,340	4,359,340	-	0.0%	4,359,340	-	0.0%
Professional Services	2,468,135	2,652,075	183,940	7.5%	2,661,992	9,917	0.4%
Miscellaneous	37,000	37,000	-	0.0%	37,000	-	0.0%
Depreciation	1,691,457	1,194,345	(497,112)	-29.4%	932,549	(261,796)	-21.9%
Total Operating Expenses	\$ 24,800,690	\$ 24,937,400	\$ 136,711	0.6%	\$ 25,462,516	\$ 525,116	2.1%
Total Direct Expenses	\$ 66,814,907	\$ 68,254,885	\$ 1,439,978	2.2%	\$ 70,112,277	\$ 1,857,392	2.7%
Indirect Expenses	\$ -	\$ -	\$ -	-	\$ -	\$ -	-
Other Non-Operating Expenses	\$ 106,725	\$ 114,000	\$ 7,275	6.8%	\$ 116,000	\$ 2,000	1.8%
Total Expenses (B)	\$ 66,921,632	\$ 68,368,885	\$ 1,447,253	2.2%	\$ 70,228,277	\$ 1,859,392	2.7%
Change in Assets	\$ 3,230,028	\$ 3,380,408	\$ 150,380	4.7%	\$ 3,055,623	\$ (324,785)	-9.6%
Fixed Assets							
Depreciation	\$ (1,691,457)	(1,194,345)	497,112	-29.4%	(932,549)	261,796	-21.9%
Computer & Software CapEx	2,572,000	2,562,000	(10,000)	-0.4%	2,112,000	(450,000)	-17.6%
Furniture & Fixtures CapEx	-	-	-	-	-	-	-
Equipment CapEx	1,800,000	1,585,000	(215,000)	-11.9%	1,705,000	120,000	7.6%
Leasehold Improvements	-	-	-	-	-	-	-
Allocation of Fixed Assets	-	-	-	-	-	-	-
Inc(Dec) in Fixed Assets (C)	\$ 2,680,543	\$ 2,952,655	\$ 272,112	10.2%	\$ 2,884,451	\$ (68,204)	-2.3%
TOTAL BUDGET (=B + C)	\$ 69,602,175	\$ 71,321,540	\$ 1,719,364	2.5%	\$ 73,112,727	\$ 1,791,188	2.5%
FTEs	189.88	189.88	-	-	189.88	-	-

Section A — 2017 Business Plan and Budget Program Area and Department Detail

Reliability Standards

Reliability Standards Program (in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	17.98	17.16	(0.82)
Direct Expenses	\$ 3,888,768	\$ 3,861,666	\$ (27,102)
Indirect Expenses	4,234,020	4,180,279	(53,741)
Other Non-Operating Expenses	-	-	-
Inc(Dec) in Fixed Assets	70,328	58,337	(11,991)
TOTAL BUDGET	\$ 8,193,116	\$ 8,100,282	\$ (92,835)

Background and Scope

The reliability standards program carries out the ERO's statutory responsibility to develop, adopt, obtain approval of, and modify (as and when appropriate) mandatory reliability standards (both continent-wide standards and regional reliability standards) for the reliable planning, operation, and critical infrastructure protection of the North American BES. The major activities undertaken by the Standards department include:

- **Delivering high-quality, continent-wide reliability standards:** NERC standard developers and other standards staff provide project management and leadership to develop solutions necessary to address reliability risks identified through the Reliability Risk Management Process (RRMP). These may include the development of, or modifications to, NERC reliability standards through standard development outreach activities, facilitation of drafting team activities, drafting support, assisting drafting teams in maintaining adherence to the development process as outlined in the *Standard Processes Manual*, and ensuring that the quality of documents produced is appropriate for approval by industry and the Board.
- **Facilitating continent-wide industry engagement:** NERC manages the work of over 200 industry contributors who serve on the Standards Committee, subgroups, and other project teams for the development of NERC reliability standards through the standards development program.
- **Conducting balloting, disseminating information, and supporting regulatory filings:** Through NERC's commenting and ANSI-accredited balloting process, industry consensus is built by engaging thousands of industry volunteers within hundreds of registered entities throughout North America who review, comment on, and approve the standards created by the standard drafting teams. The department also supports the filing of standards with regulatory authorities and provides support with regulatory proceedings.

The reliability standards program provides a mechanism for the eight Regional Entities to process regional standards when unique regional reliability gaps are detected, or incorporate Regional variances into continent-wide standards. The NERC Standards department staff supports regional standards development processes by providing technical advice, final quality review of regional standards,

presentation to the Board, and preparation of regional standards materials for submission for standard adoption to the applicable regulatory authorities in the United States and Canada.

Stakeholder Engagement and Cost Effectiveness Project

As part of the standard development process, industry technical experts scope, draft, and review the new or revised NERC reliability standards for approval by the industry ballot body, adoption by the Board, and filing with regulatory authorities in the United States and Canada. Additionally, Federal, State and Provincial regulatory authorities, the NERC Board of Trustees, Regional Entities, and many industry stakeholders have expressed interest in the identification of costs incurred from implementing NERC reliability standards compared to risks they address. The objective is to ensure that these elements are considered during the standards development and revision process. A pilot was conducted in 2016 to develop an approach to determine the level of cost versus the reliability benefit to mitigate an identified risk. Work will continue in 2017 on refining the approach.

Key Efforts Underway

NERC will ensure that the Reliability Standards Development Plan (RSDP) is effectively executed and that reliability standards are focused on and mitigate significant risks to BES reliability. Department resources will be focused on supporting the ERO Enterprise Strategic Plan, including but not limited to support of the RRMP and resolving FERC directives. The Standards department will:

1. **Focus on the selection of projects undertaken.** Resources will be expended on issues determined to be a reliability risk through the RRMP (also see the Reliability Assessment and System Analysis section and the Performance Analysis section, below, for additional detail). The department will apply broader project management skills to implement a variety of solutions to a reliability concern. An effective solution to an identified reliability risk may be a Reliability Standard, or it may be a guideline, information request, training, NERC Alert, technical conference, research, or a combination of these or other tools.
2. **Address FERC directives and respond to FERC orders** through standards development projects, as necessary. Each project will determine whether: (1) the directive will be complied with as issued, (2) there is an equally effective and efficient way to address the concern that fostered the directive, or (3) if there is technical justification (including that the directive has been overcome by events, processes, or advances in technology) that resolution of the directive is no longer needed.
3. **Perform Enhanced Periodic Reviews.** In 2016, as the reliability standards reach steady state, industry, NERC, and FERC will determine whether there is a need to make further improvements to the standards through enhanced periodic reviews, that include: (1) a measured review of the content of standards, considering whether the requirements could more effectively mitigate risks to the BPS; (2) whether the standards are results based and drafted with high quality; (3) whether the standards are concise or if the number of requirements could be reduced; and (4) whether compliance expectations are clear.
4. **Facilitate smooth transition to new standards.** This includes working with the Compliance Monitoring and Enforcement and Organization Registration and Certification, Reliability Assessment and System Analysis, and Performance Analysis programs to develop guidelines, webinars, and other activities to support auditor and industry training for the new standards.

The 2017–2019 RSDP will be developed in 2016 in conjunction with the Standards Committee, RISC, and RRMP. It will outline the work plan for the continued evaluation of NERC reliability standards, the Standards department’s support of Reliability Risk Management, and resolution of FERC directives.

Additionally, associated metrics will be developed and deployed to measure the overall quality of the reliability standard as a basis for measuring needed improvements.

2017 Goals and Deliverables

The transformation of the reliability standards to steady state is nearing completion.¹⁷ Specifically, the majority of FERC directives will be addressed, as well as the remaining recommendations for retiring requirements made by the Paragraph 81 project and the independent experts. The body of standards will be improved while considering quality and content criteria as well as results-based standards principles. The NERC Standards staff will continue to address any new directives issued by FERC as well any reliability risks identified through RRMP or by the RISC for which a Reliability Standard is part of the solution.

Resource Requirements

Personnel

As in prior years, industry engagement is vital to the successful development of standards. The continued transformation of NERC standards to steady state will require additional industry engagement throughout 2016. In 2017, industry subject matter expert engagement requirements will be ongoing as enhanced periodic reviews are performed.

The NERC standards department continues to focus resources on the production of quality standards, rather than solely on the monitoring and execution of the standards process. Workload in the standards area during 2017 is anticipated to remain stable, with no additional personnel resources planned for 2017. The departmental travel expenses are expected to be the same as the 2016 levels, given the anticipated amount of outreach for the number of standards reviews expected to be in process, coupled with cost savings resulting from holding more meetings at NERC's Atlanta and Washington, DC, offices. The FTE reduction (0.82 FTE) shown in the table at the end of this section is the result of the allocation of standards staff towards more critical activities like cyber security and analytical capabilities.

Contractors and Consultants

No contractor and consulting support is budgeted in 2017, which is consistent with the 2016 budget.

¹⁷As defined in the 2015-2017 RSDP, "steady state" means a stable set of clear, concise, high-quality and technically sound reliability standards that are results based, including retirement of requirements that do little to promote reliability.

**Statement of Activities and Fixed Assets Expenditures
2016 Budget & Projection, and 2017 Budget**

RELIABILITY STANDARDS

	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 7,869,295	\$ 7,869,295	\$ (0)	\$ 7,835,213	\$ (34,082)
Assessment Stabilization Reserve - Penalties	218,376	218,376	-	159,642	(58,734)
Total NERC Funding	\$ 8,087,671	\$ 8,087,671	\$ (0)	\$ 7,994,855	\$ (92,816)
Third-Party Funding	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	105,000	105,000	-	105,000	-
Interest	445	5,374	4,929	427	(18)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 8,193,116	\$ 8,198,045	\$ 4,929	\$ 8,100,282	\$ (92,834)
Expenses					
Personnel Expenses					
Salaries	\$ 2,260,735	\$ 2,349,773	\$ 89,039	\$ 2,340,405	\$ 79,671
Payroll Taxes	163,064	168,710	5,646	151,658	(11,406)
Benefits	327,239	289,808	(37,432)	307,085	(20,154)
Retirement Costs	250,560	265,961	15,401	259,407	8,847
Total Personnel Expenses	\$ 3,001,598	\$ 3,074,252	\$ 72,654	\$ 3,058,556	\$ 56,958
Meeting Expenses					
Meetings	\$ 207,000	\$ 207,000	\$ -	\$ 207,000	\$ -
Travel	271,988	230,000	(41,988)	271,988	-
Conference Calls	133,000	100,000	(33,000)	40,565	(92,435)
Total Meeting Expenses	\$ 611,988	\$ 537,000	\$ (74,988)	\$ 519,553	\$ (92,435)
Operating Expenses					
Consultants & Contracts	\$ -	\$ -	\$ -	\$ -	\$ -
Office Rent	-	-	-	-	-
Office Costs	64,622	42,784	(21,838)	51,336	(13,286)
Professional Services	-	-	-	-	-
Miscellaneous	500	500	-	500	-
Depreciation	210,060	231,843	21,783	231,721	21,661
Total Operating Expenses	\$ 275,182	\$ 275,127	\$ (55)	\$ 283,556	\$ 8,375
Total Direct Expenses	\$ 3,888,768	\$ 3,886,379	\$ (2,389)	\$ 3,861,666	\$ (27,102)
Indirect Expenses	\$ 4,234,020	\$ 4,458,581	\$ 224,561	\$ 4,180,279	\$ (53,741)
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 8,122,788	\$ 8,344,959	\$ 222,171	\$ 8,041,945	\$ (80,843)
Change in Assets	\$ 70,328	\$ (146,914)	\$ (217,242)	\$ 58,337	\$ (11,991)
Fixed Assets					
Depreciation	\$ (210,060)	\$ (231,843)	\$ (21,783)	\$ (231,721)	\$ (21,661)
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 280,388	231,639	(48,749)	290,058	9,670
Inc(Dec) in Fixed Assets (C)	70,328	(204)	(70,532)	58,337	(11,991)
TOTAL BUDGET (=B + C)	\$ 8,193,116	\$ 8,344,755	\$ 151,639	\$ 8,100,282	\$ (92,834)
FTEs	17.98	18.27	0.29	17.16	(0.82)

Compliance Monitoring and Enforcement and Organization Registration and Certification

The Compliance Monitoring, Enforcement, and Organization Registration and Certification Program Area’s purpose is to monitor, enforce, and ensure registered entity compliance with the ERO’s mandatory reliability standards. This program area is addressed by three operational groups: Compliance Assurance (addressing compliance monitoring), Compliance Analysis, Certification and Registration (addressing Assurance, Organization Registration and Certification), and Compliance Enforcement.

Compliance Assurance

Compliance Assurance addresses the Regional Entities’ implementation of the compliance monitoring section of the Compliance Monitoring and Enforcement Program (CMEP). The group works in tandem with Compliance Enforcement, Standards, and Reliability Risk Management.

Compliance Assurance

Compliance Assurance (in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	19.36	15.51	(3.85)
Direct Expenses	\$ 4,559,233	\$ 3,816,924	\$ (742,308)
Indirect Expenses	4,559,714	3,779,431	(780,283)
Other Non-Operating Expenses	-	-	-
Inc(Dec) in Fixed Assets	301,956	262,244	(39,712)
TOTAL BUDGET	\$ 9,420,903	\$ 7,858,599	\$ (1,562,304)

Background and Scope

NERC’s Compliance Assurance group works collaboratively with the eight Regional Entities to ensure effective implementation of risk-based compliance monitoring under the CMEP across the entire ERO Enterprise. This program ensures that Regional Entities monitor registered entities for compliance according to their own specific facts and circumstances, including the entity’s inherent risks, evaluation of controls in place to mitigate the inherent risks, and any aggravating factors. The CMEP provides for Regional Entities to develop customized compliance oversight plans (COPs) for each registered entity that identifies: 1) the standards or requirements to be monitored; 2) the monitoring processes (tools) for use by the Regional Entities, including compliance audits, self-certification, spot checking, investigations, self-reporting, periodic data submittals, and complaints; and 3) the frequency of monitoring. NERC and the Regional Entities ensure that inherent risk assessments (IRAs) for registered entities begin with a consistent framework and that Regional Entities’ implementation of the CMEP coalesce around best practices, data management procedures that address data reporting requirements, integrity, retention, security, and confidentiality.

The Compliance Assurance group’s responsibilities include but are not limited to the following major activities and functions:

- Oversight of the quality implementation of the risk-based compliance monitoring program;
- Development of the annual CMEP Implementation Plan (IP);

- Oversight of the use of necessary compliance-related processes, procedures, IT platforms, tools, and templates;
- Development and delivery of education and training for ERO Enterprise staff;
- Critical Infrastructure Protection (CIP) Version 5 activities related to education programs that support industry compliance and the integration of risk assessment and internal controls;
- CIP-014-1 training and outreach activities related to effective implementation of the Physical Security Reliability Standard;
- Coordination with the NERC Standards department for standard development to assist in the smooth transition for standards from development to enforceability;
- Support for Regional Entity and industry committees, working groups, and task forces, such as the NERC Compliance and Certification Committee; and
- Industry training for every Reliability Standard approved by FERC.

Stakeholder Engagement and Benefit

NERC continues to promote the Regional Entities' development of customized COPs for registered entities. As the risk-based compliance monitoring approach was implemented in 2015 and 2016, Regional Entities worked closely with stakeholders to develop IRAs and appropriately scope compliance monitoring activities. As this process matures in 2017, Regional Entities will continue to develop customized uses of compliance monitoring tools and frequency of monitoring for each registered entity, based on its IRA. Additionally, NERC continues to promote registered entities' development of effective compliance programs and internal controls, which may provide a benefit in the development of their COPs.

Compliance Assurance continues to work closely with the standard development program to provide compliance information, statistics, and perspectives to drafting teams fostering the development of standards that provide an increased reliability benefit and clarify compliance risks. This collaboration with industry and Standards department staff will occur early in the standard development process by providing draft compliance monitoring guidance, including information on how compliance with draft standards will be determined, as well as input to the drafting teams on the auditability and enforceability of the draft standards. This will ensure that ERO Enterprise tools used in the auditing process, such as the reliability standards auditing worksheet (RSAW), do not expand or modify standards requirements.

NERC also continues to provide industry-focused outreach events and webinars on the ERO Enterprise's approaches to risk-based CMEP activities. The ERO Enterprise staff will continue its webinar series providing guidance on standards and requirements associated with the 2017 risk elements identified for consideration for compliance monitoring.

Key Efforts Underway

Regional Entity Oversight for Risk-Based Compliance Monitoring

Consistent with the goals and objectives set forth in the strategic plan, NERC will continue to implement risk-based compliance monitoring and enforcement as part of its stated objectives of ensuring BES reliability, improving the efficiency and effectiveness of NERC and Regional Entity compliance and enforcement operations, focusing on identified risks and reducing unnecessary burdens on registered entities.

CIP Compliance and Transition

NERC and the Regional Entities continue to manage the smooth implementation of compliance activities for CIP Version 5 and subsequent enhancements to the CIP Standards by providing training, webinars, and other forms of outreach. The ERO Enterprise will continue to provide educational programs to support industry compliance and the integration of risk assessment and internal controls. In addition, NERC and the Regional Entities will continue supporting the successful implementation and monitoring of the physical security reliability standard.

2017 Goals and Deliverables

The Compliance Assurance group has several goals and deliverables that support the 2016-2019 *ERO Enterprise Strategic Plan*. Resources will be focused on building upon the framework and improvements implemented as a result of the risk-based compliance monitoring activities in 2016. Specific 2017 objectives for this group are:

- Continue to mature the risk-based compliance monitoring program, fully developing customized COPs for registered entities.
- Work closely with NERC's Enforcement and IT departments, as well as staff in the Regional Entities, on improvements to the existing compliance, reporting, analysis tracking system (C-RATS), and other compliance tools to support risk-based activities.
- Support the continued successful implementation of the CIP Version 5 reliability standards and subsequent enhancements that become effective in 2017 and beyond.
- Continue to monitor and support effective implementation and monitoring of the Physical Security Reliability Standard.
- Initiate a training program to support implementation of the common audit procedures for each Reliability Standard, integrating principles from the ERO Auditor Capabilities and Competencies Guide.
- Continue to integrate the standards and compliance functions for clear stakeholder implementation. Support this effort through common set of RSAWs, measures, or successors, for all standards. Initiate a compliance phase-in learning periods for new standards.

These 2017 activities are necessary to further implement risk-based compliance monitoring, including the CIP standards, and integrate the standards and compliance functions. A number of activities that support the implementation of the strategic risk-based reforms are intended to reduce regulatory burden by focusing monitoring according to each registered entity's potential impact on the BPS.

Resource Requirements

Personnel

The 2017 FTE reduction set forth in the table at the end of this section reflects the reallocation of 2016 budgeted FTEs to other program areas to support key initiatives related to successful implementation and oversight of the risk-based CMEP.

Contractors and Consultants

Funds budgeted for outside consultants to assist in successful implementation of risk-based compliance monitoring have been reduced to \$50k. While at a significantly reduced level from the 2016 budget, some consultant resources continue to be needed to support the transformation of NERC's Compliance Monitoring and Enforcement Program to a risk-based design. In addition, the Information Technology budget includes funding for the maintenance of existing software tools supporting compliance assessment, registration, certification, and enforcement activities, as well as the investigation and

development of a business case for future tools supporting ERO Enterprise compliance assessment, registration, and certification and enforcement activities.

Statement of Activities and Fixed Assets Expenditures					
2016 Budget & Projection, and 2017 Budget					
COMPLIANCE ASSURANCE					
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 9,185,250	\$ 9,185,250	\$ (0)	\$ 7,713,879	\$ (1,471,371)
Assessment Stabilization Reserve - Penalties	\$ 235,174	\$ 235,174		144,334	(90,840)
Total NERC Funding	\$ 9,420,424	\$ 9,420,424	\$ (0)	\$ 7,858,213	\$ (1,562,212)
Third-Party Funding	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	479	4,710	4,231	386	(93)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 9,420,903	\$ 9,425,134	\$ 4,231	\$ 7,858,599	\$ (1,562,305)
Expenses					
Personnel Expenses					
Salaries	\$ 3,063,004	\$ 2,367,713	\$ (695,290)	\$ 2,509,618	\$ (553,386)
Payroll Taxes	205,979	159,939	(46,040)	163,335	(42,644)
Benefits	351,727	308,546	(43,180)	333,557	(18,170)
Retirement Costs	336,902	267,268	(69,634)	276,273	(60,629)
Total Personnel Expenses	\$ 3,957,612	\$ 3,103,467	\$ (854,145)	\$ 3,282,783	\$ (674,828)
Meeting Expenses					
Meetings	\$ 60,000	\$ 120,000	\$ 60,000	\$ 60,000	\$ -
Travel	276,343	322,000	45,657	276,343	-
Conference Calls	20,000	20,000	-	6,100	(13,900)
Total Meeting Expenses	\$ 356,343	\$ 462,000	\$ 105,657	\$ 342,443	\$ (13,900)
Operating Expenses					
Consultants & Contracts	\$ 200,000	\$ 115,000	\$ (85,000)	\$ 50,000	\$ (150,000)
Office Rent	-	-	-	-	-
Office Costs	44,779	38,880	(5,899)	141,198	96,419
Professional Services	-	-	-	-	-
Miscellaneous	500	500	-	500	-
Depreciation	-	-	-	-	-
Total Operating Expenses	\$ 245,279	\$ 154,380	\$ (90,899)	\$ 191,698	\$ (53,581)
Total Direct Expenses	\$ 4,559,233	\$ 3,719,847	\$ (839,386)	\$ 3,816,924	\$ (742,309)
Indirect Expenses	\$ 4,559,714	\$ 3,687,419	\$ (872,294)	\$ 3,779,431	\$ (780,283)
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 9,118,947	\$ 7,407,267	\$ (1,711,681)	\$ 7,596,355	\$ (1,522,592)
Change in Assets	\$ 301,956	\$ 2,017,868	\$ 1,715,912	\$ 262,244	\$ (39,712)
Fixed Assets					
Depreciation	-	-	-	-	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 301,956	\$ 191,574	(110,382)	262,244	(39,712)
Inc(Dec) in Fixed Assets (C)	\$ 301,956	\$ 191,574	\$ (110,382)	\$ 262,244	\$ (39,712)
TOTAL BUDGET (=B + C)	\$ 9,420,903	\$ 7,598,841	\$ (1,822,062)	\$ 7,858,599	\$ (1,562,305)
FTEs	19.36	15.11	(4.25)	15.51	(3.85)

Compliance Analysis, Certification and Registration

Compliance Analysis, Certification and Registration (in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	10.14	7.52	(2.62)
Direct Expenses	\$ 2,086,784	\$ 1,686,689	\$ (400,093)
Indirect Expenses	2,387,951	1,832,451	(555,499)
Other Non-Operating Expenses	-	-	-
Inc(Dec) in Fixed Assets	158,136	127,149	(30,988)
TOTAL BUDGET	\$ 4,632,871	\$ 3,646,289	\$ (986,581)

Background and Scope

The Compliance Analysis, Certification and Registration group is responsible for a range of requirements and activities embodied in Section 500 (Organization Registration and Certification) and Appendices 5A and 5B of the NERC Rules of Procedure. The group provides technical resource support to standards development, compliance monitoring, and enforcement and (1) ensures that all entities impacting the BES are registered commensurate with risk; (2) ensures that all RCs, TOPs, and BAs are certified; (3) conducts industry reliability assurance activities; and (4) ensures that compliance gaps identified in reportable events are assessed and addressed if appropriate. Specific activities of the group include:

- **Registration** – Identifies and registers BES users, owners, and operators who are responsible for compliance with reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and complying with all applicable reliability standards. Maintains the current registration for the entire ERO for entities as they take on and drop functional responsibilities.
- **Certification** – Evaluates and certifies the competency of reliability entities; i.e., those that perform certain key reliability functions, specifically the RC, BA, and TOP functions. Entities performing these three functions must be evaluated for having the necessary personnel, knowledge, facilities, programs, and other qualifications to carry out these important responsibilities, including demonstrating the ability to meet the requirements and sub-requirements of all of the reliability standards applicable to the reliability function(s). This also includes confirming through the certification review process that a reliability entity continues to have the qualifications mentioned above following planned material changes to that entity's operation.
- **Reliability Assurance** – Conducts reliability assurance activities, including:
 - **Reliability Assurance** – Conducts activities to reasonably assure the ERO that certain actions have been taken as reported in response to NERC Alerts or guidance to industry. An example of this is the NERC Alert on Right-of-Way Clearances, which is one of the 2015 ERO Enterprise high-priority risk projects.
 - **Oversight** – Provides oversight of Regional Entity implementation of regional registration, compliance, certification, investigation, complaint programs, and processes.
 - **Investigations** – Conducts non-public, confidential investigations to identify Possible Violations of NERC reliability standards in response to complaints, BES disturbances, or

other similar triggers. The Compliance Analysis, Certification and Registration staff participates on all Regional Entity-led investigations and observers as requested on FERC-led reliability investigations and inquiries.

- **Compliance evaluations** – Works closely with regional staff to confirm that qualified events and disturbances are evaluated against the relevant approved reliability standards and ensure formal compliance monitoring occurs if indicated. These analyses are also shared with FERC staff.
- **Complaints** – Addresses formal complaints that allege the violation of reliability standards, through a confidential process.

Key Efforts Underway

In 2014 and 2015, the Compliance Analysis, Certification and Registration group developed the risk-based Registration (RBR) design and registration criteria. FERC approved the design in 2015, in two orders issued March 15 and October 15, which approved the deactivation of the registered entity functions of Interchange Authorities (IAs), Load Serving Entities (LSEs) and Distribution Providers below 75 MW (DPs), as well as the creation of a NERC-led panel (Panel) to review entities for deregistration or applicability to a reduced number of standards. In 2016, the ERO Enterprise implemented the Panel. In 2017, the Panel will continue to review registration for individual entities and evaluate trends to determine emerging classes of similarly situated entities. In 2016, a review and identification of potential improvements in both the Registration and Certification programs is being undertaken. Improvements identified will be considered for implementation in 2017.

2017 Goals and Deliverables

The Compliance Analysis, Certification and Registration group has several goals and deliverables that support the 2016-2019 *ERO Enterprise Strategic Plan*. Resources will be focused on building upon the improvements identified in 2016. Specific 2017 objectives for this group are:

- Continue to mature the NERC-led Panel.
- Implement registration program improvements identified in the 2016 project, and conduct any additional actions identified by the project. Conduct training as necessary.
- Implement certification program improvements identified in the 2016 project and conduct training as necessary.

Resource Requirements

Personnel

No additional personnel are budgeted for 2017. The FTE count in the table at the end of this section reflects the 2016 merger of the Registration and Reliability Assurance groups.

Contractor Expenses

No contractor expenses are budgeted in 2017.

Section A — 2017 Business Plan and Budget Program Area and Department Detail

Statement of Activities and Fixed Assets Expenditures					
2016 Budget & Projection, and 2017 Budget					
COMPLIANCE ANALYSIS, CERTIFICATION and REGISTRATION					
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 4,509,458	\$ 4,509,458	\$ 0	\$ 3,576,122	\$ (933,336)
Assessment Stabilization Reserve - Penalties	\$ 123,162	\$ 123,162		69,980	(53,182)
Total NERC Funding	\$ 4,632,620	\$ 4,632,620	\$ 0	\$ 3,646,102	\$ (986,518)
Third-Party Funding	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	251	2,860	2,609	187	(64)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 4,632,871	\$ 4,635,480	\$ 2,609	\$ 3,646,289	\$ (986,582)
Expenses					
Personnel Expenses					
Salaries	\$ 1,410,333	\$ 1,218,102	\$ (192,231)	\$ 1,125,154	\$ (285,179)
Payroll Taxes	97,779	85,268	(12,512)	76,383	(21,396)
Benefits	184,238	188,834	4,596	174,014	(10,224)
Retirement Costs	157,451	138,134	(19,317)	126,651	(30,800)
Total Personnel Expenses	\$ 1,849,801	\$ 1,630,338	\$ (219,463)	\$ 1,502,203	\$ (347,598)
Meeting Expenses					
Meetings	\$ 4,000	\$ 3,000	\$ (1,000)	\$ 4,000	\$ -
Travel	155,146	149,000	(6,146)	155,146	-
Conference Calls	2,000	2,000	-	610	(1,390)
Total Meeting Expenses	\$ 161,146	\$ 154,000	\$ (7,146)	\$ 159,756	\$ (1,390)
Operating Expenses					
Consultants & Contracts	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ (50,000)
Office Rent	-	-	-	-	-
Office Costs	25,338	17,169	(8,169)	24,231	(1,106)
Professional Services	-	-	-	-	-
Miscellaneous	500	500	-	500	-
Depreciation	-	-	-	-	-
Total Operating Expenses	\$ 75,838	\$ 67,669	\$ (8,169)	\$ 24,731	\$ (51,106)
Total Direct Expenses	\$ 2,086,784	\$ 1,852,007	\$ (234,777)	\$ 1,686,689	\$ (400,094)
Indirect Expenses	\$ 2,387,951	\$ 2,142,657	\$ (245,294)	\$ 1,832,451	\$ (555,499)
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 4,474,734	\$ 3,994,664	\$ (480,071)	\$ 3,519,141	\$ (955,594)
Change in Assets	\$ 158,136	\$ 640,816	\$ 482,680	\$ 127,149	\$ (30,988)
Fixed Assets					
Depreciation	-	-	-	-	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 158,136	\$ 111,318	(46,818)	127,149	(30,988)
Inc(Dec) in Fixed Assets (C)	\$ 158,136	\$ 111,318	\$ (46,818)	\$ 127,149	\$ (30,988)
TOTAL BUDGET (=B + C)	\$ 4,632,871	\$ 4,105,982	\$ (526,889)	\$ 3,646,289	\$ (986,582)
FTEs	10.14	8.78	(1.36)	7.52	(2.62)

Compliance Enforcement

Compliance Enforcement (in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	12.22	13.16	0.94
Direct Expenses	\$ 2,225,938	\$ 2,371,347	\$ 145,410
Indirect Expenses	2,876,962	3,206,790	329,827
Other Non-Operating Expenses	-	-	-
Inc(Dec) in Fixed Assets	190,398	222,510	32,112
TOTAL BUDGET	\$ 5,293,298	\$ 5,800,647	\$ 507,350

Background and Scope

The Compliance Enforcement department is responsible for overseeing enforcement processes, the application of penalties or sanctions, and activities to mitigate and prevent recurrence of noncompliance with reliability standards. The Compliance Enforcement department works collaboratively with the eight Regional Entities to ensure consistent and effective implementation of the risk-based Compliance Monitoring and Enforcement Program. Importantly, the department also focuses on ensuring that the ERO Enterprise dedicates resources to the matters that pose the greatest risk to reliability.

The NERC Compliance Enforcement department performs its responsibilities by:

- Monitoring Regional Entities' enforcement processes and providing oversight over their outcomes to ensure due process, to identify best practices and process efficiency opportunities, and to promote consistency among Regional Entities' business practices;
- Collecting and analyzing compliance enforcement data and trends to assist with the identification of emerging risks and to help inform the development of enforcement policies and processes;
- Filing notices of penalty and other submittals associated with noncompliance discovered through Regional Entity compliance monitoring and enforcement activities;
- Processing and filing notices of penalty and other submittals associated with violations discovered through NERC-led investigations and audits;
- Collaborating with other NERC departments, including Compliance Assurance, Standards, Event Analysis, and Regional Entity Coordination; and
- Delivering training of the ERO Enterprise staff and registered entities, as well as supporting other outreach efforts.

The ERO Enterprise's enforcement jurisdiction is drawn from the Energy Policy Act of 2005 (the Act), which added section 215 to the Federal Power Act (FPA). Section 215 made compliance with electric reliability standards mandatory and authorized the creation of an ERO and Regional Entities to establish and enforce reliability standards. Under section 215(e)(1) of the FPA, NERC or a Regional Entity may impose a penalty on a user, owner, or operator of the BPS for a violation of a Reliability Standard approved by FERC. As the ERO, NERC has set forth Sanction Guidelines outlined in its Rules of Procedure that govern the ERO Enterprise's penalties and non-monetary sanctions for Reliability Standard violations. This document

provides information on the ERO Enterprise's enforcement philosophy, i.e., the ERO Enterprise's approach for assessing and resolving noncompliance while continuing to work to bring entities into compliance with applicable reliability standards.

ERO Enterprise Core Values and Guiding Principles

The ERO Enterprise's 2016-2019 Strategic Plan promotes the ERO Enterprise's core values and guiding principles, which are based on accountability and independence, responsiveness, fairness and inclusiveness, adaptation and innovation, excellence, efficiency, and integrity. These core values and guiding principles support the four pillars of the ERO Enterprise's efforts, namely, reliability, assurance, learning, and a risk-based approach.

Strategic Goals Related to Enforcement

Strategic Goal 2 provides that the ERO Enterprise shall:

[b]e a strong enforcement authority that is independent, without conflict of interest, objective and fair, and promote a culture of reliability excellence through risk-informed compliance monitoring and enforcement. The ERO Enterprise retains and refines its ability to use standards enforcement when warranted and imposes penalties and sanctions commensurate with risk. The ERO Enterprise retains and refines its ability to use reliability standards enforcement when warranted and imposes penalties and sanctions commensurate with risk.

The risk-based enforcement approach allows for the appropriate allocation of resources to the issues that pose a higher level of risk to the reliability of the BPS.

Guiding Enforcement Principles

The following principles serve as guidelines for the conduct and behavior of all involved in the ERO Enterprise enforcement program to ensure alignment with Strategic Goal 2 and the ERO Enterprise's core values.

Compliance Enforcement Authorities are independent, without conflict of interest, objective, and fair.

The ERO Enterprise strives to be a strong enforcement authority that is independent, without conflict of interest, objective, and fair. NERC and each of the Regional Entities has a code of conduct addressing the professional and ethical standards applicable to its personnel. Foremost among these standards is the requirement that no person work on a matter where that work may affect the person's financial interest. The ERO Enterprise also expects its personnel to conduct themselves professionally and respectfully when engaging with registered entities or other stakeholders. Personnel who do not meet these standards are subject to discipline, up to and including termination.

Enforcement program promotes culture of reliability excellence through a risk-based approach.

The ERO Enterprise's risk-based enforcement philosophy generally advocates reserving enforcement actions under section 5.0 of the Compliance Monitoring and Enforcement Program for those issues that pose a higher risk to the reliability of the BPS. The risk of a noncompliance is determined based on specific facts and circumstances, including any controls in place at the time of the noncompliance. The ERO Enterprise works with registered entities to ensure timely remediation of potential risks to the reliability of the BPS and prevent recurrence of noncompliance. The enforcement process allows parties to address risks collaboratively and promote increased compliance and reliability through improvement of programs and controls at the registered entities.

The ERO Enterprise applies a presumption of non-enforcement treatment of minimal risk noncompliance to entities with demonstrated internal controls who are permitted to self-log such minimal risk issues.

Regarding other issues posing a minimal risk, NERC and the Regional Entities may exercise appropriate judgment whether to initiate a formal enforcement action or resolve the issue outside of the formal enforcement processes. The availability of streamlined treatment of minimal risk noncompliance outside of the formal enforcement process encourages self-inspection by registered entities. When self-identified minimal risk noncompliance is more than likely not going to be subject to a financial penalty, registered entities are encouraged to establish more robust internal controls for the detection and correction of noncompliance. This approach allows the ERO Enterprise to oversee the activities of registered entities in a more efficient manner and to focus resources where they result in the greatest benefit to reliability. In this context, efficiency does not necessarily mean less time or effort. Rather, it is using the requisite time, knowledge, and skills required for each circumstance. In addition, this approach allows the ERO Enterprise to continue to provide clear signals to registered entities about identified areas of concern and risk prioritization, while maintaining existing visibility into potential noncompliance and emerging areas of risk. Outcomes for noncompliance are based on the risk of a specific noncompliance and may range from streamlined, non-enforcement processes, to significant monetary penalties.

Enforcement actions are used and penalties are imposed when warranted, commensurate with risk.

An element of a risk-based approach to enforcement is accountability of registered entities for their noncompliance. No matter the risk of the noncompliance, the registered entity still bears the responsibility of mitigating that noncompliance. Based on the risk, facts, and circumstances associated with that noncompliance, the Regional Entity decides on an appropriate disposition track, inside or outside of an enforcement action, as described above, and whether a penalty is appropriate for the noncompliance.

Penalties are generally warranted for serious risk violations (e.g., uncontrolled loss of load, CIP program failures) and for when repeated noncompliance constitutes an aggravating factor. In addition to the use of significant penalties to deter undesired behavior, the ERO Enterprise also incentivizes desired behaviors.¹⁸ Specifically, Regional Entities may offset penalties to encourage valued behavior. Factors that may mitigate penalty amounts include registered entity cooperation, accountability (including admission of violations), culture of compliance, and self-identification of noncompliance.

Regional Entities may also grant credit in enforcement determinations for certain actions undertaken by registered entities for improvements in addition to mitigating factors. For example, Regional Entities may consider significant investments in reliability made by registered entities, beyond those otherwise planned and required, as an offset for proposed penalties in enforcement determinations. Regional Entities do not award credits or offsets for actions or investments undertaken by a registered entity that are required to mitigate noncompliance.

NERC engages in regular oversight of Regional Entity enforcement activities to confirm that the Regional Entities have followed the CMEP. This oversight evaluates the consistency of disposition methods, including assessment of a penalty or sanction, with previous resolutions of similar noncompliance involving similar circumstances. The NERC Board of Trustees Compliance Committee (the Compliance Committee) considers the recommendations of NERC staff regarding approval of Full Notices of Penalty and monitors the handling of noncompliance through the streamlined disposition methods of Spreadsheet NOPs, FFTs, and Compliance Exceptions.

¹⁸ As required by §215(e)(96) of the Federal Power Act and the Commission's regulations at 18 C.F.R. §39.7(g), the Sanction Guidelines, Appendix 4B to the NERC Rules of Procedure, provide that penalties and sanctions imposed for the violation of a Reliability Standard shall bear a reasonable relation to the seriousness of the violation while also reflecting consideration of the other factors specified in the Sanction Guidelines. The Sanction Guidelines are available on [NERC's website](#).

Actions are timely and transparent.

The ERO Enterprise maintains an elevated level of transparency regarding enforcement matters. NERC's Rules of Procedure (including the CMEP and Sanction Guidelines) and program documents are available to the public.¹⁹ NERC also posts information on enforcement actions on a monthly basis.²⁰ Moreover, information on the efficiency of the enforcement program is available to regulators, industry stakeholders and the public on a quarterly basis.²¹

Noncompliance information is used as an input to other processes.

When developing risk elements, NERC annually identifies and prioritizes risks to the reliability of the BPS, taking into account factors such as compliance findings, event analysis experiences, and data analysis. In addition, Regional Entities consider factors such as noncompliance information when conducting an IRA of a registered entity. The ERO Enterprise also uses noncompliance information as part of a feedback loop to the standards development process. This allows enhanced reliability standards through appropriate information flows from compliance monitoring and enforcement to the standards drafting process and other NERC programs. NERC regularly provides analysis and lessons learned from noncompliance information to industry stakeholders and the public.²²

Stakeholder Engagement and Benefit

Over the past few years, NERC and the Regional Entities have made substantial progress in reducing the number of instances of noncompliance remaining to be evaluated and processed. The ERO Enterprise has held registered entities accountable for instances of noncompliance that posed a risk to the reliability of the BPS while ensuring that enforcement actions are timely and transparent. NERC promotes a culture of reliability excellence by examining registered entities' internal compliance programs and considering them as mitigating factors in penalty determinations.

Processing Efficiencies

In an effort to improve the efficiency of enforcement processing throughout the ERO Enterprise, NERC developed a series of key enforcement processing metrics, which are tracked and analyzed throughout the year. In addition, since 2012, NERC has established goals to reduce the number of older violations remaining to be processed. Working with NERC, the Regional Entities invested significant time and resources in processing the older violations. As a result, the ERO Enterprise as a whole reduced the number of older violations substantially.

As of the end of 2015, there were three hundred twenty (320) violations older than 24 months. Sixty-four (64) of these violations stemmed from 9 non-federal registered entities and two hundred fifty-six (256) violations derived from 13 federal registered entities. The vast majority of the violations have either been fully mitigated or have mitigation plans in progress.

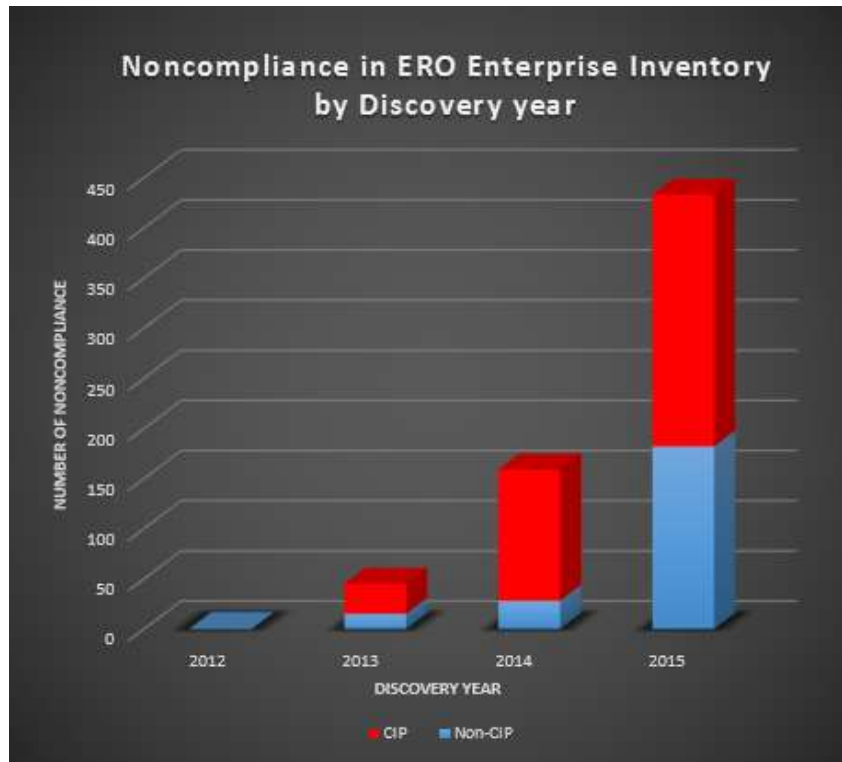
The targets and thresholds for efficiency-related processing metrics remain the same in 2016. This is because the ERO Enterprise has reached a stable state with regard to enforcement processing. Achieving this state has only been possible due to the hard work of the Regional Entities and NERC Enforcement in eliminating the backlog of noncompliances and implementing new enforcement processes and procedures.

¹⁹ [The NERC Rules of Procedure](#)

²⁰ [Posted compliance exceptions, Spreadsheet Notices of Penalty, and Full Notices of Penalty](#)

²¹ [Quarterly enforcement program](#)

²² [Quarterly compliance reports](#)



Continued Outreach Efforts in 2016 and Beyond

In 2016, NERC and the Regional Entities will continue to conduct outreach activities that focus on self-logging, compliance exceptions, risk elements, CIP Version 5, Inherent Risk Assessments, and internal controls. NERC plans to use existing industry events, such as the Standards and Compliance workshops and industry webinars, to provide information on compliance monitoring and enforcement activities.

In addition, NERC and the Regional Entities will conduct industry outreach on reliability standards approved by FERC in 2016. These events will focus on the approved new standards or modifications to existing standards along with implementation timelines. Although most events will take place via webinar, some events will be delivered as workshops.

Risk-Based CMEP Implementation

On February 19, 2015, FERC approved the implementation of the risk-based CMEP.²³ The goal of the risk-based CMEP is to shift the compliance and enforcement approach from one in which all instances of noncompliance are evaluated as Possible Violations to an approach that strengthens management practices and reserves the enforcement process for instances of noncompliance that have been found to pose a greater risk to reliability. The programs discussed below, in conjunction with compliance outreach encouraging the development of strong management practices, will advance NERC's progress toward this goal.

Compliance Exceptions

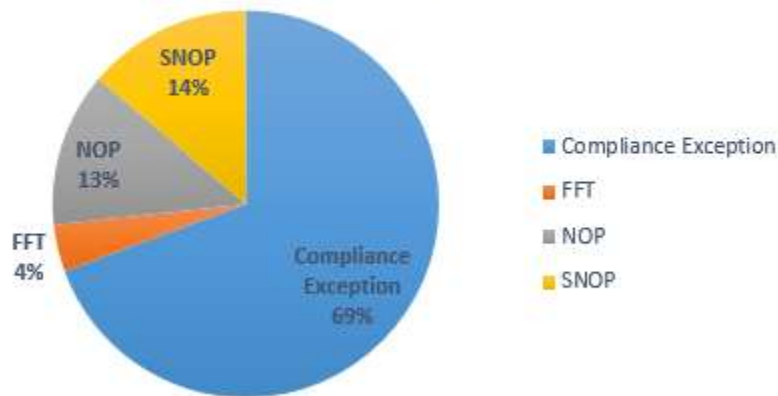
A compliance exception is an alternative disposition method and is not a dismissal, Find, Fix, Track (FFT), or Notice of Penalty. It is essentially the exercise of enforcement judgment with respect to a noncompliance regardless of its method of discovery (self-report, self-certification, compliance audit

²³ *North American Electric Reliability Corp., Order on Electric Reliability Organization Reliability Assurance Initiative and Requiring Compliance Filing*, 150 FERC ¶ 61,108 (2015).

finding, etc.). The process of identifying and recording a compliance exception builds on the FFT program. The ERO Enterprise uses judgment in the process by taking into account the facts and circumstances of the noncompliance, the risk posed by the noncompliance to the reliability of the BPS, and the deterrent effect of an enforcement action or penalty, among other things. Compliance exception treatment is available for issues that pose a minimal risk to the BPS that would be mitigated within 12 months of the date the compliance exception is posted.

In 2013 and 2014, the use of compliance exceptions (as the alternative disposition for noncompliance posing a minimal risk to the reliability of the BPS) was limited to allow the testing of the new process. In 2015, this disposition track became available throughout the ERO Enterprise. Use of compliance exceptions as a disposition track has increased steadily. Minimal risk issues continue to be the majority of the caseload. Regional Entities have continued to use the compliance exception disposition method and increasingly relied upon it for minimal-risk issues. The increase in compliance exception use has corresponded with a decline in the use of the FFT disposition track.

Disposition Method for Minimal Risk Issues in 2015



Self-Logging

NERC and Regional Entity enforcement staff also have worked closely with stakeholders to identify potential improvements to self-reporting and other enforcement processes. A number of improvements were designed and implemented in 2013 and 2014. The self-logging program allows registered entities that have demonstrated effective management practices to keep track of minimal-risk noncompliance (and related mitigation) on a log that is periodically reviewed by the Regional Entity.

In November 2015, FERC approved the ERO Enterprise Self-Logging Program document, which includes the method to evaluate eligibility.²⁴ The program is available to any registered entity that would like to be evaluated by its Regional Entity in accordance with the program requirements. Self-logging became available to all registered entities that met the program qualifications at the start of 2015, and 42 registered entities have been approved by Regional Entities to self-log as of December 31, 2015. NERC is conducting a review of the self-logging program, in coordination with FERC staff, during 2016.

²⁴ *North American Electric Reliability Corporation*, 153 FERC ¶ 61,130 (2015). The *ERO Self-Logging Program* document is available on [NERC's website](#)

NERC Oversight of Risk-Based CMEP Implementation

For 2016, ensuring the successful implementation of NERC's risk-based CMEP remains the priority of Compliance Enforcement's oversight plan. As part of that oversight and in addition to offering regular feedback to the Regional Entities, NERC will continue to identify areas for improvement or promoting consistency through training, guidance, or adjustment the following year. NERC also produces an ERO Enterprise CMEP annual report, which includes an assessment of the risk-based CMEP implementation. NERC expects to publish that report during Q1 2017.

NERC performs oversight of the Regional Entities' enforcement programs primarily through the review of the processes, supporting evidence, and other information provided by the Regional Entities over the course of focused engagements of program areas that are scheduled throughout the year. NERC communicates the recommendations and findings to the Regional Entities to help the ERO Enterprise develop responsive strategies and solutions to potential issues and ensure uniform and consistent implementation of the CMEP. Such recommendations and findings also help identify priority areas for training of ERO Enterprise staff during the year.

Other Key Enforcement Efforts Underway

Regional Entity Training

NERC Enforcement will provide training to Regional Entity staff on the most important elements of risk-based enforcement, including risk assessment of noncompliance and the determination of appropriate penalties and sanctions for noncompliance. NERC is developing this training based on observations from its oversight activities of Regional Entity settlement agreements, as well as the process reviews described above.

2017 Goals and Deliverables

Specific 2017 objectives for the Compliance Enforcement department include:

- Refining and improving the risk-based CMEP processes;
- Implementing in a transparent manner an ERO Enterprise enforcement philosophy that is risk focused and drives desired behaviors by registered entities;
- Expanding the feedback loop of information from Enforcement to Standards and other program areas; and
- Working closely with NERC's Compliance Assurance and Information Technology departments, as well as staff in the Regional Entities, regarding the evaluation of improvements in the existing compliance, reporting, analysis tracking system, and other compliance tools to support risk-based activities.

Resource Requirements

Personnel

The additional Enforcement staffing in 2017 is to provide resources to support a proposed internship program.

Contractor Expenses

No Consultant and Contractor expenses are budgeted in Compliance Enforcement; however, the Information Technology budget includes funding for the maintenance, evaluation, and development of enterprise tools supporting technical feasibility exceptions, registration, and enforcement activities.

Section A — 2017 Business Plan and Budget Program Area and Department Detail

Statement of Activities and Fixed Assets Expenditures					
2016 Budget & Projection, and 2017 Budget					
COMPLIANCE ENFORCEMENT					
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 5,144,612	\$ 5,144,612	\$ 0	\$ 5,677,854	\$ 533,242
Assessment Stabilization Reserve - Penalties	148,384	148,384		122,465	(25,919)
Total NERC Funding	\$ 5,292,996	\$ 5,292,996	\$ 0	\$ 5,800,319	\$ 507,323
Third-Party Funding	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	302	3,682	3,380	327	25
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 5,293,298	\$ 5,296,678	\$ 3,380	\$ 5,800,647	\$ 507,349
Expenses					
Personnel Expenses					
Salaries	\$ 1,629,233	\$ 1,755,799	\$ 126,566	\$ 1,790,859	\$ 161,627
Payroll Taxes	109,485	113,380	3,895	117,205	7,720
Benefits	222,877	176,404	(46,473)	184,106	(38,771)
Retirement Costs	181,419	196,458	15,039	198,694	17,275
Total Personnel Expenses	\$ 2,143,014	\$ 2,242,042	\$ 99,028	\$ 2,290,865	\$ 147,851
Meeting Expenses					
Meetings	\$ 2,500	\$ 2,500	\$ -	\$ 2,500	\$ -
Travel	56,736	55,000	(1,736)	56,736	-
Conference Calls	1,200	2,000	800	366	(834)
Total Meeting Expenses	\$ 60,436	\$ 59,500	\$ (936)	\$ 59,602	\$ (834)
Operating Expenses					
Consultants & Contracts	\$ -	\$ -	\$ -	\$ -	\$ -
Office Rent	-	-	-	-	-
Office Costs	21,866	14,983	(6,883)	20,379	(1,486)
Professional Services	-	-	-	-	-
Miscellaneous	500	1,000	500	500	-
Depreciation	122	122	-	-	(122)
Total Operating Expenses	\$ 22,488	\$ 16,105	\$ (6,383)	\$ 20,879	\$ (1,608)
Total Direct Expenses	\$ 2,225,938	\$ 2,317,647	\$ 91,708	\$ 2,371,347	\$ 145,409
Indirect Expenses	\$ 2,876,962	\$ 2,989,470	\$ 112,507	\$ 3,206,790	\$ 329,827
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 5,102,901	\$ 5,307,116	\$ 204,216	\$ 5,578,137	\$ 475,236
Change in Assets	\$ 190,398	\$ (10,438)	\$ (200,836)	\$ 222,510	\$ 32,112
Fixed Assets					
Depreciation	(122)	(122)	-	-	122
Computer & Software CapEx	-	107,000	107,000	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 190,520	\$ 155,313	(35,207)	222,510	31,990
Inc(Dec) in Fixed Assets (C)	\$ 190,398	\$ 262,191	\$ 71,793	\$ 222,510	\$ 32,112
TOTAL BUDGET (=B + C)	\$ 5,293,298	\$ 5,569,308	\$ 276,009	\$ 5,800,647	\$ 507,349
FTEs	12.22	12.25	0.03	13.16	0.94

Reliability Assessment and System Analysis

Reliability Assessments and System Analysis (in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	11.75	14.10	2.35
Direct Expenses	\$ 3,778,595	\$ 3,986,965	\$ 208,370
Indirect Expenses	2,767,102	3,435,846	668,744
Other Non-Operating Expenses	-	-	-
Inc(Dec) in Fixed Assets	(202,780)	112,782	315,563
TOTAL BUDGET	\$ 6,342,917	\$ 7,535,594	\$ 1,192,677

Background and Scope

The Reliability Assessment and System Analysis (RASA) department carries out the ERO's statutory responsibility to conduct assessments of the reliability and adequacy of the BES. These assessments are used to provide insight and guidance about reliability risks. These insights provide a foundation for the development of new reliability standards or modifications to mandatory reliability standards, or other initiatives, such as guidelines, alert(s), webinars, etc., all focused on enhancing overall reliability. The majority of the activities in the RASA department directly address the risk priorities established by the Reliability Issues Steering Committee. In particular, the risks pertaining to changing resources and planning noted in the 2015 RISC report are of particular importance to the assessment and analysis work being performed in RASA.

NERC staff works closely with stakeholders on creating assessment development schedules, including schedules with adequate stakeholder review at every level. All NERC reliability assessments have a sponsoring technical committee, subcommittee, or other subgroup. The Long-Term and Seasonal assessments are conducted by the Reliability Assessment Subcommittee, and ultimately endorsed by the Planning Committee. Special Assessments often require a separate and specialized task force or advisory group to help construct, conduct, and produce special topic assessments such as the CPP assessments, Natural Gas interdependency assessment, and distributed energy report.

The department focuses on developing a technical framework and understanding the emerging reliability risks facing the industry. It also provides guidance and insights to stakeholders across North America. The department relies on its own engineering and analysis expertise, as well as Regional Entity and stakeholder resources. RASA is responsible for:

- Independent reliability assessments on the overall reliability and adequacy of the BES and associated emerging reliability risks that could impact the short-, mid- and the long-term (e.g., 10-year) planning horizons, and other reliability issues requiring an in-depth analysis.
- Support for the development and improvement of long-term sustainable interconnection-based power flow, dynamic, and load models that exhibit the accuracy and fidelity reflecting actual BES reliability performance and dynamic conditions.

- Interconnection-wide analysis of steady-state and dynamic conditions, including frequency, Essential Reliability Services, stability, and oscillatory behavior aspects.
- Advancement of industry and the ERO’s understanding of power system characteristics and behaviors by gathering larger Phasor Measurement Unit (PMU) datasets for advanced data analytics and modeling improvements.
- Assurance oversight that the BES electrical elements necessary for its reliable operation are identified, requiring the elements to follow the appropriate NERC Reliability Standards.
- Establishment of reliability leadership and consistent, technically sound guidance and recommendations that position industry and policy makers to enhance reliability through effective outreach and communications.

Stakeholder Engagement and Benefit

RASA works with industry leaders to create a reliability strategy that is relevant, timely, and effective to address the most important reliability risks. This effort includes reviewing and addressing key priority risks identified by NERC’s Reliability Issues Steering Committee (RISC); synthesizing key information identified through analysis and assessment efforts; extracting and prioritizing the associated reliability risks; sharing and integrating risk analysis insights across the ERO Enterprise; and translating that knowledge into actionable guidance and recommendations for NERC management, the Board, and entities, along with state, federal, and provincial policy makers.

In addition, the ERO monitors the ongoing and historic reliability performance of the BES through data gathered to analyze historic trends. The ERO provides reports and recommendations regarding the anticipated conditions that could impact the reliability, security, and stability of the BPS to the industry, Regional Entities, regulatory entities, and other designated entities.

2017 Enhancements

Enhancements in the 2017 BP&B are a reflection of the strategic goals and objectives identified in the Electric Reliability Organization Enterprise Strategic Plan 2016–2019. The following enhancements are attributable to Strategic Goal #4²⁵ and the objectives and valued outcomes noted within Strategic Goal #4a:

- Improve resource adequacy assessments with increased probabilistic and risk analysis
- Conduct interconnection-wide analysis to support NERC’s reliability assessments and improve industry planning
- Increase technical analysis and assessment focus on natural gas, wind, and solar resource and fuel availability
- Develop technical references and guidelines that advance and improve reliability using new technologies
- Develop quality/fidelity assessments of interconnection models

Key RASA Efforts Underway

RASA focuses its efforts in the following key areas:

²⁵ ERO Enterprise identifies, evaluates, studies, and independently assesses emerging risks to reliability.

Reliability Assessment

Reliability assessments serve to evaluate the expected reliability of the BES through extensive deterministic and probabilistic analyses to identify potential reliability risks and potential mitigation approaches. These reviews include both evaluations at the edge of the planning horizon, as well as assessments of the anticipated performance during the short-term (12- to 18-month outlook). These analyses involved planned and anticipated changes to generation resources, transmission infrastructure, and load behavior compared to base-line needs of the system to remain reliable and formulate recommendations and related guidance. This assessment is often by completed by examining special scenarios and unique situations within the BES. These analyses provide a technical platform for important policy discussions on challenges facing the interconnected BES, as well as focused recommendations on mitigation to improve overall reliability or lessen reliability risks.

By identifying and quantifying emerging reliability issues, NERC is able to provide risk-informed recommendations and support a learning environment for industry to address emerging risks and pursue improved reliability performance. These efforts are expected to expand to assess the impacts on reliability from the changing resource mix, reliability behavior of resources, distributed energy resources, and loads. Many resource additions are asynchronous and energy-limited, requiring assessment of a substantial number of scenarios rather than just seasonal peak conditions. Reliability assessments must therefore include a greater focus on probabilistic approaches, assessing the sufficiency of essential reliability services as well as focusing seasonal assessments on short-term horizons to encompass more than peak condition reserve margin analyses.

Key assessments include:

- Long-Term Reliability Assessment (supplemented by the Probabilistic Assessment)
- Summer and Winter Reliability Assessments (condensed report)
- Short-Term and Special Reliability Assessments
 - a. Between one and four short-term reliability assessments are expected, driven by the need to assess emerging short-term risks to reliability
 - b. Special Assessments are selected based on high-priority/high-risk issues that require an independent assessment from the ERO.

A significant ongoing effort anticipated to involve RASA, Regional Entity staff, and stakeholders focuses on the continued development of effective Essential Reliability Services. These efforts are expected to lead to a broad set of recommendations that will culminate with defined elements, an evaluation of initial metrics and data compilation of actual performance, and refinement about the ongoing assessment of Essential Reliability Services measures.

System Analysis

Understanding the technical behavior of the North American grid is the foundation for identifying crucial aspects of performance that are important for sustaining overall reliability. NERC's understanding of grid behavior is achieved through a comprehensive evaluation of system behavior through constant observation and study, analytic simulations, and forensic analysis of system disturbances. Methodically comparing the simulation results of powerflow and system dynamic performance to actual system behavior improves models critical for industry use to simulate system conditions as well as enables RASA to gain insights to enhance predictive system analysis.

The ERO Enterprise RASA team also supports the following objectives:

- Continue leading and improving NERC’s analytical capabilities to address a broad range of engineering topics,
- Support NERC Reliability Standards development with subject matter expertise,
- Support and lead technical analysis of emerging risks requiring advanced analytics and interconnection-wide assessment,
- Detailed forensic analysis of significant system disturbances

Key focus areas:

- PMU Measurement, use, and analysis improvements
 - Synchrophasor technology
 - Power plant model verification
 - Oscillation analysis
- Frequency Response Analysis, Interconnection Frequency Response Obligation Analysis, and forward-looking reliability assessment
- Interconnection-Wide Model Building Designation and Criteria administration
- Analysis of TPL Footnote 12
- Load and distributed energy resource modeling
- Event analysis – simulation and forensic analysis of major events
- Reliability Standards support
- BES Exception and Self-Determined Notification Processing

Further, RASA will continue to work closely with other organizations, including but not limited to the Electric Power Research Institute (EPRI), the Department of Energy (DOE), the Institute of Electrical and Electronic Engineers (IEEE), the Institute of Nuclear Power Operations (INPO), the North American Transmission Forum (NATF), the North American Generation Forum (NAGF), and the Canadian Electricity Association (CEA). RASA collaborates with these groups on a number of fronts, including geomagnetic disturbance (GMD), vegetation management, and variable generation integration. RASA will continue working with the Interstate Natural Gas Association of America (INGAA) and the Natural Gas Supply Association (NGSA) regarding studies pertaining to the interdependency of gas and electric systems.

2017 Goals and Deliverables

In 2017, RASA will seek to achieve several specific goals and objectives as part of the strategic focus of the ERO Enterprise (Strategic Goal 4a):

1. Pioneer implementation of advanced reliability assessment and system analysis methods to address the changing nature of the grid. Issue reliability assessment reports, guidelines, and recommendations to address high priority evolving performance trends and address emerging risks to reliability.
 - a. Expand the use of probabilistic assessment tools across the ERO and gain consistency in approach

- b. Special assessments on identified high-priority risks (from RISC prioritization and recommendations)²⁶
 - Changing resource mix and maintaining Essential Reliability Services
 - Increased penetration of Distributed Energy Resources
 - Increasing dependency on generation fueled by natural gas
 - Broaden understanding of inter-area and local system oscillations in all interconnections and their potential impact on interconnection reliability.
 - c. As part of its oversight of the Regional Entities, build and sustain an Enterprise RAPA team (ERO-RAPA) that encompasses the consistent development and implementation of risk-informed approaches and structured methods to identify and address reliability risks.
2. Provide the basis for industry to meet regulatory requirements of the NERC Reliability Standard BAL-003-1, “Frequency Response and Frequency Bias Setting;” exploratory understanding of frequency response; support interconnection-wide studies of frequency response
 - a. Frequency Response Annual Analysis and BAL-003 FERC filing
 - b. Determination of Interconnection Frequency Response Obligation (IFRO) and Balancing Authority Frequency Reporting Obligation values
 3. Support NERC Reliability Standard development by providing subject matter expertise.
 4. Provide support and leadership to (1) the Planning Committee and (2) standing committees’ subcommittees, working groups, and task forces serving the standing committees. Support the development of technical reference documents and Reliability Guidelines with support of the PC leadership and established in the annual PC work plan
 5. As necessary, support major event investigations, analyses, and reporting of findings, recommendations, and lessons learned to improve reliability.
 6. Provide feedback to interconnection-wide model-building groups on improvements to system model quality and fidelity.
 7. Assist in the development of approaches to registration and provide input to NERC staff in support of the development of CMEP risk elements, as well as support and lead the BES Definition Exception Process.

Resource Requirements

Personnel

Additional personnel were allocated to RASA in 2016 to address increased resource demands associated with ongoing reliability assessment, performance analysis, and system analysis activities.

Contractor Expenses

The total contractor and consultant expenses for the RASA department are projected at \$525k, a decrease of \$50k from the 2016 budget. Further information is provided on Exhibit C.

²⁶ [RISC Recommendations to the NERC Board of Trustees](#)

Section A — 2017 Business Plan and Budget Program Area and Department Detail

Statement of Activities and Fixed Assets Expenditures					
2016 Budget & Projection, and 2017 Budget					
RELIABILITY ASSESSMENTS and SYSTEM ANALYSIS					
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 6,135,872	\$ 6,135,872	0	\$ 7,339,030	\$ 1,203,158
Assessment Stabilization Reserve - Penalties	142,718	142,718		131,213	(11,505)
Total NERC Funding	\$ 6,278,590	\$ 6,278,590	\$ 0	\$ 7,470,243	\$ 1,191,653
Third-Party Funding	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	50,000	-	(50,000)	50,000	-
Workshops	15,000	15,000	-	15,000	-
Interest	462	3,634	3,172	351	(111)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 6,344,052	\$ 6,297,224	\$ (46,828)	\$ 7,535,594	\$ 1,191,542
Expenses					
Personnel Expenses					
Salaries	\$ 1,826,951	\$ 2,080,813	\$ 253,862	\$ 2,247,826	\$ 420,875
Payroll Taxes	122,096	137,089	14,993	142,919	20,823
Benefits	213,866	240,723	26,857	263,230	49,364
Retirement Costs	203,274	229,385	26,111	246,609	43,335
Total Personnel Expenses	\$ 2,366,187	\$ 2,688,010	\$ 321,823	\$ 2,900,585	\$ 534,398
Meeting Expenses					
Meetings	\$ 109,000	\$ 109,000	\$ -	\$ 74,000	\$ (35,000)
Travel	208,338	249,000	40,662	208,338	-
Conference Calls	17,280	17,280	-	5,270	(12,010)
Total Meeting Expenses	\$ 334,618	\$ 375,280	\$ 40,662	\$ 287,608	\$ (47,010)
Operating Expenses					
Consultants & Contracts	\$ 575,000	\$ 442,425	\$ (132,575)	\$ 525,000	\$ (50,000)
Office Rent	-	-	-	-	-
Office Costs	116,266	138,523	22,257	147,652	31,386
Professional Services	-	-	-	-	-
Miscellaneous	500	500	-	500	-
Depreciation	386,024	282,034	(103,991)	125,621	(260,403)
Total Operating Expenses	\$ 1,077,790	\$ 863,482	\$ (214,308)	\$ 798,773	\$ (279,018)
Total Direct Expenses	\$ 3,778,595	\$ 3,926,772	\$ 148,177	\$ 3,986,965	\$ 208,370
Indirect Expenses	\$ 2,767,102	\$ 3,218,866	\$ 451,764	\$ 3,435,846	\$ 668,744
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 6,545,697	\$ 7,145,638	\$ 599,940	\$ 7,422,812	\$ 877,114
Change in Assets	\$ (201,645)	\$ (848,413)	\$ (646,768)	\$ 112,782	\$ 314,428
Fixed Assets					
Depreciation	(386,024)	(282,034)	103,991	(125,621)	260,403
Computer & Software CapEx	-	53,580	53,580	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 183,244	\$ 167,231	\$ (16,013)	238,403	\$ 55,159
Inc(Dec) in Fixed Assets (C)	\$ (202,780)	\$ (61,222)	\$ 141,558	\$ 112,782	\$ 315,563
TOTAL BUDGET (=B + C)	\$ 6,342,917	\$ 7,084,415	\$ 741,498	\$ 7,535,594	\$ 1,192,677
FTEs	11.75	13.19	1.44	14.10	2.35

Performance Analysis

Performance Analysis (in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	6.92	9.40	2.49
Direct Expenses	\$ 1,838,245	\$ 2,459,356	\$ 621,111
Indirect Expenses	1,629,647	2,290,564	660,917
Other Non-Operating Expenses	-	-	-
Inc(Dec) in Fixed Assets	107,919	158,936	51,017
TOTAL BUDGET	\$ 3,575,811	\$ 4,908,855	\$ 1,333,043

Background and Scope

The Performance Analysis (PA) group provides insight and guidance about reliability risks and areas of concern based on analysis of historic system performance. This includes identifying potential risks of concern related to system, equipment, entity, and organizational performance that may indicate a need to develop remediation strategies, action plans, or data used to create, revise or retire reliability standards or consider new reliability standards. The department focuses on developing a technical framework and understanding the reliability risks facing the industry.

Stakeholder Engagement and Benefit

The ERO monitors the reliability performance of the BES in North America through data gathered to analyze historic trends. The ERO provides reports and recommendations regarding the anticipated conditions that could impact the reliability, security, and stability of the BPS to the industry, Regional Entities, regulatory entities, and other designated entities.

The ERO works with industry leaders to create a reliability strategy that is relevant, timely, and effective at addressing the most important reliability risks. This effort includes PA's contribution (both in data gathering and in statistical analysis of data, trends, and events) toward the ERO's understanding key information identified through analysis and assessment efforts; extracting and prioritizing the associated reliability risks from that information; sharing and integrating those risk analysis insights across the ERO Enterprise; and translating that knowledge into actionable guidance and recommendations for NERC management, the Board, and entities, and state, federal, and provincial policy makers. This offers stakeholders an open and transparent approach for the development of NERC's reliability strategy, ultimately ensuring the ERO is accountable to industry, regulators, and the public at large.

Key Efforts Underway

Performance Analysis collects transmission outage, generator performance, demand response, and protection and control misoperation data in a common format using the various industry databases. This data is used to develop and report on grid metrics that analyze outage frequency, duration, causes, and many other factors related to transmission and generator performance as well as automatic power system protection and control effectiveness. In addition to collecting simple equipment availability data, detailed information about individual outage events is collected that, when analyzed at the regional and NERC levels, provides data that may be used to improve BES reliability.

The key trends, findings, and recommendations from Performance Analysis serve as technical input to the ERO's reliability standards and standards project prioritization, compliance process improvements, event analyses, reliability assessment, and critical infrastructure protection efforts. This analysis of BES performance provides an industry reference for historical BES reliability, but it also offers analytical insights that lead toward the prioritization of specific actionable risk control steps for industry. These analyses and results are summarized in the annual state of reliability report, which provides guidance and recommendations for enhanced bulk system reliability. By January, 2017, PA will add GADS Wind Data to the data collected under Section 1600, requiring the development of a new software tool to enable this.

Performance Analysis is working with Event Analysis to develop a link between their databases. Specific equipment outages will be linked to disturbance reports filed with NERC, enabling better association of transmission and generation outages. The continued alignment between these efforts is expected to enhance the ability to conduct effective event analyses as well as identify key reliability areas for trend analyses of multiple databases. This is expected to improve the depth of event analyses across the ERO Enterprise and expand the quality of data gathered for sophisticated statistical and probabilistic analyses. This will lead to trends and insights about reliability performance, as well as effective measures and actions to address reliability risks. Further in 2016, PA has begun data mining of completed EA efforts to see if any insight might be gained from these events as the grid evolves that were not first and foremost or particularly relevant to enhanced grid reliability at the time of the original event investigation.

Performance Analysis is currently refining the composition of NERC's annual state of reliability (SOR) report to expand the GADS data trend analysis, and for 2017 begin to reflect post-seasonal reliability review, insights from analysis of transmission, generator, and demand response data systems (TADS, GADS, and DADS), and integration of event analysis and misoperations. Also, in 2016, the department will perform activities necessary to determine whether in 2017 the SOR should move from a calendar year (Q1-Q4) report to a fiscal year (2016,Q4-2017,Q3) report.

Further, Performance Analysis will continue to work closely with other organizations, including but not limited to the EPRI, the DOE, the IEEE, INPO, the NATF, the NAGF, and the CEA. PA collaborates with these groups on a number of fronts, including TADS, GADS, and DADS.

2017 Goals and Deliverables

In 2017, Performance Analysis has a number of specific goals and deliverables in support of the ERO Enterprise Strategic Plan, including:

1. Issue the state of reliability report, guidelines, recommendations, alerts as needed (including the verification and validation of data and information through Regional Entities and technical committees as required)
2. Oversee and evaluate reliability trends that identify reliability risks by analyzing data contained in NERC's GADS, TADS, and DADS, along with reliability metrics and protection & controls system misoperations data.
3. Support NERC Reliability Standard development by providing subject matter expertise.
4. Provide support and leadership to the standing committees' subcommittees, working groups, and task forces serving the standing committees (primary focus on the Performance Analysis Subcommittee and its subgroups).
5. Assist in the development of approaches to registration and provide input to NERC staff in support of the development of CMEP risk elements

6. Conduct major event investigations, analyses, and reporting of major findings, recommendations, and lessons learned that will improve reliability.
7. Provide insight on emerging system protection issues, and hand-off any issues gleaned with future implications to RASA.

Resource Requirements

Personnel

During 2016 additional personnel (including open positions) were allocated to Performance Analysis to address increased resource demands associated with ongoing reliability assessment, performance analysis, and system analysis activities.

Contractor Expenses

Performance Analysis contractor and consultant expenses are \$528k, an increase of \$19k over 2016. Additional details are provided in Exhibit C.

Section A — 2017 Business Plan and Budget Program Area and Department Detail

Statement of Activities and Fixed Assets Expenditures					
2016 Budget & Projection, and 2017 Budget					
PERFORMANCE ANALYSIS					
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 3,490,625	\$ 3,490,625	\$ -	\$ 4,821,146	\$ 1,330,521
Assessment Stabilization Reserve - Penalties	84,052	84,051	-	87,475	3,423
Total NERC Funding	\$ 3,574,677	\$ 3,574,676	\$ -	\$ 4,908,621	\$ 1,333,944
Third-Party Funding	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	50,000	50,000	-	-
Workshops	-	-	-	-	-
Interest	-	2,554	2,554	234	234
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 3,574,677	\$ 3,627,230	\$ 52,554	\$ 4,908,855	\$ 1,334,178
Expenses					
Personnel Expenses					
Salaries	\$ 886,643	\$ 1,280,436	\$ 393,793	\$ 1,349,579	\$ 462,936
Payroll Taxes	65,373	90,958	25,585	92,093	26,720
Benefits	126,252	142,204	15,952	143,104	16,852
Retirement Costs	98,314	144,446	46,132	149,018	50,704
Total Personnel Expenses	\$ 1,176,582	\$ 1,658,044	\$ 481,462	\$ 1,733,794	\$ 557,212
Meeting Expenses					
Meetings	\$ 1,000	\$ 6,000	\$ 5,000	\$ 1,000	\$ -
Travel	118,172	98,000	(20,172)	118,172	-
Conference Calls	9,720	7,000	(2,720)	2,965	(6,755)
Total Meeting Expenses	\$ 128,892	\$ 111,000	\$ (17,892)	\$ 122,137	\$ (6,755)
Operating Expenses					
Consultants & Contracts	\$ 509,039	\$ 621,849	\$ 112,810	\$ 528,082	\$ 19,043
Office Rent	-	-	-	-	-
Office Costs	23,732	51,194	27,462	74,843	51,111
Professional Services	-	-	-	-	-
Miscellaneous	-	-	-	500	500
Depreciation	-	-	-	-	-
Total Operating Expenses	\$ 532,771	\$ 673,043	\$ 140,272	\$ 603,426	\$ 70,655
Total Direct Expenses	\$ 1,838,245	\$ 2,442,087	\$ 603,842	\$ 2,459,356	\$ 621,111
Indirect Expenses	\$ 1,629,647	\$ 2,242,712	\$ 613,065	\$ 2,290,564	\$ 660,917
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 3,467,892	\$ 4,684,799	\$ 1,216,907	\$ 4,749,920	\$ 1,282,028
Change in Assets	\$ 106,785	\$ (1,057,569)	\$ (1,164,353)	\$ 158,936	\$ 52,151
Fixed Assets					
Depreciation	-	-	-	-	-
Computer & Software CapEx	-	162,500	162,500	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 107,919	\$ 116,517	\$ 8,598	158,936	\$ 51,017
Inc(Dec) in Fixed Assets (C)	\$ 107,919	\$ 279,017	\$ 171,098	\$ 158,936	\$ 51,017
TOTAL BUDGET (=B + C)	\$ 3,575,811	\$ 4,963,816	\$ 1,388,005	\$ 4,908,855	\$ 1,333,044
FTEs	6.92	9.19	2.28	9.40	2.49

Reliability Risk Management

NERC's Reliability Risk Management (RRM) group carries out the ERO's statutory responsibility to perform assessments (real time or near real time continual awareness, detailed analysis of significant events, and longer-term broad performance assessments) of the reliability and adequacy of the BES, including identifying potential issues of concern relating to system, equipment, entity, and human performance that may indicate the need to develop and implement targeted interventions. RRM has three departments: Situation Awareness (also referred to as Bulk Power System Awareness), Event Analysis, and Performance Analysis, as described above beginning on page 49. These departments are responsible for six primary functions: (1) BES awareness; (2) event analysis and determination of root and contributing causes; (3) assessment of human performance challenges that affect BES reliability and identification of improvement opportunities; (4) continent-wide analysis and reporting of BES performance; (5) support of the NERC Operating Committee; and (6) support of the NERC Critical Infrastructure Protection Committee.

RRM's functions and resources are directly focused on proactive awareness of BES conditions and all events over a threshold of certain risk or impact. Through awareness and continuous assessment, RRM identifies potential reliability risks to the BES. RRM analyzes events in detail, addresses the most significant risks to BES reliability, and ensures that industry is well informed of system events, emerging trends, risk analysis, and lessons learned. Through performing these functions, RRM provides data and analysis to inform the other aspects of NERC's statutory functions. The group also provides strategic direction for using risk-based concepts in planning and executing its responsibilities.

Situation Awareness

Situation Awareness (in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	5.53	5.64	0.11
Direct Expenses	\$ 2,310,875	\$ 2,570,828	\$ 259,953
Indirect Expenses	1,302,775	1,374,338	71,563
Other Non-Operating Expenses	-	-	-
Inc(Dec) in Fixed Assets	78,547	87,695	9,148
TOTAL BUDGET	\$ 3,692,197	\$ 4,032,862	\$ 340,664

Background and Scope

NERC's Situation Awareness department and the eight Regional Entities monitor BES conditions, significant occurrences and emerging risks, and threats across the 14 Reliability Coordinator regions in North America to maintain an understanding of conditions and situations that could impact the bulk electric system's reliable operation. This group also supports the development and publication of Alerts and awareness products and facilitates information sharing among industry, Regions, and the government during crisis situations and major system disturbances. The process for understanding the potential threats or vulnerabilities to the reliability of the BPS starts with understanding occurrences and events in the context in which they occur.

Stakeholder Engagement and Benefit

BES conditions continually change and provide recognizable signatures through automated tools, mandatory reports and voluntary information sharing, and third-party publicly available sources. The significant majority of these signatures represents conditions and occurrences that have little or no reliability impact, either positive or adverse, on the BES. However, being cognizant of the short-term condition of the BES and the signatures associated with the entire range of reliability performance helps the ERO identify significant occurrences and events more accurately and efficiently. Registered entities continue to robustly share information and collaborate with the ERO in an effort to maintain and improve the overall reliability of the grid.

Key Efforts Underway

Several reliability-related situation awareness and monitoring tools will undergo enhancement, replacement, streamlining, or modification. The following tools are being focused on during 2016: (1) operation and maintenance of Situation Awareness for NERC, FERC, and Regions, Version 2 (SAFNrv2) software application used for monitoring, to include preparation for a new RFP process in late 2016 to enhance the tool from its current state with no changes to the data used; (2) operation and maintenance of the current secure NERC Alerts tool while planning for a streamlined NERC Alert process and platform appropriately integrated with related ongoing NERC, E-ISAC and ERO Enterprise IT initiatives; (3) refresh of the Reliability Coordinator Information System (RCIS) legacy application for operability and maintainability reasons, with no significant changes to functionality; and (4) continuing to set the conditions to bring limited streaming Synchrophasor data into NERC for wide-area situational awareness and event triage applications.

2017 Goals and Deliverables

In 2017, the Situation Awareness department will seek to accomplish the following specific goals and deliverables:

1. Ensure that the ERO is aware of all BES events above a threshold of impact.
2. Enable the sharing of information and data to facilitate wide-area situational awareness.
3. During crisis situations, facilitate the exchange of information among industry, Regions, and the U.S. and Canadian governments.
4. Keep industry informed of emerging reliability threats and risks to the BES, including any expected actions.
5. Conduct the annual NERC Monitoring and Situational Awareness Conference and Human Performance Conference.
6. Administer the NERC Alerts process as specified in Rules of Procedure (ROP) §810 to issue Advisory (Level 1) Alerts on significant and emerging reliability- and security-related topics as needed, and facilitate the tracking of actions specified in Recommendation (Level 2) and Essential Action (Level 3) Alerts.

The department uses the following major reliability-related tools to support department activities:

Resource Adequacy (ACE Frequency) Tool

This software application provides continuous monitoring of key resource adequacy performance metrics, including pre-established thresholds and limits defined in standards. It alerts Reliability Coordinators and resource subcommittees to conditions that could result in critical inadequacies, such as major tie errors, inaccurate load forecasts, and inadequate frequency response.

Inadvertent Interchange

This tool facilitates the entering of monthly scheduling data and submittal of monthly inadvertent performance standards reports to NERC. It also assists in the monitoring and resolution of reliability issues originated by inadvertent interchange imbalances.

Frequency Monitoring and Analysis Tool

This tool detects frequency events and captures key frequency response information for each interconnection.

Intelligent Alarms Tool

This tool detects short-term and long-term frequency deviations using data transmitted to NERC by the Balancing Authorities. When coupled with the FNet²⁷ and Frequency Monitoring and Analysis tools, this tool allows immediate differentiation of the cause of a frequency deviation—a generator trip or a scheduling error.

Genscape

The PowerIQ and PowerRT tools provide more detailed insight into current-day conditions impacting BPS conditions in both normal operations and stressed conditions.

Resource Requirements

Personnel

No additional personnel are projected for the Situation Awareness department in 2017. The slight increase reflected in the following table is due to a lower vacancy rate than in 2016.

Contractor Expenses

The overall funding of approximately \$1.3M for contractors and consultants (which includes the cost of the tools set forth above) to support the Situation Awareness department in 2017 represents an increase of \$84k over 2016 budget levels. The detailed 2017 contractor and consulting budget for the Situation Awareness department is set forth in Exhibit C with a comparison to 2016 budgeted amounts.

²⁷ FNet – Operated by the Power Information Technology Laboratory at the University of Tennessee, FNET is a low-cost, quickly deployable global positioning system (GPS)-synchronized wide-area frequency measurement network. High dynamic accuracy Frequency Disturbance Recorders (FDRs) are used to measure the frequency, phase angle, and voltage of the power system at ordinary 120 V outlets. The measurement data are continuously transmitted via the Internet to the FNET servers hosted at the University of Tennessee and Virginia Tech.

Section A — 2017 Business Plan and Budget Program Area and Department Detail

Statement of Activities and Fixed Assets Expenditures					
2016 Budget & Projection, and 2017 Budget					
SITUATION AWARENESS					
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 3,624,868	3,624,868	\$ 0	\$ 3,980,236	\$ 355,369
Assessment Stabilization Reserve - Penalties	67,193	67,193	0	52,485	(14,708)
Total NERC Funding	\$ 3,692,060	\$ 3,692,060	\$ 0	\$ 4,032,721	\$ 340,661
Third-Party Funding	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	1,128	1,128	-	-
Interest	137	1,816	1,679	140	3
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 3,692,197	\$ 3,695,004	\$ 2,807	\$ 4,032,862	\$ 340,664
Expenses					
Personnel Expenses					
Salaries	\$ 764,342	\$ 787,436	\$ 23,094	\$ 873,869	\$ 109,527
Payroll Taxes	58,235	59,443	1,208	58,749	515
Benefits	101,765	135,367	33,601	156,328	54,563
Retirement Costs	85,275	88,342	3,067	96,159	10,884
Total Personnel Expenses	\$ 1,009,617	\$ 1,070,587	\$ 60,971	\$ 1,185,105	\$ 175,488
Meeting Expenses					
Meetings	\$ 6,500	\$ 5,000	\$ (1,500)	\$ 6,500	\$ -
Travel	33,005	32,500	(505)	33,005	-
Conference Calls	1,000	1,000	-	305	(695)
Total Meeting Expenses	\$ 40,505	\$ 38,500	\$ (2,005)	\$ 39,810	\$ (695)
Operating Expenses					
Consultants & Contracts	\$ 1,211,475	\$ 1,268,777	\$ 57,302	\$ 1,295,850	\$ 84,375
Office Rent	-	-	-	-	-
Office Costs	41,052	39,540	(1,512)	41,897	845
Professional Services	-	-	-	-	-
Miscellaneous	500	500	-	500	-
Depreciation	7,727	7,727	-	7,667	(60)
Total Operating Expenses	\$ 1,260,754	\$ 1,316,544	\$ 55,790	\$ 1,345,914	\$ 85,160
Total Direct Expenses	\$ 2,310,875	\$ 2,425,631	\$ 114,756	\$ 2,570,828	\$ 259,953
Indirect Expenses	\$ 1,302,775	\$ 1,391,019	\$ 88,243	\$ 1,374,338	\$ 71,563
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 3,613,650	\$ 3,816,649	\$ 202,999	\$ 3,945,167	\$ 331,516
Change in Assets	\$ 78,547	\$ (121,645)	\$ (200,192)	\$ 87,695	\$ 9,148
Fixed Assets					
Depreciation	(7,727)	(7,727)	-	(7,667)	60
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 86,273	\$ 72,268	(14,005)	95,361	9,088
Inc(Dec) in Fixed Assets (C)	\$ 78,547	\$ 64,542	\$ (14,005)	\$ 87,695	\$ 9,148
TOTAL BUDGET (=B + C)	\$ 3,692,197	\$ 3,881,191	\$ 188,994	\$ 4,032,862	\$ 340,664
FTEs	5.53	5.70	0.17	5.64	0.11

Event Analysis Department

Event Analysis (in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	11.06	11.28	0.22
Direct Expenses	\$ 2,650,065	\$ 2,592,388	\$ (57,676)
Indirect Expenses	2,605,551	2,748,677	143,126
Other Non-Operating Expenses	-	-	-
Inc(Dec) in Fixed Assets	100,179	105,141	4,962
TOTAL BUDGET	\$ 5,355,795	\$ 5,446,206	\$ 90,411

Background and Scope

The Event Analysis department performs assessments of the reliability and adequacy of the BES. This includes identifying potential issues of concern related to system, equipment, entity, and human performance that may indicate a need to develop remediation strategies, action plans, or data used to revise or retire reliability standards or consider new reliability standards. The department analyzes and determines the cause of the events, promptly ensures tracking of corrective actions to prevent recurrence, and provides lessons learned to the industry. Event Analysis ensures that reporting and analysis are consistent to allow wide-area assessment of trends and risks. The department analyzes all reportable events for sequence of events, root cause, risk to reliability, and mitigation and keeps the industry well informed of system events, emerging trends, risk analysis, lessons learned, and expected actions.

Additional resources within this department focus on identifying human-error risks and those precursor factors that allow human error to impact system reliability. The department educates industry regarding risks, precursors, and mitigation methods. Resources also support compliance and standards training initiatives and trending and analysis to identify emerging reliability risks to the BES. These efforts are conducted in collaboration with industry human performance projects, including WECC's Human Performance Working Group, the NERC Operating Committee's Event Analysis Subcommittee, and others.

Stakeholder Engagement and Benefit

The Event Analysis department coordinates event analyses to support the use of collective resources, consistency in analysis, and timely delivery of event analysis reports.²⁸ The ERO disseminates to the electric industry lessons learned and other useful information obtained from or as a result of event analysis. The Event Analysis team conducts in-depth analyses of approximately 150 events per year on average. In 2014, the team also conducted calls facilitated by the Regional Entities with over 140 registered entities to discuss in detail and finalize root and contributing causes for the categorized events analyzed. Major analysis to date includes continuing assessment of Energy Management System (EMS) outages, continued collaboration with Reliability Assessments and System Analysis on frequency response performance, analyses of substation equipment failure events and protective relay trends including ground overcurrent relay misoperations, relay communication system failures, and the importance of commissioning testing.

²⁸ The core process for Event Analysis is outlined in the approved process: Electric Reliability Organization Event Analysis Process - Version 3 (January 2016).

Collaboration with the Trade Associations and Forums

The activities of the NATF, the NAGF, trade associations, and other industry groups are expected to compliment ERO Enterprise activities and limit the need to add incremental resources to the NERC and Regional Entity business plans and budgets that might otherwise be required in the absence of these forums.

NERC is supporting the NAGF's ongoing transformation into a more formal structure through 2017 and continuing through 2018 with logistical and administrative support.

NATF has been invited to participate in several reliability initiatives that are expected to continue into 2017, including protection systems misoperations reduction, physical security, various activities related to reliability assurance initiatives, improvement of modeling practices, and complementary efforts on addressing the GMD challenges.

2017 Goals and Deliverables

In 2017, the Event Analysis department will seek to accomplish several specific goals and objectives as part of the strategic focus of the ERO Enterprise:

- Work with the Regional Entities to obtain and review information from registered entities on qualifying events and disturbances to advance awareness of events above a threshold level; facilitate analysis of root and contributing causes, risks to reliability, wide-area assessments, and remediation efforts; and disseminate information regarding events in a timely manner.
- Ensure that all reportable events are analyzed for sequence of events, root cause, risk to reliability, and mitigation.
- Continue to refine risk-based methods to support better identification of reliability risks, including the use of more sophisticated cause codes for analysis.
- Conduct training (webinars, workshops, and conference support) to inform industry and the ERO of lessons learned, root cause analysis, trends, human performance, and extreme weather preparedness and recommendations.
- Develop reliability recommendations and alerts as needed and track industry accountability for critical reliability recommendations.
- Ensure that industry is well informed of system events, emerging trends, risk analysis, lessons learned, and expected actions.
- Conduct major event analysis and reporting of major findings and recommendations that will improve reliability.

The Event Analysis department will also support several of the top-priority reliability risk projects during 2017 through 2018, as identified and described under the Performance Analysis department section of this document.

Resource Requirements

Personnel

The slight increase in FTEs budgeted in the Event Analysis department in 2017 is due to a lower vacancy rate than in 2016.

Contractor Expenses

No funding is budgeted for contractors and consultants to support the Event Analysis department in 2017, as compared to \$56,000 budgeted in 2016.

Statement of Activities and Fixed Assets Expenditures					
2016 Budget & Projection, and 2017 Budget					
EVENT ANALYSIS					
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 5,181,136	\$ 5,181,136	\$ 0	\$ 5,300,955	\$ 119,819
Assessment Stabilization Reserve - Penalties	134,385	\$ 134,385		104,970	(29,415)
Total NERC Funding	\$ 5,315,521	\$ 5,315,521	\$ 0	\$ 5,405,926	\$ 90,404
Third-Party Funding	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	40,000	78,073	38,073	40,000	-
Interest	274	2,918	2,644	281	7
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 5,355,795	\$ 5,396,512	\$ 40,717	\$ 5,446,206	\$ 90,411
Expenses					
Personnel Expenses					
Salaries	\$ 1,716,263	\$ 1,617,447	\$ (98,817)	\$ 1,708,049	\$ (8,214)
Payroll Taxes	114,132	\$ 110,186	(3,946)	108,739	(5,393)
Benefits	202,259	\$ 183,405	(18,853)	212,232	9,973
Retirement Costs	191,377	\$ 180,295	(11,082)	189,397	(1,980)
Total Personnel Expenses	\$ 2,224,030	\$ 2,091,333	\$ (132,698)	\$ 2,218,416	\$ (5,614)
Meeting Expenses					
Meetings	\$ 81,500	\$ 140,000	\$ 58,500	\$ 81,500	\$ -
Travel	152,487	152,000	(487)	152,487	-
Conference Calls	14,000	14,000	-	4,270	(9,730)
Total Meeting Expenses	\$ 247,987	\$ 306,000	\$ 58,013	\$ 238,257	\$ (9,730)
Operating Expenses					
Consultants & Contracts	\$ 56,000	\$ 56,000	\$ -	\$ -	\$ (56,000)
Office Rent	-	-	-	-	-
Office Costs	49,181	53,576	4,395	49,634	452
Professional Services	-	-	-	-	-
Miscellaneous	500	500	-	500	-
Depreciation	72,367	85,582	13,214	85,582	13,214
Total Operating Expenses	\$ 178,048	\$ 195,658	\$ 17,609	\$ 135,715	\$ (42,333)
Total Direct Expenses	\$ 2,650,065	\$ 2,592,990	\$ (57,075)	\$ 2,592,388	\$ (57,677)
Indirect Expenses	\$ 2,605,551	\$ 2,511,155	\$ (94,396)	\$ 2,748,677	\$ 143,126
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 5,255,616	\$ 5,104,145	\$ (151,471)	\$ 5,341,065	\$ 85,449
Change in Assets	\$ 100,179	\$ 292,367	\$ 192,188	\$ 105,141	\$ 4,962
Fixed Assets					
Depreciation	(72,367)	(85,582)	(13,214)	(85,582)	(13,214)
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 172,546	\$ 130,463	(42,083)	190,723	18,176
Inc(Dec) in Fixed Assets (C)	\$ 100,179	\$ 44,881	\$ (55,298)	\$ 105,141	\$ 4,962
TOTAL BUDGET (=B + C)	\$ 5,355,795	\$ 5,149,026	\$ (206,769)	\$ 5,446,206	\$ 90,411
FTEs	11.06	10.29	(0.77)	11.28	0.22

Electricity Information Sharing and Analysis Center (E-ISAC)²⁹

	E-ISAC (in whole dollars)		Increase (Decrease)
	2016 Budget	2017 Budget	
Total FTEs	18.90	19.74	0.84
Direct Expenses	\$ 11,965,349	\$ 12,276,689	\$ 311,340
Indirect Expenses	4,450,914	4,810,185	359,271
Other Non-Operating Expenses	-	-	-
Inc(Dec) in Fixed Assets	351,262	1,428,467	1,077,205
TOTAL BUDGET	\$ 16,767,525	\$ 18,515,341	\$ 1,747,816

Background and Scope

The Electricity Sector Information Sharing and Analysis Center (ES-ISAC) was formed in 1998 when the U.S. Secretary of Energy requested that NERC serve as the ISAC³⁰ for the Electricity Subsector.³¹ This department was rebranded to the Electricity Information Sharing and Analysis Center (E-ISAC) in September 2015. The E-ISAC reduces cyber and physical risk to the Electricity Subsector across North America by providing unique insights, leadership, and coordination. The vision is to be the trusted, timely, actionable resource of grid risk information and analysis to enhance electricity reliability. The E-ISAC facilitates Electricity Subsector and cross-sector coordination regarding physical security and cybersecurity events affecting the BES.

Maintaining Separation from Compliance and Enforcement

In February 2012, and as amended in March 2013, the Board of Trustees approved an E-ISAC Policy Statement that established a separation between the E-ISAC and NERC's compliance and enforcement program. In 2015, physical separation of the E-ISAC was completed. The company also has in place an [E-ISAC Code of Conduct](#) and [Policy on the Role of the E-ISAC vis-à-vis NERC's Compliance Monitoring and Enforcement Program](#).

Key Efforts Underway

With industry support, in coordination with the Electricity Subsector Coordinating Council (ESCC) and its Member Executive Committee (MEC), senior management is committed to enhancing the effectiveness and capabilities of E-ISAC operations. These efforts include ongoing enhancement in organizational structure, operational and analytical capabilities, as well as the development of metrics to track the effectiveness of operations. Management will also take steps to improve the quality and value of E-ISAC products, including ongoing review of registered user needs.

²⁹ In 2015, NERC combined its Critical Infrastructure Department (CID) into the E-ISAC for both operational and financial reporting purposes.

³⁰ The Information Security Analysis Center (ISAC) construct was conceived and operates under US Government authorities derived from Presidential Decision Directive 63, which was signed in 1998. The ISACs focus specifically on information sharing, analytics and sector activities directly related to the protection of critical infrastructure.

³¹ Subsequent administrations have sought to continue and strengthen information sharing in other sectors by establishing other sector-specific ISACs. In 2013, the Department of Energy (DOE) again reaffirmed its desire for NERC to continue to operate the E-ISAC.

During 2015, as part of a periodic review of companywide resource needs and resource allocation, NERC allocated additional resources to support the E-ISAC. Management recruited personnel to fill open positions, and recruited and appointed a senior vice president and chief security officer in charge of E-ISAC operations. Ongoing resource requirements consist primarily of personnel, contractors, consultants, software, hardware and communications infrastructure to gather, analyze, and provide information regarding cyber and physical security threats.

In the fourth quarter of 2014 and with broad industry support, NERC also assumed management responsibility for the Cybersecurity Risk Information Sharing Program (CRISP). CRISP is a public-private partnership whose purpose is to facilitate the sharing of cyber threat information and to develop situation awareness tools that enhance the electricity sector's ability to identify, prioritize, and coordinate the protection of its critical infrastructure. CRISP provides critical infrastructure owners and operators the capability to voluntarily share cyber threat data, analyze this data, and receive machine-to-machine mitigation measures. Information-sharing devices that are installed on participants' networks send encrypted data to a CRISP analysis center operated by the Pacific Northwest National Labs (PNNL), which analyzes the data it receives and sends alerts and mitigation measures back to CRISP participants and the E-ISAC through secure communications. CRISP became fully operational in 2015. The E-ISAC will continue to work with PNNL, CRISP participants and E-ISAC registered users to strengthen program execution, including both quality and timeliness aspects of information sharing. The 2017 E-ISAC budget maintains the same percentage allocation of CRISP funding requirements from assessments and from CRISP participants as 2016. In connection with the growth of the program and related support needs from E-ISAC staff, the 2017 E-ISAC budget also reflects an increase in the number of budgeted E-ISAC FTEs allocated to support CRISP.

Resource Requirements

Personnel

In 2016 additional open budgeted resources were re-allocated to provide support to the E-ISAC³², resulting in a net increase of 0.84 FTEs.

The E-ISAC staffing and organizational structure has recently been updated to reflect four primary focus areas (1) stakeholder engagement, (2) watch operations (3) cyber security analysis, and (4) physical security analysis. NERC's 2017 organization chart attached as Appendix 1 has been updated to reflect these changes and additional personnel on-boarded in 2016. The E-ISAC will continue to receive shared services support from NERC's corporate services departments (i.e. finance and accounting, IT, HR, legal and external affairs). Personnel providing such shared services will do so only in accordance with strict operating protocols governing access to and use of E-ISAC information as noted above.

Contract Expenses

The specific nature and need for contract support for the E-ISAC falls under three major categories: Program Level Support, Software and Services, and Events and Outreach. Each of these categories is discussed further below and Exhibit C sets forth the 2017 budget for each of these categories of expense.

Program Level Support

CRISP

During 2016 and 2017 NERC will continue to subcontract to PNNL the majority of the resource requirements and associated costs to operate and maintain CRISP.

³² Departments with reduced staffing needs included the legal, enforcement and standards departments.

E-ISAC Portal Enhancement

The E-ISAC communication portal capabilities include: publishing immediate notifications and other informational products, exchanging threat indicator information, and providing self-service access to user security awareness services. The E-ISAC is working with NERC Information Technology (in the lead) to continue development of the portal that was initiated in 2014 as part of a long-term improvement strategy. Important new enhancements and improved capabilities are presently in use and development. These include facilitating direct data exchange with E-ISAC members, other ISACs and government partners, and establishing user communities where individuals can discuss security issues. The portal's improved capabilities support E-ISAC analysts in their information analysis functions and directly tie them with their counterparts in other sectors and national laboratories.

In 2015, the ESCC presented its recommendations resulting from a review of the E-ISAC operations performed that year. These recommendations included a request to evaluate and potentially enhance the user interface and underlying functionality of the E-ISAC portal. In 2015, the ESCC established a Member Executive Committee (MEC) to provide guidance with respect to various E-ISAC matters, including improvements to the E-ISAC portal. As part of an approved 2016 work plan, the E-ISAC staff worked closely with the MEC to develop a business case and funding estimates for these improvements. Additional details summarizing the business case, funding estimate and additional detail regarding the portal improvement project is attached as Exhibit F.

The 2017 E-ISAC budget includes \$1M for the portal enhancements (\$250,000 of which is allocated to CRISP)³³. The MEC has provided written comments in support of this investment.³⁴

Additional portal enhancements in 2016 and 2017 will also extend functionality to allow for easier access to filtered data for both the cyber and physical security communities and provide for automated information sharing. Based on input from users, the E-ISAC is transitioning the current portal capability to a platform model that will provide features and extensions beyond what can currently be delivered with the existing portal. Some of the new features will include user customization, visual and graphical orientation (versus text-based), robust search and structured queries, and the ability to create on-the-fly technical analysis of information shared by users. This will be a multi-year project that will evolve as users engage the new capabilities and provide feedback. In 2017 the E-ISAC and NERC IT plan to launch the initial platform prototype with new capabilities, then add capabilities and features in 2018 and subsequent years as needed.

Software and Services

Software Integration Support Services

The E-ISAC operations center includes monitors used to display intelligence information provided from various software applications. Software integration services are routinely required from vendors providing existing and new software applications. Additional software must be licensed and maintained to display and integrate BES maps that have cyber intelligence information. A portion of these costs is budgeted under Office Costs as software maintenance expenses.

³³ The annual impact of the proposed \$1M investment on assessments will be approximately \$250,000 since projects of this nature are typically financed through NERC's capital financing program and funded over a three year period.

³⁴ MEC's comments are available [on NERC's website](#)

Analyst Workbench

A strong technical analytic capability is needed to develop baselines and identify patterns and understandings of potential cyber-related threats. The analyst workbench toolset maintains historical information and allows a team to use and deliver consistent and repeatable analysis in both an operational (during an event) as well as nonoperational capacity. This workbench will include a threat database for historical correlation and various tools for network- and host-based analysis of malicious software.

Automated Information Sharing

The E-ISAC is broadening automated information sharing beyond CRISP, looking at programs such as the Structured Threat Information Expression/Trusted Automated Exchange of Indicator Information (STIX/TAXII) initiative hosted by the US Department of Homeland Security. As part of a work plan developed in consultation with the MEC, in 2016 the E-ISAC plans to pilot and gather data on these technologies, leveraging existing implementations at Argonne National Lab. The pilot will help the E-ISAC understand the nuances of bi-directional communication, workflow, handling rules, vetting information, and learning from the technology and processes overall. The E-ISAC aims to have seven members signed up by the end of 2016, and, assuming the 2016 pilot is successful, another 10 members sign up by the end of 2017.

Events and Outreach

Grid Security Exercises

Since 2011, NERC has sponsored a series of biennial grid security exercises (GridEx). These geographically distributed exercises are designed to exercise the electricity sector's crisis response to simulated coordinated cybersecurity and physical security threats and incidents, to strengthen utilities' crisis response functions, and to provide input for lessons learned. GridEx III, in November 2015, consisted of a two-day grid-focused operational exercise for participants across North America and a half-day tabletop discussion for executives. The E-ISAC manages the program and collects industry information during and after the exercise subject to existing data collection policies. During the exercise, E-ISAC watch and analysis staff exercise the E-ISAC mission and share severe crisis information sharing and analysis towards mitigating the threats and attacks. Lessons learned and recommendations are turned over to groups like NERC's Board of Trustees and CIPC and to the ESCC for consideration and coordination between industry and government stakeholders. GridEx IV is scheduled for November 15-16, 2017.

Grid Security Conferences

Since 2011, NERC has sponsored a series of annual grid security conferences (GridSecCon). These conferences bring together industry and government subject matter experts on cyber, physical and operations technology threats and solutions, with training sessions and classified or official use briefs on topics vital to grid security. The E-ISAC provides expertise and gathers appropriate speakers, panelists and training providers. GridSecCon 2016 is scheduled for October 18-21 in Quebec, Canada, with the 2017 location and dates TBD.

Intelligence Reporting Services

E-ISAC analytic personnel maintain a detailed understanding of emerging vulnerabilities and threats within the broad industrial control systems community, as well as within the more focused BES community. To support this intelligence role, the E-ISAC budget includes the costs for intelligence services from a specialized security information service providers that focuses closely on the electricity subsector. This service gives E-ISAC staff increased understanding of continuing trends, breaking news, and implications to the BES, which they utilize to keep registered entities informed of emerging BES risks through immediate notifications and portal security postings.

The total budgeted Consultants & Contracts expense for the E-ISAC for 2017 is approximately \$6.8 million, an increase of \$237k from the 2016 budget. Exhibit C lists the components and amounts of the 2016 and

2017 Consultants & Contracts budgets for the E-ISAC. Approximately 5.8M of the 2017 budgeted amount is for CRISP, which is flat compare the 2016 budget. The remaining \$900k budgeted for 2017 is for other E-ISAC activities, an increase of \$152k from the 2016 budget.

Statement of Activities and Fixed Assets Expenditures					
2016 Budget & Projection and 2017 Budget					
E-ISAC					
	2016 Budget	2016 Projection	2016 Projection v 2016 Budget Over(Under)	2017 Budget	2017 Budget v 2016 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 9,636,756	9,636,756	\$ (0)	\$ 11,270,705	\$ 1,633,948
Assessment Stabilization Reserve - Penalties	229,563	229,563	0	183,698	(45,865)
Total NERC Funding	\$ 9,866,319	\$ 9,866,319	\$ (0)	\$ 11,454,403	\$ 1,588,084
Third-Party Funding (CRISP)	6,830,738	7,335,757	505,019	6,990,447	159,709
Workshops	70,000	70,000	-	70,000	-
Interest	468	-	(468)	491	24
Total Funding (A)	\$ 16,767,525	\$ 17,272,076	\$ 504,551	\$ 18,515,341	\$ 1,747,816
Expenses					
Personnel Expenses					
Salaries	\$ 3,373,066	\$ 3,242,857	\$ (130,209)	\$ 3,417,398	\$ 44,332
Payroll Taxes	208,610	193,941	(14,668)	204,023	(4,587)
Benefits	345,260	315,363	(29,897)	397,467	52,207
Retirement Costs	366,723	351,531	(15,192)	363,482	(3,241)
Total Personnel Expenses	\$ 4,293,659	\$ 4,103,693	\$ (189,966)	\$ 4,382,370	\$ 88,711
Meeting Expenses					
Meetings	\$ 230,000	\$ 229,000	\$ (1,000)	\$ 230,000	\$ -
Travel	256,488	237,455	(19,032)	256,488	-
Conference Calls	22,000	23,000	1,000	6,710	(15,290)
Total Meeting Expenses	\$ 508,488	\$ 489,455	\$ (19,032)	\$ 493,198	\$ (15,290)
Operating Expenses					
Consultants & Contracts	\$ 6,551,929	\$ 7,579,159	\$ 1,027,230	\$ 6,788,429	\$ 236,500
Office Rent	-	\$ -	-	-	-
Office Costs	392,285	\$ 296,103	(96,182)	431,895	39,610
Professional Services	175,000	\$ 175,000	-	175,000	-
Miscellaneous	500	\$ 500	-	500	-
Depreciation	43,489	\$ 45,998	2,509	5,297	(38,192)
Total Operating Expenses	\$ 7,163,203	\$ 8,096,760	\$ 933,557	\$ 7,401,121	\$ 237,919
Total Direct Expenses	\$ 11,965,349	\$ 12,689,908	\$ 724,559	\$ 12,276,689	\$ 311,340
Indirect Expenses	\$ 4,450,914	\$ 4,601,898	\$ 150,984	\$ 4,810,185	\$ 359,271
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 16,416,263	\$ 17,291,806	\$ 875,543	\$ 17,086,873	\$ 670,610
Change in Assets	\$ 351,262	\$ (19,730)	\$ (370,992)	\$ 1,428,467	\$ 1,077,205
Fixed Assets					
Depreciation	(43,489)	(45,998)	(2,509)	(5,297)	38,192
Computer & Software CapEx	100,000	111,722	11,722	1,100,000	1,000,000
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	41,958	41,958	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 294,751	\$ 248,373	(46,378)	333,765	39,014
Inc(Dec) in Fixed Assets (C)	\$ 351,262	\$ 356,054	\$ 4,792	\$ 1,428,467	\$ 1,077,205
TOTAL BUDGET (=B + C)	\$ 16,767,525	\$ 17,647,860	\$ 880,335	\$ 18,515,341	\$ 1,747,816
FTEs	18.90	18.95	0.05	19.74	0.84

Training, Education, and Operator Certification

Training, Education and Operator Certification (in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	7.38	7.05	(0.33)
Direct Expenses	\$ 2,062,086	\$ 1,922,295	\$ (139,791)
Indirect Expenses	1,737,034	1,717,923	(19,111)
Other Non-Operating Expenses	-	-	-
Inc(Dec) in Fixed Assets	113,112	117,283	4,171
TOTAL BUDGET	\$ 3,912,231	\$ 3,757,501	\$ (154,731)

Background and Scope

NERC's Training and Education Program provides oversight and coordination of the delivery of training programs that support the ERO's statutory responsibilities. This program provides training to NERC and Regional Entity staff members. It also provides training and education to industry participants on the requirements of reliability standards and the compliance monitoring and enforcement process. Further, this program provides training to industry participants on NERC's reliability standards development process, thereby helping to support the more efficient and effective development of mandatory reliability standards. The Training and Education Program supports NERC's responsibilities to develop, adopt, and obtain approval of reliability standards and to monitor, enforce, and achieve compliance with the mandatory standards. Section 901 of the NERC Rules of Procedure addresses the Training and Education Program's activities. The responsibility for training is shared among multiple departments at NERC.³⁵

NERC's System Operator Certification program ensures that personnel operating the BES have the skills, training, and qualifications needed to operate the system reliably. NERC maintains the required credentials for over 6,000 system operators to work in system control centers across North America. NERC's system operator certification exam is designed to test specific knowledge of job skills and reliability standards. It also prepares operators for complying with requirements of reliability standards and appropriately operating the BES during normal and emergency operations. The System Operator Certification Program is governed by the Personnel Certification Governance Committee (PCGC), an industry group of operations experts, trainers, and supervisors. Certification exams are created by the Exam Working Group (EWG), an industry group of operations subject matter experts. Under the PCGC oversight, the EWG reviews and updates job tasks and certification exams. Section 600 of the NERC Rules of Procedure addresses the Personnel Certification activities in the area of Operator Certification.

Once an operator passes the certification exam, certification is maintained by completing NERC-approved continuing education courses and activities. The Personnel Subcommittee, composed of industry training experts, provides oversight of the Continuing Education program. Section 902 of the NERC Rules of Procedure addresses the Continuing Education Program's activities in these areas.

³⁵ The Human Resources department is also engaged in training initiatives.

Key Efforts Underway

The ERO provides education for industry and ERO Enterprise staff personnel to support their understanding of key program areas. These areas include:

1. Risk-Based Compliance Monitoring and Enforcement
2. Standards and Compliance
3. Registration and Certification
4. Event Analysis, Cause Analysis, and Lessons Learned
5. Reliability Assessment and System Analysis
6. Continuing education for system operators
7. New System Operator Certification exams for each credential: Reliability Coordinator; Transmission Operator; Balancing and Interchange Operator; and Balancing, Interchange and Transmission Operator.

2017 Goals and Deliverables

In response to stakeholder and Regional Entity feedback, training and education opportunities will be further expanded and focused for registered entities, NERC staff, and Regional Entities. For registered entities, this training and education will focus on objectives related to NERC reliability standards, including standards compliance and emerging cyber-related issues that could affect BES reliability. For NERC and Regional Entity staff, the training and education will focus on consistent audit and investigation techniques and standards compliance reviews, including the risk-based compliance monitoring and enforcement and other improvements in compliance and enforcement practices. NERC will continue to offer training in auditor skills to promote continued development of auditing expertise. NERC will leverage IT systems to better deliver and share common training products and information with Regional Entities and registered entities. Other training will focus on knowledge and skill development in a number of key areas, including:

- Development and implementation of clear and technically sound reliability standards
- Key lessons learned and trends from events
- Identified themes from trending and common-cause analyses
- Effective compliance cultures with practices, procedures, and controls to address reliability risks
- Effective root, apparent, and common-cause analysis methods
- Quality improvement of registered entity self-reporting and self-certification
- Entity registration processes, issues, and alternatives
- Human performance fundamentals
- Developing and incorporating a systematic approach to ongoing training

NERC will continue to provide learning opportunities through workshops hosted by the Regional Entities. NERC will also host workshops, webinars, and training courses, as well as use vendors to develop training modules and supplement internal training resources. The responsibility for the subject matter expertise for much of the training is shared among multiple departments at NERC. The Training and Education group will provide coordination and synchronization efforts for shared NERC and ERO training responsibilities in addition to advancing and improving the skills of NERC's operating staff. NERC's Human Resources department will continue to budget and manage the delivery of more traditional corporate employee

training and continuing education programs in concert with the coordination and synchronizing efforts of the Training and Education group.

As part of the System Operator Certification exam development cycle, the results of the 2015 job task analysis (JTA) is the baseline for the upcoming set of exams. The EWG will continue to analyze new items and develop a cut score for the pending 2018 exams.

Key deliverables for the System Operator Certification Program:

- Complete analysis of exam Item Bank
- Implementation of Linear On the Fly (LOFT) testing for all exams

NERC will continue to work with industry stakeholders and the exam development vendor to create certification exams that will promote reliability of the North American BPS.

The Continuing Education (CE) program will evaluate and revise the current program criteria as reflected in the program manual. The evaluation will consider the growth and maturation of industry training programs as well as ongoing research in the area of adult learning to ensure the CE program continues to foster improvement of training and promotes quality in training programs.

Resource Requirements

Personnel

No additional personnel are proposed for this area in 2017. The small reduction in budgeted FTE is due to a slight reduction in FTEs supporting the Operator Certification Program.

Contractor Expenses

The total proposed consulting and contractor budget is approximately \$95k lower in 2017 than the 2016 budget.

Further detail in support of the proposed 2017 contractor and consulting budget to support Training, Education, and Operator Certification is set forth in Exhibit C, which includes a comparison to 2016 budgeted amounts. The primary areas of contractor and consulting support include:

- Testing services to develop, administer, proctor, score, and support system operator certification exams across North America.
- Ongoing hosting and maintenance fees for the System Operator Certification and Continuing Education (SOCCED) database.
- Improvements to the SOCCED database.
- Supplemental support to Continuing Education Review Panel industry volunteers to review and audit over 2,500 individual learning activities and provider applications received each year.³⁶
- Audit team leader soft skills training delivered by certified NERC staff using vendor-licensed materials to support effective dialogue and communications between audit teams and registered entities.

³⁶ Review and approval of learning activity applications results in over 400,000 hours of continuing education per year for the industry's certified system operators.

- Vendor-supported BES technical training for select ERO staff, including compliance, technical and support staff.
- Risk-based compliance training by recognized specialists for NERC and Regional Entity staff to promote continued development of compliance staff.
- Web-based training development for ERO staff and industry, including standards applications, risk assessment training, industry human performance fundamentals, and BES events lessons learned.
- An ERO Enterprise learning management system to support scheduling, computer-based training delivery and record maintenance for ERO and select Enterprise staff.

Section A — 2017 Business Plan and Budget Program Area and Department Detail

Statement of Activities and Fixed Assets Expenditures 2016 Budget & Projection, and 2017 Budget					
TRAINING, EDUCATION and OPERATOR CERTIFICATION					
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 1,742,146	\$ 1,742,146	\$ 0	\$ 1,822,089	\$ 79,944
Assessment Stabilization Reserve - Penalties	55,994	55,994	\$ -	43,738	(12,256)
Total NERC Funding	\$ 1,798,139	\$ 1,798,139	\$ 0	\$ 1,865,827	\$ 67,687
Third-Party Funding	-	-	-	-	-
Testing Fees	1,867,972	1,867,972	-	1,921,900	53,928
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	183	2,096	1,913	175	(7)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 3,666,294	\$ 3,668,207	\$ 1,913	\$ 3,787,902	\$ 121,608
Expenses					
Personnel Expenses					
Salaries	\$ 857,257	\$ 849,104	\$ (8,153)	\$ 852,091	\$ (5,166)
Payroll Taxes	64,345	65,293	948	62,727	(1,619)
Benefits	133,991	114,786	(19,205)	139,239	5,248
Retirement Costs	94,860	97,129	2,268	97,624	2,764
Total Personnel Expenses	\$ 1,150,454	\$ 1,126,312	\$ (24,142)	\$ 1,151,681	\$ 1,227
Meeting Expenses					
Meetings	\$ 80,000	\$ 55,000	\$ (25,000)	\$ 55,000	\$ (25,000)
Travel	21,139	19,900	(1,239)	21,139	-
Conference Calls	36,500	36,500	-	11,133	(25,368)
Total Meeting Expenses	\$ 137,639	\$ 111,400	\$ (26,239)	\$ 87,272	\$ (50,368)
Operating Expenses					
Consultants & Contracts	\$ 675,800	\$ 731,460	\$ 55,660	\$ 580,600	\$ (95,200)
Office Rent	-	-	-	-	-
Office Costs	95,773	104,935	9,161	100,323	4,550
Professional Services	-	-	-	-	-
Miscellaneous	500	500	-	500	-
Depreciation	1,919	1,919	-	1,919	-
Total Operating Expenses	\$ 773,992	\$ 838,814	\$ 64,821	\$ 683,342	\$ (90,650)
Total Direct Expenses	\$ 2,062,086	\$ 2,076,525	\$ 14,440	\$ 1,922,295	\$ (139,791)
Indirect Expenses	\$ 1,737,034	\$ 1,810,570	\$ 73,536	\$ 1,717,923	\$ (19,111)
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 3,799,119	\$ 3,887,096	\$ 87,976	\$ 3,640,218	\$ (158,901)
Change in Assets	\$ (132,825)	\$ (218,888)	\$ (86,063)	\$ 147,684	\$ 280,510
Fixed Assets					
Depreciation	(1,919)	(3,838)	-	(1,919)	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 115,031	\$ 103,360	(11,671)	119,202	4,171
Inc(Dec) in Fixed Assets (C)	\$ 113,112	\$ 99,522	\$ (11,671)	\$ 117,283	\$ 4,171
TOTAL BUDGET (=B + C)	\$ 3,912,231	\$ 3,986,618	\$ 76,305	\$ 3,757,501	\$ (154,731)
FTEs	7.38	7.39	0.01	7.05	(0.33)

Administrative Services

	Administrative Services (in whole dollars)					
	Direct Expenses and Fixed Assets			FTEs		
	2016 Budget	2017 Budget	Increase (Decrease)	2016 Budget	2017 Budget	Increase (Decrease)
General and Administrative	\$ 9,881,311	\$ 10,205,977	\$ 324,666	17.52	16.92	(0.60)
Legal and Regulatory	3,465,966	3,292,379	(173,587)	12.22	11.28	(0.94)
Information Technology	12,156,674	12,480,846	324,171	22.13	23.27	1.14
Human Resources	1,510,177	1,608,583	98,406	2.77	2.82	0.05
Finance and Accounting	3,428,307	3,827,050	398,743	16.60	15.04	(1.56)
Total Administrative Services	\$ 30,442,435	\$ 31,414,834	\$ 972,399	71.23	69.33	-1.91

Program Scope and Functional Description

NERC's Administrative Services area includes the budget for all business and administrative functions of the organization, including (1) technical committees and member forums; (2) General and Administrative, which includes Board fees and expenses, the president and chief executive officer (CEO), chief reliability officer (CRO) and support staff, communications, external affairs and governmental relations, and office rent; (3) Legal and Regulatory; (4) Information Technology; (5) Human Resources; (6) Finance and Accounting; and (7) other general administrative expenses necessary to support program area activities. These functions are necessary to the existence and functioning of the organization and support the performance of NERC's ERO statutory activities. The costs of the Administrative Services functions are allocated to the five statutory programs as indirect expenses. The resource requirements and comparative budget information for each of these functions are described below.

Technical Committees and Members' Forum Program

While NERC management and staff will continue to interact with and support numerous reliability-related forums (e.g., the North American Transmission Forum and Generator Forum), NERC's 2017 budget does not contain specific funding for any forum activities.

General and Administrative

Background and Scope

The General and Administrative area is responsible for the administration and general management of the organization. Expenses allocated in this area include office rent; personnel and related costs of the CEO, the CRO, the CEO's executive assistant, communications, external affairs and government relations staff, and costs related to the Board. No additional personnel are budgeted for 2017 beyond current staffing. The slight reduction in FTEs in the General and Administrative area is due to a lower vacancy rate used in 2017 compared to 2016.

The following table details the Board costs included in the total costs of the General and Administrative area.

Board of Trustee Expenses	Budget 2016	Projection 2016	Budget 2017	2017 v 2016 Budget	Variance %
Meetings and Travel Expenses					
Quarterly Board Meetings	\$ 244,000	\$ 244,000	\$ 244,000	\$ -	
Trustee Travel	150,000	150,000	150,000	-	
Total Board of Trustees Meetings and Travel Expenses	\$ 394,000	\$ 394,000	\$ 394,000	\$ -	
Professional Services					
Independent Trustee Fees	\$ 1,126,354	\$ 1,126,354	\$ 1,226,000	\$ 99,646	
Trustee Search Fees	100,000	100,000	100,000	-	
Total Board of Trustee Professional Services Expenses	\$ 1,226,354	\$ 1,226,354	\$ 1,326,000	\$ 99,646	8.13%
Total Board of Trustee Expenses	\$ 1,620,354	\$ 1,620,354	\$ 1,720,000	\$ 99,646	6.15%

Legal and Regulatory

Background and Scope

The Legal and Regulatory department's workload is derived from the following key NERC program areas: Compliance Analysis, Certification and Registration, Reliability Risk Management, Reliability Assessment and System Analysis, Performance Analysis, and Standards. In addition, the Legal and Regulatory department is also responsible for providing a wide range of legal support to the NERC management team regarding antitrust, corporate, commercial, insurance, contract, employment, real estate, copyright, tax, legislation, and other legal matters. The department also addresses legal and regulatory matters that arise in connection with the delegation agreements with the Regional Entities.

Resource Requirements

Due to process improvements and increased efficiency, the number of FTEs allocated to the department was reduced in 2017 compared to 2016.

Outside law firms and consultants supporting this area are budgeted and tracked as Professional Services. The Professional Services budget for 2017 was reduced by approximately 25% compared to the 2016 budget.

Information Technology

Background and Scope

NERC's IT department plan includes capital and operating expenses required to support, build, configure, and enhance applications that serve registered entities, Regional Entities, and NERC staff. The plan also includes work related to ERO Enterprise data analysis, as well as ongoing NERC internal operations.

The focus of the 2017 – 2019 budget places a heavy emphasis on applications and data analytics designed to improve and enhance the efficiency and productivity of NERC and the Regional Entities, and support more consistent and streamlined interactions with registered entities. These investments will provide broad benefits across the ERO Enterprise in terms of the efficiency and effectiveness of operations and meeting our reliability goals. Additionally, by working to provide more services to the Regional Entities in terms of tools and systems, associated economies of scale will result in these initial investments providing increasing value across the ERO Enterprise in the years to come.

The budget is broken down into four categories as follows:

1. **ERO Enterprise New Functionality** – Items listed in this category are those items designed to add, enhance, or improve, capabilities for registered entities, Regional Entities, and NERC staff. This includes items such as Enterprise Reporting, data analytics and warehousing, the Misoperation Information Data Analysis System (MIDAS), User Management and Registration (UMR), and the Generating Availability Data System for Wind Turbine Generation (GADS Wind).
2. **ERO Enterprise Infrastructure & Support** – Items listed in this category are those infrastructure and support items required for applications used by registered entities, Regional Entities, and NERC staff. Items include The Events Analysis Management System (TEAMS), the Bulk Electric System Notification and Exception System tool (BESnet), the Standards Balloting System (SBS), the Reliability Coordinator Information System (RCIS), and numerous other applications.
3. **NERC New Functionality** – Items in this category are those items that enhance or improve the internal NERC infrastructure, such as Document Management, telephony, and audio visual.
4. **NERC Infrastructure & Support** – Items listed in this category are primarily those items required to maintain and run the internal office infrastructure, and support NERC staff operations. Items include server hardware and software licenses, network equipment, data and telecommunication circuits, and data storage, as well as office administrative applications (e.g., Microsoft Office) and user hardware such as laptops and peripherals.

A further discussion of each item is outlined below:

ERO Enterprise New Functionality:

As noted above, this category is primarily those applications or systems designed to improve or add capability to registered entities, Regional Entities, and NERC staff. Over the past two years, IT has been successful at deploying a number of new applications and functionality for the ERO Enterprise that have now moved into support. In 2017 and beyond, IT will continue that trend with a heavy focus on data and analytics.

- a. **Enterprise Reporting.** In 2015, IT was successful at providing Enterprise Reporting Phase 1 and 2. In the latter part of 2016, IT will bring generation performance data into the Enterprise Reporting system. In 2017 and subsequent budget planning years IT will focus on additional datasets, as well as increasing the analytical and data mining capabilities for the ERO Enterprise.
- b. **Entity Registration.** In 2016, IT began an effort to replace its existing “User Management Program” customer relationship management tool with one based on Microsoft Dynamics CRM (xRM). In 2017, that effort will be extended by integrating the compliance registration function into the xRM system, including implementation of the “common registration form.” This will result in a common registration system shared across the ERO Enterprise that provides a consistent user experience for registered entities.
- c. **Compliance Monitoring and Enforcement Process Tools.** IT will also work closely with the Regional Entities in 2017 to evaluate and implement strategic investments in tools that support the Compliance Monitoring and Enforcement Process. Items under consideration at this time include how NERC and the Regional Entities manage registered entity information (and how that information integrates with Enterprise Reporting to provide reliability risk analysis functionality), how Reliability Standards data is stored and maintained, and how best to support the various parts of the compliance and enforcement process (e.g., analysis of risk, development of implementation plans and audit schedules, actual compliance monitoring, and enforcement processing). Funding for any capital investments in new Enterprise Compliance and Monitoring

Tools will be subject to review and approval as part of the business plan and budget application to the year when such investments are proposed to be made.

- d. **Extranet Development** – NERC IT currently provides external collaboration function through the use of secure WebDAV folders and limited deployment of Microsoft SharePoint. In 2017, IT will develop a more robust implementation of SharePoint to provide better services and support for collaboration across the ERO Enterprise and with stakeholders.

ERO Enterprise Infrastructure & Support:

This line item primarily consists of items used by registered entities, Regional Entities, and NERC Staff. During 2015 and 2016, IT, worked closely with the Regional Entities to design and configure a number of ERO Enterprise applications, with a bias toward using Commercial-off-the-Shelf (COTS) technology whenever possible. Infrastructure and support for these COTS tools (such as SharePoint and the Dynamics xRM platform), as well as custom built applications developed in the past, require ongoing investment to maintain continuous operations. For many applications and systems, this includes the cost of maintaining development, quality assurance, and staging and production environments, which are required to ensure the security and operational integrity and stability of the multiple applications supported for the ERO Enterprise. These applications and systems are monitored, tested (including penetration and vulnerability testing), and maintained in a manner as to ensure the highest level of integrity, security, and availability to the roughly 4,000 users across North America.

In 2016, IT placed emphasis on ensuring the environment was configured in a manner consistent with enterprise best practices, ensuring the security and integrity of the environment while allowing ERO Enterprise users to obtain the information and resources required to perform various analyses. Ongoing support for applications such as TEAMS, MIDAS, SBS, the Reliability Analysis Data System (RADS), in addition to numerous legacy ERO Enterprise products, make up this portion of the IT budget.

NERC New Functionality:

Items included in this category are primarily those items designed to improve, enhance, or replace existing functionality for internal NERC staff and, generally speaking, are not consumed by ERO Enterprise clients.

- a. **Document Management Program and Intranet Enhancement** – During 2015 and 2016, NERC began implementation of a document management system, leveraging SharePoint 2013 as the foundational platform. The implementation of a document management program supports a number of important business requirements, including:
 - Ensuring proper classification and management of confidential information
 - Addressing a number of internal audit recommendations/mitigating corporate risk
 - Improving information access and search capabilities
 - Facilitating working group, team, and stakeholder collaboration
 - Supporting document retention policy and procedures
 - Simplifying document retrieval
 - Improving version control of documents
 - Improving workflow control (review and approval of documents)
 - Increasing efficiency and employee productivity

Two additional products were integrated as part of this effort: Gimmel Compliance Suite, an add-on to SharePoint, which enables robust records management capabilities, and Repstor Affinity, which enables offline visibility into content repositories via Microsoft Outlook. In

2016, NERC will implement document management for six program areas. In 2017, NERC will bring the remaining program areas into the document management program. The implementation of a document management program is a multi-year initiative designed to greatly reduce the manual and labor-intensive effort of managing thousands of documents by streamlining the storage, security, versioning, data classification, and archiving of NERC information.

- b. **Audio Visual** – During 2016, IT will replace audit visual (AV) equipment in NERC’s primary conference rooms with a Cisco WebEx solution designed to enhance capability (e.g. video conferencing), in addition to reducing cost of travel, when possible. In 2017, as appropriate and approved, additional conference rooms will be refreshed with AV equipment.
- c. **IT Infrastructure Services** – During 2016, IT undertook an initiative to leverage qualified vendors for sourceable work, allowing IT to place a greater emphasis on ERO Enterprise projects. Network monitoring is one example of where NERC has been successful in moving items such as monitoring to a qualified vendor. While technically not “new” capability, implementation of this new approach to network monitoring allows NERC’s internal IT resources to focus on larger initiatives designed to serve the ERO Enterprise. IT will continue to pursue this strategy in 2017 as additional work is identified that can be efficiency and cost effectively assumed by qualified vendors.
- d. **Public Facing Website Improvements** - Over the past several years, NERC has made a number of updates to its outward-facing Internet presence, during which technology improvements are made and suggestions and requests are implemented. In 2017, IT will work with the company’s communications department to begin a project to review the information architecture of the NERC.com site and make changes with the goal of providing a more streamlined user experience.

NERC Infrastructure & Support

As previously noted, NERC Infrastructure & Support are those items required to maintain and support the internal infrastructure for NERC staff. Items such as file servers, network equipment, storage, Microsoft Office (Word, Excel, PowerPoint, Email, SharePoint, etc.), along with security and telecommunications are required to ensure staff have the necessary tools and technology to perform their daily operational functions. Emphasis in 2017 and in the 2018 – 2019 planning cycle will continue to be placed on optimizing the amount of effort placed on NERC infrastructure and support in order to minimize spend on internal office steady state operations, allowing a larger portion of IT resources to focus on new ERO Enterprise functionality, as well as ERO Enterprise infrastructure and support. Examples of items included in internal operations are outlined below:

- a. **Compliance Reporting and Tracking System (CRATS)** – This compliance database is used to track violations, mitigation plans, and reporting required by NERC as the certified ERO. The compliance database has additional modules, such as the Standards, Technical Feasibility Exceptions (TFEs), and Registration module, which contains a list of all registered entities. Funding requirements include ongoing maintenance and enhancements to the CRATS compliance tools.
- b. **Meeting Manager, ERO Membership, RCIS, Central Repository of Curtailment Events (CRC)** – NERC maintains a number of legacy applications. Many of the legacy applications were developed and implemented five to ten years ago and are unable to benefit from contemporary application development. Some of these applications may have to be completely rewritten, or moved to the xRM application platform, as IT was able to do with Application Broker, NERC MyAccount and UMP in 2016. Funding in 2017 is required for

ongoing maintenance and enhancements until the applications can be rewritten or moved to the xRM platform or, in some cases, potentially divested or transferred to industry support.

- c. **Quarterly Penetration and Vulnerability Testing All NERC Networks and Systems** – Expert consulting services to provide ongoing intrusion detection and vulnerability testing of the NERC public website and NERC’s network, applications, and systems, is an essential requirement of ongoing operations. NERC is subject to frequent intrusion attempts where external parties try to gain access to its systems and infrastructure. Any vulnerability identified is documented and provided to NERC IT for rapid remediation.
- d. **NERC Security Program** - NERC’s IT department performs a number of technology initiatives to ensure the security of the network and infrastructure. However, in order to continually improve security, a more holistic approach is required that implements technology improvements and constructs an overarching security program to ensure all aspects of security have been considered, including information classification, review of retention policies, and enforcement of security guidelines. During 2016, IT undertook an initiative to improve several processes and will continue to place a high emphasis on security over the coming years.

Robust Planning for New Capital Projects

In connection with the 2016 business planning cycle, the company significantly improved its approach to evaluating potential capital investments in major enterprise software applications. The company has adopted an enterprise information technology investment planning methodology that ensures only projects with compelling and approved business cases are funded. The approval process uses four approval gates:

- A Business Unit Sponsor approval gate,
- A NERC VP/CTO approval gate,
- An ERO Technology Leadership Team (comprised of the NERC CEO and two Regional Entity CEOs) approval gate, and
- The full ERO-EMG (CEOs of NERC and each Regional Entities) approval gate.

This gated process provides the required rigor and discipline to ensure only high value enterprise IT investments are pursued. In addition, all Enterprise IT investments are subject to ongoing oversight by a subgroup consisting of four members of the Board’s Standards Oversight and Technology Committee. The company will continue to use this process for the 2017 – 2019 budget planning cycle.

TEAMS, the RADS, and the document management program are three examples of applications or programs for which investments were approved in 2016 using the new enterprise information technology investment planning methodology.

TEAMS. The TEAMS application provides integration of events data systems, while enabling a more efficient and effective method for event data collection, tracking, analysis and reporting. This enhances the ability of the ERO and stakeholders to identify and focus on significant and emerging reliability risks. This tool is used by NERC and the Regional Entities, providing a consistent experience for all ERO clients involved in the events analysis business process. The benefits provided by the TEAMS application streamline ERO Enterprise reliability data sources with an event data collection platform that is consistent with the event analysis process. Benefits include:

- **Improving Efficiency:** TEAMS helps ensure the reliability of the Bulk Power System by facilitating:

- The reporting of a BPS event
- The evaluation of BPS events
- The undertaking of appropriate levels of EA
- The generation of lessons learned
- The generation of reliability trend analysis
- **Managing Reliability Risk:** TEAMS enables the ERO Enterprise to integrate event reports with other reliability data sources and develop portfolios of risk information. This integration enables a more complete analysis into the cause of events, including transmission outages, generation trips, and load loss. With this analysis, the ERO Enterprise can better identify unplanned service interruptions and spotlight key areas for reliability improvement, with the ultimate goal of reducing the probability and reliability impact of future system events.
- **Fostering Collaboration:** Increased efficient and effective collaboration amongst NERC and the Regional Entities has resulted through the centralization and appropriately secure distribution of information across Regions (including EA results, trending analysis, and lessons learned), and the increased clarity and standardization of processes provided by the software solution.

RADS. The RADS provides for a more efficient method for NERC to complete seasonal and long-term reliability assessment reports. Specifically, RADS automates the importing of data, provides for ad hoc and pre-defined reporting, and provides access to historical data. In fact, a recent benchmarking exercise indicated that RADS enabled a routine data import process to be completed in 22 minutes as compared to prior manual work efforts totaling roughly 80 hours. This process improvement has allowed NERC's analysts and engineers to spend more time analyzing reliability and less time importing and managing data. Additional benefits of RADS include:

- **Management of Reliability Risk.** By allowing analysts to refocus their efforts on higher value work, the implementation of RADS is resulting in more and better analyses of future conditions and risks.
- **Improved Quality.** Part of the reason for the respected status of the ERO and its assessments conducted and published by the ERO is the high level of quality embodied within its documents. If factual errors were introduced into NERC's reliability assessments, such errors would considerably diminish the ERO's credibility. By centralizing information and reducing the number of manual interventions required to manage data, the RADS aids in ensuring that the information contained within NERC assessments is accurate and correct.
- **Increased Security.** NERC has obligations to ensure the integrity and security of assessment data. Having a central place to manage and store assessment data has reduced the number of instances of confidential proprietary data being handled and managed at NERC. As such, the risk of accidental inappropriate disclosure has been reduced.

Document Management. As a third example, as described previously, NERC commenced implementation of a document management program during 2015 and 2016. The evaluation of the cost-benefit of the document management program indicated tremendous value to the organization, primarily in terms of addressing the business requirements set forth above. The cost benefit analysis of this project also demonstrated that NERC's projected average cost per user is

comparable to market. In addition, assuming achievement of modest personnel efficiency gains (between 2-7 percent) from using the new system, the program will generate value in terms of increased resource availability well above anticipated costs. The project was reviewed in depth with the board of trustee's Standards Oversight and Technology Committee and Finance and Audit Committee, which, together with the Board, authorized reserve funding at their May, 2015 meetings to commence initiation of the program.

For all three of these projects, NERC's planning process and associated approval gates resulted in thorough review of both costs and benefits of the proposed technology projects prior to moving forward. As the planning process has matured, NERC has also begun to analyze potential benefits to the Regional Entities when considering the benefits from potential IT investments. In the Enterprise Reporting – GADS business case brought before the ERO Technology Leadership Team in April, NERC included estimates of productivity gain in terms of both NERC staff and the staff of the Regional Entities. NERC estimated that across the ERO Enterprise, in the first year of operation, 32 Regional Entity employees would save roughly 10 hours of time per employee and 42 NERC employees would save roughly 29 hours of time per employee, with benefits increasing in future years as users became more familiar with the system and as the system was expanded with additional data. This saved time represents additional value that those employees can provide by not having to manage data or duplicate work. Beyond this analysis, the business case considered less quantifiable benefits to both NERC and the Regional Entities in terms of supporting the ERO Enterprise Strategic Plan and reducing reliability risk.

As the planning process continues to develop and mature, NERC will continue to expand incorporation of regional staffing and budget impacts into its business case analysis, as well as identifying economies of scale, efficiency improvements, and enhancements to reliability through IT investment.

Resource Requirements

Personnel

The increase in Information Technology FTEs is due to the reallocation of personnel to strengthen project management oversight over NERC and ERO Enterprise software application development and implementation.

Contract and Consulting Resources to Support Internal Operations

The 2017 budgeted amounts are set forth in Exhibit C, with a comparison to 2016 budgeted amounts. The increase in the 2017 budget compared to 2016 is primarily due to ongoing maintenance costs for recently added ERO Enterprise applications and costs for the document management program.

2017 IT Operating Expenses

A summary of the major categories of IT Operating Expenses are set forth in the following table:

Office Costs	Budget 2016	Budget 2017	Variance
Telephone	\$ 225,000	\$ 230,000	\$ 5,000
Telephone - Answering Service	3,000	2,500	(500)
Internet	350,000	358,920	8,920
Computer Supplies and Maintenance			
Computers	25,000	25,000	-
Computer Supplies	96,100	98,100	2,000
Maintenance & Service Agreements	1,365,295	1,706,088	340,793
Software	59,000	59,000	-
Subscription and Publications	108,300	108,300	
Dues	2,500	2,500	
Express Shipping	5,000	5,000	-
Total Office Costs	\$ 2,239,195	\$ 2,595,408	\$ 356,213

Telephone Expenses

Office telephone costs are items associated with cellular phone, mobile laptop cellular air card, Session Internet Protocol (SIP) data circuits, and conference calling expenses.

Internet Expense

Internet expense is comprised of data circuits, and redundant capability in the event of primary service provider failure.

Computer Supplies and Maintenance

Computers (expensed) are lower cost computers, such as desktop computers or iPads that do not meet the criteria to be considered a capital expenditure. Computer supplies are expense items required for infrastructure support. Maintenance and service agreements are required to support internal and external access to routers, switches, firewalls, intrusion protection, file servers, audiovisual equipment, storage area networks, data backup services, network and security monitoring, co-location data center services, video conferencing, digital certificates, and development and virtualization software. Service agreements related to the co-location data center, offsite backup of data, conference calling, and network and security monitoring comprise a large portion of the maintenance and service agreements budget.

Software

Tools such as Adobe Creativity Suite, remote support tools, and various other IT support tools are included under this line item. The tools are primarily used for NERC infrastructure purposes to support and manage the application, server, and network environment.

2017 IT Fixed Asset (Capital) Expenses

The following table presents a summary of NERC’s IT 2017 fixed asset (capital) budget³⁷ compared to the 2016 budget:

IT CAPITAL BUDGET	2016	2017
ERO Application Development	\$ 1,500,000	\$ 700,000
Document Management Program	465,000	335,000
Hardware (Storage, servers, laptops)	955,000	991,000
Other Equipment	535,000	885,000
Disaster Recovery	200,000	150,000
NERC Software licenses	256,000	211,000
	\$ 3,911,000	\$ 3,272,000

As in prior years, the goal of the fixed assets program, for the 2017–2019 planning period is to provide access, visibility, and analysis of data from many different sources; this requires ongoing investments in hardware, software, and associated tools. The overarching theme is to securely gather, analyze, and maintain data across the ERO Enterprise to support ERO operations. Adding the capability to centralize and mine data—in addition to foundational elements such as the Microsoft xRM application, SharePoint 2013, and disaster recovery and enhanced security—sets the stage for vastly improved reporting and business intelligence. It also allows the capability for collaboration and sharing of information vital to the ERO’s mission.

In addition to the investments described in the preceding paragraph to support efficiency and consistency across the Enterprise, the 2017 budget also includes the cost of, network assets, software, servers, laptops, and other hardware to support daily operations.

Human Resources**Background and Scope**

Human Resources (HR) manages all of NERC’s HR functions, including staffing, benefits administration, employee relations, performance and compensation management, and training and development. Management has implemented a robust, objective, and auditable performance management system to track corporate and individual performance against pre-established goals, objectives, and measures. Each year NERC continues to refine and improve this system.

Leadership, Management, and Professional and Administrative Staff Training and Development

As part of the 3-year ERO Enterprise Strategic Plan to engage and retain highly qualified talent with the leadership and technical skills to support the mission, NERC’s executives, managers, and professional and support staff participate in ongoing training and development to improve competencies critical to success and succession planning for critical roles. As such, NERC will continue to invest in learning opportunities in several areas. First, HR will continue to host and optimize an e-learning platform, SkillSoft, to provide staff resources for improving soft and technical skills. Second, HR will provide broad-based staff development training through real-world access via tours of and training on control centers, electric substations, and power generation plants. Finally, staff will have access to additional education, including but not limited to degree-oriented university education, pursuit of specialized certifications, and other in-

³⁷ NERC’s total 2017 fixed asset (capital) budget is \$4,372,000, and includes \$1.1M budgeted in E-ISAC for portal enhancements and other costs related to CRISP.

house and external training that provides essential competencies and skills development that will lead to improved organization performance.

Compensation Consulting

Consultants are periodically retained to examine appropriate compensation based on current market data. This ensures that decisions affecting compensation are made in light of the current market climate and that qualified employees are attracted and retained within a defined total remuneration range. NERC also periodically retains compensation subject matter experts to perform periodic assessments of the BOT compensation model to ensure alignment with market practices.

Surveys

NERC periodically retains a vendor to conduct Board of Trustees and committee effectiveness surveys to identify improvement opportunities. HR will also launch additional surveys as appropriate, based on business needs, which may include periodic internal climate surveys.

Succession Planning

Minimizing disruption of knowledge, skill, and experience of key staff is critical to the company's success. HR works with senior management to identify essential roles and develop strategies to build succession and contingency plans for any loss of staff.

HR Products and Services Automation

HR will continue to operate, maintain, and investigate investment in additional electronic platforms for HR support services that reduce administrative burden and improve employee access to tools and information.

Resource Requirements

Personnel

The slight increase in FTEs is due a lower vacancy rate in 2017 compared to 2016.

Contractor Expenses

Contractor and consultant expenses are set forth in additional detail in Exhibit C. The increase over 2016 is primarily due to increased investments for additional leadership and staff training.

Miscellaneous Expenses

Miscellaneous expenses include community responsibility and employee engagement, the year-end employee appreciation event, and employee rewards and recognition.

Finance and Accounting

Background and Scope

NERC's Finance and Accounting department manages all finance and accounting functions, including employee payroll, 401(k), 457(b), and 457(f) plans, travel and expense reporting, monthly financial reporting, sales and use tax, meeting and events planning and services, insurance, internal auditing, and facilities management. This area also holds primary responsibility for the development of the annual business plan and budget, as well as NERC's proposed ERO risk management framework. Over the past several years, NERC's Finance and Accounting department implemented additional policies, procedures, and controls governing day-to-day practices including contract and personnel procurements, meetings, conference planning and travel, expense reimbursement, and back office systems and procedures. The

department will continue to refine, improve and, where necessary, implement additional procedures and controls.

Resource Requirements

Personnel

The reduction in FTEs is due to a reallocation of resources to other departments in 2016.

Contractor Expenses

\$457k is budgeted for outside contractor and consulting support, representing an increase compared to the 2016 budget. These costs are primarily for outside professional support for auditors to support various risk management and internal control and audit initiatives, as well as to provide finance and accounting support.

Section A — 2017 Business Plan and Budget Program Area and Department Detail

Statement of Activities and Fixed Assets Expenditures 2016 Budget & Projection, and 2017 Budget						
ADMINISTRATIVE SERVICES						
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)	
Funding						
ERO Funding						
NERC Assessments	\$ 561,427	\$ 626,997	\$ 65,570	\$ 519,083	\$ (42,344)	
Assessment Stabilization Reserve -	-	-	-	-	-	
Total NERC Funding	\$ 561,427	\$ 626,997	\$ 65,570	\$ 519,083	\$ (42,344)	
Third-Party Funding	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Total Funding (A)	\$ 561,427	\$ 626,997	\$ 65,570	\$ 519,083	\$ (42,344)	
Expenses						
Personnel Expenses						
Salaries	\$ 11,054,511	\$ 11,050,223	\$ (4,288)	\$ 11,858,590	\$ 804,078	
Payroll Taxes	662,269	656,558	(5,711)	669,299	7,030	
Benefits	1,369,805	1,348,538	(21,267)	1,333,443	(36,362)	
Retirement Costs	1,024,669	1,101,571	76,902	1,073,642	48,973	
Total Personnel Expenses	\$ 14,111,254	\$ 14,156,890	\$ 45,636	\$ 14,934,974	\$ 823,720	
Meeting Expenses						
Meetings	\$ 315,000	\$ 351,681	\$ 36,681	\$ 350,000	\$ 35,000	
Travel	653,945	651,240	(2,705)	653,945	-	
Conference Calls	63,300	62,110	(1,190)	19,307	(43,994)	
Total Meeting Expenses	\$ 1,032,245	\$ 1,065,031	\$ 32,786	\$ 1,023,251	\$ (8,994)	
Operating Expenses						
Consultants & Contracts	\$ 3,036,671	\$ 2,585,495	\$ (451,176)	\$ 3,359,787	\$ 323,116	
Office Rent	3,054,287	2,987,777	(66,510)	3,117,009	62,722	
Office Costs	2,920,678	2,713,155	(207,523)	3,275,952	355,274	
Professional Services	2,334,300	1,961,280	(373,020)	2,293,135	(41,165)	
Miscellaneous	32,000	32,000	-	32,000	-	
Depreciation	1,920,234	1,751,253	(168,981)	1,233,650	(686,584)	
Total Operating Expenses	\$ 13,298,171	\$ 12,030,960	\$ (1,267,210)	\$ 13,311,534	\$ 13,363	
Total Direct Expenses	\$ 28,441,669	\$ 27,252,881	\$ (1,188,788)	\$ 29,269,759	\$ 828,090	
Indirect Expenses	\$ (28,551,669)	\$ (27,323,087)	\$ 1,228,582	\$ (29,376,484)	\$ (824,815)	
Other Non-Operating Expenses	\$ 110,000	\$ 70,206	\$ (39,794)	\$ 106,725	\$ (3,275)	
Total Expenses (B)	\$ -	\$ 0	\$ (0)	\$ -	\$ 0	
Change in Assets	\$ 561,427	\$ 626,997	\$ 65,570	\$ 519,083	\$ (42,344)	
Fixed Assets						
Depreciation	(1,920,234)	(1,751,253)	168,981	(1,233,650)	686,584	
Computer & Software CapEx	2,347,000	2,749,562	402,562	1,472,000	(875,000)	
Furniture & Fixtures CapEx	-	14,611	14,611	-	-	
Equipment CapEx	1,464,000	365,000	(1,099,000)	1,800,000	336,000	
Leasehold Improvements	-	566,361	566,361	-	-	
Allocation of Fixed Assets	(1,890,766)	(1,944,281)	(53,515)	(2,038,350)	(147,584)	
Inc(Dec) in Fixed Assets (C)	\$ -	\$ -	\$ (0)	\$ -	\$ (0)	
TOTAL BUDGET (=B + C)	\$ -	\$ 0	\$ (0)	\$ -	\$ 0	
FTEs	71.23	73.62	2.39	69.33	(1.91)	

Section B — Supplemental Financial Information

Breakdown by Statement of Activity Sections

The following detailed schedules support the consolidated Statement of Activities. All significant variances were described by program area in the preceding pages.

Table B-1
Operating Reserve and Assessment Analysis

Operating Reserve and Assessment Analysis						
Statutory						
	Total Reserves	Future Obligations Reserve ¹	Operating Contingency Reserve	Operator Certification	CRISP	Assessment Stabilization Reserve
Beginning Operating Reserves Balance - 1/1/2016	8,346,782	3,431,795	1,213,419	930,568	500,000	2,271,000
Generation or (Use) from 2016 Operations						
From 2016 budgeted operations	862,799		1,109,651	(246,852)		
From 2016 approved use of reserves	(1,117,056)	(320,218)	(796,838)			
Proceeds from financing activities (non-current portion only) ²	1,256,042		1,256,042			
Debt Service ³	(1,055,000)		(1,055,000)			
Other adjustments to reserves ⁴	(464,868)	(464,868)	-			
Projected Operating Reserves - 12/31/16	7,828,700	2,646,709	1,727,275	683,716	500,000	2,271,000
Required Working Capital and Operating Reserves - 12/31/17 ⁵	7,759,102	2,646,709	2,227,275	714,118	500,000	1,671,000
Adjustment in funding to achieve required reserve balance	530,402	-	500,000	30,402	-	
Penalty sanctions received 7/1/2015 - 6/30/2016 (See Table B-2)	500,000					500,000
Less: Assessment Stabilization Reserve Release - Penalties	(1,100,000)					(1,100,000)
Total Adjustments to Reserves	(69,598)	-	500,000	30,402	-	(600,000)
Assessment Reconciliation						
2017 Expenses and Capital Expenditures	69,602,175					
Less: Assessment Stabilization Reserve Release - Penalties	(1,100,000)					
Adjustment in funding to achieve required reserve balance	530,402					
Less: Other Funding Sources	(9,195,347)					
Less: Proceeds from financing activities (non-current only)	(966,667)					
Plus: debt service	985,750					
2017 NERC Assessment	59,856,314					

¹As further explained in the discussion of the Working Capital Reserve amount in Exhibit E, the Future Obligations Reserve offsets future, non-current liabilities. The calculation of Working Capital and Operating Reserve balances per 2015 audited financials and as projected for 2016 and 2017 is included with the Statements of Financial Position on page 91.

²Proceeds from financing amount is equal to two-thirds of the amount financed or to be financed in the year.

³Debt Service amount is equal to Annual Payments for Debt Service less Interest Expense. See Exhibit D.

⁴Represents transactions recorded only on the Statement of Financial Position (balance sheet) and do not impact the Statement of Activities (income statement), including recording of capitalized leases, amortization of future obligations and funding the 457f plan.

⁵On August 11, 2016, the NERC Board of Trustees approved the Working Capital and Operating Reserve Balance at 12/31/17.

Table B-2 Penalties

Penalty Sanctions

The *NERC Policy – Accounting, Financial Statement and Budgetary Treatment of Penalties Imposed and Received for Violations of Reliability Standard*, as well as Section 1107.2 of the Rules of Procedure, specify that Penalty monies received by NERC during the 12 months ended June 30 are to be used in the subsequent budget year to offset assessments. In 2015, the NERC Board approved an updated Working Capital and Operating Reserves Policy that was approved by FERC. This updated Policy allows NERC, with Board and FERC approval pursuant to Section 1107.4 of the Rules of Procedure, to place penalty funds into a new Assessment Stabilization Reserve for use in future years to offset assessments. For the 2017 budget, NERC proposes to deposit \$500,000 of penalty funds received during the 12 months ended June 30, 2016 into the Assessment Stabilization Reserve, resulting in a balance of \$2,771,000 on January 1, 2017. NERC further proposes that \$1,100,000 of those funds be used to offset assessments for the 2017 budget with the remaining \$1,671,000 held in the Assessment Stabilization Reserve for future assessment offsets.

All penalties received during the 12 month period ended June 30, 2016 are detailed below, including the amount and date received.

Allocation Method

Penalty sanctions used to offset 2017 assessments have been allocated to the following statutory programs to reduce assessments: Reliability Standards, Compliance Assurance, Compliance Analysis and Certification, Compliance Enforcement, Reliability Assessments and System Analysis, Performance Analysis, Training and Education, Situation Awareness, Event Analysis, and E-ISAC. Penalty sanctions are allocated based on the number of FTEs in the program divided by the aggregate total FTEs in the programs receiving the allocation. In addition to the information noted below, an additional \$500,000 is expected in May 2017 related to an agreed-upon penalty settlement with WECC resulting from the September 2011 blackout.

Penalty Sanctions	Date Received	Amount Received
Penalties received between 7/1/2015 and 6/30/2016		
	May-16	\$ 500,000
		<u>\$ 500,000</u>
Penalties received prior to 6/30/2015, held in the assessment stabilization reserve		\$ 2,271,000
Total penalties available on 1/1/2017 to offset assessments		<u>\$ 2,771,000</u>
Adjustments		
Total penalties released to offset assessments in the 2017 Budget		(1,100,000)
Total penalties held in Assessment Stabilization Reserve 12/31/2017		<u>\$ 1,671,000</u>

Table B-3 Outside Funding

Outside Funding Breakdown By Program (Excludes Penalty Sanction)	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget
Reliability Standards				
Workshops	\$ 105,000	\$ 105,000	\$ 105,000	\$ -
Interest Income Allocation	445	5,374	427	(18)
Total	\$ 105,445	\$ 110,374	\$ 105,427	\$ (18)
Compliance Analysis, Registration and Certification				
Interest Income Allocation	\$ 251	\$ 2,860	\$ 187	\$ (64)
Total	\$ 251	\$ 2,860	\$ 187	\$ (64)
Compliance Assurance				
Workshops	\$ -	\$ -	\$ -	\$ -
Interest Income Allocation	479	4,710	386	(93)
Total	\$ 479	\$ 4,710	\$ 386	\$ (93)
Compliance Enforcement				
Interest Income Allocation	\$ 302	\$ 3,682	\$ 327	\$ 25
Total	\$ 302	\$ 3,682	\$ 327	\$ 25
Reliability Assessments and System Analysis				
pc_GAR Software	\$ 50,000	\$ -	\$ 50,000	\$ -
Workshops	15,000	15,000	15,000	-
Interest Income Allocation	462	3,634	351	(111)
Total	\$ 65,462	\$ 18,634	\$ 65,351	\$ (111)
Performance Analysis				
Interest Income Allocation	\$ -	\$ 2,554	\$ 234	\$ 234
Total	\$ -	\$ 2,554	\$ 234	\$ 234
Training and Education				
Testing Fees and Certificate Renewals	\$ 1,267,972	\$ 1,267,972	\$ 1,321,900	\$ 53,928
CEH Fees	600,000	600,000	600,000	-
Interest Income Allocation	183	2,096	175	(7)
Total	\$ 1,868,155	\$ 1,870,068	\$ 1,922,075	\$ 53,921
Event Analysis				
Workshops	\$ 40,000	\$ 78,073	\$ 40,000	\$ -
Interest Income Allocation	274	2,918	281	7
Total	\$ 40,274	\$ 80,991	\$ 40,281	\$ 7
Situation Awareness				
Workshops	\$ -	\$ 1,128	\$ -	\$ -
Interest Income Allocation	137	1,816	140	3
Total	\$ 137	\$ 2,944	\$ 140	\$ 3
E-ISAC				
Third Party Funding (CRISP)	\$ 6,830,738	\$ 7,335,757	\$ 6,990,447	\$ 159,709
Workshops	70,000	70,000	70,000	-
Interest Income Allocation	468	6,254	491	24
Total	\$ 6,901,206	\$ 7,412,011	\$ 7,060,938	\$ 159,732

- Testing Fees and Certificate Renewals – The 2017 budget reflects prior year actual results and the anticipated number of tests to be taken in 2017.
- E-ISAC – The increase in third-party funding is due to the increase in NERC costs, which are funded equally by participants in CRISP and through assessments.

**Table B-4
Personnel**

Personnel Expenses	Budget		Projection		Variance	
	2016	2016	2017	2017 Budget v 2016 Budget	Variance %	
Total Salaries	\$ 28,842,336	\$ 29,052,918	\$ 30,073,438	\$ 1,231,102	4.3%	
Total Payroll Taxes	1,871,367	1,830,724	1,847,130	(24,237)	-1.3%	
Total Benefits	3,579,280	3,390,190	3,643,806	64,526	1.8%	
Total Retirement	2,990,823	3,015,135	3,076,956	86,134	2.9%	
Total Personnel Costs	<u>\$ 37,283,807</u>	<u>\$ 37,288,967</u>	<u>\$ 38,641,331</u>	<u>\$ 1,357,525</u>	<u>3.6%</u>	
FTEs	192.47	145.02	189.88	(2.59)	-1.3%	
Cost per FTE						
Salaries	\$ 149,852	\$ 200,337	\$ 158,381	8,529	5.7%	
Payroll Taxes	9,723	12,624	9,728	5	0.1%	
Benefits	18,596	23,377	19,190	594	3.2%	
Retirement	15,539	20,791	16,205	666	4.3%	
Total Cost per FTE	\$ 193,710	\$ 257,130	\$ 203,504	\$ 9,794	5.1%	

- Salaries - Total Salaries expense is comprised of base salaries, incentive compensation, deferred compensation, employment agency fees and temporary office expenses. The 2017 budget for base salaries assumes a 3% increase over actual 2016 base salaries and is inclusive of market adjustments and promotions. Due to the addition of more senior staff in 2016, and the need to pay higher market-based compensation than previously budgeted to attract and retain employees, the actual average salary is higher than the 2016 budget, which causes the comparison of 2017 budget to 2016 budget to be higher than 3%. The 2017 budget for incentive compensation is based on historical actuals and is slightly higher as a percent of base salaries, 20.9% in 2017 compared to 19.5% in 2016. The 2017 budgets for deferred compensation, employment agency fees and temporary office expenses are generally consistent with 2016.
- Payroll taxes are decreasing based upon the 2016 projection and the reduction in total FTEs. While total Salaries expense is increasing, the maximum salary subject to FICA taxes limits the change in employer costs.
- Benefits are budgeted to increase based on the most recent market data as provided by NERC's insurance broker.
- There have been no changes to NERC's retirement plans. Retirement expenses are increasing at a higher rate consistent with the 3% increase in base salaries.

**Table B-5
Meetings**

Meetings	Budget 2016	Projection 2016	Budget 2017	Variance	
				2017 Budget v 2016 Budget	Variance %
Meetings	\$ 1,096,500	\$ 1,194,500	\$ 1,071,500	\$ (25,000)	-2.28%
Travel	\$ 2,203,786	\$ 2,190,184	\$ 2,203,786	(0)	0.62%
Conference Calls	\$ 320,000	\$ 261,880	\$ 97,600	(222,400)	-62.73%
Total Meetings	\$ 3,620,286	\$ 3,646,564	\$ 3,372,886	\$ (247,400)	-6.83%

- The 2017 budget for Meetings expense in the Operator Certification Program is \$25.0k lower than the 2016 budget based upon prior year actual results.
- The 2017 budget for Conference Calls is \$222.4k, 69.5%, lower than 2016 based upon the planned execution of a contract with a new provider scheduled to occur in 2016. This reduction in Conference Calls expenses will offset an increase in maintenance costs associated with a new audio visual lease related to new equipment and associated service and maintenance agreements.

**Table B-6
Consultants and Contracts**

NOTE: This table has been replaced by Exhibit C, and is further discussed in the Executive Summary on page 13

**Table B-7
Rent**

Office Rent	Budget 2016	Projection 2016	Budget 2017	Variance	
				2017 Budget v 2016 Budget	Variance %
Office Rent	\$ 2,954,287	\$ 2,954,287	\$ 2,838,144	\$ (116,143)	-3.93%
Utilities	-	-	-	-	
Maintenance	100,000	270,000	278,866	178,866	178.87%
Total Office Rent	\$ 3,054,287	\$ 3,224,287	\$ 3,117,009	\$ 62,722	2.05%

- The decrease in Office Rent is due to the termination of the lease at NERC's former Washington, DC office.
- Maintenance costs at NERC offices increase year over year per the terms of the lease agreements. The 2016 projected expenses are significantly higher than the 2016 budget due to escalations that were not included in the budget and due to higher costs not covered by the lease agreements.

Table B-8
Office Costs

Office Costs	Budget	Projection	Budget	Variance	Variance
	2016	2016	2017	2017 Budget v 2016 Budget	%
Telephone	\$ 548,596	\$ 410,053	\$ 539,737	\$ (8,859)	-1.61%
Telephone Answering Srv	3,000	3,355	2,500	(500)	-16.67%
Internet	375,900	369,021	383,366	7,466	1.99%
Office Supplies	173,800	177,392	194,000	20,200	11.62%
Computer Supplies and Maintenance	-	-	-	-	
Computers	25,000	26,000	25,000	-	0.00%
Computer Supplies	98,400	85,607	101,400	3,000	3.05%
Maintenance & Service Agreements	1,875,126	1,858,992	2,426,139	551,013	29.39%
Software	117,500	226,643	122,500	5,000	4.26%
Network Supplies	-	-	-	-	
Publications & Subscriptions	167,650	190,852	180,460	12,810	7.64%
Dues	48,050	63,165	49,316	1,266	2.64%
Postage	16,350	15,786	16,221	(129)	-0.79%
Express Shipping	28,200	17,405	28,216	16	0.06%
Copying	105,000	104,993	110,123	5,123	4.88%
Reports	2,000	1,362	362	(1,638)	-81.90%
Stationary/Forms	2,500	1,090	2,500	-	0.00%
Equipment Repair/Service Contracts	75,000	75,000	75,000	-	0.00%
Bank Charges	42,500	26,494	25,000	(17,500)	-41.18%
Sales & Use Taxes	5,000	500	-	(5,000)	-100.00%
Merchant Card Fees	86,000	86,575	77,500	(8,500)	-9.88%
Total Office Costs	\$ 3,583,328	\$ 3,740,288	\$ 4,359,340	\$ 563,768	21.66%

- The increase in Office Supplies is primarily related to increased needs at NERC's Washington, D.C. office.
- The increase in Maintenance and Service agreement costs is primarily due to:
 - New software audit tool in Compliance Assurance, \$100k
 - New software analytic tools used in RASA, \$37k
 - Increase in maintenance costs for new data center hardware installed in 2015 and 2016, and new network storage devices, \$200k
 - Increase in maintenance costs for new audio visual equipment planned for 2016, \$164k

Table B-9
Professional Services

Professional Services	Budget	Projection	Budget	Variance	Variance
	2016	2016	2017	2017 Budget v 2016 Budget	%
Independent Trustee Fees	\$ 1,126,354	\$ 1,126,354	\$ 1,226,000	\$ 99,646	8.85%
Trustee Search Fee	100,000	100,000	100,000	-	0.00%
Outside Legal	690,000	590,000	515,000	(175,000)	-25.36%
Lobbying	50,000	50,000	60,000	10,000	20.00%
Accounting & Auditing Fees	154,500	154,500	159,135	4,635	3.00%
Insurance Commercial	225,000	225,000	230,000	5,000	2.22%
Outside Services	163,446	168,446	178,000	14,554	8.90%
Total Services	\$ 2,509,300	\$ 2,414,300	\$ 2,468,135	\$ (41,165)	-1.64%

- The increase in Independent Trustee Fees was approved by the Board of Trustees on August 13, 2015. The increase in fees is being implemented over a 3-year period from 2016 through 2018. Independent Trustee Fees are included in the Professional Services budget in the General and Administrative department.
- The reduction in outside legal fees, budgeted in the Legal and Regulatory department, is based on bringing more work in-house and a reduction in projected outside legal needs due to the completion of certain contract negotiations.
- The increase in Lobbying expense, budgeted in the Legal and Regulatory department, is based upon prior year actual expenses. This expense is primarily related to NERC's monitoring of regulatory and legislative issues and responding to information requests related to these activities.
- The increase in outside service costs is primarily due to various employee benefit management systems budgeted in the Human Resources department.

Table B-10
Miscellaneous

Miscellaneous Expenses	Budget 2016	Projection 2016	Budget 2017	Variance	
				2017 Budget v 2016 Budget	Variance %
Miscellaneous Expense	\$ 6,500	\$ 6,500	\$ 6,500	\$ -	0.0%
Employee Rewards and Recognition	10,000	\$ 10,000	10,000	-	0.0%
Community Resp & Employee Engagement	10,000	10,000	5,000	(5,000)	-50.0%
Year-end Employee Recognition Event	10,000	10,000	15,500	5,500	55.0%
Total Miscellaneous Expenses	\$ 36,500	\$ 36,500	\$ 37,000	\$ 500	1.4%

The total 2017 Miscellaneous Expenses budget shows a small increase of \$500 over the 2016 budget.

This budget is intended to cover the cost of:

- Token gifts to retiring employees, condolence flowers in the event of a death in the family of an employee, and similar types of miscellaneous expenses (\$6.5k);
- Funds to support Community Responsibility and Employee Engagement Committee activities (\$5.0k);
- Departmental and company team-building activities and employee rewards and recognition expenses that are not otherwise included in personnel expenses (\$10.0k); and
- Year-end employee recognition meal expenses (\$15.50k). \$5.0k was reallocated from Community Responsibility and Employee Engagement expenses to the Year-End Employee Recognition Event to better align the budget with prior year actual results.

The budget for item (1) is spread throughout all Programs and Administrative departments. The budget for items (2) and (4) are included in the Human Resources department. The budget for item (3) was split equally between General and Administrative and Human Resources in the 2016 Budget, but is budgeted in Human Resources only in 2017.

Table B-11
Other Non-Operating Expenses

Other Non-Operating Expenses	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Property Tax Expense	\$ 50,000	50,000	\$ 50,000	-	
Interest Expense	60,000	60,000	56,725	(3,275)	-5.46%
Total Other Non-Operating Expenses	\$ 110,000	\$ 110,000	\$ 106,725	\$ (3,275)	-2.98%

Budgeted interest expense is calculated based on expected draws on the capital financing loan. Refer to Exhibit D, page 126 for more detailed information related to debt repayment and the interest expense calculation.

Table B-12
Fixed Assets

Fixed Assets	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Depreciation	\$ (2,641,943)	\$ (2,558,606)	\$ (1,691,457)	\$ 950,486	-35.98%
Computer & Software CapEx	2,447,000	2,362,402	2,572,000	125,000	5.11%
Furniture & Fixtures CapEx	-	-	-	-	
Equipment CapEx	1,464,000	1,545,797	1,800,000	336,000	22.95%
Leasehold Improvements	-	-	-	-	
	\$ 1,269,057	\$ 1,349,593	\$ 2,680,543	\$ 1,411,486	111.22%

As further explained in the Executive Summary on page 15 and in Section A in the Information Technology section on page 78 and the E-ISAC section on page 61, expenditures for fixed assets, excluding the reversal of Depreciation expense, are budgeted to be \$461.0k higher in 2017 compared to 2016. The increase in Computer & Software CapEx is primarily due to the combination of lower costs resulting from a delay in the potential replacement for the current compliance monitoring and enforcement tracking tool, originally planned for 2017, and the increase in costs related to the portal enhancement project. This delay in the compliance monitoring and enforcement tracking tool resulted in a \$800k decrease in ERO applications development from \$1.5M in 2016 to \$700k in 2017. The increase in Equipment CapEx is primarily for security devices.

Table B-13
2018-2019 Projections

NOTE: Refer to the Executive Summary beginning on page 20

Section C — Non-Statutory Activity

NERC has no non-statutory activities.

Section D — Supplemental Financial Statements

NORTH AMERICAN ELECTRIC RELIABILITY COPORATION STATEMENT OF FINANCIAL POSITION

	12/31/2015 Per Audit	12/31/2016 - Projection	12/31/2017 - Projection
ASSETS			
Cash	40,308,955	39,464,020	39,091,525
Trade Accounts receivable, net of allowance for uncollectible accounts of \$0 and \$62,573 in 2013 and 2012	3,986,346	3,986,346	3,986,346
Prepaid expenses and other current assets	1,291,805	1,291,805	1,291,805
Security deposit	125,416	125,416	125,416
Plan Assets - 457b	744,439	744,439	744,439
Plan Assets - 457f	271,200	271,200	271,200
Property and equipment	8,301,730	9,411,545	12,669,171
Total Assets	55,029,891	55,294,771	58,179,902
LIABILITIES AND NET ASSETS			
Liabilities			
Current Portion			
Accounts payable and accrued expenses (incl, vacation accrual)	5,326,723	5,326,723	5,326,723
Accrued Incentive Comp	4,721,278	4,956,779	4,872,492
Deferred rent-current	322,016	400,434	480,457
Deferred compensation-current	-	-	-
Capital lease obligations - current	64,728	64,728	64,728
Accrued retirement liabilities	1,878,830	1,695,570	1,761,502
Debt Service - Current Portion	744,253	857,725	650,231
Deferred income	7,961,316	7,961,316	7,961,316
Deferred revenue - penalties	-	-	-
Deferred revenue - CRISP	2,508,514	2,508,514	2,508,514
Regional assessments	12,273,666	12,273,666	12,273,666
Total Current Portion	35,801,324	36,045,455	35,899,629
Long-Term Portion			
Deferred compensation ¹	1,038,350	1,038,350	1,038,350
Capital Project Financing - non-current	680,311	1,011,839	1,033,333
Deferred rent - non-current	3,412,298	3,011,864	2,531,407
CRISP Insurance Reserve	500,000	500,000	500,000
Deferred Revenue - Assessment Stabilization Reserve	-	2,271,000	2,271,000
Capital lease obligations - non-current	151,752	151,752	151,752
Total Non-Current Portion	5,782,711	7,984,805	7,525,842
Total Liabilities	41,584,035	44,030,260	43,425,472
Net Assets - unrestricted	9,735,856	10,764,511	14,254,430
Net Assets - restricted	3,710,000	500,000	500,000
Total Liabilities and Net Assets	55,029,891	55,294,771	58,179,902

¹Includes 457b liability, life insurance for former executive, and retiree medical

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Statement of Activities, Fixed Asset Expenditures and Change in Working Capital by Program 2016 Budget	Statutory Activities																
	Statutory Total	Reliability Standards	Compliance Analysis, Registration & Certification	Compliance Assurance	Compliance Enforcement	Reliability Assessment and System Analysis	Performance Analysis	Operator Certification	Training and Continuing Education	Event Analysis	Situation Awareness	E-ISAC	General and Administrative (Includes Executive and Gov't Relations)	Legal and Regulatory	Information Technology	Human Resources	Accounting and Finance
Funding																	
ERO Funding																	
NERC Assessments	59,856,314	7,835,213	3,576,122	7,713,879	5,677,854	7,339,030	4,821,146		1,822,089	5,300,955	3,980,236	11,270,705	519,083	-	-	-	-
Assessment Stabilization Reserve - Penalties	1,100,000	159,642	69,980	144,334	122,465	131,213	87,475		43,738	104,970	52,485	183,698		-	-	-	-
Total NERC Funding	60,956,314	7,994,855	3,646,102	7,858,213	5,800,319	7,470,243	4,908,621		1,865,827	5,405,926	4,032,721	11,454,403	519,083	-	-	-	-
Third-Party Funding (CRISP)	6,990,447											6,990,447					
Testing Fees	1,921,900							1,321,900	600,000								
Services & Software	50,000					50,000											
Workshops	230,000	105,000				15,000				40,000		70,000					
Interest	3,000	427	187	386	327	351	234	58	117	281	140	491					
Miscellaneous	-																
Total Funding (A)	70,151,660	8,100,282	3,646,289	7,858,599	5,800,647	7,535,594	4,908,855	1,321,958	2,465,944	5,446,206	4,032,862	18,515,341	519,083	-	-	-	-
Expenses																	
Personnel Expenses																	
Salaries	30,073,438	2,340,405	1,125,154	2,509,618	1,790,859	2,247,826	1,349,579	245,337	606,753	1,708,049	873,869	3,417,398	3,476,241	2,148,056	3,261,320	770,439	2,202,533
Payroll Taxes	1,847,130	151,658	76,383	163,335	117,205	142,919	92,093	18,342	44,385	108,739	58,749	204,023	173,245	119,055	216,747	28,144	132,107
Benefits	3,643,806	307,085	174,014	333,557	184,106	263,230	143,104	84,920	54,319	212,232	156,328	397,467	396,300	151,930	389,091	72,977	323,144
Retirement Costs	3,076,956	259,407	126,651	276,273	198,694	246,609	149,018	30,026	67,599	189,397	96,159	363,482	197,650	232,244	359,376	46,242	238,131
Total Personnel Expenses	38,641,331	3,058,556	1,502,203	3,282,783	2,290,865	2,900,585	1,733,794	378,625	773,056	2,218,416	1,185,105	4,382,370	4,243,437	2,651,285	4,226,534	917,802	2,895,916
Meeting Expenses																	
Meetings	1,071,500	207,000	4,000	60,000	2,500	74,000	1,000	30,000	25,000	81,500	6,500	230,000	334,000	4,000	7,500	2,000	2,500
Travel	2,203,786	271,988	155,146	276,243	56,736	208,338	118,172	7,389	13,751	152,487	33,005	256,488	444,515	93,231	56,508	8,728	50,963
Conference Calls	97,600	40,565	610	6,100	366	5,270	2,965	153	10,980	4,270	305	6,710	5,856	1,952	9,608	305	1,586
Total Meeting Expenses	3,372,886	519,553	159,756	342,443	59,602	287,608	122,137	37,541	49,731	238,257	39,810	493,198	784,371	99,183	73,616	11,033	55,049
Operating Expenses																	
Consultants & Contracts	13,127,749			50,000		525,000	528,082	219,800	360,800		1,295,850	6,788,429	15,000		2,312,787	575,000	457,000
Office Rent	3,117,009												3,117,009				
Office Costs	4,359,340	51,336	24,231	141,198	20,379	147,652	74,843	43,216	57,107	49,634	41,897	431,895	507,934	46,411	2,595,408	11,748	114,450
Professional Services	2,468,135											175,000	1,431,000	495,000		63,000	304,135
Miscellaneous	37,000	500	500	500	500	500	500		500	500	500	500	500	500	500	30,000	500
Depreciation	1,691,457	231,721				125,621			1,919	85,582	7,667	5,297	438,305		795,345		
Total Operating Expenses	24,800,690	283,556	24,731	191,698	20,879	798,773	603,426	263,016	420,326	135,715	1,345,914	7,401,121	5,509,749	541,911	5,704,041	679,748	876,085
Total Direct Expenses	66,814,907	3,861,666	1,686,689	3,816,924	2,371,347	3,986,965	2,459,356	679,182	1,243,113	2,592,388	2,570,828	12,276,689	10,537,557	3,292,379	10,004,191	1,608,583	3,827,050
Indirect Expenses	0	4,180,279	1,832,451	3,779,431	3,206,790	3,435,846	2,290,564	572,641	1,145,282	2,748,677	1,374,338	4,810,185	(10,644,282)	(3,292,379)	(10,004,191)	(1,608,583)	(3,827,050)
Other Non-Operating Expenses	106,725	-	-	-	-	-	-	-	-	-	-	-	106,725	-	-	-	-
Total Expenses (B)	66,921,632	8,041,945	3,519,141	7,596,355	5,578,137	7,422,812	4,749,920	1,251,823	2,388,395	5,341,065	3,945,167	17,086,873	-	-	-	-	-
Change in Assets	3,230,028	58,337	127,149	262,244	222,510	112,782	158,936	70,136	77,549	105,141	87,695	1,428,467	519,083	-	-	-	-
Fixed Assets																	
Depreciation	(1,691,457)	(231,721)	-	-	-	(125,621)	-	-	(1,919)	(85,582)	(7,667)	(5,297)	(438,305)	-	(795,345)	-	-
Computer & Software CapEx	2,572,000											1,100,000			1,472,000		
Furniture & Fixtures CapEx	-																
Equipment CapEx	1,800,000														1,800,000		
Leasehold Improvements	-																
Allocation of Fixed Assets	0	290,058	127,149	262,244	222,510	238,403	158,936	39,734	79,468	190,723	95,361	333,765	438,305	-	(2,476,655)	-	-
Inc(Dec) in Fixed Assets (C)	2,680,543	58,337	127,149	262,244	222,510	112,782	158,936	39,734	77,549	105,141	87,695	1,428,467	-	-	-	-	-
TOTAL BUDGET (=B + C)	69,602,175	8,100,282	3,646,289	7,858,599	5,800,647	7,535,594	4,908,855	1,291,557	2,465,944	5,446,206	4,032,862	18,515,341	-	-	-	-	-
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	549,485	(0)	-	-	-	(0)	0	30,402	-	-	(0)	0	519,083	-	-	-	-
FTEs	189.88	17.16	7.52	15.51	13.16	14.10	9.40	2.35	4.70	11.28	5.64	19.74	16.92	11.28	23.27	2.82	15.04

Exhibit A – Common Assumptions

Shared Business Plan and Budget Assumptions NERC and the Regional Entities 2016–2019 Planning Period (2017 Budget Cycle)

NERC and the eight Regional Entities are committed to a common operating model³⁸ that describes the characteristics of a highly effective and efficient electric reliability organization (ERO) Enterprise. This operating model includes action items to address coordinated strategic and business planning as well as performance monitoring processes across the enterprise. These processes remain transparent, with results reported out on a quarterly basis to NERC’s Corporate Governance and Human Resources Committee and NERC Board of Trustees (Board) in support of the ERO corporate oversight function.

Recently, at its November 2015 meeting, the Board approved an updated version of the ERO Enterprise Strategic Plan with goals, objectives, and deliverables for the 2016–2019 planning period. The strategic plan lays out five goals that the ERO Enterprise will focus on over the next three years. They include (1) standards; (2) compliance, enforcement, registration, and certification; (3) risks to reliability; (4) emerging risks; and (5) coordination and collaboration. The plan also identifies a number of associated objectives and deliverables to achieve the goals of the ERO Enterprise. There are also four overarching performance metrics to assess the overall effectiveness of the ERO Enterprise in addressing risk to the Bulk Electric System (BES) and improving BES reliability in 2016. These metrics concentrate on (1) measuring progress in achieving reliability results, (2) assuring standards and compliance effectiveness, (3) improving risk mitigation, and (4) program execution.

The following set of common assumptions has been developed to guide ERO Enterprise resource projections³⁹ for the 2016–2019 period. Specifically, it supports the strategies heading into the 2016 year and establishes common assumptions, goals and objectives as the ERO Enterprise begins the 2017 Business Plan and Budget (BP&B) cycle. Additionally, it outlines how these goals and objectives set the stage for periods beyond 2017, all in support of achievement of the goals and objectives set forth in the Strategic Plan.

Similar to prior planning cycles, the specific resource needs and budgets of NERC and the Regional Entities will be publicly posted and made available on NERC’s website for review. Each Regional Entity board approves its BP&Bs after an extensive review process that includes consideration of stakeholder input. Also, the BP&Bs of NERC and each Regional Entity are approved in open session by NERC’s Finance and Audit Committee and Board of Trustees as part of the annual BP&B process. NERC’s review of the Regional Entity BP&Bs will be primarily focused on ensuring alignment of activities with the Strategic Plan and adequacy of resources to support performance of delegated functions and key efforts. A 2017 BP&B schedule has been developed to identify important meeting dates, review periods, posting dates, etc. associated with the development and completion of the NERC and Regional Entity BP&Bs.

These assumptions will continue to be refined based on comments received from stakeholders and the ongoing work conducted by NERC and Regional Entity leadership regarding specific goals, objectives, and supporting activities over the planning period.

³⁸ [ERO Enterprise Operating Model](#)

³⁹ NERC recognizes there are often unique factors that drive differences in each entity or organization’s final determination of its resource needs and budget. Regional Entity-specific assumptions are stated in each Regional Entity’s BP&B as appropriate.

Legal and Operating Framework

NERC and the Regional Entities will continue to work under the existing regulatory framework governing the establishment and enforcement of reliability standards for the BES established by applicable governmental authorities in the United States, provincial regulatory and/or governmental authorities in Canada, and portions of Mexico, as well as the authorizations contained in the Federal Energy Regulatory Commission's (FERC) Order approving NERC as the ERO.

NERC continues to enhance its oversight of the Regional Entities' performance of their delegated functions. NERC in collaboration with the Regional Entities will continue to develop goals, measures, and reports to assess and evaluate the Regional Entities' performance of their Regional Delegation Agreements (RDAs), NERC's Rules of Procedure, the Compliance Monitoring and Enforcement Program, FERC requirements, and directives that are in effect pursuant to Section 8(c) of the RDAs. NERC will continue to provide feedback and direction to the Regional Entities on performance improvements. NERC and the Regional Entities will also continue to work collaboratively to refine and revise processes and procedures to eliminate duplication, increase operational efficiencies, enhance ERO-wide consistency, and achieve measureable reliability outcomes. Regional Entities will continue to have the primary responsibility for day-to-day operations and interactions with registered entities.

Stakeholder Participation

NERC and the Regional Entities develop their BP&B's based upon the assumption of continued stakeholder participation in support of key program areas, while recognizing that stakeholder resource limitations may affect specific levels of participation in any given activity. The availability and adequacy of industry resource support will be evaluated on an ongoing basis.

External Factors

The performance and execution of BP&B's for each entity in the ERO Enterprise may be impacted by various external factors. These factors include, but are not limited to, the following:

- FERC Orders, other applicable governmental authority actions, directives, audits, mitigation efforts, and performance assessments;
- Environmental Protection Agency (EPA) rules that could potentially impact the reliability and/or operation of the BES;
- Other governmental agencies or departments that may issue rules, guidelines, orders, or directives that may impact the operation of the BES;
- The number and significance of changes within Balancing Authorities' and Reliability Coordinators' areas, prompting the need for associated re-certification and reliability plan assessments;
- The unanticipated rise in the rate and severity of entity violations;
- The unanticipated rise in the rate and severity of system events requiring formal investigations beyond historic volumes, and causal drivers of these events;
- New technologies and changes in resource or demand composition that require additional reliability studies and reliability risk analysis, including new techniques for conducting relevant assessments;
- Changes in applicable laws and regulations, including environmental laws and others;
- Priority risk activities identified by the Reliability Issues Steering Committee, committees of the Board, and through other stakeholder input;

- The ability of stakeholders to support the pace and scope of the various activities while implementing the results of earlier efforts.

Collaboration with the Trade Associations and Forums

The activities of the North American Transmission Forum (NATF), North American Generator Forum (NAGF), and other trade forums and associations are expected to complement ERO Enterprise activities and mitigate incremental resource needs of NERC and Regional Entities in certain areas. NERC has a memorandum of understanding with the NATF and NAGF to help ensure that the common objectives of each organization are achieved in the most efficient and effective manner. Increased collaboration between the NERC and the NATF and NAGF is expected to continue.

Key Assumptions by Program Area⁴⁰

Reliability Standards Program

- It is expected the number of continent-wide standards development projects will remain relatively stable, except as required to address any new FERC directives to create or modify reliability standards, or industry submittals of standard authorization requests.
- Continent-wide standards projects will consist primarily of conducting enhanced periodic reviews on existing standards to improve their content and quality, respond to identified risks to reliability (including those that may be identified through the implementation of risk-based Compliance Monitoring and Enforcement), and address FERC directives that may arise. This activity will require the allocation of technical resources from several internal NERC departments (e.g., Reliability Assessment and Performance Analysis (RAPA), Reliability Risk Management (RRM), Compliance Analysis and Certification, and Compliance Assurance) and support from across the ERO Enterprise.
- During the enhanced periodic review of ERO standards, any associated regional standards will be reviewed for potential incorporation as variances or as improvements to the continent-wide requirements. Regional and NERC standards development processes may require modification to accomplish efficiently this task. Each Regional Entity will work with NERC and possibly other Regional Entities on projects where there is a regional standard/variance. Regional standards development activity will be driven by requests the Regional Entity may receive or reliability issues the Regional Entity may identify. Regional standards development activity is expected to remain low.
- In coordination with Standard Drafting Teams and consistent with current approaches, Regional Entities may support outreach during standard development, and participate in the standard development activities as may be required to address reliability and stakeholder issues that may arise within their respective regions. Additionally, following FERC approval, NERC and the Regional Entities collectively will assist the transition of standards to compliance monitoring and enforcement by providing knowledge that supports industry and auditor training, or providing information regarding the intent of the standard.
- The number of interpretations are expected to remain low. However, guidance requests associated with the implementation of Standards may increase.

⁴⁰ These statements, which are generally organized by program area, are intended to help guide resource allocation decision-making in the development of the 2017 BP&Bs.

Compliance Monitoring and Enforcement, and Organization Registration and Certification Programs

Compliance and Enforcement

- The implementation of the risk-based compliance monitoring and enforcement program (CMEP) will continue to require the allocation of dedicated resources from both NERC and the Regional Entities for both compliance and enforcement. Regional Entities created a plan in 2016 to complete Inherent Risk Assessments (IRAs) for all their Reliability Coordinators, Balancing Authorities, and Transmission Operators and will require resources to complete the remaining IRAs in 2017. In addition, Regional Entities will require resources to update previously done IRAs based on identified triggers, and focus on creating compliance oversight plans that include compliance monitoring tools, the frequency of compliance monitoring, and the standards that are to be monitored as well as the depth of testing of those standards.
- NERC and the Regional Entities will continue the 2015-2016 ERO Enterprise exercises to evaluate business practices, implementation, and consistency within risk-based compliance monitoring.
- NERC and the Regional Entities will participate in ERO Enterprise consistency activities, including providing input into standards development.
- NERC and the Regional Entities are planning to support the training and education requirements and guidelines necessary to meet the criteria set forth by the *ERO Enterprise Compliance Monitoring and Enforcement Manual* and the *Competency Guide*.
- The suitability of software systems currently used for compliance, registration, analysis and tracking will continue to be evaluated from a strategic perspective, which may result in changing or replacing existing systems in the future. However, until such changes have been identified, reviewed and approved by the ERO Enterprise Technology Leadership Team and EROEMG for implementation, NERC and the Regional Entities should continue to maintain the necessary resources to support existing systems.
- Planning and operating standard violations are expected to level off or continue decreasing as most registered entities have been audited and thus have a greater understanding of compliance expectations, and the standards have matured.
- Compliance personnel will need to continue to support the implementation of cyber-security reliability standards version 5 (CIP V5):
 - NERC will lead the CIP V5 training development, coordination, and facilitation for the ERO Enterprise CIP auditors and industry outreach. ERO Enterprise CIP auditors will support these activities in collaboration with NERC to ensure appropriate knowledge and guidance is developed, understood by industry, and administered.
 - The allocation of resources in 2017 and 2018 should be responsive to continued implementation by registered entities of new versions of the CIP Standards, while recognizing that the risk-informed focus will be on monitoring “high” and “medium” impact requirements.
- Additional resource allocation may be necessary for increased Physical Security compliance monitoring activities for CIP-014.
- ERO Enterprise CMEP staff, particularly staff with visibility into risks occurring in the field, will provide feedback to the ERO Enterprise. This feedback may include information on risks seen in the field that are not addressed by a standard as well as information on where a standard is too broad. ERO Enterprise CMEP staff will participate in the development of a solution, regardless of whether the solution is a standard or other solution.

- ERO Enterprise CMEP staff will provide input for standards development teams on the risks seen in the field relating to a standard under development, as well as how a standard would be monitored.

Organization Registration and Certification

- Two central reforms have been identified as a result of the completion of the risk-based registration activity in 2015:
 1. Modifications to the NERC Registry Criteria have been approved, including the elimination of three functional entities (Purchasing-Selling Entities, Interchange Authorities, and Load-Serving Entities), modifications to the threshold criteria for Distribution Providers, and alignment of five registration categories with the BES definition.
 2. The NERC-led panel, which establishes subset lists of applicable reliability standards for registered entity functions (e.g., Under-Frequency Load Shedding-only Distribution Providers), has been incorporated into the rules.

These reforms strengthen the registration process and are important milestones in NERC’s approach to managing risks to reliability. Deployment and implementation of these revisions began in 2015, with continued work in 2016 and possibly 2017.

- No further enhancements are anticipated to support the ongoing next phases of the risk-based registration activity.
- Based on the 2015 technical assessment of the Phase 2 registered functions (Transmission Operator, Transmission Owner, Generator Owner, and Generator Operator), development of subsets of standards are not necessary.
- The certification and registration programs will be assessed in 2016, which may result in modifications to the program in 2017.
- The activities associated with the implementation of the BES definition have decreased, therefore no additional resource demands are expected in the registration area.
- Planned oversight activities for 2017 will be aligned with the ERO Enterprise Operating Model and should not affect 2017 resource allocation and should have little effect on overall NERC resource requirements. NERC understands that each Regional Entity will need to evaluate its individual resource needs and allocations.

Reliability Assessment and Performance Analysis Program (RAPA)

- Support and leadership to (1) the Planning Committee and (2) standing committees’ subcommittees, working groups, and task forces serving the standing committees will continue.
- NERC and the Regional Entities will continue to focus resources on high quality reliability assessments and performance analysis, including:
 - Development and implementation of expanded and enhanced enterprise-based data collection and analysis systems, and capabilities for performance analyses. This includes TADS, GADS, NERC RAS data, and misoperations data;
 - Support of the integration of RAPA information systems for assessments and associated data requirements, with focus on objective and technically sound reliability assessments supporting delivery of high quality reports (e.g., long-term, short-term, special or scenario assessments, and State of Reliability Report);

- Development of assessment and performance analysis techniques as well as resource capabilities and tools, including probabilistic and scenario evaluations, which address the reliability impacts of new technologies, changing resource or demand resource composition, and environmental related regulations or legislation;
- Providing technical resources and expertise to perform analyses as needed, including to support and identify risk priorities for standards development, compliance, and enforcement activities;
- Development of appropriately tailored analysis and overall assessment, including guidance for registered entities, of high impact, low frequency BES risks, including physical security and geomagnetic disturbance (GMD) vulnerability.
- Providing technical resources to support up to four short-term reliability assessments (6-18 month horizon replacing the current summer and winter assessments), which focus on specific reliability risk areas and geographic areas with specific reliability concerns, while also allowing for regional assessments;
- Support of the common approach developed for NERC reliability assessments to ensure consistent treatment of resource and reliability evaluations.
- NERC and the Regional Entities will advance analytical capabilities for identifying and determining reliability risks and conducting various reliability assessments by:
 - Integrating the analysis and measures of essential reliability services (ERS) into the Long-Term Reliability Assessment. The process encompasses new data collection and analysis approaches needed to address assessment objectives of identifying reliability issues due to a changing resource mix;
 - Requiring advanced powerflow and stability analysis tools and objective expert input for transmission/deliverability assessments and studies;
 - Maturing and developing interconnection-wide analysis groups to support the assessment of interconnection-wide risks, such as frequency response;
 - Providing technical resources and reliability leadership for the advancement of probabilistic analyses supporting the Long-Term Reliability Assessment;
 - Requiring advanced statistical analysis tools and objective expert input to support them for probabilistic assessments.
- NERC will support the maintenance of the BESnet application and manage processing of the Regional BES Exception Requests (ERs), including technical validation of the definition and exception requests, self-determined notification submittals, periodic reviews of network changes affecting BES determinations, as well as requests for registration and certification reviews. The Regional Entities will continue to process BES ERs per guidelines established in the NERC Rules of Procedure.⁴¹
- NERC and Regional Entities' resources (through the case building designee agreements) will support the Planning Coordinators' development of long-term sustainable interconnection-wide powerflow and dynamics model cases under reliability standards MOD-032 and MOD-033 that exhibit the accuracy and fidelity reflecting actual BES reliability performance and dynamic conditions. These models will integrate needed elements that address reliability behavior of changing resource mix and technology of both generation and loads, including:

⁴¹ [NERC Rules of Procedure](#)

- Development of a process to ensure the continued compilation and creation of annual sets of seasonal and future steady state and dynamic simulation model cases;
- Provision of technical resources to support the effective and continuous improvement of the models that incorporate recognition of reliability behavior of loads and generation associated with the changing resource mix;
- NERC and the Regional Entities will work collaboratively to enhance the ERO Enterprise’s capability for post event analysis, including:
 - Development of a process to ensure the compilation and creation of steady state and dynamic simulation model cases for use in the investigation and analysis of major power system disturbance events;
 - Development and tracking of metrics that demonstrate the accuracy of the powerflow and dynamics models to replicate actual system conditions and reliability behavior;
 - Evaluation of event disturbances using phasor measurements and other methods to assess sufficiency of data and models.
- NERC and the Regional Entities may require contractor and consultant services to maintain continued support and technical expertise associated with activities listed in the above assumptions and with supporting special assessment, scenario, or other technical research efforts. It could potentially impact both NERC and Regional Entity resource allocation:
 - If significant events occur, contractor services may be required to support wide-area system analyses and root cause evaluations.
 - Contractor services may be necessary to support special assessment analyses (e.g., EPA 111(d) evaluation or ERS), scenario analyses (e.g., polar vortex-like severe event analyses and gas-electric interdependence), and other technical research efforts (e.g., similar to geomagnetic disturbances, and FAC-003 Vegetation Management).

Training, Education, and Operator Certification Program

- NERC will continue to budget for the unified learning management system (LMS) focused initially on Regional Entity audit staff, with near-term consideration for risk-based compliance monitoring and enforcement related staff. Future inclusion of other ERO functional areas is expected as potential requirements present themselves during system development. NERC will work with the Regional Entities to consolidate training resources and promote better coordination, planning, delivery and management of training and outreach efforts across the enterprise without adversely impacting Region-specific training requirements.
- The implementation of CMEP staff training and competencies are expected to influence the allocation of training resources throughout the enterprise. NERC will continue the development of compliance training modules with assistance of qualified subject matter experts from the Regional Entities and incorporation of outside expertise/services.
- An allocation of additional resources may be required to support certain training and outreach activities of the risk-based CMEP:
 - Regional Entities should allocate resources to meet the requirements for the compliance and enforcement staff that are associated with the implementation of the risk-based CMEP.
- The Regional Entities, in collaboration with NERC, are expected to help assess and determine training and outreach needs. This includes flexibility in approach between Regional Entities, and

anticipating areas of support for their staff and stakeholders for standards, compliance monitoring and enforcement, situation awareness and event analysis, and information technology. Addressing these needs will likely require additional resource allocation and budgeting considerations.

- NERC, in collaboration with Regional Entities, will develop and deliver additional CIP V5 training to support the transition. This may require consideration for additional funding of the NERC training and education budget.
- The Operating Personnel Certification program is expected to remain at a steady state with no additional resources required from the Regional Entities.
- Contractor and consultant services may be necessary to maintain the continued support and technical expertise associated with some enterprise training, outreach and education activities.

Situation Awareness and Infrastructure Security (including Events Analysis)

- NERC will continue to provide required support and leadership for the Operating Committee and the Critical Infrastructure Protection Committee, and standing committees, subcommittees, working groups, and task forces serving the standing committees. Regional Entity involvement is expected to remain at current levels with no additional resources required from the Regional Entities.
- Registered Entity participation in the ERO Event Analysis Process, which involves active participation by Regional Entity staffs, will continue at or above current levels through 2016.
- NERC will continue to budget and incur costs to operate and maintain the software application known as Situational Awareness for FERC, NERC, and Regional Entities, Version 2 (SAFNrv2) for situation awareness, and The Event Analysis Management System (TEAMS) for Events Analysis. The allocation of additional resource investments are expected to maintain the capabilities of SAFNrv2 throughout the planning period. Any such investments will be NERC funded and not result in an allocation of cost to the Regional Entities.
- Regional Entities will continue to budget for event analysis and situational awareness activities based on their respective Region's historical workload, as they did in the past. Some Regional Entities will continue to allocate resources as part of the activities accounted for under their RAPA program, and should clearly delineate where the activities' resources are budgeted.
- Regional Entities will support critical infrastructure security activities in the context of situation awareness, using those designated resources, unless specifically budgeted and managed elsewhere.

Electricity Information Sharing and Analysis Center (E-ISAC)

- NERC will continue to fund, operate and maintain the E-ISAC, with no increased cost to the Regional Entities.
- NERC will continue to fund and conduct the Grid Security Exercise program, with no increased cost to the Regional Entities. Analysis and planning activities will occur during even-numbered years and execution of the exercise will take place in odd-numbered years.
- NERC will continue to fund and conduct the Grid Security Conference as an annual event. Other than funding registration fees for individual attendees from their Regional Entity, no Regional Entity funding is anticipated.

Information Technology and Project Management Office (PMO)

- NERC and the Regional Entities will work collaboratively to refine existing strategies and governance and procurement practices applicable to the development, operation, and maintenance of enterprise architecture, including software and data systems supporting both NERC and Regional Entity operations.
- NERC's BP&B will include ongoing funding support for the development, operation, and maintenance of ERO Executive Management Group (EMG)-approved enterprise applications. Enterprise application funding in any given year will be subject to the budget and funding limits set forth in NERC's approved BP&B. Regional Entities should include appropriate funding for applications and supporting systems designed to satisfy Regional business needs (if not within the mutually agreed upon scope of the ERO Enterprise applications that are funded by NERC).
- Regional Entities may be required to provide or augment business teams to help develop application business requirements and to test business functionality within the ERO applications.
- Ongoing investments will be required to develop, implement, and maintain enhancements to the NERC and Regional Entity websites, ERO applications, and ERO data repositories, which are required to improve access to information and data. NERC and the Regional Entities will separately fund any enhancements to their own websites.

ERO Enterprise-wide Risk Management

- A common ERO Enterprise risk management framework commenced in 2014 to focus on identifying, assessing, prioritizing, and mitigating risks associated with the performance of both NERC and the Regional Entities. This will be a multi-year activity with the project expected to reach steady state by 2017.
- NERC's Director of Risk Management and Internal Audit is responsible for the overall development of this framework, with the approval of the ERO Regional Executives and under the oversight of NERC's Enterprise Wide Risk Management Committee. NERC and the Regional Entities will continue to devote resources to implement this framework. Activities include validating and prioritizing risks for EROEMG review and approval. The results will serve as an input into the NERC's future audit plans, which are reviewed and approved by the NERC Board of Trustees Enterprise Risk Management Committee. Regional Entities may add risk management and internal control resources as needed.

Exhibit B – Application of NERC Section 215 Criteria

DISCUSSION OF HOW THE NERC MAJOR ACTIVITIES IN THE 2017 BUSINESS PLAN AND BUDGET MEET THE NERC WRITTEN CRITERIA FOR DETERMINING WHETHER A RELIABILITY ACTIVITY IS ELIGIBLE TO BE FUNDED UNDER FEDERAL POWER ACT SECTION 215

I. Introduction

This Exhibit discusses how the major activities in NERC’s 2017 Business Plan and Budget meet the NERC written criteria for determining whether a reliability activity is eligible to be funded under §215 of the Federal Power Act (“FPA §215”). This Exhibit is intended to satisfy Recommendation No. 38 resulting from the financial performance of NERC conducted by the Commission’s Division of Audits (“DA”) in 2012-2013 and adopted by the Commission in its November 2, 2012 order on NERC’s 2013 Business Plan and Budget.¹ NERC submitted the written criteria to the Commission in a compliance filing dated February 21, 2013 in Docket No. FA11-21-000.² The Commission approved the NERC written criteria, with modifications, in an order issued in that docket on April 18, 2013.³ The NERC written criteria as used in this Exhibit incorporate the modifications specified in the Compliance Order.⁴

II. Reliability Standards Program 2017 Major Activities

The major activities of the Reliability Standards Program are described at pages 24-26 of the 2017 Business Plan and Budget. The Reliability Standards Program carries out the ERO’s responsibility to develop, adopt, obtain approval of, and modify as and when appropriate, mandatory Reliability Standards for the reliable planning, operation, and critical infrastructure protection of the North American BES. The major activity areas for this program include (1) providing project management and leadership to the reliability standard development process to deliver high-quality, continent-wide reliability standards, both new and modified, including standard development outreach activities, facilitation of Standard Drafting Team activities, drafting support, assisting Standard Drafting Teams in adhering to the processes in the *Standard Processes Manual*, and ensuring that the quality of documents produced are appropriate for approval by industry and the NERC Board; (2) facilitating continent-wide industry engagement in the standard development processes; and (3) conducting industry balloting on standards, disseminating information on standards and the standard development processes, and supporting regulatory filings and proceedings relating to standards. Additionally, the Reliability Standards Program provides technical advice and final quality review for Regional Entity standards development processes, presents proposed regional standards to the

¹ *North American Electric Reliability Corporation, Order Accepting 2013 Business Plan and Budget of the North American Electric Reliability Corporation and Ordering Compliance Filing*, 141 FERC ¶ 61,086 (2012) (“2013 Budget Order”). Recommendation 38, as adopted in the 2013 Budget Order, is: “In its annual business plan and budget filings, [NERC should] provide an explanation as to why the proposed activities to be undertaken by each program area for the budget year are statutory, including, at a minimum: a description and the purpose of the major activities to be taken by each program area and an explanation for why the activity is a statutory activity.” *Id.* at P 16.

² *Compliance Filing of the North American Electric Reliability Corporation in Response to Paragraph 30 of November 2, 2012 Commission Order – NERC Written Criteria for Determining Whether a Reliability Activity is Eligible to be Funded Under Federal Power Act Section 215*, filed February 1, 2013 in Docket No. FA 11-21-000 (“February 1, 2013 Compliance Filing”).

³ *North American Electric Reliability Corporation, Order on Compliance*, 143 FERC ¶ 61,052 (2013) (“Compliance Order”).

⁴ For ease of reference, the complete NERC written criteria, as modified in accordance with the Compliance Order, are provided at the end of this Exhibit.

NERC Board, and prepares submissions for approval of regional standards to the applicable regulatory authorities in the U.S. and Canada.

For 2017, the major activities of the Reliability Standards Program will focus on (1) selection of standards projects to be undertaken based on the nature of the reliability issue, cost compared to risks, and whether a standard or another solution is most appropriate to address the issue; (2) addressing Commission directives and responding to Commission orders as necessary through the standards process; (3) performing enhanced periodic reviews of standards; and (4) facilitating smooth transitions to new standards through developing guidelines, webinars, and other activities to support auditor and industry training for new standards. Identification of need for new standards projects will be based on sources such as Commission directives and reliability risks identified by the Reliability Risk Management Process or the Reliability Issues Steering Committee (RISC).

The major activities of the Reliability Standards Program satisfy the following criteria:

I.A: Is the activity necessary or appropriate for Reliability Standards development projects pursuant to the NERC Rules of Procedure (ROP)?

I.B: Is the activity necessary or appropriate for providing guidance and assistance to Regional Entities in carrying out Regional Reliability Standards development activities?

I.C: Is the activity necessary or appropriate for information gathering, collection and analysis activities to obtain information for Reliability Standards development, including for purposes of identifying areas in which new Reliability Standards could be developed, existing Reliability Standards could be revised, or existing Reliability Standards could be eliminated?

I.D: Is the activity necessary or appropriate for the provision of training and education concerning Reliability Standards development processes, procedures, and topics for/to (i) NERC personnel, (ii) Regional Entity personnel, (iii) industry personnel?

II.F.1: Is the activity necessary or appropriate for the provision of training, education and dissemination of information for/to (i) NERC personnel, (ii) Regional Entity personnel, and (ii) industry personnel with respect to compliance monitoring and enforcement topics and topics concerning reliability risks identified through compliance monitoring and enforcement activities, such as (1) Requirements of Reliability Standards, including how to comply and how to demonstrate compliance? This includes development of guidance and interpretation documents.

IV: Is the activity one that was required or directed by a Commission order issued pursuant to §215? (Reliability Standards development projects are often initiated in response to directives in Commission orders).

V: Is the activity one that is required or specified by, or carries out, the provisions of NERC's Rules of Procedure that have been approved by the Commission as "Electric Reliability Organization Rules" (defined in 18 C.F.R. §39.1) pursuant to FPA §215(f)? (The applicable Rules of Procedure provisions for these major activities are §300 and Appendix 3A.)

VI: Is the activity necessary or appropriate for the supervision and oversight of Regional Entities in the performance of their delegated responsibilities in accordance with FPA §215, 18

C.F.R. Part 39, the Commission-approved delegation agreement between NERC and the Regional Entity, the NERC ROP, and applicable provisions of Commission orders?

IX. Is the activity necessary or appropriate for NERC and Regional Entity committees, subcommittees and working groups engaged in activities encompassed by one or more of the other criteria?

X. Is the activity necessary or appropriate for the analysis and evaluation of activities encompassed by one or more of the other criteria for the purpose of identifying means of performing the activities more effectively and efficiently?

III. Compliance Monitoring and Enforcement and Organization Registration and Certification Program Area 2017 Major Activities

The major activities of the Compliance Monitoring and Enforcement and Organization Registration and Certification Program Area are described at pages 28-30, 32-33, and 35-41 of the 2017 Business Plan and Budget. This Program Area is comprised of three operational groups: (1) Compliance Assurance (addressing compliance monitoring), (2) Reliability Assurance (addressing assurance, organization registration and certification), and (3) Compliance Enforcement.

The Compliance Assurance group works collaboratively with the Regional Entities to ensure effective implementation of risk-based compliance monitoring under the Compliance Monitoring and Enforcement Program (“CMEP”) across the entire ERO Enterprise. This group’s activities include the following major activities and functions: (1) ensuring that Regional Entities monitor registered entities for compliance according to their specific facts and circumstances, developing customized compliance oversight plans (COPs) for each registered entity based on its inherent risk assessment (IRA); (2) overseeing Regional Entities’ IRAs of registered entities; (3) oversight of the quality implementation of the risk-based compliance monitoring program; (4) development of the annual CMEP Implementation Plan; (5) oversight of use of necessary compliance-related processes, procedures, IT platforms, tools and templates; (6) development and delivery of education and training for ERO Enterprise staff; (7) conducting CIP V5 training and education programs and other outreach that support industry compliance and integration of risk assessment and internal controls; (8) conducting CIP-014-1 training and outreach activities related to effective implementation of the Physical Security Reliability Standard; (9) coordinating with the NERC Standards department for standards development to provide compliance information, statistics, and perspectives to standard drafting teams to foster development of standards that provide increased reliability benefit and clarify compliance risks, and to assist in smooth transitions for standards from development to enforceability, including by providing draft compliance monitoring guidance, information on how compliance with draft standards will be determined, and input on auditability and enforceability; (10) supporting Regional Entity and industry committees, working groups and task forces, such as the NERC Compliance and Certification Committee; (11) industry training for every Reliability Standard approved by the Commission, as well as industry-focused outreach events and webinars on risk-based CMEP activities; and (12) promoting registered entities’ development of effective compliance programs and internal controls.

The ongoing and new major activities of the Compliance Assurance group for 2017 will include: (1) continuing to mature the risk-based compliance program, including fully developing customized COPs for registered entities; (2) working with NERC Enforcement and IT and with Regional Entity staffs on improvements in the existing compliance reporting, analysis, tracking system and other compliance tools

supporting risk-based activities; (3) supporting successful implementation of CIP V5 standards and subsequent enhancements that become effective in 2017 and beyond; (4) continuing to monitor and support effective implementation and monitoring of the Physical Security Reliability Standard; (5) initiating a training program to support implementation of common audit procedures for each standard; and (6) continuing to integrate standards and compliance functions for clear stakeholder implementation, including through a common set of Reliability Standards Audit Worksheets, measures, or successors for all standards and in initiating a compliance phase-in learning period for all standards.

The Compliance Analysis, Certification and Registration group is responsible for a range of requirements and activities embodied in Section 500 and Appendices 5A and 5B of the NERC ROP, including providing technical resource support to standards development, compliance monitoring, and enforcement; ensuring that all entities impacting the BES are registered commensurate with risk; ensuring all Reliability Coordinators (“RC”), Balancing Authorities (“BA”) and Transmission Operators (“TOP”) are certified; conducting industry reliability assurance activities; and ensuring that compliance gaps identified in reportable events are assessed and addressed if appropriate. Major activities of this group include (1) registration of BES users, owners, and operators who are responsible for compliance with Commission-approved Reliability Standards; (2) evaluating and certification of the competency of RCs, BAs and TOPs; (3) conducting activities to reasonably assure the ERO that certain actions have been taken as reported in response to NERC Alerts or guidance to industry; (4) providing oversight of Regional Entity implementation of regional registration, compliance, certification, investigation, and complaint programs and processes; (5) conducting investigations to identify Possible Violations of Reliability Standards in response to complaints, BES disturbances, or other triggers, including participating on all Regional Entity-led investigations and as observers as requested on Commission-led reliability investigations and inquiries; (6) working with Regional Entity staff to confirm that qualified events and disturbances are evaluated against the relevant Reliability Standards and to ensure formal compliance monitoring occurs if indicated; and (7) addressing formal complaints that allege violations of Reliability Standards. Specific major activities of Compliance Analysis, Certification and Registration for 2017 will include continuing to work with the NERC-led panel to review registered entities for deregistration or applicability to a reduced number of Reliability Standards; and implementing registration program improvements and certification program improvements identified in 2016, including conducting training as necessary.

The Compliance Enforcement department is responsible for overseeing enforcement processes, the application of penalties or sanctions, and activities to mitigate and prevent recurrence of noncompliance with Reliability Standards. The Department works collaboratively with the Regional Entities to ensure consistent and effective implementation of the risk-based CMEP, including evaluating the consistency of disposition methods including assessment of penalties or sanctions. It also focuses on ensuring that the ERO Enterprise dedicates resources to the matters that pose the greatest risk to reliability. The Compliance Enforcement department monitors Regional Entities’ enforcement processes and provides oversight over the outcomes of such processes, to ensure due process, identify best practices and process efficiency opportunities, and promote consistency among Regional Entities’ business practices; collects and analyzes compliance enforcement data and trends to assist with identification of emerging risks and help to inform development of enforcement policy and processes; files notices of penalty (“NOP”) and other submittals associated with noncompliance discovered through Regional Entity compliance, monitoring and enforcement activities; processes and files NOPs and other submittals discovered through NERC-led investigations and audits; collaborates with other NERC departments, including Compliance Assurance, Reliability Standards and Regional Entity Coordination; and delivers training of the ERO Enterprise staff and outreach to registered entities on compliance and enforcement

topics. Compliance Enforcement also conducts outreach activities that focus on self-logging, compliance exceptions, risk elements, CIP V5, IRAs, and internal controls.

During 2017, the Compliance Enforcement department will continue to focus on the successful implementation of, as well as refining and improving, the risk-based CMEP. The major activities of Compliance Enforcement will include refining and improving risk-based CMEP processes; implementing in a transparent manner the risk-focused ERO Enterprise enforcement philosophy; expanding the feedback loop of information from Enforcement to Standards and other program areas; and working with Compliance Assurance, IT, and Regional Entity staffs regarding improvements in the existing compliance, reporting, analysis system and other compliance tools to support risk-based activities.

The major activities of the Compliance Monitoring and Enforcement and Organization Registration and Certification Program Area satisfy the following criteria:

I.A: Is the activity necessary or appropriate for Reliability Standards development projects pursuant to the NERC Rules of Procedure?

I.C: Is the activity necessary or appropriate for information gathering, collection and analysis activities to obtain information for Reliability Standards development, including for purposes of identifying areas in which new Reliability Standards could be developed, existing Reliability Standards could be revised, or existing Reliability Standards could be eliminated?

II.A: Is the activity necessary or appropriate for the identification and registration of users, owners, and operators of the Bulk Power System that are required to comply with Requirements of Reliability Standards applicable to the reliability functions for which they are registered?

II.B: Is the activity necessary or appropriate for the Certification of Reliability Coordinators, Transmission Operators and Balancing Authorities as having the requisite personnel, qualifications and facilities and equipment needed to perform these reliability functions in accordance with the applicable Requirements of Reliability Standards?

II.D: Is the activity necessary or appropriate for conducting, participating in or overseeing compliance monitoring and enforcement activities pursuant to the NERC ROP and (through the Regional Entities) the Commission-approved delegation agreements?

II.E: Is the activity necessary or appropriate for information gathering, collection and analysis activities to obtain information to monitor and enforce compliance with Reliability Standards, including evaluating the effectiveness of current compliance monitoring and enforcement processes, the need for new or revised compliance monitoring and enforcement processes, and the need for new or different means of training and education on compliance with Reliability Standards.

II.F: Is the activity necessary or appropriate for the provision of training, education and dissemination of information for/to (i) NERC personnel, (ii) Regional Entity personnel, and (iii) industry personnel with respect to compliance monitoring and enforcement topics and topics concerning reliability risks identified through compliance monitoring and enforcement activities, such as: (1) Requirements of Reliability Standards, including how to comply and how to demonstrate compliance? This includes development of guidance and interpretation documents.

(2) Compliance monitoring and enforcement processes, including how to conduct them, how to participate in them, and the expectations for the process? This includes development of guidance documents. (3) Disseminating, through workshops, webinars, Advisories/Recommendations/Essential Actions, and other publications, “lessons learned” information on compliance concerns and reliability risks obtained through compliance monitoring and enforcement activities, monitoring and investigation of Bulk Power System major events, off-normal occurrences and near miss events, and other Bulk Power System monitoring activities? (4) Registered Entity internal processes for compliance with Reliability Standards, such as development, implementation and maintenance of internal reliability compliance programs?

V: Is the activity one that is required or specified by, or carries out, the provisions of NERC’s Rules of Procedure that have been approved by the Commission as “Electric Reliability Organization Rules” (defined in 18 C.F.R. §39.1) pursuant to FPA §215(f)? (The applicable Rules of Procedure provisions for these major activities are §400 and 500 and Appendices 4B, 4C, 5A, 5B and 5C.)

VI: Is the activity necessary or appropriate for the supervision and oversight of Regional Entities in the performance of their delegated responsibilities in accordance with FPA §215, 18 C.F.R. Part 39, the Commission-approved delegation agreement between NERC and the Regional Entity, the NERC ROP, and applicable provisions of Commission orders?

IX: Is the activity necessary or appropriate for NERC and Regional Entity committees, subcommittees and working groups engaged in the activities encompassed by one or more of the other criteria?

X: Is the activity necessary or appropriate for the analysis and evaluation of activities encompassed by one or more of the other criteria for the purpose of identifying means of performing the activities more effectively and efficiently?

IV. Reliability Assessment and System Analysis Program 2017 Major Activities

The major activities of the Reliability Assessment and System Analysis (RASA) Program are described at pages 43-47 of the 2017 Business Plan and Budget. The RASA Program carries out the ERO’s responsibility to conduct assessments of the reliability and adequacy of the BES to provide insight and guidance about reliability risks. RASA focuses on developing a technical framework and understanding of the emerging reliability risks facing the industry. The principal activity areas of the RASA Program include: independent assessments and reports on the overall reliability and adequacy of the BES, and associated reliability risks that could impact the upcoming summer and winter seasons and the long-term (e.g. 10-year) planning horizon and other reliability issues requiring an in-depth analysis; interconnection-wide analysis for analyzing steady-state and dynamic conditions, including frequency, Essential Reliability Services, stability, and oscillatory behavior aspects; assurance oversight that electrical elements necessary for reliable operation of the BES are appropriately identified as BES elements; support for development and improvement of long-term sustainable interconnection-based power flow, dynamic and load models that exhibit the accuracy and fidelity reflecting actual BES reliability performance and dynamic conditions; advancement of industry and the ERO’s understanding of power system characteristics and behaviors by gathering larger PMU datasets of data for advanced data analytics and modeling improvements; and establishing reliability leadership and consistent, technically sound guidance and recommendations that position industry and policy-makers to enhance reliability through effective outreach and

communications.

The RASA Program works with industry leaders to create a reliability strategy that is relevant, timely, and effective at addressing the most important reliability risks, through reviewing and addressing key priority risks identified by the NERC RISC, synthesizing information identified through analysis and assessment efforts, extracting and prioritizing the associated reliability risks; sharing and integrating risk analysis insights across the ERO Enterprise; and translating that knowledge into actionable guidance and recommendations for NERC management, the Board, and entities, and government policy makers. Reliability assessments evaluate the expected reliability behavior of the BPS through extensive deterministic and probabilistic analyses to identify potential reliability risks and potential mitigation approaches. RASA monitors the ongoing and historic reliability performance of the BES through data gathered to analyze historic trends and provides reports and recommendations regarding the associated conditions that could impact reliability, security and stability of the BPS. RASA assesses and reports on the reliability, adequacy and associated risks that could impact short-term and long-term study periods, and conducts special reliability assessments and identifies recommendations and guidance actions that may be warranted to lessen identified risks or enhance overall reliability. RASA also coordinates forecast reliability data between planning areas, the Regional Entities, and government organizations. A significant ongoing effort involving RASA, Regional Entity staff, and stakeholders focuses on continued development of effective Essential Reliability Services, leading to defined Essential Reliability Services, an evaluation of initial metrics and data compilation of actual performance, and ongoing assessment.

RASA works closely with other organizations such as the Electric Power Research Institute (EPRI), Department of Energy (DOE), Institute of Electrical and Electronics Engineers (IEEE), Institute of Nuclear Power Operations (INPO), North American Transmission Forum (NATF), North American Generation Forum (NAGF), Canadian Electricity Association (CEA), Interstate Natural Gas Association of America, and Natural Gas Supply Association, on a number of energy industry reliability issues such as geomagnetic disturbances, vegetation management, variable generation integration, and interdependency of gas and electric systems.

The ongoing and new major activities of the RASA Program for 2017 include: (1) implementing advanced reliability assessment and system analysis methods to address the changing nature of the grid, including issuing reliability assessment reports, guidelines, and recommendations to address high priority evolving performance trends and address emerging risks to reliability; (2) issue special assessments on identified high-priority risks as prioritized and recommended by the RISC, including on changing resource mix and maintaining Essential Reliability Services, increased penetration of distributed energy resources, increasing dependency on generation fuel by natural gas, and inter-area and local system oscillations in all interconnections and their potential impact on interconnection reliability; (3) providing the basis for industry to meet the regulatory requirements of Reliability Standard BAL-003-1, including the Frequency Response Annual Analysis and BAL-003 filing with the Commission and the determination of Interconnection Frequency Response Obligation and Balancing Authority Frequency Reporting Obligation values; (4) supporting Reliability Standard development by providing subject matter expertise; (5) Providing support and leadership to the NERC Planning Committee and to standing committees and subcommittees, working groups, and task forces; (6) supporting major event investigations, analyses, and reporting of major findings, recommendations, and lessons learned that will improve reliability; (7) providing feedback to interconnection-wide model-building groups on improvements to system model quality and fidelity; and (8) assist in development of approaches to registration and provide input to NERC staff in support of the development of CMEP risk elements, as well as supporting and leading the BES Definition Exception process and processing Self-Determined Notifications.

The major activities of the RASA Program satisfy the following criteria:

I.A: is the activity necessary or appropriate for Reliability Standards development projects pursuant to the NERC Rules of Procedure?

I.C.1: Is the activity necessary or appropriate for information gathering, collection and analysis activities to obtain information for Reliability Standards development, including for purposes of identifying areas in which new Reliability Standards could be developed, existing Reliability Standards could be revised, or existing Reliability Standards could be eliminated, such as: (1) Measuring reliability performance – past, present and future; publishing or disseminating the results of such measurements; analyzing the results of such measurements; identifying and analyzing risks to reliability of the Bulk Power System based on such measurements; and/or identifying approaches to mitigating or eliminating such risks?

II.A: Is the activity necessary or appropriate for the identification and registration of users, owners, and operators of the Bulk Power System that are required to comply with Requirements of Reliability Standards applicable to the reliability functions for which they are registered?

III.A: Is the activity necessary or appropriate for the preparation or dissemination of long-term, seasonal, and special assessments of the reliability and adequacy of the Bulk Power System?

III.B: Is the activity necessary or appropriate for measuring reliability performance – past, present and future; publishing or disseminating the results of such measurements; analyzing the results of such measurements; identifying and analyzing risks to reliability of the Bulk Power System based on such measurements; and/or identifying approaches to mitigating or eliminating such risks?

III.F: Is the activity necessary or appropriate for the development and dissemination of Advisories/Recommendations/Essential Actions regarding lessons learned and potential reliability risks to users, owners, and operators of the Bulk Power System?

IV: Is the activity one that was required or directed by a Commission order issued pursuant to §215? (FERC orders directed NERC to develop and implement a revised definition of “Bulk Electric System” and a procedure for requesting and receiving exceptions from the BES definition, and subsequently approved NERC’s proposed revised BES definition and its proposed BES exception procedure.)

V. Is the activity one that is required or specified by, or carries out, the provisions of NERC’s Rules of Procedure that have been approved by the Commission as “Electric Reliability Organization Rules” (defined in 18 C.F.R. §39.1) pursuant to FPA §215(f)? (The applicable Rules of Procedure provisions for this major activity are §801-806 and 809-810 and Appendix 5C.)

VI: Is the activity necessary or appropriate for the supervision and oversight of Regional Entities in the performance of their delegated responsibilities in accordance with FPA §215, 18 C.F.R. Part 39, the Commission-approved delegation agreement between NERC and the Regional Entity, the NERC ROP, and applicable provisions of Commission orders?

IX: Is the activity necessary or appropriate for NERC and Regional Entity committees, subcommittees and working groups engaged in activities encompassed by one or more of the other criteria?

X: Is the activity necessary or appropriate for the analysis and evaluation of activities encompassed by one or more of the other criteria for the purpose of identifying means of performing the activities more effectively and efficiently?

V. Performance Analysis 2017 Major Activities

The major activities of the Performance Analysis (PA) group are described at pages 49-51 of the 2017 Business Plan and Budget. The PA group provides analysis and guidance about reliability risks and areas of concern based on analysis of historic system performance, including with respect to system, equipment, entity and organizational performance that may indicate a need to develop remediation strategies, action plans, or data used to revise or retire Reliability Standards or consider new Reliability Standards. PA focuses on developing a technical framework and understanding reliability risks facing the industry.

PA collects transmission outage, generator performance, demand response, and protection and control systems misoperation data in a common format using various industry databases; this data is used to develop and report grid metrics that analyze outage frequency, duration, causes, and other factors related to transmission and generator performance and automatic power system protection and control effectiveness. Trends, findings and recommendations from PA serve as technical input to Reliability Standards and to standards project prioritization, compliance process improvements, event analyses, reliability assessment, and critical infrastructure protection efforts. In 2017, PA will add wind generator data to the data collected. The analyses and results collected and produced are reported in the annual State of Reliability Report, which provides guidance and recommendations for enhanced bulk system reliability. In 2017, the State of Reliability Report will begin to reflect post-seasonal reliability review, insights from analysis of transmission, generator, and demand response data systems, and integration of event analysis and misoperations.

PA works closely with other organizations including EPI, DOE, IEEE, INPO, NATF, NAGF, and CEA, on a number of fronts, including the Transmission Availability Data System (TADS), Generator Data Availability System (GADS), and Demand Response Availability Data System (DADS).

PA's ongoing and new major activities for 2017 will include the following: (1) Issuing the State of Reliability Report and guidelines, recommendations, and alerts as needed, including verification and validation of data and information through Regional Entities and technical committees. (2) Overseeing and evaluating reliability trends that identify reliability risks, by analyzing data contained in TADS, GADS and TADS as well as reliability metrics and protection and control systems misoperations data. (3) Supporting Reliability Standards development by providing subject matter expertise. (4) Providing support and leadership to the NERC standing committees' subcommittees, working groups, and task forces serving the standing committees. (5) Assisting in the development of approaches to registration and providing input to NERC staff in support of development of CMEP risk elements. (6) Conducting major event investigations, analyses, and reporting of major findings, recommendations, and lessons learned that will improve reliability. (7) Providing insight on emerging system protection issues, and handing off any issues with future implications to RASA.

The major activities of PA satisfy the following criteria:

I.A: Is the activity necessary or appropriate for Reliability Standards development projects pursuant to the NERC Rules of Procedure?

I.C.1: Is the activity necessary or appropriate for information gathering, collection and analysis activities to obtain information for Reliability Standards development, including for purposes of identifying areas in which new Reliability Standards could be developed, existing Reliability Standards could be revised, or existing Reliability Standards could be eliminated, such as: (1) Measuring reliability performance – past, present and future; publishing or disseminating the results of such measurements; analyzing the results of such measurements; identifying and analyzing risks to reliability of the Bulk Power System based on such measurements; and/or identifying approaches to mitigating or eliminating such risks? (2) Monitoring, event analysis and investigation of Bulk Power System major events, off-normal occurrences and near miss events?

II.A: Is the activity necessary or appropriate for the identification and registration of users, owners, and operators of the Bulk Power System that are required to comply with Requirements of Reliability Standards applicable to the reliability functions for which they are registered?

III.A: Is the activity necessary or appropriate for the preparation or dissemination of long-term, seasonal, and special assessments of the reliability and adequacy of the Bulk Power System?

III.B: Is the activity necessary or appropriate for measuring reliability performance – past, present and future; publishing or disseminating the results of such measurements; analyzing the results of such measurements; identifying and analyzing risks to reliability of the Bulk Power System based on such measurements; and/or identifying approaches to mitigating or eliminating such risks?

III.F: Is the activity necessary or appropriate for the development and dissemination of Advisories/Recommendations/Essential Actions regarding lessons learned and potential reliability risks to users, owners, and operators of the Bulk Power System?

V. Is the activity one that is required or specified by, or carries out, the provisions of NERC's Rules of Procedure that have been approved by the Commission as "Electric Reliability Organization Rules" (defined in 18 C.F.R. §39.1) pursuant to FPA §215(f)? (The applicable Rules of Procedure provisions for this major activity are §801-811 and Appendix 8.)

IX: Is the activity necessary or appropriate for NERC and Regional Entity committees, subcommittees and working groups engaged in activities encompassed by one or more of the other criteria?

VI. Reliability Risk Management (Situation Awareness and Event Analysis) 2017 Major Activities

The major activities of the Reliability Risk Management ("RRM") group, which is comprised of the Situation Awareness Department and the Event Analysis Department, are described at pages 53-55 and 57-58 of the 2017 Business Plan and Budget. The RRM group carries out the ERO's responsibility to perform assessments (including real-time and near-real-time continual awareness, detailed analysis of

significant events, and longer-term broad performance assessments) of the reliability and adequacy of the BES, including identifying potential issues of concern relating to system, equipment, entity, and human performance. RRM has six primary functions: (1) BES awareness, (2) event analysis and determination of root and contributing causes, (3) assessment of human performance challenges that affect BES reliability and identification of improvement opportunities, (4) continent-wide analysis and reporting of BES performance, (5) support of the NERC Operating Committee, and (6) support of the NERC Critical Infrastructure Protection Committee. Through awareness and continuous assessment, RRM identifies potential reliability risks to the BES, analyzes events in detail, ensures that industry is well informed of system events, emerging trends, risk analysis, and lessons learned, and provides data and analysis to inform other aspects of NERC's statutory functions.

The Situation Awareness department along, with the Regional Entities, monitors BES conditions, significant occurrences and emerging risks, and threats across the 14 Reliability Coordinator regions in North America. Situation Awareness also supports development and publication of NERC Alerts and awareness products, and facilitates information sharing among industry, Regions and government during crisis situations and major system disturbances. Situation Awareness is engaged in enhancement, replacement, streamlining or modification of several reliability-related situation awareness and monitoring tools, including SAFNRv2, operation and maintenance pending replacement of the current secure alert tool, refreshing the Reliability Coordinator Information System application, and continuing to set conditions to bring limited Synchrophasor data into NERC for wide-area situational awareness and event triage applications. The Situation Awareness Department uses the following reliability-related tools to support its activities: Resource Adequacy (ACE Frequency) Tool; Inadvertent Interchange; Frequency Monitoring and Analysis Tool; Intelligent Alarms Tool; and Genscape (PowerIQ and PowerRT tools).

The ongoing and new major activities of the Situation Awareness department for 2017 include: ensuring that the ERO is aware of all BES events above a threshold of impact; enabling the sharing of information and data to facilitate wide area situational awareness; during crisis situations, facilitating the exchange of information among industry, Regions, and U.S. and Canadian governments; keeping the industry informed of emerging reliability threats and risks to the BES, including any expected actions; conducting the annual NERC Monitoring and Situational Awareness Conference and Human Performance Conference; and administering the NERC Alerts process as specified in §810 of the Rules of Procedure to issue Advisory (Level 1) Alerts on significant and emerging reliability and security related topics, and facilitate the tracking of actions specified in Recommendation (Level 2) and Essential Action (Level 3) Alerts.

The Event Analysis department performs assessments of the reliability and adequacy of the BES to identify potential issues of concern related to system, equipment, entity, and human performance that may indicate a need to develop remediation strategies, action plans, or data used to revise Reliability Standards or consider new Reliability Standards. Event Analysis conducts analyses to determine the causes of events, promptly assures tracking of corrective actions to prevent recurrence, and provides lessons learned to the industry. Event Analysis analyzes all reportable events for sequence of events, root cause, risks to reliability, and mitigation and ensures that the industry is well-informed of system events, emerging trends, risk analysis, lessons learned, and expected actions. Event Analysis conducts in-depth analyses of approximately 150 events per year on average. Additionally, Event Analysis identifies human error risks and precursor factors that allow human error to affect BES reliability, and educates industry regarding such risks, precursors, and related mitigation methods. Event analysis also supports compliance and standards training initiatives and trending and analysis to identify emerging reliability risks to the BES. Event Analysis works in collaboration with and supports the activities of other groups involved in human

performance analysis including the NERC Operating Committee’s Event Analysis Subcommittee, the WECC Human Performance Working Group, and others. Event Analysis also collaborates with industry groups including the NATF, NAGF, and trade associations.

The ongoing and new major activities for 2017 for the Event Analysis department include: (1) Working with Regional Entities to obtain and review information from registered entities on qualifying events and disturbances in order to advance awareness of events above a threshold level; facilitating analysis of root and contributing causes, risks to reliability, wide area assessments and remediation efforts; and disseminating information regarding events in a timely manner. (2) Ensuring that all reportable events are analyzed for sequence of events, root cause, risk to reliability, and mitigation. (3) Continuing to refine risk-based methodologies to support better identification of reliability risks, including use of more sophisticated cause codes for analysis. (4) Conducting training (webinars, workshops and conference support) to inform industry and the ERO of lessons learned, root cause analysis, trends, human performance, and cold weather preparedness and recommendations. (5) Developing reliability recommendations and alerts as needed, and tracking industry accountability for critical reliability recommendations. (6) Ensuring that industry is well informed of system events, emerging trends, risk analysis, lessons learned, and expected actions. (7) Conducting major event analysis and reporting of major findings and recommendations that will improve reliability. The Event Analysis department will also support several top priority reliability risk projects being led by the PA program.

The major activities of the RRM group satisfy the following criteria:

I.C.2: Is the activity necessary or appropriate for information gathering, collection and analysis activities to obtain information for Reliability Standards development, including for purposes of identifying areas in which new Reliability Standards could be developed, existing Reliability Standards could be revised, or existing Reliability Standards could be eliminated, such as: (2) Monitoring, event analysis and investigations of Bulk Power System major events, off-normal occurrences and near-miss events?

II.E.2: Is the activity necessary or appropriate for information gathering, collection and analysis activities to obtain information to monitor and enforce compliance with Reliability Standards, including evaluating the effectiveness of current compliance monitoring and enforcement processes, the need for new or revised compliance monitoring and enforcement processes, and the need for new or different means of training and education on compliance with Reliability Standards, such as: (2) Monitoring, event analysis and investigation of Bulk Power System major events, off-normal occurrences, and near miss events?

II.F.3: Is the activity necessary or appropriate for the provision of training, education and dissemination of information for/to (i) NERC personnel, (ii) Regional Entity personnel, and (iii) industry personnel with respect to compliance monitoring and enforcement topics and topics concerning reliability risks identified through compliance monitoring and enforcement activities, such as: (3) Disseminating, through workshops, webinars, Advisories, Recommendations, Essential Actions, and other publications; “lessons learned” information on compliance concerns and reliability risks obtained through compliance monitoring and enforcement activities; monitoring and investigation of Bulk Power System major events, off-normal occurrences and near miss events, and other Bulk Power System monitoring activities?

II.G: Is the activity necessary or appropriate for the development and provision of tools and services that are useful for the provision of adequate reliability, because they relate specifically to compliance with existing Reliability Standards and they proactively help avert Reliability Standard violations and Bulk Power System disturbances?

III.C: Is the activity necessary or appropriate for investigating, analyzing, evaluating, and disseminating information concerning, the causes of major events and off-normal occurrences, and/or providing coordination assistance, technical expertise and other assistance to users, owners, and operators of the Bulk Power System in connection with Bulk Power System major events and off-normal occurrences, but not real-time operational control of the Bulk Power System?

III.D: Is the activity necessary or appropriate for awareness of circumstances on the Bulk Power System and to contribute to understanding risks to reliability?

III.F: Is the activity necessary or appropriate for the development and dissemination of Advisories/Recommendations/Essential Actions regarding lessons learned and potential reliability risks to users, owners, and operators of the Bulk Power System?

V: Is the activity one that is required or specified by, or carries out, the provisions of NERC's Rules of Procedure that have been approved by the Commission as "Electric Reliability Organization Rules" (defined in 18 C.F.R. §39.1) pursuant to FPA §215(f)? (The applicable Rules of Procedure provisions for these major activities are §807, 808, 810 and 1001 and Appendix 8.)

IX. Is the activity necessary or appropriate for NERC and Regional Entity committees, subcommittees and working groups engaged in activities encompassed by one or more of the other criteria?

VII. Electricity Information Sharing and Analysis Center 2017 Major Activities

The major activities of the Electricity Information Sharing and Analysis Center ("E-ISAC") are described at pages 60-63 of the 2017 Business Plan and Budget. The primary function of E-ISAC is to reduce cyber and physical risk to the Electricity Subsector across North America by providing unique insights, leadership and coordination, and to be the trusted, timely, actionable resource of grid risk information and analysis to enhance electric reliability. The E-ISAC facilitates electricity sector coordination regarding physical security and cybersecurity events affecting the BES. E-ISAC analytic personnel maintain a detailed understanding of emerging vulnerabilities and threats within the broad industrial control systems community and the more focused BES community, utilizing, among other sources, intelligence reporting services. E-ISAC manages and executes NERC's responsibilities in the Cybersecurity Risk Information Sharing Program ("CRISP") and acts as the program manager for CRISP. The purpose of CRISP is to facilitate the sharing of cyber threat information and to develop situation awareness tools that enhance the electricity sector's ability to identify, prioritize, and coordinate protection of its critical infrastructure. Finally, E-ISAC also supports an annual grid security conference and a biennial Grid Security Exercise. During 2017, the E-ISAC's and CRISP's activities will include beginning development and implementation of significant improvements to the E-ISAC portal to extend its functionality and allow for easier access to filter data for the cyber and physical security communities and for automated information sharing.

The major activities of the ES-ISAC satisfy the following criteria:

I.C.1: Is the activity necessary or appropriate for information gathering, collection and analysis activities to obtain information for Reliability Standards development, including for purposes of identifying areas in which new Reliability Standards could be developed, existing Reliability Standards could be revised, or existing Reliability Standards could be eliminated, such as: (1) Measuring reliability performance – past, present and future; publishing or disseminating the results of such measurements; analyzing the results of such measurements; identifying and analyzing risks to reliability of the Bulk Power System based on such measurements; and/or identifying approaches to mitigating or eliminating such risks? (2) Monitoring, event analysis and investigation of Bulk Power System major events, off-normal occurrences and near-miss events?

III.D: Is the activity necessary or appropriate for awareness of circumstances on the Bulk Power System and to contribute to understanding risks to reliability.

III.E: Is the activity necessary or appropriate for gathering, analyzing and sharing with and among industry and government participants, information regarding the physical or cyber security of the Bulk Power System.

III.F: Is the activity necessary or appropriate for the development and dissemination of Advisories/Recommendations/Essential Actions regarding lessons learned and potential reliability risks to users, owners, and operators of the Bulk Power System?

V: Is the activity one that is required or specified by, or carries out, the provisions of NERC's Rules of Procedure that have been approved by the Commission as "Electric Reliability Organization Rules" (defined in 18 C.F.R. §39.1) pursuant to FPA §215(f)? (The applicable Rules of Procedure provisions for these major activities are §810 and 1003.)

IX. Is the activity necessary or appropriate for NERC and Regional Entity committees, subcommittees and working groups engaged in activities encompassed by one or more of the other criteria?

VIII. Training, Education, and Operator Certification Program 2017 Major Activities

The major activities of the Training, Education, and Operator Certification Program are described at pages 65-67 of the 2017 Business Plan and Budget. The major activities of this program include oversight and coordination of the delivery of training programs to NERC and Regional Entity staff; as well as training and education for industry participants on the requirements of Reliability Standards, the Reliability Standards development process, and the compliance monitoring and enforcement process. The Training and Education Program supports the ERO's responsibilities to develop, adopt, and obtain approval of Reliability Standards and to monitor, enforce and achieve compliance with the mandatory standards. The Training and Education Program also supports NERC's System Operator Certification Program, which ensure that personnel operating the BES have the skills, training and qualifications needed to operate the BES reliably. This Program maintains the credentials required to work in system control centers across North America for over 6,000 system operators. The Training and Education Program prepares operators for complying with requirements of Reliability Standards and appropriately operating the BES during normal and emergency operations. Education and training activities include the following subject matter: risk-based compliance monitoring and enforcement; standards and compliance;

registration and certification; event analysis, cause analysis, and lessons learned; reliability assessment and system analysis; continuing education for system operators; and new system operator certification examinations for the Reliability Coordinator, Transmission Operator, Balancing and Interchange Operator, and Balancing, Interchange and Transmission Operator credentials.

The major activities of the Training, Education, and Operator Certification Program for 2017 include providing and expanding training and education for ERO personnel and industry in the following areas: Reliability Standards compliance, emerging cyber-related issues; auditor skills and consistent audit and investigation techniques and standards compliance reviews, including risk-based compliance monitoring and enforcement and other improvements in compliance and enforcement practices; development and implementation of clear and technically sound Reliability Standards; lessons learned and trends from events, and identified themes from trending and common cause analysis; effective root, apparent and common cause analysis methods; quality improvement of registered entity self-reporting and self-certification; entity registration processes, issues and alternatives; human performance fundamentals; and developing and incorporating a systematic approach to ongoing training. The Training, Education, and Operator Certification Program will continue to work with industry stakeholders and the System Operator Certification exam vendor to create certification exams that will promote reliability of the BPS. Further, the Continuing Education (CE) program will evaluate and revise the current program criteria as reflected in the CE program manual, taking into account the growth and maturation of industry training programs as well as ongoing research on adult learning to ensure the CE program continues to foster improvements in training and promotes quality in training programs.

The major activities of the Training, Education, and Operator Certification Program satisfy the following criteria:

I.D: Is the activity necessary or appropriate for the provision of training and education concerning Reliability Standards development processes, procedures and topics for/to (i) NERC personnel, (ii) Regional Entity personnel, and (iii) industry personnel?

II.C: Is the activity necessary or appropriate for the Certification of system operating personnel as qualified to carry out the duties and responsibilities of their positions in accordance with the Requirements of applicable Reliability Standards?

II.F: Is the activity necessary or appropriate for the provision of training, education and dissemination of information for/to (i) NERC personnel, (ii) Regional Entity personnel, and (iii) industry personnel with respect to compliance monitoring and enforcement topics and topics concerning reliability risks identified through compliance monitoring and enforcement activities, such as: (1) Requirements of Reliability Standards, including how to comply and how to demonstrate compliance? This includes development of guidance and interpretation documents. (2) Compliance monitoring and enforcement processes, including how to conduct them, how to participate in them, and the expectations for the processes? This includes development of guidance documents. (3) Disseminating, through workshops, webinars, Advisories/Recommendations/Essential Actions, and other publications, “lessons learned” information on compliance concerns and reliability risks obtained through compliance monitoring and enforcement activities, monitoring and investigation of Bulk Power System major events, off-normal occurrences and near miss events, and other Bulk Power System monitoring activities. (4) Registered Entity internal processes for compliance with Reliability Standards, such as development, implementation and maintenance of internal reliability compliance programs?

V: Is the activity one that is required or specified by, or carries out, the provisions of NERC's Rules of Procedure that have been approved by the Commission as "Electric Reliability Organization Rules" (defined in 18 C.F.R. §39.1) pursuant to FPA §215(f)? (The applicable Rules of Procedure provision for these major activities are §600 and 900.)

VI: Is the activity necessary or appropriate for the supervision and oversight of Regional Entities in the performance of their delegated responsibilities in accordance with FPA §215, 18 C.F.R. Part 39, the Commission-approved delegation agreement between NERC and the Regional Entity, the NERC ROP, and applicable provisions of Commission orders?

IX. Administrative Services 2017 Major Activities

NERC's Administrative Services Departments are Technical Committees and Member Forums (for which no funding for activities is budgeted for 2017), General and Administrative, Legal and Regulatory, Information Technology ("IT"), Human Resources, and Finance and Accounting. The major activities of these departments are described at pages 70-81 of the 2017 Business Plan and Budget.

General and Administrative includes the administration and general management of the organization, the Chief Executive Officer and Chief Reliability Officer, Board of Trustees fees and expenses, communications, external affairs and government relations, and office rent.

Legal and Regulatory provides legal support to the organization, including to management, and the Reliability Standards, Compliance Analysis, Certification and Registration, Reliability Risk Management, RASA, and Performance Analysis Programs, as well as general corporate legal support in areas including antitrust, corporate, commercial, insurance, contracts, employment, real estate, copyright, tax, and other areas.

IT supports NERC's computing, Internet, database and electronic data storage and maintenance, and telecommunications and internet needs, programs, applications and infrastructure, including management of the development and implementation of new software applications and infrastructure. The capital expenditure projects managed by IT represent capital expenditures in hardware, software and associated tools to securely gather, store, analyze and maintain data across the ERO Enterprise to support the ERO's operations, as well as necessary acquisition and replacement of computers, servers and related devices. IT's 2017 activities are focused on NERC infrastructure and support; improving, enhancing, or replacing existing functionalities; ERO Enterprise infrastructure and support; and ERO Enterprise new functionalities, including the document management program.

Human Resources manages all of NERC's human resources functions, including staffing, benefits administration, employee relations, performance and compensation management, succession planning, and training and development. Human Resources also obtains compensation studies, effectiveness studies, and other compensation consulting services when needed.

Finance and Accounting manages all finance and accounting functions of NERC, including employee payroll, 401(k), 457(b) and 457(f) plans, travel and expense reporting, monthly financial reporting, sales and use tax, meetings and events planning and services, insurance, internal audit, facilities management, development of the annual business plan and budget, and the ERO risk management

framework.

The major activities of NERC's Administrative Services Departments satisfy the following criteria:

I.A: Is the activity necessary or appropriate for Reliability Standards development projects pursuant to the NERC Rules of Procedure (ROP)?

II.A: Is the activity necessary or appropriate for the identification and registration of users, owners, and operators of the Bulk Power System that are required to comply with Requirements of Reliability Standards applicable to the reliability functions for which they are registered?

II.D: Is the activity necessary or appropriate for conducting, participating in or overseeing compliance monitoring and enforcement activities pursuant to the NERC ROP and (through the Regional Entities) the Commission-approved delegation agreements?

III.C: Is the activity necessary or appropriate for investigating, analyzing, evaluating, and disseminating information concerning, the causes of major events and off-normal occurrences, and/or providing coordination assistance, technical expertise and other assistance to users, owners, and operators of the Bulk Power System in connection with Bulk Power System major events and off-normal occurrences, but not real-time operational control of the Bulk Power System?

V: Is the activity one that is required or specified by, or carries out, the provisions of NERC's Rules of Procedure that have been approved by the Commission as "Electric Reliability Organization Rules" (defined in 18 C.F.R. §39.1) pursuant to FPA §215(f)? (The applicable Rules of Procedure provision for the major activities of Finance and Accounting is §1100.)

VI: Is the activity necessary or appropriate for the supervision and oversight of Regional Entities in the performance of their delegated responsibilities in accordance with FPA §215, 18 C.F.R. Part 39, the Commission-approved delegation agreement between NERC and the Regional Entity, the NERC ROP, and the applicable provisions of Commission orders.

IX: Is the activity necessary or appropriate for NERC and Regional Entity committees, subcommittees and working groups engaged in activities encompassed by one or more of the other criteria?

XI: Is the activity a governance or administrative/overhead function, activity or service necessary or appropriate for the activities encompassed by the other criteria and, in general, necessary and appropriate to operate a functioning organization?

**NERC WRITTEN CRITERIA FOR DETERMINING
WHETHER AN ACTIVITY IS ELIGIBLE TO BE FUNDED
UNDER SECTION 215 OF THE FEDERAL POWER ACT**

For purposes of internal management approval of a proposed new activity or group of related activities (“major activity”), the proposed activity or major activity must be shown to fall within at least one of the criteria listed below. When sub-criteria are listed below a roman numeral numbered major criterion, the proposed activity should be a positive answer to at least one of the sub-criteria. Conversely, an activity that falls under a sub-criterion should pertain to the subject matter of the major criterion.

NERC’s annual business plan and budget will describe how each major activity falls within one or more of the criteria listed below. If the major activity is substantially the same as a major activity that was shown to fall within the criteria in a previous year’s business plan and budget, the current year’s business plan and budget can refer to the prior year business plan and budget.

A determination that an activity falls within FPA §215 does not necessarily mean that NERC will propose or undertake such activity. The determination of whether an activity falling under FPA §215 should or will be undertaken in a given budget year will be addressed in the context of the applicable business plan and budget and will include opportunities for stakeholder input.

The criteria listed below are not necessarily each distinct from the others. An activity or major activity may fall within more than one of the criteria listed below.

- I. Is the activity necessary or appropriate for the development of Reliability Standards?
 - A. Is the activity necessary or appropriate for Reliability Standards development projects pursuant to the NERC Rules of Procedure (ROP)?
 - B. Is the activity necessary or appropriate for providing guidance and assistance to Regional Entities in carrying out Regional Reliability Standards development activities?
 - C. Is the activity necessary or appropriate for information gathering, collection and analysis activities to obtain information for Reliability Standards development, including for purposes of identifying areas in which new Reliability Standards could be developed, existing Reliability Standards could be revised, or existing Reliability Standards could be eliminated, such as:
 1. Measuring reliability performance – past, present and future; publishing or disseminating the results of such measurements; analyzing the results of such measurements; identifying and analyzing risks to reliability of the Bulk Power System⁴⁶ based on such measurements; and/or identifying approaches to mitigating or eliminating such risks?
 2. Monitoring, event analysis and investigation of Bulk Power System major events, off-normal occurrences and near miss events?
 - D. Is the activity necessary or appropriate for the provision of training and education concerning Reliability Standards development processes, procedures and topics for/to (i) NERC personnel, (ii) Regional Entity personnel, and (iii) industry personnel?
- II. Is the activity necessary or appropriate for the monitoring and enforcement of compliance with Reliability Standards?
 - A. Is the activity necessary or appropriate for the identification and registration of users, owners, and operators of the Bulk Power System that are required to comply with

⁴⁶ This document uses the term “Bulk Power System” because that is the term defined and used in FPA §215. NERC recognizes that a different term, “Bulk Electric System,” is used to define the current reach of reliability standards. Reliability Standards.

Requirements of Reliability Standards applicable to the reliability functions for which they are registered?

- B. Is the activity necessary or appropriate for the Certification of Reliability Coordinators, Transmission Operators and Balancing Authorities as having the requisite personnel, qualifications and facilities and equipment needed to perform these reliability functions in accordance with the applicable Requirements of Reliability Standards?
- C. Is the activity necessary or appropriate for the Certification of system operating personnel as qualified to carry out the duties and responsibilities of their positions in accordance with the Requirements of applicable Reliability Standards?⁴⁷
- D. Is the activity necessary or appropriate for conducting, participating in or overseeing compliance monitoring and enforcement activities pursuant to the NERC ROP and (through the Regional Entities) the Commission-approved delegation agreements?
- E. Is the activity necessary or appropriate for information gathering, collection and analysis activities to obtain information to monitor and enforce compliance with Reliability Standards, including evaluating the effectiveness of current compliance monitoring and enforcement processes, the need for new or revised compliance monitoring and enforcement processes, and the need for new or different means of training and education on compliance with Reliability Standards, such as:
 - 1. Measuring reliability performance – past, present and future; publishing or disseminating the results of such measurements; analyzing the results of such measurements; identifying and analyzing risks to reliability of the Bulk Power System based on such measurements; and/or identifying approaches to mitigating or eliminating such risks?
 - 2. Monitoring, event analysis and investigation of Bulk Power System major events, off-normal occurrences, and near miss events?
- F. Is the activity necessary or appropriate for the provision of training, education and dissemination of information for/to (i) NERC personnel, (ii) Regional Entity personnel, and (iii) industry personnel with respect to compliance monitoring and enforcement topics and topics concerning reliability risks identified through compliance monitoring and enforcement activities, such as:
 - 1. Requirements of Reliability Standards, including how to comply and how to demonstrate compliance? This includes development of guidance and interpretation documents.
 - 2. Compliance monitoring and enforcement processes, including how to conduct them, how to participate in them, and the expectations for the processes? This includes development of guidance documents.
 - 3. Disseminating, through workshops, webinars, Advisories, Recommendations, Essential Actions, and other publications; “lessons learned” information on compliance concerns and reliability risks obtained through compliance monitoring and enforcement activities; monitoring and investigation of Bulk Power System major events, off-normal occurrences and near miss events, and other Bulk Power System monitoring activities?

⁴⁷ Although certification of system operating personnel is an activity falling within the scope of, and eligible to be funded pursuant to, FPA §215, NERC strives to fully fund the costs of this activity through fees charged to participants.

- 4. Registered Entity internal processes for compliance with Reliability Standards, such as development, implementation and maintenance of internal reliability compliance programs?
 - G. Is the activity necessary or appropriate for the development and provision of tools and services that are useful for the provision of adequate reliability, because they relate specifically to compliance with existing Reliability Standards and they proactively help avert Reliability Standard violations and Bulk Power System disturbances?
- III. Is the activity necessary or appropriate for conducting and disseminating periodic assessments of the reliability of the Bulk Power System or monitoring the reliability of the Bulk Power System?
 - A. Is the activity necessary or appropriate for the preparation or dissemination of long-term, seasonal, and special assessments of the reliability and adequacy of the Bulk Power System?
 - B. Is the activity necessary or appropriate for measuring reliability performance – past, present and future; publishing or disseminating the results of such measurements; analyzing the results of such measurements; identifying and analyzing risks to reliability of the Bulk Power System based on such measurements; and/or identifying approaches to mitigating or eliminating such risks?
 - C. Is the activity necessary or appropriate for investigating, analyzing, evaluating, and disseminating information concerning, the causes of major events and off-normal occurrences, and/or providing coordination assistance, technical expertise and other assistance to users, owners, and operators of the Bulk Power System in connection with Bulk Power System major events and off-normal occurrences, but not real-time operational control of the Bulk Power System?
 - D. Is the activity necessary or appropriate for awareness of circumstances on the Bulk Power System and to contribute to understanding risks to reliability?
 - E. Is the activity necessary or appropriate for gathering, analyzing and sharing with and among industry and government participants, information regarding the physical or cyber security of the Bulk Power System?
 - F. Is the activity necessary or appropriate for the development and dissemination of Advisories/Recommendations/Essential Actions regarding lessons learned and potential reliability risks to users, owners, and operators of the Bulk Power System?
 - G. Is the activity necessary or appropriate for data collection and analysis of information regarding Bulk Power System reliability matters mandated by the Commission?
- IV. Is the activity one that was required or directed by a Commission order issued pursuant to FPA §215? Justification of an activity as a FPA §215 activity based on this category must reference the particular Commission order and directive.
- V. Is the activity one that is required or specified by, or carries out, the provisions of NERC’s Rules of Procedure that have been approved by the Commission as “Electric Reliability Organization Rules” (defined in 18 C.F.R. §39.1) pursuant to FPA §215(f)?
- VI. Is the activity necessary or appropriate for the supervision and oversight of Regional Entities in the performance of their delegated responsibilities in accordance with FPA §215, 18 C.F.R. Part 39, the Commission-approved delegation agreement between NERC and the Regional Entity, the NERC ROP, and applicable provisions of Commission orders?

- VII. Is the activity necessary or appropriate to maintain NERC’s certification as the Electric Reliability Organization? This Criterion includes conducting periodic assessments of NERC’s and the Regional Entities’ performance as the Electric Reliability Organization as required by 18 C.F.R. §39.3(c).
- VIII. Does the activity respond to or is it necessary or appropriate for audits of NERC and the Regional Entities conducted by the Commission?
- IX. Is the activity necessary or appropriate for NERC and Regional Entity committees, subcommittees and working groups engaged in activities encompassed by one or more of the other criteria?
- X. Is the activity necessary or appropriate for the analysis and evaluation of activities encompassed by one or more of the other criteria for the purpose of identifying means of performing the activities more effectively and efficiently?
- XI. Is the activity a governance or administrative/overhead function, activity or service necessary or appropriate for the activities encompassed by the other criteria and, in general, necessary and appropriate to operate a functioning organization? (Should NERC perform any non-FPA §215 activities, the costs of governance and administrative/overhead functions must be appropriately allocated.)
NERC’s current governance and administrative/overhead functions are carried out in the following program areas:
 - A. Technical Committees and Members’ Forum Programs
 - B. General and administrative (includes, but is not limited to, executive, board of trustees, communications, government affairs, and facilities and related services).
 - C. Legal and Regulatory.
 - D. Information Technology
 - E. Human Resources
 - F. Accounting and Finance.

The following matters are excluded from the scope of FPA §215 activities. While a list of non-FPA §215 activities would be infinite, the following excluded matters are listed here because they are expressly referred to in FPA §215, the Commission’s ERO regulations and/or a Commission order issued pursuant to FPA §215:

- A. Developing or enforcing requirements to enlarge Bulk Power System facilities, or to construct new transmission capacity or generation capacity, or requirements for adequacy or safety of electric facilities or services.
- B. Activities entailing Real-time operational control of the Bulk Power System.
- C. Activities pertaining to facilities used in the local distribution of electricity.

Exhibit C – Contractor and Consulting Costs

Program	Consultants & Contracts	2016 BUDGET	2017 BUDGET	2017 vs 2016 Budget
Compliance Assurance	Reliability Assurance Initiative	200,000	50,000	(150,000)
	Compliance Assurance	200,000	50,000	(150,000)
Event Analysis	Reliability Assurance Project Support	56,000	-	(56,000)
	Event Analysis	56,000	-	(56,000)
Compliance Investigation, Registration and Certification	Risk-based Registration Phase 2 - Consulting Support	50,000	-	(50,000)
	Compliance Investigation, Registration and Certification	50,000	-	(50,000)
Reliability Assessments and System Analysis	Reliability affects of GMD	100,000	100,000	-
	Reliability consulting support	475,000	425,000	(50,000)
	Reliability Assessments and System Analysis	575,000	525,000	(50,000)
Performance Analysis	GADS/TADS/DADS/SED	509,039	528,082	19,044
	Performance Analysis	509,039	528,082	19,044
Situation Awareness	Reliability Tools	576,300	619,150	42,850
	Secure Alerting System	141,000	96,000	(45,000)
	SAFNR - Phase II	438,200	505,700	67,500
	Communication network (NERCnet replacement)	55,975	75,000	19,025
	Situation Awareness	1,211,475	1,295,850	84,375
E-ISAC	GridEx Support	-	383,000	383,000
	Program-Level Capabilities	499,500	353,000	(146,500)
	Software & Services	113,285	113,285	-
	Events & Outreach	50,550	50,550	-
	CRISP	5,888,594	5,888,594	-
	E-ISAC and CRISP	6,551,929	6,788,429	236,500
System Operator Certification	System Operator Testing Expenses	59,400	62,000	2,600
	System Operator Examination Development	69,000	70,000	1,000
	Database Development	24,000	-	(24,000)
	Database Maintenance	25,200	37,800	12,600
	SOCCEC Database Improvement Project (funded from Working Capital generated from fees in excess of expenses)	150,000	50,000	(100,000)
	System Operator Certification	327,600	219,800	(107,800)
Training and Education	Continuing Education Program	133,200	145,800	12,600
	Web-based course hosting (Learning Management System)	55,000	55,000	-
	Enhanced Platform	-	-	-
	Course development and Support - External Training	125,000	125,000	-
	NERC Staff Technical Training	35,000	35,000	-
Continuing Education, Training & Education	348,200	360,800	12,600	
General & Administrative	Communications support	15,000	15,000	-
	ERO Effectiveness Survey	80,000	-	(80,000)
	General & Administrative	95,000	15,000	(80,000)
IT	ERO Development & Support	988,671	1,261,787	273,116
	ERO Data Analysis	100,000	200,000	100,000
	Applications Enhancements, Consulting and Help Desk Support	1,006,000	851,000	(155,000)
	Information Technology	2,094,671	2,312,787	218,116
HR	Training and Development	325,000	350,000	25,000
	Compensation Consulting	100,000	100,000	-
	Employee, industry and Board Surveys	50,000	50,000	-
	HR Consulting Services	75,000	75,000	-
	Human Resources	550,000	575,000	25,000
Finance	Internal Controls and Outside Auditor Consulting Support	200,000	300,000	100,000
	Finance and Accounting Support	97,000	157,000	60,000
	Finance and Accounting	297,000	457,000	160,000
TOTAL CONSULTANTS AND CONTRACTS		12,865,914	13,127,749	261,835

Exhibit D – Capital Financing

The company successfully closed on its capital financing program on January 10, 2014. The interest rate is floating and equal to LIBOR plus 275 basis points, which yielded a rate of 2.91% at closing.⁴⁸ The total size of the non-revolving credit facility is \$7.5M, with the total authorized borrowings each year limited to the amount approved by the Board of Trustees and FERC in that year's business plan and budget for IT hardware and the costs of developing software applications. Consistent with the terms of the loan documentation and its Board and FERC-approved 2014 budget, the company made an initial draw of \$1.265M at the end of January 2014 related to 2013 expenditures. The company recorded new capital investments of approximately \$1.65M in 2013 related to the development of software applications and IT hardware,⁴⁹ a portion of which was financed with the proceeds from this initial draw. This borrowing is amortized over three years, commencing January 31, 2014, and can be prepaid without penalty. A balance of \$1.416M was available for draw during 2014, which was also consistent with NERC's 2014 approved budget. However, the company had sufficient funds available to pay for budgeted capital improvements without having to draw on this credit facility. A balance of \$1.9M was available for draw during 2015, consistent with NERC's 2015 approved budget. New capital investments of \$1.85M were financed with draws late in 2015 and early 2016. These new borrowings are also being amortized over three years, beginning January, 2016 and April, 2016.

The company is in discussions with the lender about renewing this facility for another three year term. The facility will continue to be used as a funding source for larger projects that primarily benefit the ERO Enterprise. The total amount of the credit facility will likely decline from the current \$7.5M level since NERC expects a decline in applicable projects (likely \$5-6M limit). NERC expects the terms and conditions of this renewed facility to be similar to those in the current agreement.

As further discussed in the Introduction and Executive Summary and in Section A, General and Administrative and set forth in the table below, NERC has a 2017 proposed capital budget of approximately \$4.4M, \$1.45M of which it is proposing to finance.

NERC CAPITAL BUDGET	2016	2017
ERO Application Development	\$ 1,500,000	\$ 700,000
E-ISAC Portal Improvement		1,000,000
Document Management Program	465,000	335,000
Hardware (Storage, servers, laptops)	955,000	991,000
Other Equipment	535,000	885,000
Disaster Recovery	200,000	150,000
NERC Software licenses	256,000	311,000
Total Capital Budget	\$ 3,911,000	\$ 4,372,000

The table below sets forth the projected principal and interest repayment schedule for the amounts financed to date and the additional planned \$1.45M in capital financing.⁵⁰ This projection assumes an average interest rate of 3.5% over the term of the financing, which is consistent with the 2014, 2015 and 2016 budgets. Management is

⁴⁸ The interest rate at closing was lower than projected for purposes of the 2014 budget. As detailed in the company's approved 2014 *Business Plan and Budget*, any difference between actual and budgeted interest expense for draws under the credit facility becomes an addition to the company's Unforeseen Contingency Operating Reserve balance.

⁴⁹ This capital investment amount is exclusive of approximately \$640k in expenses which were incurred in 2013 in the development of the Events Information Data System application and expensed rather than capitalized, as further discussed in the [company's Q1 2014 budget variance](#) report (item 2.c.i) presented to the NERC Finance and Audit Committee.

⁵⁰ The company plans to finance \$700k in ERO Application Development costs and \$750k of the \$1M E-ISAC Portal Development project.

recommending that 3.5% continue to be used given the potential for interest rate increases during 2016. The actual interest rate and interest rate expense will be reflected in the quarterly budget to actual variance reports the company posts on its website, reviews in open session with the NERC Finance and Audit Committee, and files with FERC. Any variations in interest expense will be captured and reported as a contribution to operating reserves, the expenditures of which are subject to the terms of the company's Working Capital and Operating Reserve Policy.

	YEAR-END OUTSTANDING DEBT BALANCE					
	2014	2015	2016	2017	2018	2019
2013 Expenditure / Closed 2014	\$ 878,472	\$ 456,806	\$ 35,139	\$ -	\$ -	
2015 Budgeted	-	-	1,234,547	617,274	-	
2016 Budgeted	-	-	1,500,000	666,667	333,333	
2017 Projected	-	-	-	1,450,000	966,667	483,333
2018 Projected	-	-	-	-	1,800,000	1,200,000
Total Outstanding Balance	\$ 878,472	\$ 456,806	\$2,769,686	\$2,733,940	\$3,100,000	\$1,683,333

	ANNUAL PAYMENTS FOR DEBT SERVICE					
	2014	2015	2016	2017	2018	2019
2013 Expenditure / Closed 2014	\$ 386,528	\$ 421,667	\$ 421,667	\$ 35,139	\$ -	
2015 Budgeted	-	-	617,274	617,274	617,274	
2016 Budgeted	-	-	-	333,333	333,333	333,333
2017 Projected	-	-	-	-	483,333	483,333
2018 Projected	-	-	-	-	-	600,000
Interest Expense	29,367	24,826	56,529	56,725	61,170	72,203
Total Principal and Interest Costs	\$ 415,895	\$ 446,493	\$1,095,469	\$1,042,471	\$1,495,110	\$1,488,869

Exhibit E – Working Capital and Operating Reserve Amounts

In September 2015, the Commission approved NERC’s proposed amendments to the Company’s Working Capital and Operating Reserve Policy, which had been approved by the NERC Board. A number of changes were made to the policy, including:

- Clarifying the definition of working capital to represent funding needed for cash flow purposes due to the timing of the receipt of funds and the payment of expenses.
- Creating four separate categories of operating reserves:
 1. A new subcategory of reserves entitled **Future Obligation Reserve** for funds that are being held to satisfy obligations that will be settled in a future year. Examples include leases, certain contracts, and credit agreements. These reserves were previously included within the definition of working capital, but are more accurately classified as a form of operating reserve.
 2. Continuation of a separate category of reserves for the Operator Certification Program called the **Operator Certification Reserve**.
 3. Elimination of the Known and Unforeseen Contingency categories of operating reserves and creating a single category of contingency reserves called the **Operating Contingency Reserve**.
 4. Creation of a separate category of reserves for CRISP called the **CRISP Reserve**.

Working Capital

Based on its 2016 cash flow projection and taking into account the historic manner in which NERC’s assessments have been billed and paid, NERC does not anticipate needing access to working capital in 2017 to meet monthly cash flow needs. While individual reserve categories are increasing and decreasing based on operating needs and uses, the budget in total does not reflect additional net funding for reserves. In the unlikely event NERC experiences a temporary cash flow shortage, it has the ability to either request authorization from the Finance and Audit Committee and Board of Trustees to temporarily access operating contingency reserve funds, or draw on its \$4M line of credit, as long as NERC is in compliance with the covenants under its bank credit agreement.

Operating Reserves

Total operating reserves are budgeted to be \$6.1M at December 31, 2017 among all four categories, or \$5.6M excluding the \$500,000 CRISP Reserve. The Future Obligation Reserve is budgeted to be \$2.6M and is primarily funds held to offset future liabilities under lease agreements for the Atlanta and Washington, DC, offices. System Operator Certification Reserves are budgeted at \$714k and the Operating Contingency Reserve is budgeted for \$2.2M. The CRISP Reserve (budgeted at \$500k) is held pursuant to the terms of the Master Services Agreement between NERC and participating utilities, which calls for a separate third-party funded reserve established to fund certain contingencies in connection with CRISP.

In addition to the foregoing reserves, the amended policy also provides for an **Assessment Stabilization Reserve**. The goal of the Assessment Stabilization Reserve is to mitigate assessment volatility and have percentage changes in annual assessments track, within a reasonable band, percentage changes in the company’s total annual budget, with the total budget reflecting prudent fiscal discipline and good stewardship of resources. Assessment stabilization funds will be used when available to help stabilize assessments and mitigate year-to-year swings in assessments. Those swings primarily result from the year-to-year variations in collections of penalty funds to be applied to offset assessments, but could also result from other factors like surplus funds available from a prior period, the need to replenish the Operating Contingency Reserve, or significant but relatively short-term operating or capital spending needs. Subject to Board and Commission approval, NERC proposes (1) to place the \$500,000 of Penalties collected in the 12 months ended June 30, 2016, into the Assessment Stabilization Reserve, resulting in a balance on January 1, 2017 of approximately \$2.7M, funded entirely by penalties, and (2) to use \$1.1M of the

balance at January 1, 2017 to offset 2017 U.S. assessments. An additional penalty is expected in May 2017 for \$500,000. This penalty results from a settlement reached through WECC related to the September 2011 blackout. NERC's proposals will result in a balance remaining in the Assessment Stabilization Reserve of \$1,671,000 at December 31, 2017 (or \$2,167,000 taking into account the \$500,000 penalty scheduled to be received in May 2017 and assuming that after June 30, 2016, no additional Penalties are received and placed into the Assessment Stabilization Reserve). This balance will be available to be used, with Board and Commission approval, to mitigate annual assessment increases in future years.

Exhibit F – E-ISAC Portal Improvement

- Cyber and physical threats do not come from machines
 - They originate in the minds of human adversaries
 - Cyberspace is just a tool for the adversary
 - So are explosives, weapons, truck bombs, bolt cutters and social engineering
- Threat actors typically don't work alone
 - Strategic “existential” threats (the ones we should worry about) are typified by large, well connected organizations
 - These groups routinely share, collaborate, and analyze situations freely, using every tool available including the Internet and technology
- Our challenge is to be better at sharing, collaborating, and analyzing than our adversaries
 - We need better tools than those they have

- ESCC Strategic Review (July 2015) called for continued improvement to the portal
 - Recommended the use of STIX/TAXII standards
 - Recommended the exploration of ways to automate information sharing and analysis
- Updated portal launched in September 2015
- GridEx III Simulation Deck portal used in November 2015 offered several new ideas about grid security visualization
- MEC's OTT working group developed a comprehensive list of portal improvement recommendations

- 2016:
 - Fix existing portal bugs and issues identified by the E-ISAC and members
 - Build incremental improvements to meet short-term recommendations
 - Conduct scoping/discovery effort for transition to platform
 - Validate requirements with membership
 - Launch new “look and feel” for existing portal
- 2017:
 - Install new hardware
 - Launch new platform
 - Build incremental improvements to meet long-term requirements
 - Ongoing membership feedback

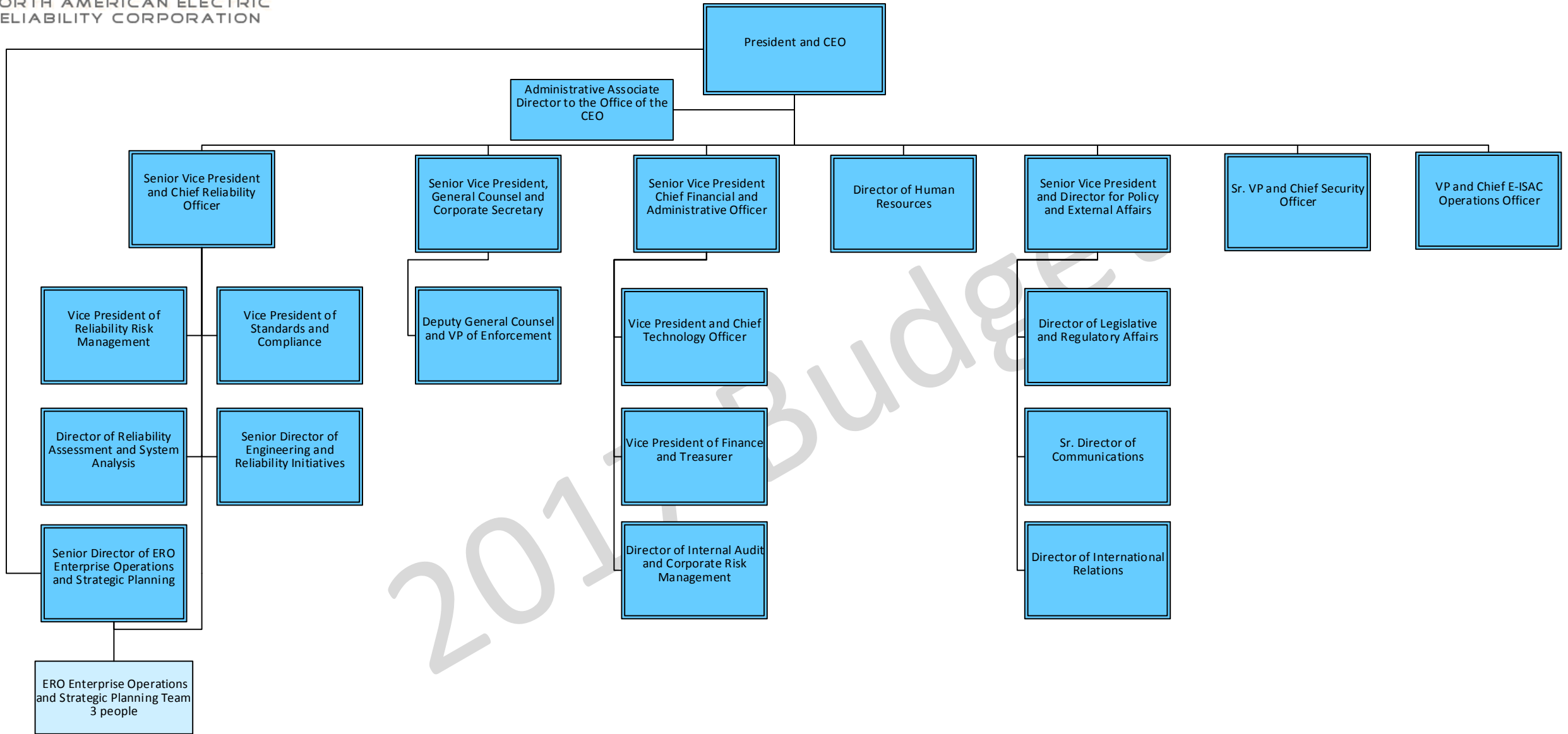
- Dramatic improvement to information sharing
 - Human to human via text, discussion, document, photo, etc. sharing
 - Machine to machine via built in STIX/TAXII compatibility
- Rapid response to emerging critical situations
 - Situational awareness of physical and cyber events
 - Coordination within and external to the Electricity Sector
- Extendable as new technologies emerge
 - Easy integration with mobile technologies
 - Designed to be modular and adaptable to future capability requirements
- Increased trust in the E-ISAC
 - Will result in increased sharing and collaboration

- Existing portal characteristics
 - Designed for a specific audience with a specific purpose
 - Static content with infrequent changes
 - No user control over look/feel of layout
 - Not designed for high levels of interaction
 - Limited search capability
- Proposed platform characteristics
 - Designed for a wide audience with different needs
 - Highly customizable by users
 - Extendable to accommodate new technologies
 - Visual and graphical orientation (vs text-based)
 - Robust search, filtering, and native language queries of datasets
 - Server-side computation and analytics

- Total proposed 2017 budget of \$1 million
- Two parallel projects
 - Near-term quick fixes and user interface improvements
 - Long-term movement to a platform with significant changes
- Project implementation managed by NERC CTO and the ERO IT PMO
- Disciplined approach used to successfully manage and implement other recent IT projects
- Ongoing MEC engagement
- Scope will be managed within approved budget

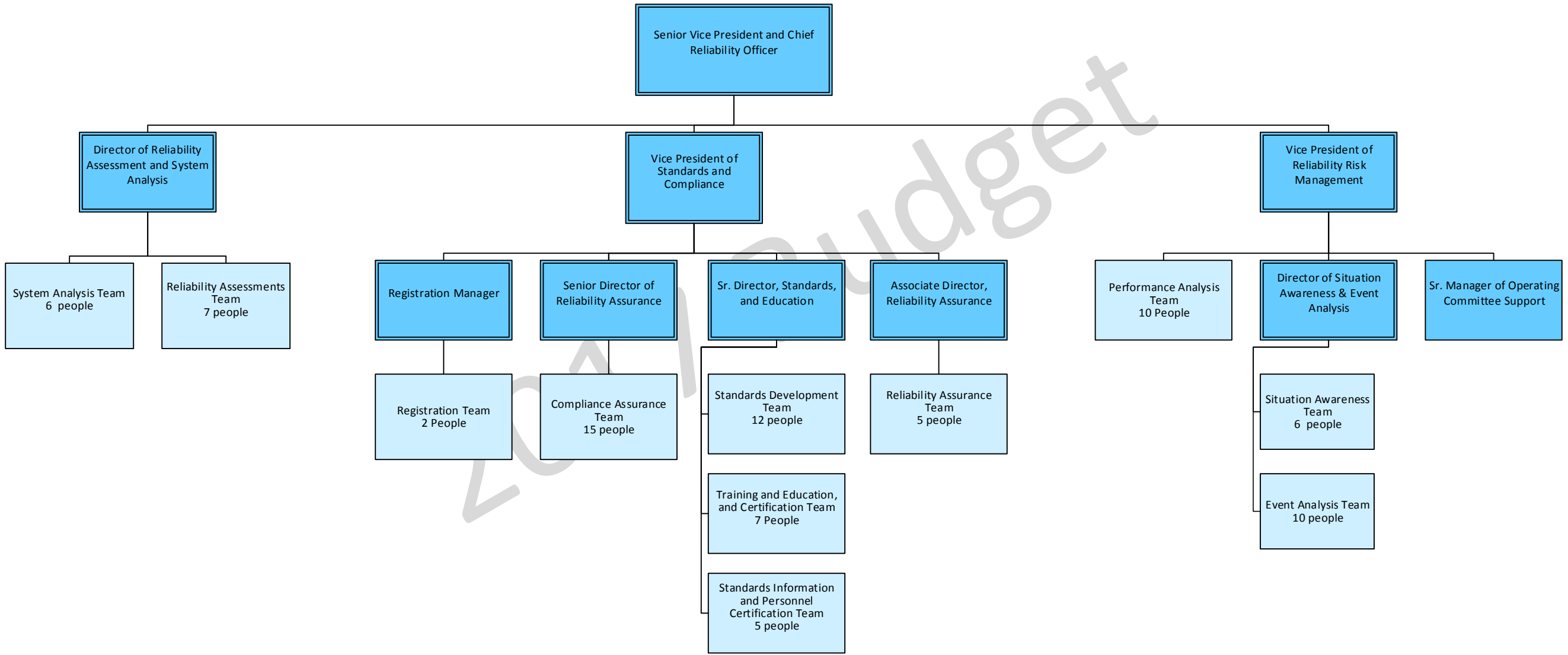
- MEC briefed at June 15, 2016 face-to-face meeting
- Bill Spence (Chairman, President and CEO, PPL Corporation, Inc. and Chair, E-ISAC Member Executive Committee) briefed EEI's Executive Committee on June 14, 2016 and provided positive feedback
- The MEC provided NERC with written comments in support of the proposed funding on or before June 30, 2016.

NERC Staff Organization Chart – Budget 2017

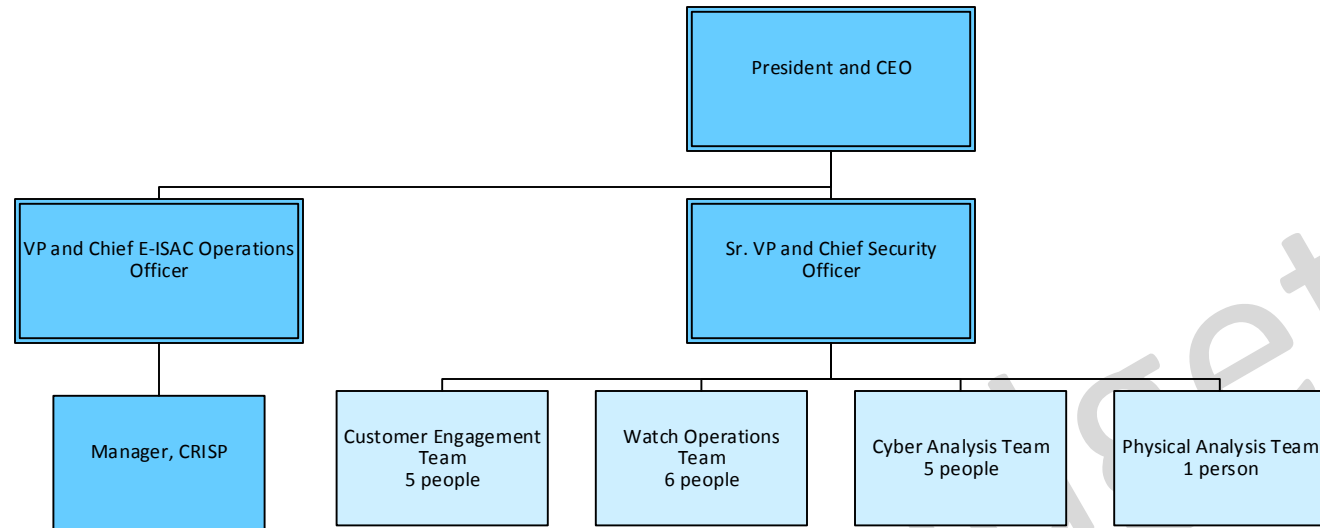


2017 Budget

Reliability Standards, Reliability Assurance, Reliability Assessment and System Oversight, Performance Analysis, Event Analysis, Situation Awareness, Training and Education

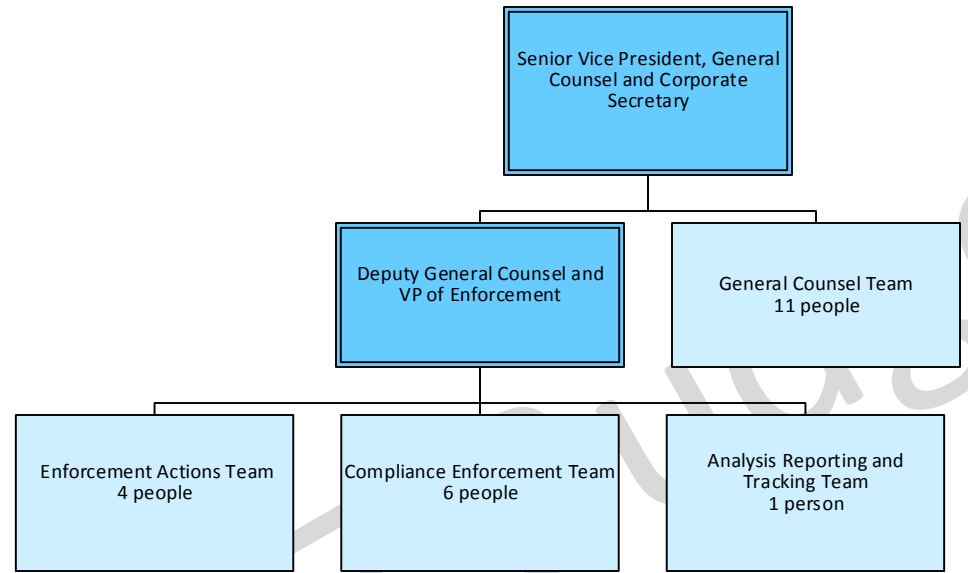


Electricity Information Sharing and Analysis Center

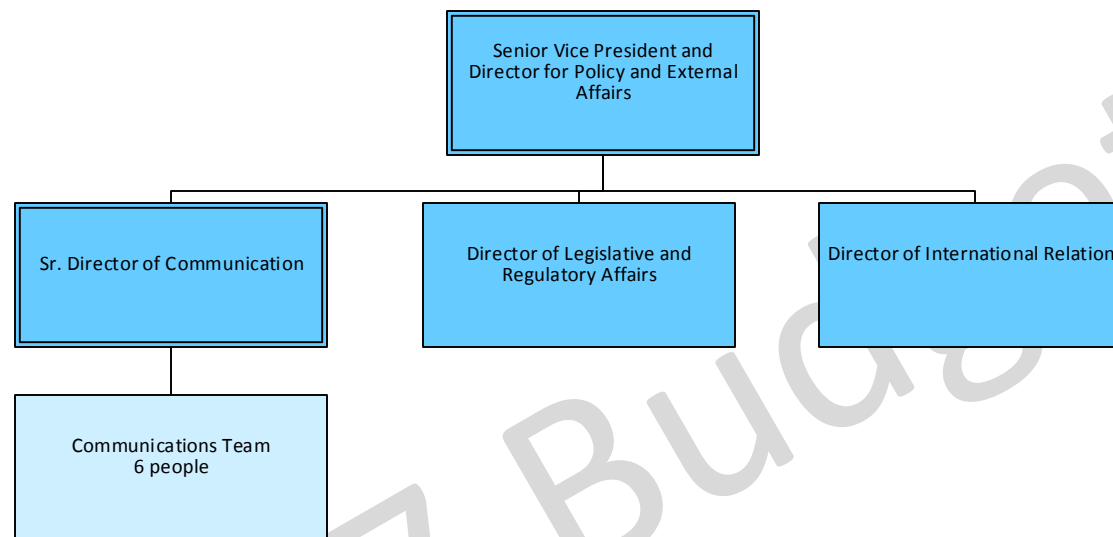


2017 Budget

Legal and Regulatory Compliance Enforcement



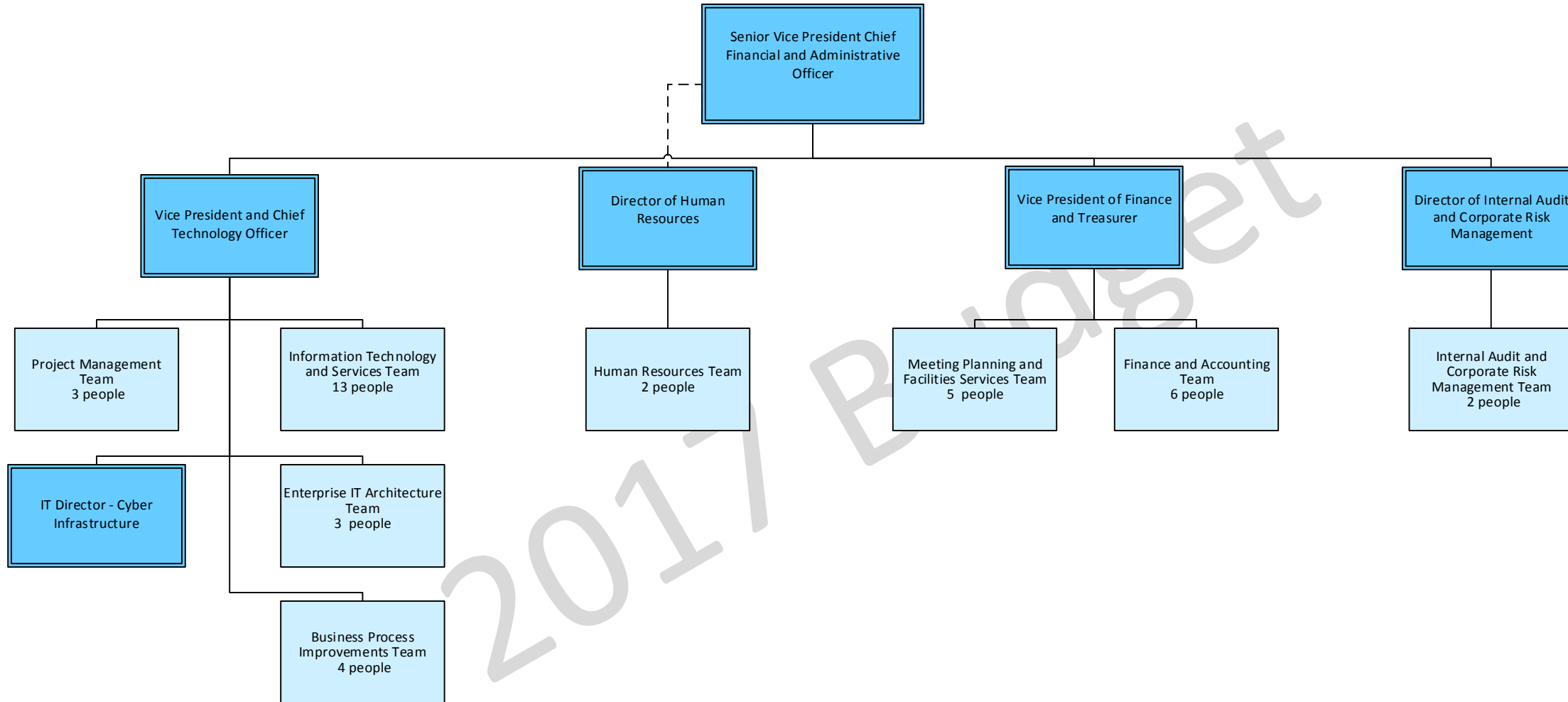
Policy and External Affairs



2017 Budget

- Telecommuter
- Atlanta
- Washington, DC
- Unbudgeted 015

Information Technology, Human Resources, and Accounting & Finance



2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NEL (MWh)	U.S. NEL	Canada NEL	Mexico NEL	% of RE total	US Total	Canada Total	Mexico Total	% of ERO Total	US Total	Canada Total	Mexico Total	% of ERO - US Only
2015	FRCC	1074	Alachua, City of	U.S.	129,346	129,346	-	-	0.055%	0.055%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.003%
2015	FRCC	1075	Bartow, City of	U.S.	288,100	288,100	-	-	0.123%	0.123%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.007%
2015	FRCC	1076	Chattahoochee, City of	U.S.	39,387	39,387	-	-	0.017%	0.017%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	FRCC	1077	Florida Keys Electric Cooperative Assn	U.S.	784,000	784,000	-	-	0.334%	0.334%	0.000%	0.000%	0.017%	0.017%	0.000%	0.000%	0.020%
2015	FRCC	1078	Florida Power & Light Co.	U.S.	116,025,000	116,025,000	-	-	49.455%	49.455%	0.000%	0.000%	2.570%	2.570%	0.000%	0.000%	2.913%
2015	FRCC	1079	Florida Public Utilities Company	U.S.	352,150	352,150	-	-	0.150%	0.150%	0.000%	0.000%	0.008%	0.008%	0.000%	0.000%	0.009%
2015	FRCC	1080	Gainesville Regional Utilities	U.S.	1,809,861	1,809,861	-	-	0.771%	0.771%	0.000%	0.000%	0.040%	0.040%	0.000%	0.000%	0.045%
2015	FRCC	1081	Homestead, City of	U.S.	563,000	563,000	-	-	0.240%	0.240%	0.000%	0.000%	0.012%	0.012%	0.000%	0.000%	0.014%
2015	FRCC	1082	JEA	U.S.	12,536,240	12,536,240	-	-	5.344%	5.344%	0.000%	0.000%	0.278%	0.278%	0.000%	0.000%	0.315%
2015	FRCC	1083	Lakeland Electric	U.S.	3,126,000	3,126,000	-	-	1.332%	1.332%	0.000%	0.000%	0.069%	0.069%	0.000%	0.000%	0.078%
2015	FRCC	1626	Lee County Electric Cooperative, Inc	U.S.	4,063,000	4,063,000	-	-	1.732%	1.732%	0.000%	0.000%	0.090%	0.090%	0.000%	0.000%	1.022%
2015	FRCC	1661	City of Lake Worth	U.S.	477,000	477,000	-	-	0.203%	0.203%	0.000%	0.000%	0.011%	0.011%	0.000%	0.000%	0.012%
2015	FRCC	1084	Mount Dora, City of	U.S.	94,457	94,457	-	-	0.040%	0.040%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	FRCC	1085	New Smyrna Beach, Utilities Commission of	U.S.	433,000	433,000	-	-	0.185%	0.185%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.011%
2015	FRCC	1086	Orlando Utilities Commission	U.S.	6,331,845	6,331,845	-	-	2.699%	2.699%	0.000%	0.000%	0.140%	0.140%	0.000%	0.000%	0.159%
2015	FRCC	1087	Duke Energy Florida	U.S.	41,092,945	41,092,945	-	-	17.516%	17.516%	0.000%	0.000%	0.910%	0.910%	0.000%	0.000%	1.032%
2015	FRCC	1088	Quincy, City of	U.S.	134,000	134,000	-	-	0.057%	0.057%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.003%
2015	FRCC	1089	Reedy Creek Improvement District	U.S.	1,222,000	1,222,000	-	-	0.521%	0.521%	0.000%	0.000%	0.027%	0.027%	0.000%	0.000%	0.031%
2015	FRCC	1090	St. Cloud, City of (OUC)	U.S.	697,000	697,000	-	-	0.297%	0.297%	0.000%	0.000%	0.015%	0.015%	0.000%	0.000%	0.017%
2015	FRCC	1091	Tallahassee, City of	U.S.	2,776,000	2,776,000	-	-	1.183%	1.183%	0.000%	0.000%	0.061%	0.061%	0.000%	0.000%	0.070%
2015	FRCC	1092	Tampa Electric Company	U.S.	20,105,000	20,105,000	-	-	8.570%	8.570%	0.000%	0.000%	0.445%	0.445%	0.000%	0.000%	0.505%
2015	FRCC	1603	City of Vero Beach	U.S.	780,000	780,000	-	-	0.332%	0.332%	0.000%	0.000%	0.017%	0.017%	0.000%	0.000%	0.020%
2015	FRCC	1093	Wauchula, City of	U.S.	65,000	65,000	-	-	0.028%	0.028%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.002%
2015	FRCC	1094	Williston, City of	U.S.	35,211	35,211	-	-	0.015%	0.015%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	FRCC	1095	Winter Park, City of	U.S.	461,927	461,927	-	-	0.197%	0.197%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.012%
2015	FRCC	1072	Florida Municipal Power Agency	U.S.	5,954,300	5,954,300	-	-	2.538%	2.538%	0.000%	0.000%	0.132%	0.132%	0.000%	0.000%	0.149%
2015	FRCC	1073	Seminole Electric Cooperative	U.S.	14,230,300	14,230,300	-	-	6.066%	6.066%	0.000%	0.000%	0.315%	0.315%	0.000%	0.000%	0.357%
TOTAL FRCC					234,606,069	234,606,069	-	-	100.000%	100.000%	0.000%	0.000%	5.197%	5.197%	0.000%	0.000%	5.889%
2015	MRO	1199	Basin Electric Power Cooperative	U.S.	17,016,273	17,016,273	-	-	6.010%	6.010%	0.000%	0.000%	0.377%	0.377%	0.000%	0.000%	0.427%
2015	MRO	1201	Central Iowa Power Cooperative (CIPCO)	U.S.	2,723,564	2,723,564	-	-	0.962%	0.962%	0.000%	0.000%	0.060%	0.060%	0.000%	0.000%	0.068%
2015	MRO	1204	Corn Belt Power Cooperative	U.S.	1,880,589	1,880,589	-	-	0.664%	0.664%	0.000%	0.000%	0.042%	0.042%	0.000%	0.000%	0.047%
2015	MRO	1207	Dairyland Power Cooperative	U.S.	5,395,700	5,395,700	-	-	1.906%	1.906%	0.000%	0.000%	0.120%	0.120%	0.000%	0.000%	0.135%
2015	MRO	1210	Great River Energy	U.S.	13,568,742	13,568,742	-	-	4.792%	4.792%	0.000%	0.000%	0.301%	0.301%	0.000%	0.000%	0.341%
2015	MRO	1222	Minnkota Power Cooperative, Inc.	U.S.	4,297,898	4,297,898	-	-	1.518%	1.518%	0.000%	0.000%	0.095%	0.095%	0.000%	0.000%	0.108%
2015	MRO	1230	Nebraska Public Power District	U.S.	13,413,477	13,413,477	-	-	4.737%	4.737%	0.000%	0.000%	0.297%	0.297%	0.000%	0.000%	0.337%
2015	MRO	1232	Omaha Public Power District	U.S.	10,929,723	10,929,723	-	-	3.860%	3.860%	0.000%	0.000%	0.242%	0.242%	0.000%	0.000%	0.274%
2015	MRO	1237	Southern Montana Generation and Transmission	U.S.	9,943	9,943	-	-	0.004%	0.004%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	MRO	1240	Western Area Power Administration (UM)	U.S.	5,520,634	5,520,634	-	-	1.950%	1.950%	0.000%	0.000%	0.122%	0.122%	0.000%	0.000%	0.139%
2015	MRO	1239	Western Area Power Administration (LM)	U.S.	140,751	140,751	-	-	0.050%	0.050%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
2015	MRO	1217	Manitoba Hydro	CAN	23,543,825	-	23,543,825	-	8.315%	0.000%	8.315%	0.000%	0.522%	0.000%	0.522%	0.000%	0.000%
2015	MRO	1235	SaskPower	CAN	23,653,300	-	23,653,300	-	8.354%	0.000%	8.354%	0.000%	0.524%	0.000%	0.524%	0.000%	0.000%
2015	MRO	1195	Alliant Energy (Alliant East - WPL & Alliant West IPL)	U.S.	28,939,186	28,939,186	-	-	10.221%	10.221%	0.000%	0.000%	0.641%	0.641%	0.000%	0.000%	0.726%
2015	MRO	1710	Dahlberg Electric Company	U.S.	115,897	115,897	-	-	0.041%	0.041%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.003%
2015	MRO	1216	Madison, Gas and Electric	U.S.	3,432,618	3,432,618	-	-	1.212%	1.212%	0.000%	0.000%	0.076%	0.076%	0.000%	0.000%	0.086%
2015	MRO	1220	MidAmerican Energy Company	U.S.	24,003,462	24,003,462	-	-	8.478%	8.478%	0.000%	0.000%	0.532%	0.532%	0.000%	0.000%	0.603%
2015	MRO	1221	Minnesota Power	U.S.	12,226,563	12,226,563	-	-	4.318%	4.318%	0.000%	0.000%	0.271%	0.271%	0.000%	0.000%	0.307%
2015	MRO	1226	Montana-Dakota Utilities Co.	U.S.	3,239,575	3,239,575	-	-	1.144%	1.144%	0.000%	0.000%	0.072%	0.072%	0.000%	0.000%	0.081%
2015	MRO	1711	North Central Power Company	U.S.	350,009	350,009	-	-	0.124%	0.124%	0.000%	0.000%	0.008%	0.008%	0.000%	0.000%	0.009%
2015	MRO	1231	NorthWestern Energy	U.S.	1,544,846	1,544,846	-	-	0.546%	0.546%	0.000%	0.000%	0.034%	0.034%	0.000%	0.000%	0.039%
2015	MRO	1712	NorthWestern Wisconsin	U.S.	182,703	182,703	-	-	0.065%	0.065%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.005%
2015	MRO	1233	Otter Tail Power Company	U.S.	4,719,131	4,719,131	-	-	1.667%	1.667%	0.000%	0.000%	0.105%	0.105%	0.000%	0.000%	0.118%
2015	MRO	1664	Wisconsin Public Service (WPS)	U.S.	12,119,735	12,119,735	-	-	4.281%	4.281%	0.000%	0.000%	0.268%	0.268%	0.000%	0.000%	0.304%
2015	MRO	1665	Upper Peninsula Power Company (UPPCO)	U.S.	759,712	759,712	-	-	0.268%	0.268%	0.000%	0.000%	0.017%	0.017%	0.000%	0.000%	0.019%
2015	MRO	1244	Xcel Energy Company (NSP)	U.S.	44,501,938	44,501,938	-	-	15.718%	15.718%	0.000%	0.000%	0.986%	0.986%	0.000%	0.000%	1.117%
2015	MRO	1196	Ames Municipal Electric System	U.S.	805,571	805,571	-	-	0.285%	0.285%	0.000%	0.000%	0.018%	0.018%	0.000%	0.000%	0.020%
2015	MRO	1604	Atlantic Municipal Utilities	U.S.	80,666	80,666	-	-	0.028%	0.028%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	MRO	1476	Badger Power Marketing Authority of Wisconsin, Inc.	U.S.	384,158	384,158	-	-	0.136%	0.136%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.010%
2015	MRO	1713	Bloomer Electric & Water Co.	U.S.	55,538	55,538	-	-	0.020%	0.020%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	MRO	1714	Village of Caddott	U.S.	13,900	13,900	-	-	0.005%	0.005%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	MRO	1200	Cedar Falls Municipal Utilities	U.S.	514,538	514,538	-	-	0.182%	0.182%	0.000%	0.000%	0.011%	0.011%	0.000%	0.000%	0.013%
2015	MRO	1477	Central Minnesota Municipal Power Agency (CMMPA)	U.S.	465,772	465,772	-	-	0.165%	0.165%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.012%
2015	MRO	1715	Village of Centuria	U.S.	5,988	5,988	-	-	0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	MRO	1716	Eldridge Electric and Water Utilities	U.S.	42,244	42,244	-	-	0.015%	0.015%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NEL (MWh)	U.S. NEL	Canada NEL	Mexico NEL	% of RE total	US Total	Canada Total	Mexico Total	% of ERO Total	US Total	Canada Total	Mexico Total	% of ERO - US Only
2015	MRO	1203	City of Escanaba	U.S.	146,316	146,316	-	-	0.052%	0.052%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
2015	MRO	1205	Falls City Water & Light Department	U.S.	56,870	56,870	-	-	0.020%	0.020%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	MRO	1206	Fremont Department of Utilities	U.S.	408,799	408,799	-	-	0.144%	0.144%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.010%
2015	MRO	1208	Geneseo Municipal Utilities	U.S.	64,050	64,050	-	-	0.023%	0.023%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.002%
2015	MRO	1209	Grand Island Utilities Department	U.S.	745,207	745,207	-	-	0.263%	0.263%	0.000%	0.000%	0.017%	0.017%	0.000%	0.000%	0.019%
2015	MRO	1717	Great Lakes Utilities	U.S.	391,896	391,896	-	-	0.138%	0.138%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.010%
2015	MRO	1718	City of Guttenberg	U.S.	18,251	18,251	-	-	0.006%	0.006%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	MRO	1606	Harlan Municipal Utilities	U.S.	63,234	63,234	-	-	0.022%	0.022%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.002%
2015	MRO	1211	Hastings Utilities	U.S.	414,852	414,852	-	-	0.147%	0.147%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.010%
2015	MRO	1212	Heartland Consumers Power District	U.S.	860,001	860,001	-	-	0.304%	0.304%	0.000%	0.000%	0.019%	0.019%	0.000%	0.000%	0.022%
2015	MRO	1213	Hutchinson Utilities Commission	U.S.	302,057	302,057	-	-	0.107%	0.107%	0.000%	0.000%	0.007%	0.007%	0.000%	0.000%	0.008%
2015	MRO	1719	City of Kasota	U.S.	3,894	3,894	-	-	0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	MRO	1215	Lincoln Electric System	U.S.	3,200,763	3,200,763	-	-	1.130%	1.130%	0.000%	0.000%	0.071%	0.071%	0.000%	0.000%	0.080%
2015	MRO	1218	Manitowoc Public Utilities	U.S.	549,173	549,173	-	-	0.194%	0.194%	0.000%	0.000%	0.012%	0.012%	0.000%	0.000%	0.014%
2015	MRO	1223	Missouri River Energy Services	U.S.	2,329,189	2,329,189	-	-	0.823%	0.823%	0.000%	0.000%	0.052%	0.052%	0.000%	0.000%	0.058%
2015	MRO	1224	MN Municipal Power Agency (MMPA)	U.S.	1,534,298	1,534,298	-	-	0.542%	0.542%	0.000%	0.000%	0.034%	0.034%	0.000%	0.000%	0.039%
2015	MRO	1607	Montezuma Municipal Light & Power	U.S.	29,517	29,517	-	-	0.010%	0.010%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	MRO	1227	Municipal Energy Agency of Nebraska	U.S.	1,110,172	1,110,172	-	-	0.392%	0.392%	0.000%	0.000%	0.025%	0.025%	0.000%	0.000%	0.028%
2015	MRO	1228	Muscatine Power and Water	U.S.	876,599	876,599	-	-	0.310%	0.310%	0.000%	0.000%	0.019%	0.019%	0.000%	0.000%	0.022%
2015	MRO	1229	Nebraska City Utilities	U.S.	168,198	168,198	-	-	0.059%	0.059%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.004%
2015	MRO	1720	Resale Power Group of Iowa	U.S.	540,809	540,809	-	-	0.191%	0.191%	0.000%	0.000%	0.012%	0.012%	0.000%	0.000%	0.014%
2015	MRO	1721	Rice Lake Utilities	U.S.	164,697	164,697	-	-	0.058%	0.058%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.004%
2015	MRO	1234	Rochester Public Utilities	U.S.	2,008	2,008	-	-	0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	MRO	1236	Southern Minnesota Municipal Power Agency	U.S.	2,787,431	2,787,431	-	-	0.984%	0.984%	0.000%	0.000%	0.062%	0.062%	0.000%	0.000%	0.070%
2015	MRO	1722	City of Spooner	U.S.	30,863	30,863	-	-	0.011%	0.011%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	MRO	1723	Village of Trempealeau	U.S.	15,529	15,529	-	-	0.005%	0.005%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	MRO	1241	Willmar Municipal Utilities	U.S.	284,686	284,686	-	-	0.101%	0.101%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.007%
2015	MRO	1242	Wisconsin Public Power, Inc. (East and West regions)	U.S.	5,438,537	5,438,537	-	-	1.921%	1.921%	0.000%	0.000%	0.120%	0.120%	0.000%	0.000%	0.137%
TOTAL MRO					283,136,065	235,938,940	47,197,125	-	100.00%	83.331%	16.669%	0.000%	6.272%	5.226%	1.045%	0.000%	5.923%
2015	NPCC	1336	New England	U.S.	126,955,000	126,955,000	-	-	19.982%	19.982%	0.000%	0.000%	2.812%	2.812%	0.000%	0.000%	3.187%
2015	NPCC	1339	New York	U.S.	161,572,000	161,572,000	-	-	25.430%	25.430%	0.000%	0.000%	3.579%	3.579%	0.000%	0.000%	4.056%
2015	NPCC	1337	Ontario	Canada	137,012,000	-	137,012,000	-	21.565%	0.000%	21.565%	0.000%	3.035%	0.000%	3.035%	0.000%	-
2015	NPCC	1341	Quebec	Canada	184,629,000	-	184,629,000	-	29.059%	0.000%	29.059%	0.000%	4.090%	0.000%	4.090%	0.000%	-
2015	NPCC	1705	New Brunswick	Canada	14,199,000	-	14,199,000	-	2.235%	0.000%	2.235%	0.000%	0.315%	0.000%	0.315%	0.000%	-
2015	NPCC	1340	Nova Scotia	Canada	10,982,000	-	10,982,000	-	1.728%	0.000%	1.728%	0.000%	0.243%	0.000%	0.243%	0.000%	-
TOTAL NPCC					635,349,000	288,527,000	346,822,000	-	100.000%	45.412%	54.588%	0.000%	14.073%	6.391%	7.682%	0.000%	7.243%
2015	RF	1102	Cannelton Utilities	U.S.	15,705	15,705	-	-	0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	RF	1106	City of Crosswell	U.S.	39,866	39,866	-	-	0.004%	0.004%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	RF	1490	City of Lansing	U.S.	2,190,625	2,190,625	-	-	0.246%	0.246%	0.000%	0.000%	0.049%	0.049%	0.000%	0.000%	0.055%
2015	RF	1120	Cloverland Electric Cooperative	U.S.	741,891	741,891	-	-	0.083%	0.083%	0.000%	0.000%	0.016%	0.016%	0.000%	0.000%	0.019%
2015	RF	1122	CMS ERM Michigan LLC	U.S.	105,787	105,787	-	-	0.012%	0.012%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.003%
2015	RF	1124	Constellation New Energy (MECS-CONS)	U.S.	860,709	860,709	-	-	0.096%	0.096%	0.000%	0.000%	0.019%	0.019%	0.000%	0.000%	0.022%
2015	RF	1123	Constellation New Energy (MECS-DET)	U.S.	1,005,590	1,005,590	-	-	0.113%	0.113%	0.000%	0.000%	0.022%	0.022%	0.000%	0.000%	0.025%
2015	RF	1126	Consumers Energy Company	U.S.	32,992,002	32,992,002	-	-	3.698%	3.698%	0.000%	0.000%	0.731%	0.731%	0.000%	0.000%	0.828%
2015	RF	1128	Detroit Edison Company	U.S.	45,544,679	45,544,679	-	-	5.105%	5.105%	0.000%	0.000%	1.009%	1.009%	0.000%	0.000%	1.143%
2015	RF	1166	Duke Energy Indiana	U.S.	29,533,656	29,533,656	-	-	3.310%	3.310%	0.000%	0.000%	0.654%	0.654%	0.000%	0.000%	0.741%
2015	RF	1135	Ferdinand Municipal Light & Water	U.S.	46,450	46,450	-	-	0.005%	0.005%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	RF	1646	FirstEnergy Solutions (MECS-CONS)	U.S.	698,106	698,106	-	-	0.078%	0.078%	0.000%	0.000%	0.015%	0.015%	0.000%	0.000%	0.018%
2015	RF	1549	FirstEnergy Solutions (MECS-DET)	U.S.	1,592,903	1,592,903	-	-	0.179%	0.179%	0.000%	0.000%	0.035%	0.035%	0.000%	0.000%	0.040%
2015	RF	1145	Hoosier Energy	U.S.	7,481,060	7,481,060	-	-	0.839%	0.839%	0.000%	0.000%	0.166%	0.166%	0.000%	0.000%	0.188%
2015	RF	1148	Indiana Municipal Power Agency (DUKE CIN)	U.S.	3,116,499	3,116,499	-	-	0.349%	0.349%	0.000%	0.000%	0.069%	0.069%	0.000%	0.000%	0.078%
2015	RF	1485	Indiana Municipal Power Agency (NIPSCO)	U.S.	429,441	429,441	-	-	0.048%	0.048%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.011%
2015	RF	1486	Indiana Municipal Power Agency (SIGE)	U.S.	586,745	586,745	-	-	0.066%	0.066%	0.000%	0.000%	0.013%	0.013%	0.000%	0.000%	0.015%
2015	RF	1149	Indianapolis Power & Light Co.	U.S.	14,352,872	14,352,872	-	-	1.609%	1.609%	0.000%	0.000%	0.318%	0.318%	0.000%	0.000%	0.360%
2015	RF	1553	Integrus Energy Services (MECS-CONS)	U.S.	1,025,094	1,025,094	-	-	0.115%	0.115%	0.000%	0.000%	0.023%	0.023%	0.000%	0.000%	0.026%
2015	RF	1554	Integrus Energy Services (MECS-DET)	U.S.	1,045,940	1,045,940	-	-	0.117%	0.117%	0.000%	0.000%	0.023%	0.023%	0.000%	0.000%	0.026%
2015	RF	1666	Integrus Energy Services (WEPC)	U.S.	447,972	447,972	-	-	0.050%	0.050%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.011%
2015	RF	1614	Just Energy (MECS-DET)	U.S.	44,582	44,582	-	-	0.005%	0.005%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	RF	1154	Michigan Public Power Agency	U.S.	3,391,996	3,391,996	-	-	0.380%	0.380%	0.000%	0.000%	0.075%	0.075%	0.000%	0.000%	0.085%
2015	RF	1155	Michigan South Central Power Agency	U.S.	682,013	682,013	-	-	0.076%	0.076%	0.000%	0.000%	0.015%	0.015%	0.000%	0.000%	0.017%
2015	RF	1158	MidAmerican Energy Company Retail	U.S.	30,045	30,045	-	-	0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	RF	1163	Northern Indiana Public Service Co.	U.S.	17,386,604	17,386,604	-	-	1.949%	1.949%	0.000%	0.000%	0.385%	0.385%	0.000%	0.000%	0.436%

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NEL (MWh)	U.S. NEL	Canada NEL	Mexico NEL	% of RE total	US Total	Canada Total	Mexico Total	% of ERO Total	US Total	Canada Total	Mexico Total	% of ERO - US Only
2015	RF	1164	Onotonagon County Rural Electrification Assoc.	U.S.	28,538	28,538			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	RF	1265	PJM Interconnection, LLC	U.S.	682,420,478	682,420,478			76.490%	76.490%	0.000%	0.000%	15.116%	15.116%	0.000%	0.000%	17.130%
2015	RF	1172	Noble Americas Energy Solutions (MECS-CONS)	U.S.	406,135	406,135			0.046%	0.046%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.010%
2015	RF	1171	Noble Americas Energy Solutions (MECS-DET)	U.S.	625,800	625,800			0.070%	0.070%	0.000%	0.000%	0.014%	0.014%	0.000%	0.000%	0.016%
2015	RF	1176	Direct Energy (fka:Strategic Energy,LLC) (MECS-CONS)	U.S.	192,302	192,302			0.022%	0.022%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.005%
2015	RF	1174	Direct Energy (fka:Strategic Energy,LLC) (MECS-DET)	U.S.	622,718	622,718			0.070%	0.070%	0.000%	0.000%	0.014%	0.014%	0.000%	0.000%	0.016%
2015	RF	1581	Spartan Renewable Energy	U.S.	73,902	73,902			0.008%	0.008%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	RF	1180	Thumb Electric Cooperative	U.S.	182,367	182,367			0.020%	0.020%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.005%
2015	RF	1662	Ohio Valley Electric Corporation	U.S.	438,076	438,076			0.049%	0.049%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.011%
2015	RF	1181	Vectren Energy Delivery of IN	U.S.	5,732,515	5,732,515			0.643%	0.643%	0.000%	0.000%	0.127%	0.127%	0.000%	0.000%	0.144%
2015	RF	1183	Village of Sebewaing	U.S.	45,922	45,922			0.005%	0.005%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	RF	1184	Wabash Valley Power Association Inc. (DUKE CIN)	U.S.	2,819,563	2,819,563			0.316%	0.316%	0.000%	0.000%	0.062%	0.062%	0.000%	0.000%	0.071%
2015	RF	1488	Wabash Valley Power Association Inc.(NIPSCO)	U.S.	1,663,433	1,663,433			0.186%	0.186%	0.000%	0.000%	0.037%	0.037%	0.000%	0.000%	0.042%
2015	RF	1185	Wisconsin Electric Power Co.	U.S.	27,890,656	27,890,656			3.126%	3.126%	0.000%	0.000%	0.618%	0.618%	0.000%	0.000%	0.700%
2015	RF	1189	Wolverine Power Marketing Cooperative	U.S.	834,791	834,791			0.094%	0.094%	0.000%	0.000%	0.018%	0.018%	0.000%	0.000%	0.021%
2015	RF	1191	Wolverine Power Supply Cooperative	U.S.	2,656,515	2,656,515			0.298%	0.298%	0.000%	0.000%	0.059%	0.059%	0.000%	0.000%	0.067%
2015	RF	1190	Wolverine Power Marketing Cooperative(MECS-DET)	U.S.	144,174	144,174			0.016%	0.016%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
TOTAL RELIABILITYFIRST					892,166,717	892,166,717	-	-	100.000%	100.000%	0.000%	0.000%	19.762%	19.762%	0.000%	0.000%	22.396%
2015	SERC	1267	Alabama Municipal Electric Authority	U.S.	3,425,522	3,425,522			0.334%	0.334%	0.000%	0.000%	0.076%	0.076%	0.000%	0.000%	0.086%
2015	SERC	1268	Alabama Power Company	U.S.	59,294,870	59,294,870			5.782%	5.782%	0.000%	0.000%	1.313%	1.313%	0.000%	0.000%	1.488%
2015	SERC	1269	Ameren - Illinois	U.S.	45,670,000	45,670,000			4.453%	4.453%	0.000%	0.000%	1.012%	1.012%	0.000%	0.000%	1.146%
2015	SERC	1271	Ameren - Missouri	U.S.	40,492,000	40,492,000			3.948%	3.948%	0.000%	0.000%	0.897%	0.897%	0.000%	0.000%	1.016%
2015	SERC	1272	APGI - Yadkin Division	U.S.	15,570	15,570			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	SERC	1273	Associated Electric Cooperative Inc.	U.S.	18,827,822	18,827,822			1.836%	1.836%	0.000%	0.000%	0.417%	0.417%	0.000%	0.000%	0.473%
2015	SERC	1582	Beauregard Electric Cooperative, Inc.	U.S.	1,084,232	1,084,232			0.106%	0.106%	0.000%	0.000%	0.024%	0.024%	0.000%	0.000%	0.027%
2015	SERC	1462	Benton Utility District	U.S.	240,401	240,401			0.023%	0.023%	0.000%	0.000%	0.005%	0.005%	0.000%	0.000%	0.006%
2015	SERC	1274	Big Rivers Electric Corporation	U.S.	3,797,820	3,797,820			0.370%	0.370%	0.000%	0.000%	0.084%	0.084%	0.000%	0.000%	0.095%
2015	SERC	1275	Black Warrior EMC	U.S.	433,206	433,206			0.042%	0.042%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.011%
2015	SERC	1276	Blue Ridge EMC	U.S.	1,367,394	1,367,394			0.133%	0.133%	0.000%	0.000%	0.030%	0.030%	0.000%	0.000%	0.034%
2015	SERC	1628	Brazos Electric Power Cooperative, Inc.	U.S.	476,659	476,659			0.046%	0.046%	0.000%	0.000%	0.011%	0.011%	0.000%	0.000%	0.012%
2015	SERC	1463	Canton, MS	U.S.	130,903	130,903			0.013%	0.013%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.003%
2015	SERC	1277	Central Electric Power Cooperative Inc.	U.S.	16,410,627	16,410,627			1.600%	1.600%	0.000%	0.000%	0.363%	0.363%	0.000%	0.000%	0.412%
2015	SERC	1667	Century Aluminum - Hawesville	U.S.	3,258,726	3,258,726			0.318%	0.318%	0.000%	0.000%	0.072%	0.072%	0.000%	0.000%	0.082%
2015	SERC	1668	Century Aluminum - Sebre	U.S.	3,354,067	3,354,067			0.327%	0.327%	0.000%	0.000%	0.074%	0.074%	0.000%	0.000%	0.084%
2015	SERC	1278	City of Blountstown FL	U.S.	38,219	38,219			0.004%	0.004%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SERC	1279	City of Camden SC	U.S.	199,847	199,847			0.019%	0.019%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.005%
2015	SERC	1280	City of Collins MS	U.S.	47,041	47,041			0.005%	0.005%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SERC	1281	City of Columbia MO	U.S.	1,197,869	1,197,869			0.117%	0.117%	0.000%	0.000%	0.027%	0.027%	0.000%	0.000%	0.030%
2015	SERC	1282	City of Conway AR (Conway Corporation)	U.S.	1,014,445	1,014,445			0.099%	0.099%	0.000%	0.000%	0.022%	0.022%	0.000%	0.000%	0.025%
2015	SERC	1284	City of Evergreen AL	U.S.	57,408	57,408			0.006%	0.006%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SERC	1285	City of Hampton GA	U.S.	31,155	31,155			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SERC	1286	City of Hartford AL	U.S.	30,612	30,612			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SERC	1287	City of Henderson (KY) Municipal Power & Light	U.S.	625,083	625,083			0.061%	0.061%	0.000%	0.000%	0.014%	0.014%	0.000%	0.000%	0.016%
2015	SERC	1288	City of North Little Rock AR (DENL)	U.S.	967,763	967,763			0.094%	0.094%	0.000%	0.000%	0.021%	0.021%	0.000%	0.000%	0.024%
2015	SERC	1289	City of Orangeburg SC Department of Public Utilities	U.S.	848,000	848,000			0.083%	0.083%	0.000%	0.000%	0.019%	0.019%	0.000%	0.000%	0.021%
2015	SERC	1290	City of Robertsdale AL	U.S.	87,800	87,800			0.009%	0.009%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	SERC	1291	City of Ruston LA (DERS)	U.S.	278,681	278,681			0.027%	0.027%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.007%
2015	SERC	1292	Seneca Light & Power	U.S.	163,581	163,581			0.016%	0.016%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.004%
2015	SERC	1115	City of Springfield (CWLP)	U.S.	1,757,187	1,757,187			0.171%	0.171%	0.000%	0.000%	0.039%	0.039%	0.000%	0.000%	0.044%
2015	SERC	1465	City of Thayer, MO	U.S.	19,142	19,142			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	SERC	1293	City of Troy AL	U.S.	427,100	427,100			0.042%	0.042%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.011%
2015	SERC	1294	City of West Memphis AR (West Memphis Utilities)	U.S.	392,276	392,276			0.038%	0.038%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.010%
2015	SERC	1583	Claiborne Electric Cooperative, Inc.	U.S.	668,192	668,192			0.065%	0.065%	0.000%	0.000%	0.015%	0.015%	0.000%	0.000%	0.017%
2015	SERC	1584	Concordia Electric Cooperative, Inc.	U.S.	252,000	252,000			0.025%	0.025%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.006%
2015	SERC	1283	Dalton Utilities	U.S.	1,738,041	1,738,041			0.169%	0.169%	0.000%	0.000%	0.038%	0.038%	0.000%	0.000%	0.044%
2015	SERC	1585	Dixie Electric Membership Corporation	U.S.	2,143,453	2,143,453			0.209%	0.209%	0.000%	0.000%	0.047%	0.047%	0.000%	0.000%	0.054%
2015	SERC	1295	Dominion Virginia Power	U.S.	85,719,240	85,719,240			8.358%	8.358%	0.000%	0.000%	1.899%	1.899%	0.000%	0.000%	2.152%
2015	SERC	1296	Duke Energy Carolinas, LLC	U.S.	84,886,379	84,886,379			8.277%	8.277%	0.000%	0.000%	1.880%	1.880%	0.000%	0.000%	2.131%
2015	SERC	1466	Durant, MS	U.S.	28,646	28,646			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SERC	1478	LG&E and KU Services Company as agent for LG&E Company and KUCompany	U.S.	34,846,212	34,846,212			3.398%	3.398%	0.000%	0.000%	0.772%	0.772%	0.000%	0.000%	0.875%
2015	SERC	1297	East Kentucky Power Cooperative	U.S.	13,285,875	13,285,875			1.295%	1.295%	0.000%	0.000%	0.294%	0.294%	0.000%	0.000%	0.334%
2015	SERC	1298	East Mississippi Electric Power Association	U.S.	438,339	438,339			0.043%	0.043%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.011%
2015	SERC	1669	Electricities of North Carolina Inc	U.S.	11,808,210	11,808,210			1.151%	1.151%	0.000%	0.000%	0.262%	0.262%	0.000%	0.000%	0.296%

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NEL (MWh)	U.S. NEL	Canada NEL	Mexico NEL	% of RE total	US Total	Canada Total	Mexico Total	% of ERO Total	US Total	Canada Total	Mexico Total	% of ERO - US Only
2015	SERC	1300	EnergyUnited EMC	U.S.	2,450,393	2,450,393			0.239%	0.239%	0.000%	0.000%	0.054%	0.054%	0.000%	0.000%	0.062%
2015	SERC	1301	Entergy	U.S.	117,521,118	117,521,118			11.459%	11.459%	0.000%	0.000%	2.603%	2.603%	0.000%	0.000%	2.950%
2015	SERC	1302	Fayetteville (NC) Public Works Commission	U.S.	2,160,024	2,160,024			0.211%	0.211%	0.000%	0.000%	0.048%	0.048%	0.000%	0.000%	0.054%
2015	SERC	1303	Florida Public Utilities (FL Panhandle Load)	U.S.	314,547	314,547			0.031%	0.031%	0.000%	0.000%	0.007%	0.007%	0.000%	0.000%	0.008%
2015	SERC	1304	French Broad EMC	U.S.	516,745	516,745			0.050%	0.050%	0.000%	0.000%	0.011%	0.011%	0.000%	0.000%	0.013%
2015	SERC	1305	Georgia Power Company	U.S.	86,652,550	86,652,550			8.449%	8.449%	0.000%	0.000%	1.919%	1.919%	0.000%	0.000%	2.175%
2015	SERC	1306	Georgia System Optns Corporation	U.S.	39,314,431	39,314,431			3.833%	3.833%	0.000%	0.000%	0.871%	0.871%	0.000%	0.000%	0.987%
2015	SERC	1479	Greenwood (MS) Utilities Commission	U.S.	290,602	290,602			0.028%	0.028%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.007%
2015	SERC	1307	Greenwood (SC) Commissioners of Public Works	U.S.	330,107	330,107			0.032%	0.032%	0.000%	0.000%	0.007%	0.007%	0.000%	0.000%	0.008%
2015	SERC	1308	Gulf Power Company	U.S.	11,652,721	11,652,721			1.136%	1.136%	0.000%	0.000%	0.258%	0.258%	0.000%	0.000%	0.293%
2015	SERC	1586	Haywood EMC	U.S.	308,583	308,583			0.030%	0.030%	0.000%	0.000%	0.007%	0.007%	0.000%	0.000%	0.008%
2015	SERC	1309	Illinois Municipal Electric Agency	U.S.	1,906,100	1,906,100			0.186%	0.186%	0.000%	0.000%	0.042%	0.042%	0.000%	0.000%	0.048%
2015	SERC	1480	Itta Bena, MS	U.S.	21,478	21,478			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.001%
2015	SERC	1587	Jefferson Davis Electric Cooperative, Inc.	U.S.	288,518	288,518			0.028%	0.028%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.007%
2015	SERC	1617	Kentucky Municipal Power	U.S.	678,024	678,024			0.066%	0.066%	0.000%	0.000%	0.015%	0.015%	0.000%	0.000%	0.017%
2015	SERC	1481	Kosciusko, MS	U.S.	75,865	75,865			0.007%	0.007%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	SERC	1482	Leland, MS	U.S.	33,830	33,830			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SERC	1313	McCormick Commission of Public Works	U.S.	20,880	20,880			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.001%
2015	SERC	1314	Mississippi Power Company	U.S.	10,576,801	10,576,801			1.031%	1.031%	0.000%	0.000%	0.234%	0.234%	0.000%	0.000%	0.266%
2015	SERC	1630	Mt. Carmel Public Utility	U.S.	107,817	107,817			0.011%	0.011%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.003%
2015	SERC	1315	Municipal Electric Authority of Georgia	U.S.	10,933,150	10,933,150			1.066%	1.066%	0.000%	0.000%	0.242%	0.242%	0.000%	0.000%	0.274%
2015	SERC	1316	N.C. Electric Membership Corp.	U.S.	12,773,989	12,773,989			1.246%	1.246%	0.000%	0.000%	0.283%	0.283%	0.000%	0.000%	0.321%
2015	SERC	1588	Northeast Louisiana Power Cooperative, Inc.	U.S.	277,117	277,117			0.027%	0.027%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.007%
2015	SERC	1574	Northern Virginia Electric Cooperative	U.S.	4,371,143	4,371,143			0.426%	0.426%	0.000%	0.000%	0.097%	0.097%	0.000%	0.000%	0.110%
2015	SERC	1319	Old Dominion Electric Cooperative	U.S.	6,307,085	6,307,085			0.615%	0.615%	0.000%	0.000%	0.140%	0.140%	0.000%	0.000%	0.158%
2015	SERC	1618	Osceola (Arkansas) Municipal Light and Power	U.S.	161,624	161,624			0.016%	0.016%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.004%
2015	SERC	1320	Owensboro (KY) Municipal Utilities	U.S.	837,000	837,000			0.082%	0.082%	0.000%	0.000%	0.019%	0.019%	0.000%	0.000%	0.021%
2015	SERC	1321	Piedmont EMC in Duke and Progress Areas	U.S.	522,481	522,481			0.051%	0.051%	0.000%	0.000%	0.012%	0.012%	0.000%	0.000%	0.013%
2015	SERC	1323	Piedmont Municipal Power Agency (PMPA)	U.S.	2,340,696	2,340,696			0.228%	0.228%	0.000%	0.000%	0.052%	0.052%	0.000%	0.000%	0.059%
2015	SERC	1589	Pointe Coupee Electric Memb. Corp.	U.S.	249,736	249,736			0.024%	0.024%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.006%
2015	SERC	1266	PowerSouth Energy	U.S.	8,753,976	8,753,976			0.854%	0.854%	0.000%	0.000%	0.194%	0.194%	0.000%	0.000%	0.220%
2015	SERC	1330	Prairie Power, Inc.	U.S.	1,544,028	1,544,028			0.151%	0.151%	0.000%	0.000%	0.034%	0.034%	0.000%	0.000%	0.039%
2015	SERC	1324	Duke Energy Progress	U.S.	46,839,000	46,839,000			4.567%	4.567%	0.000%	0.000%	1.037%	1.037%	0.000%	0.000%	1.176%
2015	SERC	1325	Rutherford EMC	U.S.	1,351,904	1,351,904			0.132%	0.132%	0.000%	0.000%	0.030%	0.030%	0.000%	0.000%	0.034%
2015	SERC	1631	Sam Rayburn G&T Electric Cooperative Inc.	U.S.	1,848,668	1,848,668			0.180%	0.180%	0.000%	0.000%	0.041%	0.041%	0.000%	0.000%	0.046%
2015	SERC	1326	South Carolina Electric & Gas Company	U.S.	23,338,215	23,338,215			2.276%	2.276%	0.000%	0.000%	0.517%	0.517%	0.000%	0.000%	0.586%
2015	SERC	1327	South Carolina Public Service Authority	U.S.	11,476,655	11,476,655			1.119%	1.119%	0.000%	0.000%	0.254%	0.254%	0.000%	0.000%	0.288%
2015	SERC	1590	South Louisiana Electric Cooperative Association	U.S.	637,905	637,905			0.062%	0.062%	0.000%	0.000%	0.014%	0.014%	0.000%	0.000%	0.016%
2015	SERC	1328	South Mississippi Electric Power Association	U.S.	10,086,777	10,086,777			0.984%	0.984%	0.000%	0.000%	0.223%	0.223%	0.000%	0.000%	0.253%
2015	SERC	1329	Southern Illinois Power Cooperative	U.S.	1,661,427	1,661,427			0.162%	0.162%	0.000%	0.000%	0.037%	0.037%	0.000%	0.000%	0.042%
2015	SERC	1591	Southwest Louisiana Electric Membership Corporation	U.S.	2,604,785	2,604,785			0.254%	0.254%	0.000%	0.000%	0.058%	0.058%	0.000%	0.000%	0.065%
2015	SERC	1619	Southwestern Electric Cooperative, Inc.	U.S.	454,992	454,992			0.044%	0.044%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.011%
2015	SERC	1331	Tennessee Valley Authority	U.S.	156,999,004	156,999,004			15.309%	15.309%	0.000%	0.000%	3.478%	3.478%	0.000%	0.000%	3.941%
2015	SERC	1632	Tex-La Electric Cooperative of Texas, Inc	U.S.	195,510	195,510			0.019%	0.019%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.005%
2015	SERC	1332	Tombigbee Electric Cooperative Inc.	U.S.	130,521	130,521			0.013%	0.013%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.003%
2015	SERC	1594	Town of Sharpsburg, N.C.	U.S.	20,308	20,308			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.001%
2015	SERC	1595	Town of Stantonburg, N.C. JRO	U.S.	57,100	57,100			0.006%	0.006%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SERC	1333	Town of Waynesville NC	U.S.	87,620	87,620			0.009%	0.009%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	SERC	1334	Town of Winnsboro SC	U.S.	63,242	63,242			0.006%	0.006%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.002%
2015	SERC	1335	Town of Winterville NC	U.S.	53,725	53,725			0.005%	0.005%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SERC	1597	Washington-St.Tammany Electric Cooperative, Inc.	U.S.	1,081,839	1,081,839			0.105%	0.105%	0.000%	0.000%	0.024%	0.024%	0.000%	0.000%	0.027%
TOTAL SERC					1,025,559,971	1,025,559,971	-	-	100.000%	100.000%	0.000%	0.000%	22.716%	22.716%	0.000%	0.000%	25.744%
2015	SPP	1246	American Electric Power	U.S.	38,176,495	38,176,495			16.918%	16.918%	0.000%	0.000%	0.846%	0.846%	0.000%	0.000%	0.958%
2015	SPP	1707	AEP-VEMCO	U.S.	689,383	689,383			0.306%	0.306%	0.000%	0.000%	0.015%	0.015%	0.000%	0.000%	0.017%
2015	SPP	1435	Arkansas Electric Cooperative Corporation	U.S.	13,595,565	13,595,565			6.025%	6.025%	0.000%	0.000%	0.301%	0.301%	0.000%	0.000%	0.341%
2015	SPP	1247	Board of Public Utilities (Kansas City KS)	U.S.	2,408,242	2,408,242			1.067%	1.067%	0.000%	0.000%	0.053%	0.053%	0.000%	0.000%	0.060%
2015	SPP	1620	Board of Public Utilities, City of McPherson, Kansas	U.S.	896,847	896,847			0.397%	0.397%	0.000%	0.000%	0.020%	0.020%	0.000%	0.000%	0.023%
2015	SPP	1647	Carthage City Water & Light	U.S.	300,384	300,384			0.133%	0.133%	0.000%	0.000%	0.007%	0.007%	0.000%	0.000%	0.008%
2015	SPP	1469	Central Valley Electric Cooperative	U.S.	852,178	852,178			0.378%	0.378%	0.000%	0.000%	0.019%	0.019%	0.000%	0.000%	0.021%
2015	SPP	1556	City of Bentonville	U.S.	667,459	667,459			0.296%	0.296%	0.000%	0.000%	0.015%	0.015%	0.000%	0.000%	0.017%
2015	SPP	1557	City of Clarksdale, Mississippi	U.S.	166,285	166,285			0.074%	0.074%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.004%
2015	SPP	1558	Hope Water & Light (HWL)	U.S.	283,247	283,247			0.126%	0.126%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.007%
2015	SPP	1708	City of Abbeville	U.S.	148,707	148,707			0.066%	0.066%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NEL (MWh)	U.S. NEL	Canada NEL	Mexico NEL	% of RE total	US Total	Canada Total	Mexico Total	% of ERO Total	US Total	Canada Total	Mexico Total	% of ERO - US Only
2015	SPP	1559	City of Minden	U.S.	155,401	155,401			0.069%	0.069%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
2015	SPP	1709	City of Nixa	U.S.	163,463	163,463			0.072%	0.072%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.004%
2015	SPP	1703	City of Chanute	U.S.	506,605	506,605			0.225%	0.225%	0.000%	0.000%	0.011%	0.011%	0.000%	0.000%	0.013%
2015	SPP	1636	City of Prescott	U.S.	87,464	87,464			0.039%	0.039%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	SPP	1248	Independence Power & Light (Independence, MO)	U.S.	1,029,253	1,029,253			0.456%	0.456%	0.000%	0.000%	0.023%	0.023%	0.000%	0.000%	0.026%
2015	SPP	1436	City Utilities of Springfield, MO	U.S.	3,144,526	3,144,526			1.393%	1.393%	0.000%	0.000%	0.070%	0.070%	0.000%	0.000%	0.079%
2015	SPP	1249	Cleco Power LLC	U.S.	12,568,416	12,568,416			5.570%	5.570%	0.000%	0.000%	0.278%	0.278%	0.000%	0.000%	0.315%
2015	SPP	1437	East Texas Electric Coop, Inc.	U.S.	423,395	423,395			0.188%	0.188%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.011%
2015	SPP	1250	The Empire District Electric Company	U.S.	5,281,594	5,281,594			2.341%	2.341%	0.000%	0.000%	0.117%	0.117%	0.000%	0.000%	0.133%
2015	SPP	1470	Farmers' Electric Coop	U.S.	302,273	302,273			0.134%	0.134%	0.000%	0.000%	0.007%	0.007%	0.000%	0.000%	0.008%
2015	SPP	1438	Golden Spread Electric Coop	U.S.	5,020,796	5,020,796			2.225%	2.225%	0.000%	0.000%	0.111%	0.111%	0.000%	0.000%	0.126%
2015	SPP	1251	Grand River Dam Authority	U.S.	5,292,355	5,292,355			2.345%	2.345%	0.000%	0.000%	0.117%	0.117%	0.000%	0.000%	0.133%
2015	SPP	1648	Jonesboro City Water & Light	U.S.	1,371,611	1,371,611			0.608%	0.608%	0.000%	0.000%	0.030%	0.030%	0.000%	0.000%	0.034%
2015	SPP	1252	Kansas City Power & Light (KCPL)	U.S.	15,571,143	15,571,143			6.900%	6.900%	0.000%	0.000%	0.345%	0.345%	0.000%	0.000%	0.391%
2015	SPP	1439	Kansas Electric Power Coop., Inc	U.S.	2,280,076	2,280,076			1.010%	1.010%	0.000%	0.000%	0.051%	0.051%	0.000%	0.000%	0.057%
2015	SPP	1440	Kansas Municipal Energy Agency (KCPL)	U.S.	1,483,953	1,483,953			0.658%	0.658%	0.000%	0.000%	0.033%	0.033%	0.000%	0.000%	0.037%
2015	SPP	1637	Kansas Power Pool	U.S.	887,082	887,082			0.393%	0.393%	0.000%	0.000%	0.020%	0.020%	0.000%	0.000%	0.022%
2015	SPP	1649	Kennett Board of Public Works	U.S.	150,525	150,525			0.067%	0.067%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
2015	SPP	1598	KCP&L GMOC (Greater Missouri Operations Company)	U.S.	8,543,064	8,543,064			3.786%	3.786%	0.000%	0.000%	0.189%	0.189%	0.000%	0.000%	0.214%
2015	SPP	1471	Lafayette Utilities System	U.S.	2,114,757	2,114,757			0.937%	0.937%	0.000%	0.000%	0.047%	0.047%	0.000%	0.000%	0.053%
2015	SPP	1472	Lea County Electric Coop	U.S.	1,187,534	1,187,534			0.526%	0.526%	0.000%	0.000%	0.026%	0.026%	0.000%	0.000%	0.030%
2015	SPP	1253	Louisiana Energy & Power Authority (LEPA)	U.S.	1,032,428	1,032,428			0.458%	0.458%	0.000%	0.000%	0.023%	0.023%	0.000%	0.000%	0.026%
2015	SPP	1650	Malden Board of Public Works	U.S.	50,642	50,642			0.022%	0.022%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SPP	1441	Midwest Energy Inc.	U.S.	1,779,779	1,779,779			0.789%	0.789%	0.000%	0.000%	0.039%	0.039%	0.000%	0.000%	0.045%
2015	SPP	1443	Missouri Joint Municipal Electric Utility Commission	U.S.	2,589,229	2,589,229			1.147%	1.147%	0.000%	0.000%	0.057%	0.057%	0.000%	0.000%	0.065%
2015	SPP	1442	Northeast Texas Electric Cooperative, Inc.	U.S.	3,279,484	3,279,484			1.453%	1.453%	0.000%	0.000%	0.073%	0.073%	0.000%	0.000%	0.082%
2015	SPP	1255	Oklahoma Gas and Electric Co.	U.S.	27,924,323	27,924,323			12.375%	12.375%	0.000%	0.000%	0.619%	0.619%	0.000%	0.000%	0.701%
2015	SPP	1444	Oklahoma Municipal Power Auth	U.S.	2,879,090	2,879,090			1.276%	1.276%	0.000%	0.000%	0.064%	0.064%	0.000%	0.000%	0.072%
2015	SPP	1639	OzMo Ozark Missouri, West Plains MO	U.S.	203,407	203,407			0.090%	0.090%	0.000%	0.000%	0.005%	0.005%	0.000%	0.000%	0.005%
2015	SPP	1651	Paragould Light, Water & Cable	U.S.	607,485	607,485			0.269%	0.269%	0.000%	0.000%	0.013%	0.013%	0.000%	0.000%	0.015%
2015	SPP	1652	Piggott Municipal Light, Water & Sewer	U.S.	39,929	39,929			0.018%	0.018%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	SPP	1653	Poplar Bluff Municipal Utilities	U.S.	388,972	388,972			0.172%	0.172%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.010%
2015	SPP	1561	Public Service Commission of Yazoo City of Mississippi	U.S.	117,848	117,848			0.052%	0.052%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.003%
2015	SPP	1473	Roosevelt County Electric Coop	U.S.	170,414	170,414			0.076%	0.076%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.004%
2015	SPP	1654	Sikeston Board of Municipal Utilities	U.S.	521,786	521,786			0.231%	0.231%	0.000%	0.000%	0.012%	0.012%	0.000%	0.000%	0.013%
2015	SPP	1257	Southwestern Public Service Co. (SPS-XCEL)	U.S.	20,985,181	20,985,181			9.300%	9.300%	0.000%	0.000%	0.465%	0.465%	0.000%	0.000%	0.527%
2015	SPP	1256	Sunflower Electric Power Cooperative	U.S.	4,440,912	4,440,912			1.968%	1.968%	0.000%	0.000%	0.098%	0.098%	0.000%	0.000%	0.111%
2015	SPP	1445	Tex - La Electric Cooperative of Texas	U.S.	502,724	502,724			0.223%	0.223%	0.000%	0.000%	0.011%	0.011%	0.000%	0.000%	0.013%
2015	SPP	1475	Tri County Electric Coop	U.S.	382,283	382,283			0.169%	0.169%	0.000%	0.000%	0.008%	0.008%	0.000%	0.000%	0.010%
2015	SPP	1260	Westar Energy, Inc.	U.S.	19,889,025	19,889,025			8.814%	8.814%	0.000%	0.000%	0.441%	0.441%	0.000%	0.000%	0.499%
2015	SPP	1259	Western Farmers Electric Cooperative	U.S.	9,309,274	9,309,274			4.125%	4.125%	0.000%	0.000%	0.206%	0.206%	0.000%	0.000%	0.234%
2015	SPP	1501	West Texas Municipal Power Agency	U.S.	2,812,746	2,812,746			1.246%	1.246%	0.000%	0.000%	0.062%	0.062%	0.000%	0.000%	0.071%
TOTAL SPP					225,657,039	225,657,039	-	-	100.000%	100.000%	0.000%	0.000%	4.998%	4.998%	0.000%	0.000%	5.665%
2015	TRE	1019	ERCOT	U.S.	348,274,793	348,274,793			100.000%	100.000%	0.000%	0.000%	7.714%	7.714%	0.000%	0.000%	8.743%
TOTAL ERCOT					348,274,793	348,274,793	-	-	100.000%	100.000%	0.000%	0.000%	7.714%	7.714%	0.000%	0.000%	8.743%
2015	WECC		Alberta Electric System Operator	Canada	62,602,603		62,602,603		7.197%	0.000%	7.197%	0.000%	1.387%	0.000%	1.387%	0.000%	0.000%
2015	WECC		British Columbia Hydro & Power Authority	Canada	61,606,030		61,606,030		7.082%	0.000%	7.082%	0.000%	1.365%	0.000%	1.365%	0.000%	0.000%
2015	WECC		Comision Federal de Electricidad	Mexico	12,718,116			12,718,116		1.462%	0.000%	0.000%	1.462%	0.000%	0.000%	0.282%	0.000%
2015	WECC		Ajo Improvement District	U.S.	12,063	12,063			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Arizona Public Service Company	U.S.	29,731,722	29,731,722			3.418%	3.418%	0.000%	0.000%	0.659%	0.659%	0.000%	0.000%	0.746%
2015	WECC		City of Williams	U.S.	44,299	44,299			0.005%	0.005%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Electrical Districts 3	U.S.	720,882	720,882			0.083%	0.083%	0.000%	0.000%	0.016%	0.016%	0.000%	0.000%	0.018%
2015	WECC		Majority Districts	U.S.	751,892	751,892			0.086%	0.086%	0.000%	0.000%	0.017%	0.017%	0.000%	0.000%	0.019%
2015	WECC		Navajo Tribal Utility Authority	U.S.	19,588	19,588			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Tohono O'Odham Utility Authority	U.S.	64,126	64,126			0.007%	0.007%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.002%
2015	WECC		Town of Wickenburg	U.S.	27,101	27,101			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Avista Corporation	U.S.	9,449,884	9,449,884			1.086%	1.086%	0.000%	0.000%	0.209%	0.209%	0.000%	0.000%	0.237%
2015	WECC		Big Bend Electric Cooperative, Inc.	U.S.	154,251	154,251			0.018%	0.018%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
2015	WECC		City of Cheney	U.S.	147,137	147,137			0.017%	0.017%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
2015	WECC		City of Chewelah	U.S.	22,700	22,700			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		City of Plummer	U.S.	33,549	33,549			0.004%	0.004%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Clearwater Cooperative, Inc	U.S.	161,604	161,604			0.019%	0.019%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.004%

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NEL (MWh)	U.S. NEL	Canada NEL	Mexico NEL	% of RE total	US Total	Canada Total	Mexico Total	% of ERO Total	US Total	Canada Total	Mexico Total	% of ERO - US Only
2015	WECC		Consolidated Irrigation District No. 19	U.S.	7,973	7,973			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Idaho County Light and Power Cooperative Association, Inc.	U.S.	57,059	57,059			0.007%	0.007%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Inland Power and Light Company	U.S.	470,062	470,062			0.054%	0.054%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.012%
2015	WECC		Kaiser Aluminum Fabricated Products LLC	U.S.	313,968	313,968			0.036%	0.036%	0.000%	0.000%	0.007%	0.007%	0.000%	0.000%	0.008%
2015	WECC		Kootenai Electric Cooperative, Inc.	U.S.	472,735	472,735			0.054%	0.054%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.012%
2015	WECC		Modern Electric Water Company	U.S.	234,604	234,604			0.027%	0.027%	0.000%	0.000%	0.005%	0.005%	0.000%	0.000%	0.006%
2015	WECC		Northern Lights, Inc.	U.S.	34,482	34,482			0.004%	0.004%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Pend Oreille County PUD No. 1	U.S.	841,426	841,426			0.097%	0.097%	0.000%	0.000%	0.019%	0.019%	0.000%	0.000%	0.021%
2015	WECC		PUD No. 1 of Asotin County	U.S.	5,534	5,534			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		PUD No. 2 of Grant County	U.S.	97,383	97,383			0.011%	0.011%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	WECC		U.S. BOR East Greenacres (Rathdrum)	U.S.	4,230	4,230			0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		U.S. Bor Spokane Indian Development	U.S.	3,657	3,657			0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		US Air Force Base, Fairchild	U.S.	48,577	48,577			0.006%	0.006%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		City of Redding	U.S.	786,766	786,766			0.090%	0.090%	0.000%	0.000%	0.017%	0.017%	0.000%	0.000%	0.020%
2015	WECC		City of Roseville	U.S.	1,234,303	1,234,303			0.142%	0.142%	0.000%	0.000%	0.027%	0.027%	0.000%	0.000%	0.031%
2015	WECC		Modesto Irrigation District	U.S.	2,617,520	2,617,520			0.301%	0.301%	0.000%	0.000%	0.058%	0.058%	0.000%	0.000%	0.066%
2015	WECC		Sacramento Municipal Utility District	U.S.	11,251,827	11,251,827			1.293%	1.293%	0.000%	0.000%	0.249%	0.249%	0.000%	0.000%	0.282%
2015	WECC		Western Area Power Administration - Sierra Nevada Region	U.S.	1,285,072	1,285,072			0.148%	0.148%	0.000%	0.000%	0.028%	0.028%	0.000%	0.000%	0.032%
2015	WECC		Bonneville Power Administration	U.S.	53,617,806	53,617,806			6.164%	6.164%	0.000%	0.000%	1.188%	1.188%	0.000%	0.000%	1.346%
2015	WECC		California Independent System Operator	U.S.	230,192,838	230,192,838			26.462%	26.462%	0.000%	0.000%	5.099%	5.099%	0.000%	0.000%	5.778%
2015	WECC		El Paso Electric Company	U.S.	8,441,421	8,441,421			0.970%	0.970%	0.000%	0.000%	0.187%	0.187%	0.000%	0.000%	0.212%
2015	WECC		Bonneville Power Administration	U.S.	1,818,105	1,818,105			0.209%	0.209%	0.000%	0.000%	0.040%	0.040%	0.000%	0.000%	0.046%
2015	WECC		Idaho Power Company	U.S.	15,290,274	15,290,274			1.758%	1.758%	0.000%	0.000%	0.339%	0.339%	0.000%	0.000%	0.384%
2015	WECC		PacifiCorp	U.S.	2,067	2,067			0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Imperial Irrigation District	U.S.	3,680,401	3,680,401			0.423%	0.423%	0.000%	0.000%	0.082%	0.082%	0.000%	0.000%	0.092%
2015	WECC		Los Angeles Department of Water and Power	U.S.	28,918,634	28,918,634			3.324%	3.324%	0.000%	0.000%	0.641%	0.641%	0.000%	0.000%	0.726%
2015	WECC		City of Henderson	U.S.	42,361	42,361			0.005%	0.005%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		City of Las Vegas	U.S.	43,915	43,915			0.005%	0.005%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		City of North Las Vegas	U.S.	21,102	21,102			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.001%
2015	WECC		Clark County Water Resources	U.S.	83,301	83,301			0.010%	0.010%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	WECC		Colorado River Commission of Nevada	U.S.	900,510	900,510			0.104%	0.104%	0.000%	0.000%	0.020%	0.020%	0.000%	0.000%	0.023%
2015	WECC		Las Vegas Valley Water District	U.S.	99,726	99,726			0.011%	0.011%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.003%
2015	WECC		Nevada Power Company dba NV Energy	U.S.	22,559,080	22,559,080			2.593%	2.593%	0.000%	0.000%	0.500%	0.500%	0.000%	0.000%	0.566%
2015	WECC		Overton Power District No. 5	U.S.	391,711	391,711			0.045%	0.045%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.010%
2015	WECC		Southern Nevada Water Authority	U.S.	116,793	116,793			0.013%	0.013%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.003%
2015	WECC		Bonneville Power Administration	U.S.	772,127	772,127			0.089%	0.089%	0.000%	0.000%	0.017%	0.017%	0.000%	0.000%	0.019%
2015	WECC		Basin Electric Power Cooperative	U.S.	412,482	412,482			0.047%	0.047%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.010%
2015	WECC		NorthWestern Corp. dba NorthWestern Energy, LLC	U.S.	9,245,849	9,245,849			1.063%	1.063%	0.000%	0.000%	0.205%	0.205%	0.000%	0.000%	0.232%
2015	WECC		Southern Montana Electric Generation & Transmission	U.S.	375,138	375,138			0.043%	0.043%	0.000%	0.000%	0.008%	0.008%	0.000%	0.000%	0.009%
2015	WECC		Western Area Power Administration-Upper Great Plains Region	U.S.	7,375	7,375			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		PacifiCorp	U.S.	49,350,772	49,350,772			5.673%	5.673%	0.000%	0.000%	1.093%	1.093%	0.000%	0.000%	1.239%
2015	WECC		PacifiCorp West (PACW)	U.S.	20,998,572	20,998,572			2.414%	2.414%	0.000%	0.000%	0.465%	0.465%	0.000%	0.000%	0.527%
2015	WECC		Bonneville Power Administration	U.S.	9,174	9,174			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Canby Public Utility Board	U.S.	155,362	155,362			0.018%	0.018%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
2015	WECC		Columbia River PUD	U.S.	282,432	282,432			0.032%	0.032%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.007%
2015	WECC		Constellation New Energy	U.S.	75,482	75,482			0.009%	0.009%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	WECC		Noble Americas Energy Solutions, LLC	U.S.	1,653,107	1,653,107			0.190%	0.190%	0.000%	0.000%	0.037%	0.037%	0.000%	0.000%	0.041%
2015	WECC		PacifiCorp	U.S.	4,285	4,285			0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Portland General Electric Company	U.S.	18,515,783	18,515,783			2.129%	2.129%	0.000%	0.000%	0.410%	0.410%	0.000%	0.000%	0.465%
2015	WECC		Shell Energy North America	U.S.	21,566	21,566			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.001%
2015	WECC		West Oregon Electric Cooperative, Inc.	U.S.	12,259	12,259			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Arkansas River Power Authority (ARPA)	U.S.	269,310	269,310			0.031%	0.031%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.007%
2015	WECC		Black Hills Colorado Electric	U.S.	2,049,133	2,049,133			0.236%	0.236%	0.000%	0.000%	0.045%	0.045%	0.000%	0.000%	0.051%
2015	WECC		Burlington	U.S.	51,225	51,225			0.006%	0.006%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Colorado Springs Utilities	U.S.	29,065	29,065			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Grand Valley Power	U.S.	240,486	240,486			0.028%	0.028%	0.000%	0.000%	0.005%	0.005%	0.000%	0.000%	0.006%
2015	WECC		Holy Cross Energy	U.S.	1,143,172	1,143,172			0.131%	0.131%	0.000%	0.000%	0.025%	0.025%	0.000%	0.000%	0.029%
2015	WECC		Intermountain Rural Electric Association	U.S.	2,209,948	2,209,948			0.254%	0.254%	0.000%	0.000%	0.049%	0.049%	0.000%	0.000%	0.055%
2015	WECC		Municipal Energy Agency of Nebraska	U.S.	173,303	173,303			0.020%	0.020%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.004%
2015	WECC		Platte River Power Authority	U.S.	3,248,517	3,248,517			0.373%	0.373%	0.000%	0.000%	0.072%	0.072%	0.000%	0.000%	0.082%
2015	WECC		Public Service Company of Colorado (Xcel)	U.S.	34,906,129	34,906,129			4.013%	4.013%	0.000%	0.000%	0.773%	0.773%	0.000%	0.000%	0.876%
2015	WECC		Raton Public Service	U.S.	51,257	51,257			0.006%	0.006%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Town of Center	U.S.	14,530	14,530			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Tri-State Generation & Transmission Assoc. Inc - Reliability	U.S.	2,531,800	2,531,800			0.291%	0.291%	0.000%	0.000%	0.056%	0.056%	0.000%	0.000%	0.064%

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NEL (MWh)	U.S. NEL	Canada NEL	Mexico NEL	% of RE total	US Total	Canada Total	Mexico Total	% of ERO Total	US Total	Canada Total	Mexico Total	% of ERO - US Only
2015	WECC		Western Area Power - Loveland, CO	U.S.	33,067	33,067			0.004%	0.004%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Yampa Valley Electric Association	U.S.	538,244	538,244			0.062%	0.062%	0.000%	0.000%	0.012%	0.012%	0.000%	0.000%	0.014%
2015	WECC		City of Aztec Electric Dept	U.S.	47,102	47,102			0.005%	0.005%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		City of Gallup	U.S.	225,928	225,928			0.026%	0.026%	0.000%	0.000%	0.005%	0.005%	0.000%	0.000%	0.006%
2015	WECC		Jicarilla Apache Nation Power Authority	U.S.	22,308	22,308			0.003%	0.003%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.001%
2015	WECC		Navajo Tribal Utility Authority	U.S.	226,495	226,495			0.026%	0.026%	0.000%	0.000%	0.005%	0.005%	0.000%	0.000%	0.006%
2015	WECC		Navopache Electric Cooperative, Inc.	U.S.	433,798	433,798			0.050%	0.050%	0.000%	0.000%	0.010%	0.010%	0.000%	0.000%	0.011%
2015	WECC		Public Service Company of New Mexico	U.S.	9,503,245	9,503,245			1.092%	1.092%	0.000%	0.000%	0.210%	0.210%	0.000%	0.000%	0.239%
2015	WECC		The Incorporated County of Los Alamos	U.S.	565,815	565,815			0.065%	0.065%	0.000%	0.000%	0.013%	0.013%	0.000%	0.000%	0.014%
2015	WECC		Tri-State Generation & Transmission Association, Inc.	U.S.	3,150,544	3,150,544			0.362%	0.362%	0.000%	0.000%	0.070%	0.070%	0.000%	0.000%	0.079%
2015	WECC		US Dept of Energy - Kirtland AFB	U.S.	427,896	427,896			0.049%	0.049%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.011%
2015	WECC		Public Utility District No. 1 of Chelan County	U.S.	3,820,693	3,820,693			0.439%	0.439%	0.000%	0.000%	0.085%	0.085%	0.000%	0.000%	0.096%
2015	WECC		PUD No. 1 of Douglas County	U.S.	785,738	785,738			0.090%	0.090%	0.000%	0.000%	0.017%	0.017%	0.000%	0.000%	0.020%
2015	WECC		Okanogan PUD	U.S.	651,461	651,461			0.075%	0.075%	0.000%	0.000%	0.014%	0.014%	0.000%	0.000%	0.016%
2015	WECC		BPA - Douglas Pumping	U.S.	28,406	28,406			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		BPA - Okanogan Pumping	U.S.	38,358	38,358			0.004%	0.004%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		BPA - Okanogan REA	U.S.	59,850	59,850			0.007%	0.007%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.002%
2015	WECC		BPA - USBR Load	U.S.	144,769	144,769			0.017%	0.017%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
2015	WECC		BPA - Big Bend/Schrag Load	U.S.	44,894	44,894			0.005%	0.005%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		BPA - Kittitas Load	U.S.	7,727	7,727			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Douglas Palisades / PUD No. 1 of DC	U.S.	19,482	19,482			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		PUD No. 2 of Grant County	U.S.	4,551,895	4,551,895			0.523%	0.523%	0.000%	0.000%	0.101%	0.101%	0.000%	0.000%	0.114%
2015	WECC		City of Blaine	U.S.	77,376	77,376			0.009%	0.009%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	WECC		City of Sumas	U.S.	29,263	29,263			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Port of Seattle - Seattle-Tacoma International Airport	U.S.	143,447	143,447			0.016%	0.016%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
2015	WECC		PUD No. 1 of Kittitas County	U.S.	16,126	16,126			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		PUD No. 1 of Whatcom County	U.S.	6,553	6,553			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Puget Sound Energy, Inc.	U.S.	23,613,782	23,613,782			2.715%	2.715%	0.000%	0.000%	0.523%	0.523%	0.000%	0.000%	0.593%
2015	WECC		Tanner Electric Cooperative	U.S.	95,464	95,464			0.011%	0.011%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	WECC		Salt River Project	U.S.	29,296,597	29,296,597			3.368%	3.368%	0.000%	0.000%	0.649%	0.649%	0.000%	0.000%	0.735%
2015	WECC		Seattle City Light	U.S.	9,678,214	9,678,214			1.113%	1.113%	0.000%	0.000%	0.214%	0.214%	0.000%	0.000%	0.243%
2015	WECC		Barrick Goldstrike Mines Inc.	U.S.	1,603,960	1,603,960			0.184%	0.184%	0.000%	0.000%	0.036%	0.036%	0.000%	0.000%	0.040%
2015	WECC		City of Fallon	U.S.	90,189	90,189			0.010%	0.010%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	WECC		Harney Electric Cooperative, Inc.	U.S.	314,300	314,300			0.036%	0.036%	0.000%	0.000%	0.007%	0.007%	0.000%	0.000%	0.008%
2015	WECC		Mt. Wheeler Power	U.S.	544,355	544,355			0.063%	0.063%	0.000%	0.000%	0.012%	0.012%	0.000%	0.000%	0.014%
2015	WECC		Sierra Pacific Power Company dba NV Energy	U.S.	8,537,681	8,537,681			0.981%	0.981%	0.000%	0.000%	0.189%	0.189%	0.000%	0.000%	0.214%
2015	WECC		Truckee Donner Public Utility District	U.S.	153,799	153,799			0.018%	0.018%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.004%
2015	WECC		Wells Rural Electric Cooperative	U.S.	1,008,756	1,008,756			0.116%	0.116%	0.000%	0.000%	0.022%	0.022%	0.000%	0.000%	0.025%
2015	WECC		City of Tacoma DBA Tacoma Power	U.S.	4,816,947	4,816,947			0.554%	0.554%	0.000%	0.000%	0.107%	0.107%	0.000%	0.000%	0.121%
2015	WECC		Tucson Electric Power Company	U.S.	14,903,151	14,903,151			1.713%	1.713%	0.000%	0.000%	0.330%	0.330%	0.000%	0.000%	0.374%
2015	WECC		Merced Irrigation District	U.S.	474,655	474,655			0.055%	0.055%	0.000%	0.000%	0.011%	0.011%	0.000%	0.000%	0.012%
2015	WECC		Turlock Irrigation District	U.S.	2,146,653	2,146,653			0.247%	0.247%	0.000%	0.000%	0.048%	0.048%	0.000%	0.000%	0.054%
2015	WECC		Basin Electric Power Cooperative	U.S.	2,703,823	2,703,823			0.311%	0.311%	0.000%	0.000%	0.060%	0.060%	0.000%	0.000%	0.068%
2015	WECC		Black Hills Power/Cheyenne Light Fuel & Power	U.S.	3,591,646	3,591,646			0.413%	0.413%	0.000%	0.000%	0.080%	0.080%	0.000%	0.000%	0.090%
2015	WECC		Black Hills State University South Dakota	U.S.	19,404	19,404			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		City of Page	U.S.	91,751	91,751			0.011%	0.011%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	WECC		Colorado Springs Utilities	U.S.	4,567,329	4,567,329			0.525%	0.525%	0.000%	0.000%	0.101%	0.101%	0.000%	0.000%	0.115%
2015	WECC		Deseret Generation & Transmission Cooperative	U.S.	115,501	115,501			0.013%	0.013%	0.000%	0.000%	0.003%	0.003%	0.000%	0.000%	0.003%
2015	WECC		City of Farmington	U.S.	1,073,801	1,073,801			0.123%	0.123%	0.000%	0.000%	0.024%	0.024%	0.000%	0.000%	0.027%
2015	WECC		Municipal Energy Agency of Nebraska	U.S.	631,633	631,633			0.073%	0.073%	0.000%	0.000%	0.014%	0.014%	0.000%	0.000%	0.016%
2015	WECC		Navajo Agricultural Products Industry (NAPI)	U.S.	2,780	2,780			0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Nebraska Public Power Marketing	U.S.	2,555	2,555			0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		PacificCorp	U.S.	112,018	112,018			0.013%	0.013%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.003%
2015	WECC		Public Service Company of Colorado (Xcel)	U.S.	74,613	74,613			0.009%	0.009%	0.000%	0.000%	0.002%	0.002%	0.000%	0.000%	0.002%
2015	WECC		Town of Fredonia	U.S.	10,316	10,316			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Tri-State Generation & Transmission Assoc. Inc - Reliability	U.S.	7,528,909	7,528,909			0.866%	0.866%	0.000%	0.000%	0.167%	0.167%	0.000%	0.000%	0.189%
2015	WECC		Western Area Power - Loveland, CO	U.S.	2,334,103	2,334,103			0.268%	0.268%	0.000%	0.000%	0.052%	0.052%	0.000%	0.000%	0.059%
2015	WECC		Western Area Power Administration - CRSP	U.S.	2,138,830	2,138,830			0.246%	0.246%	0.000%	0.000%	0.047%	0.047%	0.000%	0.000%	0.054%
2015	WECC		Wyoming Municipal Power Agency	U.S.	263,258	263,258			0.030%	0.030%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.007%
2015	WECC		Basin Electric Power Cooperative	U.S.	60,777	60,777			0.007%	0.007%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.002%
2015	WECC		Southern Montana Electric Generation & Transmission	U.S.	12,752	12,752			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Central Montana Electric Power Cooperative	U.S.	61,857	61,857			0.007%	0.007%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.002%
2015	WECC		Montana-Dakota Utilities Co.	U.S.	23,696	23,696			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		NorthWestern Corp. dba NorthWestern Energy, LLC	U.S.	235,611	235,611			0.027%	0.027%	0.000%	0.000%	0.005%	0.005%	0.000%	0.000%	0.006%

Data Year	Regional Entity	ID	Entity	Country	Total NEL (MWh)	U.S. NEL	Canada NEL	Mexico NEL	% of RE total	US Total	Canada Total	Mexico Total	% of ERO Total	US Total	Canada Total	Mexico Total	% of ERO - US Only
2015	WECC		Western Area Power Administration-Upper Great Plains Region	U.S.	414,372	414,372			0.048%	0.048%	0.000%	0.000%	0.009%	0.009%	0.000%	0.000%	0.010%
2015	WECC		Aha Macav Power Service	U.S.	16,001	16,001			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Bureau of Reclamation (Wellfield) - c/o DSW EMMO	U.S.	10,177	10,177			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Central Arizona Water Conservation District	U.S.	2,425,062	2,425,062			0.279%	0.279%	0.000%	0.000%	0.054%	0.054%	0.000%	0.000%	0.061%
2015	WECC		City of Mesa	U.S.	258,752	258,752			0.030%	0.030%	0.000%	0.000%	0.006%	0.006%	0.000%	0.000%	0.006%
2015	WECC		City of Needles	U.S.	29,703	29,703			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Colorado River Agency-Bureau of Indian Affairs	U.S.	23,717	23,717			0.003%	0.003%	0.000%	0.000%	0.001%	0.001%	0.000%	0.000%	0.001%
2015	WECC		Electrical District #2	U.S.	194,332	194,332			0.022%	0.022%	0.000%	0.000%	0.004%	0.004%	0.000%	0.000%	0.005%
2015	WECC		Electrical District #2 - Coolidge Generating Station	U.S.	9,172	9,172			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Silver State Energy - c/o Colorado River Commission of Nevada	U.S.	646,184	646,184			0.074%	0.074%	0.000%	0.000%	0.014%	0.014%	0.000%	0.000%	0.016%
2015	WECC		Arizona Electric Power Cooperative, Inc	U.S.	2,631,889	2,631,889			0.303%	0.303%	0.000%	0.000%	0.058%	0.058%	0.000%	0.000%	0.066%
2015	WECC		U.S. Army Yuma Proving Ground	U.S.	19,841	19,841			0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Wellton-Mohawk Irrigation & Drainage District	U.S.	7,231	7,231			0.001%	0.001%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2015	WECC		Western Area Power Administration-Desert Southwest Region	U.S.	1,596,692	1,596,692			0.184%	0.184%	0.000%	0.000%	0.035%	0.035%	0.000%	0.000%	0.040%
TOTAL WECC					869,883,481	732,956,732	124,208,633	12,718,116	100.000%	84.259%	14.279%	1.462%	19.268%	16.235%	2.751%	0.282%	18.399%
TOTAL ERO					4,514,633,135	3,983,687,261	518,227,758	12,718,116	800.000%	713.002%	85.536%	1.462%	100.000%	88.239%	11.479%	0.282%	100.000%

Summary by Regional Entity					Total NEL (MWh)	U.S. NEL	Canada NEL	Mexico NEL									
2015	FRCC				234,606,069	234,606,069	-	-	100.000%	100.000%	0.000%	0.000%	5.197%	5.197%	0.000%	0.000%	5.889%
2015	MRO				283,136,065	235,938,940	47,197,125	-	100.000%	83.331%	16.669%	0.000%	6.272%	5.226%	1.045%	0.000%	5.923%
2015	NPCC				635,349,000	288,527,000	346,822,000	-	100.000%	45.412%	54.588%	0.000%	14.073%	6.391%	7.682%	0.000%	7.243%
2015	RF				892,166,717	892,166,717	-	-	100.000%	100.000%	0.000%	0.000%	19.762%	19.762%	0.000%	0.000%	22.396%
2015	SERC				1,025,559,971	1,025,559,971	-	-	100.000%	100.000%	0.000%	0.000%	22.716%	22.716%	0.000%	0.000%	25.744%
2015	SPP				225,657,039	225,657,039	-	-	100.000%	100.000%	0.000%	0.000%	4.998%	4.998%	0.000%	0.000%	5.665%
2015	TRE				348,274,793	348,274,793	-	-	100.000%	100.000%	0.000%	0.000%	7.714%	7.714%	0.000%	0.000%	8.743%
2015	WECC				869,883,481	732,956,732	124,208,633	12,718,116	100.000%	84.259%	14.279%	1.462%	19.268%	16.235%	2.751%	0.282%	18.399%
Total					4,514,633,135	3,983,687,261	518,227,758	12,718,116	800.000%	713.002%	85.536%	1.462%	100.000%	88.239%	11.479%	0.282%	100.000%

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total ERO Assessments (NERC, RE & WIRAB Costs)				Total NERC Assessments				Total Regional Entity Assessments (Including WIRAB Assessments)			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total
2015	FRCC	1074	Alachua, City of	U.S.	5,162	5,162	-	-	1,764	1,764	-	-	3,398	3,398	-	-
2015	FRCC	1075	Bartow, City of	U.S.	11,498	11,498	-	-	3,929	3,929	-	-	7,569	7,569	-	-
2015	FRCC	1076	Chattahoochee, City of	U.S.	1,572	1,572	-	-	537	537	-	-	1,035	1,035	-	-
2015	FRCC	1077	Florida Keys Electric Cooperative Assn	U.S.	31,290	31,290	-	-	10,692	10,692	-	-	20,598	20,598	-	-
2015	FRCC	1078	Florida Power & Light Co.	U.S.	4,630,626	4,630,626	-	-	1,582,256	1,582,256	-	-	3,048,370	3,048,370	-	-
2015	FRCC	1079	Florida Public Utilities Company	U.S.	14,055	14,055	-	-	4,802	4,802	-	-	9,252	9,252	-	-
2015	FRCC	1080	Gainesville Regional Utilities	U.S.	72,233	72,233	-	-	24,681	24,681	-	-	47,551	47,551	-	-
2015	FRCC	1081	Homestead, City of	U.S.	22,470	22,470	-	-	7,678	7,678	-	-	14,792	14,792	-	-
2015	FRCC	1082	JEA	U.S.	500,329	500,329	-	-	170,959	170,959	-	-	329,369	329,369	-	-
2015	FRCC	1083	Lakeland Electric	U.S.	124,760	124,760	-	-	42,630	42,630	-	-	82,131	82,131	-	-
2015	FRCC	1626	Lee County Electric Cooperative, Inc	U.S.	162,157	162,157	-	-	55,408	55,408	-	-	106,749	106,749	-	-
2015	FRCC	1661	City of Lake Worth	U.S.	19,037	19,037	-	-	6,505	6,505	-	-	12,532	12,532	-	-
2015	FRCC	1084	Mount Dora, City of	U.S.	3,770	3,770	-	-	1,288	1,288	-	-	2,482	2,482	-	-
2015	FRCC	1085	New Smyrna Beach, Utilities Commission of	U.S.	17,281	17,281	-	-	5,905	5,905	-	-	11,376	11,376	-	-
2015	FRCC	1086	Orlando Utilities Commission	U.S.	252,708	252,708	-	-	86,349	86,349	-	-	166,359	166,359	-	-
2015	FRCC	1087	Duke Energy Florida	U.S.	1,640,044	1,640,044	-	-	560,393	560,393	-	-	1,079,651	1,079,651	-	-
2015	FRCC	1088	Quincy, City of	U.S.	5,348	5,348	-	-	1,827	1,827	-	-	3,521	3,521	-	-
2015	FRCC	1089	Reedy Creek Improvement District	U.S.	48,771	48,771	-	-	16,665	16,665	-	-	32,106	32,106	-	-
2015	FRCC	1090	St. Cloud, City of (OUC)	U.S.	27,818	27,818	-	-	9,505	9,505	-	-	18,313	18,313	-	-
2015	FRCC	1091	Tallahassee, City of	U.S.	110,792	110,792	-	-	37,857	37,857	-	-	72,935	72,935	-	-
2015	FRCC	1092	Tampa Electric Company	U.S.	802,402	802,402	-	-	274,176	274,176	-	-	528,226	528,226	-	-
2015	FRCC	1603	City of Vero Beach	U.S.	31,130	31,130	-	-	10,637	10,637	-	-	20,493	20,493	-	-
2015	FRCC	1093	Wauchula, City of	U.S.	2,594	2,594	-	-	886	886	-	-	1,708	1,708	-	-
2015	FRCC	1094	Williston, City of	U.S.	1,405	1,405	-	-	480	480	-	-	925	925	-	-
2015	FRCC	1095	Winter Park, City of	U.S.	18,436	18,436	-	-	6,299	6,299	-	-	12,136	12,136	-	-
2015	FRCC	1072	Florida Municipal Power Agency	U.S.	237,640	237,640	-	-	81,200	81,200	-	-	156,440	156,440	-	-
2015	FRCC	1073	Seminole Electric Cooperative	U.S.	567,940	567,940	-	-	194,061	194,061	-	-	373,878	373,878	-	-
TOTAL FRCC					9,363,266	9,363,266	-	-	3,199,370	3,199,370	-	-	6,163,896	6,163,896	-	-
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2015	MRO	1199	Basin Electric Power Cooperative	U.S.	860,758	860,758	-	-	232,054	232,054	-	-	628,704	628,704	-	-
2015	MRO	1201	Central Iowa Power Cooperative (CIPCO)	U.S.	137,770	137,770	-	-	37,142	37,142	-	-	100,628	100,628	-	-
2015	MRO	1204	Corn Belt Power Cooperative	U.S.	95,128	95,128	-	-	25,646	25,646	-	-	69,483	69,483	-	-
2015	MRO	1207	Dairyland Power Cooperative	U.S.	272,938	272,938	-	-	73,582	73,582	-	-	199,356	199,356	-	-
2015	MRO	1210	Great River Energy	U.S.	686,367	686,367	-	-	185,040	185,040	-	-	501,327	501,327	-	-
2015	MRO	1222	Minnkota Power Cooperative, Inc.	U.S.	217,407	217,407	-	-	58,611	58,611	-	-	158,795	158,795	-	-
2015	MRO	1230	Nebraska Public Power District	U.S.	678,513	678,513	-	-	182,922	182,922	-	-	495,591	495,591	-	-
2015	MRO	1232	Omaha Public Power District	U.S.	552,874	552,874	-	-	149,051	149,051	-	-	403,823	403,823	-	-
2015	MRO	1237	Southern Montana Generation and Transmission	U.S.	503	503	-	-	136	136	-	-	367	367	-	-
2015	MRO	1240	Western Area Power Administration (UM)	U.S.	279,258	279,258	-	-	75,286	75,286	-	-	203,972	203,972	-	-
2015	MRO	1239	Western Area Power Administration (LM)	U.S.	7,120	7,120	-	-	1,919	1,919	-	-	5,200	5,200	-	-
2015	MRO	1217	Manitoba Hydro	CAN	1,214,041	-	1,214,041	-	327,573	-	327,573	-	886,468	-	886,468	-
2015	MRO	1235	SaskPower	CAN	1,219,686	-	1,219,686	-	329,096	-	329,096	-	890,590	-	890,590	-
2015	MRO	1195	Alliant Energy (Alliant East - WPL & Alliant West IPL)	U.S.	1,463,872	1,463,872	-	-	394,649	394,649	-	-	1,069,222	1,069,222	-	-
2015	MRO	1710	Dahlberg Electric Company	U.S.	5,863	5,863	-	-	1,581	1,581	-	-	4,282	4,282	-	-
2015	MRO	1216	Madison, Gas and Electric	U.S.	173,637	173,637	-	-	46,811	46,811	-	-	126,826	126,826	-	-
2015	MRO	1220	MidAmerican Energy Company	U.S.	1,214,201	1,214,201	-	-	327,340	327,340	-	-	886,861	886,861	-	-
2015	MRO	1221	Minnesota Power	U.S.	618,474	618,474	-	-	166,736	166,736	-	-	451,737	451,737	-	-
2015	MRO	1226	Montana-Dakota Utilities Co.	U.S.	163,872	163,872	-	-	44,179	44,179	-	-	119,693	119,693	-	-
2015	MRO	1711	North Central Power Company	U.S.	17,705	17,705	-	-	4,773	4,773	-	-	12,932	12,932	-	-
2015	MRO	1231	NorthWestern Energy	U.S.	78,145	78,145	-	-	21,067	21,067	-	-	57,078	57,078	-	-
2015	MRO	1712	NorthWestern Wisconsin	U.S.	9,242	9,242	-	-	2,492	2,492	-	-	6,750	6,750	-	-
2015	MRO	1233	Otter Tail Power Company	U.S.	238,714	238,714	-	-	64,356	64,356	-	-	174,359	174,359	-	-
2015	MRO	1664	Wisconsin Public Service (WPS)	U.S.	613,070	613,070	-	-	165,279	165,279	-	-	447,790	447,790	-	-
2015	MRO	1665	Upper Peninsula Power Company (UPPCO)	U.S.	38,430	38,430	-	-	10,360	10,360	-	-	28,069	28,069	-	-
2015	MRO	1244	Xcel Energy Company (NSP)	U.S.	2,251,104	2,251,104	-	-	606,882	606,882	-	-	1,644,223	1,644,223	-	-
2015	MRO	1196	Ames Municipal Electric System	U.S.	40,749	40,749	-	-	10,986	10,986	-	-	29,764	29,764	-	-
2015	MRO	1604	Atlantic Municipal Utilities	U.S.	4,080	4,080	-	-	1,100	1,100	-	-	2,980	2,980	-	-
2015	MRO	1476	Badger Power Marketing Authority of Wisconsin, Inc.	U.S.	19,432	19,432	-	-	5,239	5,239	-	-	14,194	14,194	-	-
2015	MRO	1713	Bloomer Electric & Water Co.	U.S.	2,809	2,809	-	-	757	757	-	-	2,052	2,052	-	-
2015	MRO	1714	Village of Caddott	U.S.	703	703	-	-	190	190	-	-	514	514	-	-
2015	MRO	1200	Cedar Falls Municipal Utilities	U.S.	26,028	26,028	-	-	7,017	7,017	-	-	19,011	19,011	-	-
2015	MRO	1477	Central Minnesota Municipal Power Agency (CMMPA)	U.S.	23,561	23,561	-	-	6,352	6,352	-	-	17,209	17,209	-	-
2015	MRO	1715	Village of Centuria	U.S.	303	303	-	-	82	82	-	-	221	221	-	-
2015	MRO	1716	Eldridge Electric and Water Utilities	U.S.	2,137	2,137	-	-	576	576	-	-	1,561	1,561	-	-
2015	MRO	1203	City of Escanaba	U.S.	7,401	7,401	-	-	1,995	1,995	-	-	5,406	5,406	-	-
2015	MRO	1205	Falls City Water & Light Department	U.S.	2,877	2,877	-	-	776	776	-	-	2,101	2,101	-	-
2015	MRO	1206	Fremont Department of Utilities	U.S.	20,679	20,679	-	-	5,575	5,575	-	-	15,104	15,104	-	-

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total ERO Assessments (NERC, RE & WIRAB Costs)				Total NERC Assessments				Total Regional Entity Assessments (Including WIRAB Assessments)			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total
2015	MRO	1208	Geneseo Municipal Utilities	U.S.	3,240	3,240	-	-	873	873	-	-	2,366	2,366	-	-
2015	MRO	1209	Grand Island Utilities Department	U.S.	37,696	37,696	-	-	10,163	10,163	-	-	27,533	27,533	-	-
2015	MRO	1717	Great Lakes Utilities	U.S.	19,824	19,824	-	-	5,344	5,344	-	-	14,479	14,479	-	-
2015	MRO	1718	City of Guttenberg	U.S.	923	923	-	-	249	249	-	-	674	674	-	-
2015	MRO	1606	Harlan Municipal Utilities	U.S.	3,199	3,199	-	-	862	862	-	-	2,336	2,336	-	-
2015	MRO	1211	Hastings Utilities	U.S.	20,985	20,985	-	-	5,657	5,657	-	-	15,328	15,328	-	-
2015	MRO	1212	Heartland Consumers Power District	U.S.	43,503	43,503	-	-	11,728	11,728	-	-	31,775	31,775	-	-
2015	MRO	1213	Hutchinson Utilities Commission	U.S.	15,279	15,279	-	-	4,119	4,119	-	-	11,160	11,160	-	-
2015	MRO	1719	City of Kasota	U.S.	197	197	-	-	53	53	-	-	144	144	-	-
2015	MRO	1215	Lincoln Electric System	U.S.	161,909	161,909	-	-	43,649	43,649	-	-	118,259	118,259	-	-
2015	MRO	1218	Manitowoc Public Utilities	U.S.	27,780	27,780	-	-	7,489	7,489	-	-	20,290	20,290	-	-
2015	MRO	1223	Missouri River Energy Services	U.S.	117,821	117,821	-	-	31,764	31,764	-	-	86,057	86,057	-	-
2015	MRO	1224	MN Municipal Power Agency (MMPA)	U.S.	77,612	77,612	-	-	20,924	20,924	-	-	56,688	56,688	-	-
2015	MRO	1607	Montezuma Municipal Light & Power	U.S.	1,493	1,493	-	-	403	403	-	-	1,091	1,091	-	-
2015	MRO	1227	Municipal Energy Agency of Nebraska	U.S.	56,157	56,157	-	-	15,140	15,140	-	-	41,018	41,018	-	-
2015	MRO	1228	Muscatine Power and Water	U.S.	44,342	44,342	-	-	11,954	11,954	-	-	32,388	32,388	-	-
2015	MRO	1229	Nebraska City Utilities	U.S.	8,508	8,508	-	-	2,294	2,294	-	-	6,214	6,214	-	-
2015	MRO	1720	Resale Power Group of Iowa	U.S.	27,357	27,357	-	-	7,375	7,375	-	-	19,981	19,981	-	-
2015	MRO	1721	Rice Lake Utilities	U.S.	8,331	8,331	-	-	2,246	2,246	-	-	6,085	6,085	-	-
2015	MRO	1234	Rochester Public Utilities	U.S.	102	102	-	-	27	27	-	-	74	74	-	-
2015	MRO	1236	Southern Minnesota Municipal Power Agency	U.S.	141,001	141,001	-	-	38,013	38,013	-	-	102,988	102,988	-	-
2015	MRO	1722	City of Spooner	U.S.	1,561	1,561	-	-	421	421	-	-	1,140	1,140	-	-
2015	MRO	1723	Village of Trempealeau	U.S.	786	786	-	-	212	212	-	-	574	574	-	-
2015	MRO	1241	Willmar Municipal Utilities	U.S.	14,401	14,401	-	-	3,882	3,882	-	-	10,518	10,518	-	-
2015	MRO	1242	Wisconsin Public Power, Inc. (East and West regions)	U.S.	275,105	275,105	-	-	74,166	74,166	-	-	200,939	200,939	-	-
TOTAL MRO					14,368,560	11,934,833	2,433,728	-	3,874,215	3,217,546	656,669	-	10,494,345	8,717,286	1,777,059	-
2015	NPCC	1336	New England	U.S.	5,650,724	5,650,724	-	-	1,731,311	1,731,311	-	-	3,919,413	3,919,413	-	-
2015	NPCC	1339	New York	U.S.	7,178,672	7,178,672	-	-	2,203,390	2,203,390	-	-	4,975,283	4,975,283	-	-
2015	NPCC	1337	Ontario	Canada	3,224,119	-	3,224,119	-	1,212,884	-	1,212,884	-	2,011,235	-	2,011,235	-
2015	NPCC	1341	Quebec	Canada	4,623,724	-	4,623,724	-	1,803,289	-	1,803,289	-	2,820,435	-	2,820,435	-
2015	NPCC	1705	New Brunswick	Canada	416,490	-	416,490	-	125,585	-	125,585	-	290,905	-	290,905	-
2015	NPCC	1340	Nova Scotia	Canada	390,586	-	390,586	-	152,796	-	152,796	-	237,790	-	237,790	-
TOTAL NPCC					21,484,314	12,829,396	8,654,918	-	7,229,254	3,934,700	3,294,554	-	14,255,060	8,894,696	5,360,364	-
2015	RF	1102	Cannelton Utilities	U.S.	559	559	-	-	214	214	-	-	344	344	-	-
2015	RF	1106	City of Croswell	U.S.	1,418	1,418	-	-	544	544	-	-	874	874	-	-
2015	RF	1490	City of Lansing	U.S.	77,904	77,904	-	-	29,874	29,874	-	-	48,030	48,030	-	-
2015	RF	1120	Cloverland Electric Cooperative	U.S.	26,383	26,383	-	-	10,117	10,117	-	-	16,266	16,266	-	-
2015	RF	1122	CMS ERM Michigan LLC	U.S.	3,762	3,762	-	-	1,443	1,443	-	-	2,319	2,319	-	-
2015	RF	1124	Constellation New Energy (MECS-CONS)	U.S.	30,609	30,609	-	-	11,738	11,738	-	-	18,871	18,871	-	-
2015	RF	1123	Constellation New Energy (MECS-DET)	U.S.	35,761	35,761	-	-	13,713	13,713	-	-	22,048	22,048	-	-
2015	RF	1126	Consumers Energy Company	U.S.	1,173,273	1,173,273	-	-	449,919	449,919	-	-	723,354	723,354	-	-
2015	RF	1128	Detroit Edison Company	U.S.	1,619,675	1,619,675	-	-	621,102	621,102	-	-	998,573	998,573	-	-
2015	RF	1166	Duke Energy Indiana	U.S.	1,050,286	1,050,286	-	-	402,756	402,756	-	-	647,530	647,530	-	-
2015	RF	1135	Ferdinand Municipal Light & Water	U.S.	1,652	1,652	-	-	633	633	-	-	1,018	1,018	-	-
2015	RF	1646	FirstEnergy Solutions (MECS-CONS)	U.S.	24,826	24,826	-	-	9,520	9,520	-	-	15,306	15,306	-	-
2015	RF	1549	FirstEnergy Solutions (MECS-DET)	U.S.	56,647	56,647	-	-	21,723	21,723	-	-	34,925	34,925	-	-
2015	RF	1145	Hoosier Energy	U.S.	266,044	266,044	-	-	102,021	102,021	-	-	164,023	164,023	-	-
2015	RF	1148	Indiana Municipal Power Agency (DUKE CIN)	U.S.	110,830	110,830	-	-	42,500	42,500	-	-	68,330	68,330	-	-
2015	RF	1485	Indiana Municipal Power Agency (NIPSCO)	U.S.	15,272	15,272	-	-	5,856	5,856	-	-	9,416	9,416	-	-
2015	RF	1486	Indiana Municipal Power Agency (SIGE)	U.S.	20,866	20,866	-	-	8,002	8,002	-	-	12,864	12,864	-	-
2015	RF	1149	Indianapolis Power & Light Co.	U.S.	510,422	510,422	-	-	195,733	195,733	-	-	314,689	314,689	-	-
2015	RF	1553	Integrus Energy Services (MECS-CONS)	U.S.	36,455	36,455	-	-	13,979	13,979	-	-	22,475	22,475	-	-
2015	RF	1554	Integrus Energy Services (MECS-DET)	U.S.	37,196	37,196	-	-	14,264	14,264	-	-	22,932	22,932	-	-
2015	RF	1666	Integrus Energy Services (WEPC)	U.S.	15,931	15,931	-	-	6,109	6,109	-	-	9,822	9,822	-	-
2015	RF	1614	Just Energy (MECS-DET)	U.S.	1,585	1,585	-	-	608	608	-	-	977	977	-	-
2015	RF	1154	Michigan Public Power Agency	U.S.	120,627	120,627	-	-	46,257	46,257	-	-	74,370	74,370	-	-
2015	RF	1155	Michigan South Central Power Agency	U.S.	24,254	24,254	-	-	9,301	9,301	-	-	14,953	14,953	-	-
2015	RF	1158	MidAmerican Energy Company Retail	U.S.	1,068	1,068	-	-	410	410	-	-	659	659	-	-
2015	RF	1163	Northern Indiana Public Service Co.	U.S.	618,308	618,308	-	-	237,105	237,105	-	-	381,204	381,204	-	-
2015	RF	1164	Ontonagon County Rural Electrification Assoc.	U.S.	1,015	1,015	-	-	389	389	-	-	626	626	-	-
2015	RF	1265	PJM Interconnection, LLC	U.S.	24,268,469	24,268,469	-	-	9,306,304	9,306,304	-	-	14,962,165	14,962,165	-	-
2015	RF	1172	Noble Americas Energy Solutions (MECS-CONS)	U.S.	14,443	14,443	-	-	5,539	5,539	-	-	8,905	8,905	-	-
2015	RF	1171	Noble Americas Energy Solutions (MECS-DET)	U.S.	22,255	22,255	-	-	8,534	8,534	-	-	13,721	13,721	-	-
2015	RF	1176	Direct Energy (fka:Strategic Energy,LLC) (MECS-CONS)	U.S.	6,839	6,839	-	-	2,622	2,622	-	-	4,216	4,216	-	-
2015	RF	1174	Direct Energy (fka:Strategic Energy,LLC) (MECS-DET)	U.S.	22,145	22,145	-	-	8,492	8,492	-	-	13,653	13,653	-	-

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Data Year	Regional Entity	ID	Entity	Country	Total ERO Assessments (NERC, RE & WIRAB Costs)				Total NERC Assessments				Total Regional Entity Assessments (Including WIRAB Assessments)			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total
2015	RF	1581	Spartan Renewable Energy	U.S.	2,628	2,628	-	-	1,008	1,008	-	-	1,620	1,620	-	-
2015	RF	1180	Thumb Electric Cooperative	U.S.	6,485	6,485	-	-	2,487	2,487	-	-	3,998	3,998	-	-
2015	RF	1662	Ohio Valley Electric Corporation	U.S.	15,579	15,579	-	-	5,974	5,974	-	-	9,605	9,605	-	-
2015	RF	1181	Vectren Energy Delivery of IN	U.S.	203,862	203,862	-	-	78,175	78,175	-	-	125,686	125,686	-	-
2015	RF	1183	Village of Sebewaing	U.S.	1,633	1,633	-	-	626	626	-	-	1,007	1,007	-	-
2015	RF	1184	Wabash Valley Power Association Inc. (DUKE CIN)	U.S.	100,270	100,270	-	-	38,451	38,451	-	-	61,819	61,819	-	-
2015	RF	1488	Wabash Valley Power Association Inc.(NIPSCO)	U.S.	59,156	59,156	-	-	22,685	22,685	-	-	36,471	36,471	-	-
2015	RF	1185	Wisconsin Electric Power Co.	U.S.	991,857	991,857	-	-	380,350	380,350	-	-	611,507	611,507	-	-
2015	RF	1189	Wolverine Power Marketing Cooperative	U.S.	29,687	29,687	-	-	11,384	11,384	-	-	18,303	18,303	-	-
2015	RF	1191	Wolverine Power Supply Cooperative	U.S.	94,472	94,472	-	-	36,227	36,227	-	-	58,244	58,244	-	-
2015	RF	1190	Wolverine Power Marketing Cooperative(MECS-DET)	U.S.	5,127	5,127	-	-	1,966	1,966	-	-	3,161	3,161	-	-
TOTAL RELIABILITYFIRST					31,727,536	31,727,536	-	-	12,166,655	12,166,655	-	-	19,560,881	19,560,881	-	-
2015	SERC	1267	Alabama Municipal Electric Authority	U.S.	99,175	99,175	-	-	46,715	46,715	-	-	52,460	52,460	-	-
2015	SERC	1268	Alabama Power Company	U.S.	1,716,692	1,716,692	-	-	808,616	808,616	-	-	908,076	908,076	-	-
2015	SERC	1269	Ameren - Illinois	U.S.	1,322,228	1,322,228	-	-	622,811	622,811	-	-	699,417	699,417	-	-
2015	SERC	1271	Ameren - Missouri	U.S.	1,172,316	1,172,316	-	-	552,197	552,197	-	-	620,118	620,118	-	-
2015	SERC	1272	APGI - Yadkin Division	U.S.	451	451	-	-	212	212	-	-	238	238	-	-
2015	SERC	1273	Associated Electric Cooperative Inc.	U.S.	545,099	545,099	-	-	256,759	256,759	-	-	288,340	288,340	-	-
2015	SERC	1582	Beauregard Electric Cooperative, Inc.	U.S.	31,390	31,390	-	-	14,786	14,786	-	-	16,605	16,605	-	-
2015	SERC	1462	Benton Utility District	U.S.	6,960	6,960	-	-	3,278	3,278	-	-	3,682	3,682	-	-
2015	SERC	1274	Big Rivers Electric Corporation	U.S.	109,954	109,954	-	-	51,792	51,792	-	-	58,162	58,162	-	-
2015	SERC	1275	Black Warrior EMC	U.S.	12,542	12,542	-	-	5,908	5,908	-	-	6,634	6,634	-	-
2015	SERC	1276	Blue Ridge EMC	U.S.	39,588	39,588	-	-	18,647	18,647	-	-	20,941	20,941	-	-
2015	SERC	1628	Brazos Electric Power Cooperative, Inc.	U.S.	13,800	13,800	-	-	6,500	6,500	-	-	7,300	7,300	-	-
2015	SERC	1463	Canton, MS	U.S.	3,790	3,790	-	-	1,785	1,785	-	-	2,005	2,005	-	-
2015	SERC	1277	Central Electric Power Cooperative Inc.	U.S.	475,117	475,117	-	-	223,795	223,795	-	-	251,322	251,322	-	-
2015	SERC	1667	Century Aluminum - Hawesville	U.S.	94,346	94,346	-	-	44,440	44,440	-	-	49,906	49,906	-	-
2015	SERC	1668	Century Aluminum - Sebree	U.S.	97,106	97,106	-	-	45,740	45,740	-	-	51,366	51,366	-	-
2015	SERC	1278	City of Blountstown FL	U.S.	1,107	1,107	-	-	521	521	-	-	585	585	-	-
2015	SERC	1279	City of Camden SC	U.S.	5,786	5,786	-	-	2,725	2,725	-	-	3,061	3,061	-	-
2015	SERC	1280	City of Collins MS	U.S.	1,362	1,362	-	-	642	642	-	-	720	720	-	-
2015	SERC	1281	City of Columbia MO	U.S.	34,680	34,680	-	-	16,336	16,336	-	-	18,345	18,345	-	-
2015	SERC	1282	City of Conway AR (Conway Corporation)	U.S.	29,370	29,370	-	-	13,834	13,834	-	-	15,536	15,536	-	-
2015	SERC	1284	City of Evergreen AL	U.S.	1,662	1,662	-	-	783	783	-	-	879	879	-	-
2015	SERC	1285	City of Hampton GA	U.S.	902	902	-	-	425	425	-	-	477	477	-	-
2015	SERC	1286	City of Hartford AL	U.S.	886	886	-	-	417	417	-	-	469	469	-	-
2015	SERC	1287	City of Henderson (KY) Municipal Power & Light	U.S.	18,097	18,097	-	-	8,524	8,524	-	-	9,573	9,573	-	-
2015	SERC	1288	City of North Little Rock AR (DENL)	U.S.	28,018	28,018	-	-	13,198	13,198	-	-	14,821	14,821	-	-
2015	SERC	1289	City of Orangeburg SC Department of Public Utilities	U.S.	24,551	24,551	-	-	11,564	11,564	-	-	12,987	12,987	-	-
2015	SERC	1290	City of Robertsdale AL	U.S.	2,542	2,542	-	-	1,197	1,197	-	-	1,345	1,345	-	-
2015	SERC	1291	City of Ruston LA (DERS)	U.S.	8,068	8,068	-	-	3,800	3,800	-	-	4,268	4,268	-	-
2015	SERC	1292	Seneca Light & Power	U.S.	4,736	4,736	-	-	2,231	2,231	-	-	2,505	2,505	-	-
2015	SERC	1115	City of Springfield (CWLP)	U.S.	50,874	50,874	-	-	23,963	23,963	-	-	26,911	26,911	-	-
2015	SERC	1465	City of Thayer, MO	U.S.	554	554	-	-	261	261	-	-	293	293	-	-
2015	SERC	1293	City of Troy AL	U.S.	12,365	12,365	-	-	5,824	5,824	-	-	6,541	6,541	-	-
2015	SERC	1294	City of West Memphis AR (West Memphis Utilities)	U.S.	11,357	11,357	-	-	5,350	5,350	-	-	6,008	6,008	-	-
2015	SERC	1583	Claiborne Electric Cooperative, Inc.	U.S.	19,345	19,345	-	-	9,112	9,112	-	-	10,233	10,233	-	-
2015	SERC	1584	Concordia Electric Cooperative, Inc.	U.S.	7,296	7,296	-	-	3,437	3,437	-	-	3,859	3,859	-	-
2015	SERC	1283	Dalton Utilities	U.S.	50,319	50,319	-	-	23,702	23,702	-	-	26,617	26,617	-	-
2015	SERC	1585	Dixie Electric Membership Corporation	U.S.	62,057	62,057	-	-	29,231	29,231	-	-	32,826	32,826	-	-
2015	SERC	1295	Dominion Virginia Power	U.S.	2,481,725	2,481,725	-	-	1,168,970	1,168,970	-	-	1,312,754	1,312,754	-	-
2015	SERC	1296	Duke Energy Carolinas, LLC	U.S.	2,457,612	2,457,612	-	-	1,157,612	1,157,612	-	-	1,299,999	1,299,999	-	-
2015	SERC	1466	Durant, MS	U.S.	829	829	-	-	391	391	-	-	439	439	-	-
2015	SERC	1478	LG&E and KU Services Company as agent for LG&E Company and KUCompany	U.S.	1,008,860	1,008,860	-	-	475,205	475,205	-	-	533,655	533,655	-	-
2015	SERC	1297	East Kentucky Power Cooperative	U.S.	384,650	384,650	-	-	181,182	181,182	-	-	203,468	203,468	-	-
2015	SERC	1298	East Mississippi Electric Power Association	U.S.	12,691	12,691	-	-	5,978	5,978	-	-	6,713	6,713	-	-
2015	SERC	1669	Electricities of North Carolina Inc	U.S.	341,869	341,869	-	-	161,031	161,031	-	-	180,838	180,838	-	-
2015	SERC	1300	EnergyUnited EMC	U.S.	70,943	70,943	-	-	33,416	33,416	-	-	37,527	37,527	-	-
2015	SERC	1301	Entergy	U.S.	3,402,446	3,402,446	-	-	1,602,659	1,602,659	-	-	1,799,787	1,799,787	-	-
2015	SERC	1302	Fayetteville (NC) Public Works Commission	U.S.	62,537	62,537	-	-	29,457	29,457	-	-	33,080	33,080	-	-
2015	SERC	1303	Florida Public Utilities (FL Panhandle Load)	U.S.	9,107	9,107	-	-	4,290	4,290	-	-	4,817	4,817	-	-
2015	SERC	1304	French Broad EMC	U.S.	14,961	14,961	-	-	7,047	7,047	-	-	7,914	7,914	-	-
2015	SERC	1305	Georgia Power Company	U.S.	2,508,746	2,508,746	-	-	1,181,698	1,181,698	-	-	1,327,048	1,327,048	-	-
2015	SERC	1306	Georgia System Optms Corporation	U.S.	1,138,223	1,138,223	-	-	536,139	536,139	-	-	602,084	602,084	-	-
2015	SERC	1479	Greenwood (MS) Utilities Commission	U.S.	8,413	8,413	-	-	3,963	3,963	-	-	4,450	4,450	-	-
2015	SERC	1307	Greenwood (SC) Commissioners of Public Works	U.S.	9,557	9,557	-	-	4,502	4,502	-	-	5,055	5,055	-	-

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total ERO Assessments (NERC, RE & WIRAB Costs)				Total NERC Assessments				Total Regional Entity Assessments (Including WIRAB Assessments)			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total
2015	SERC	1308	Gulf Power Company	U.S.	337,367	337,367	-	-	158,910	158,910	-	-	178,457	178,457	-	-
2015	SERC	1586	Haywood EMC	U.S.	8,934	8,934	-	-	4,208	4,208	-	-	4,726	4,726	-	-
2015	SERC	1309	Illinois Municipal Electric Agency	U.S.	55,185	55,185	-	-	25,994	25,994	-	-	29,191	29,191	-	-
2015	SERC	1480	Itta Bena, MS	U.S.	622	622	-	-	293	293	-	-	329	329	-	-
2015	SERC	1587	Jefferson Davis Electric Cooperative, Inc.	U.S.	8,353	8,353	-	-	3,935	3,935	-	-	4,419	4,419	-	-
2015	SERC	1617	Kentucky Municipal Power	U.S.	19,630	19,630	-	-	9,246	9,246	-	-	10,384	10,384	-	-
2015	SERC	1481	Kosciusko, MS	U.S.	2,196	2,196	-	-	1,035	1,035	-	-	1,162	1,162	-	-
2015	SERC	1482	Leland, MS	U.S.	979	979	-	-	461	461	-	-	518	518	-	-
2015	SERC	1313	McCormick Commission of Public Works	U.S.	605	605	-	-	285	285	-	-	320	320	-	-
2015	SERC	1314	Mississippi Power Company	U.S.	306,217	306,217	-	-	144,238	144,238	-	-	161,979	161,979	-	-
2015	SERC	1630	Mt. Carmel Public Utility	U.S.	3,121	3,121	-	-	1,470	1,470	-	-	1,651	1,651	-	-
2015	SERC	1315	Municipal Electric Authority of Georgia	U.S.	316,534	316,534	-	-	149,098	149,098	-	-	167,437	167,437	-	-
2015	SERC	1316	N.C. Electric Membership Corp.	U.S.	369,830	369,830	-	-	174,201	174,201	-	-	195,628	195,628	-	-
2015	SERC	1588	Northeast Louisiana Power Cooperative, Inc.	U.S.	8,023	8,023	-	-	3,779	3,779	-	-	4,244	4,244	-	-
2015	SERC	1574	Northern Virginia Electric Cooperative	U.S.	126,552	126,552	-	-	59,610	59,610	-	-	66,942	66,942	-	-
2015	SERC	1319	Old Dominion Electric Cooperative	U.S.	182,601	182,601	-	-	86,011	86,011	-	-	96,590	96,590	-	-
2015	SERC	1618	Osceola (Arkansas) Municipal Light and Power	U.S.	4,679	4,679	-	-	2,204	2,204	-	-	2,475	2,475	-	-
2015	SERC	1320	Owensboro (KY) Municipal Utilities	U.S.	24,233	24,233	-	-	11,414	11,414	-	-	12,818	12,818	-	-
2015	SERC	1321	Piedmont EMC in Duke and Progress Areas	U.S.	15,127	15,127	-	-	7,125	7,125	-	-	8,002	8,002	-	-
2015	SERC	1323	Piedmont Municipal Power Agency (PMPA)	U.S.	67,767	67,767	-	-	31,921	31,921	-	-	35,847	35,847	-	-
2015	SERC	1589	Pointe Coupee Electric Memb. Corp.	U.S.	7,230	7,230	-	-	3,406	3,406	-	-	3,825	3,825	-	-
2015	SERC	1266	PowerSouth Energy	U.S.	253,443	253,443	-	-	119,380	119,380	-	-	134,063	134,063	-	-
2015	SERC	1330	Prairie Power, Inc.	U.S.	44,702	44,702	-	-	21,056	21,056	-	-	23,646	23,646	-	-
2015	SERC	1324	Duke Energy Progress	U.S.	1,356,073	1,356,073	-	-	638,753	638,753	-	-	717,320	717,320	-	-
2015	SERC	1325	Rutherford EMC	U.S.	39,140	39,140	-	-	18,436	18,436	-	-	20,704	20,704	-	-
2015	SERC	1631	Sam Rayburn G&T Electric Cooperative Inc.	U.S.	53,522	53,522	-	-	25,211	25,211	-	-	28,312	28,312	-	-
2015	SERC	1326	South Carolina Electric & Gas Company	U.S.	675,683	675,683	-	-	318,268	318,268	-	-	357,415	357,415	-	-
2015	SERC	1327	South Carolina Public Service Authority	U.S.	332,270	332,270	-	-	156,509	156,509	-	-	175,760	175,760	-	-
2015	SERC	1590	South Louisiana Electric Cooperative Association	U.S.	18,468	18,468	-	-	8,699	8,699	-	-	9,769	9,769	-	-
2015	SERC	1328	South Mississippi Electric Power Association	U.S.	292,030	292,030	-	-	137,555	137,555	-	-	154,475	154,475	-	-
2015	SERC	1329	Southern Illinois Power Cooperative	U.S.	48,101	48,101	-	-	22,657	22,657	-	-	25,444	25,444	-	-
2015	SERC	1591	Southwest Louisiana Electric Membership Corporation	U.S.	75,413	75,413	-	-	35,522	35,522	-	-	39,891	39,891	-	-
2015	SERC	1619	Southwestern Electric Cooperative, Inc.	U.S.	13,173	13,173	-	-	6,205	6,205	-	-	6,968	6,968	-	-
2015	SERC	1331	Tennessee Valley Authority	U.S.	4,545,401	4,545,401	-	-	2,141,027	2,141,027	-	-	2,404,374	2,404,374	-	-
2015	SERC	1632	Tex-La Electric Cooperative of Texas, Inc	U.S.	5,660	5,660	-	-	2,666	2,666	-	-	2,994	2,994	-	-
2015	SERC	1332	Tombigbee Electric Cooperative Inc.	U.S.	3,779	3,779	-	-	1,780	1,780	-	-	1,999	1,999	-	-
2015	SERC	1594	Town of Sharpsburg, N.C.	U.S.	588	588	-	-	277	277	-	-	311	311	-	-
2015	SERC	1595	Town of Stantonsburg, N.C. JRO	U.S.	1,653	1,653	-	-	779	779	-	-	874	874	-	-
2015	SERC	1333	Town of Waynesville NC	U.S.	2,537	2,537	-	-	1,195	1,195	-	-	1,342	1,342	-	-
2015	SERC	1334	Town of Winnsboro SC	U.S.	1,831	1,831	-	-	862	862	-	-	969	969	-	-
2015	SERC	1335	Town of Winterville NC	U.S.	1,555	1,555	-	-	733	733	-	-	823	823	-	-
2015	SERC	1597	Washington-St.Tammany Electric Cooperative, Inc.	U.S.	31,321	31,321	-	-	14,753	14,753	-	-	16,568	16,568	-	-
TOTAL SERC					29,691,789	29,691,789	-	-	13,985,766	13,985,766	-	-	15,706,023	15,706,023	-	-
2015	SPP	1246	American Electric Power	U.S.	2,058,892	2,058,892	-	-	520,620	520,620	-	-	1,538,272	1,538,272	-	-
2015	SPP	1707	AEP-VEMCO	U.S.	37,179	37,179	-	-	9,401	9,401	-	-	27,778	27,778	-	-
2015	SPP	1435	Arkansas Electric Cooperative Corporation	U.S.	733,221	733,221	-	-	185,405	185,405	-	-	547,815	547,815	-	-
2015	SPP	1247	Board of Public Utilities (Kansas City KS)	U.S.	129,879	129,879	-	-	32,842	32,842	-	-	97,037	97,037	-	-
2015	SPP	1620	Board of Public Utilities, City of McPherson, Kansas	U.S.	48,368	48,368	-	-	12,230	12,230	-	-	36,137	36,137	-	-
2015	SPP	1647	Carthage City Water & Light	U.S.	16,200	16,200	-	-	4,096	4,096	-	-	12,104	12,104	-	-
2015	SPP	1469	Central Valley Electric Cooperative	U.S.	45,959	45,959	-	-	11,621	11,621	-	-	34,337	34,337	-	-
2015	SPP	1556	City of Bentonville	U.S.	35,997	35,997	-	-	9,102	9,102	-	-	26,894	26,894	-	-
2015	SPP	1557	City of Clarksdale, Mississippi	U.S.	8,968	8,968	-	-	2,268	2,268	-	-	6,700	6,700	-	-
2015	SPP	1558	Hope Water & Light (HWL)	U.S.	15,276	15,276	-	-	3,863	3,863	-	-	11,413	11,413	-	-
2015	SPP	1708	City of Abbeville	U.S.	8,020	8,020	-	-	2,028	2,028	-	-	5,992	5,992	-	-
2015	SPP	1559	City of Minden	U.S.	8,381	8,381	-	-	2,119	2,119	-	-	6,262	6,262	-	-
2015	SPP	1709	City of Nixa	U.S.	8,816	8,816	-	-	2,229	2,229	-	-	6,587	6,587	-	-
2015	SPP	1703	City of Chanute	U.S.	27,322	27,322	-	-	6,909	6,909	-	-	20,413	20,413	-	-
2015	SPP	1636	City of Prescott	U.S.	4,717	4,717	-	-	1,193	1,193	-	-	3,524	3,524	-	-
2015	SPP	1248	Independence Power & Light (Independence, MO)	U.S.	55,509	55,509	-	-	14,036	14,036	-	-	41,472	41,472	-	-
2015	SPP	1436	City Utilities of Springfield, MO	U.S.	169,587	169,587	-	-	42,883	42,883	-	-	126,705	126,705	-	-
2015	SPP	1249	Cleco Power LLC	U.S.	677,826	677,826	-	-	171,398	171,398	-	-	506,428	506,428	-	-
2015	SPP	1437	East Texas Electric Coop, Inc.	U.S.	22,834	22,834	-	-	5,774	5,774	-	-	17,060	17,060	-	-
2015	SPP	1250	The Empire District Electric Company	U.S.	284,841	284,841	-	-	72,026	72,026	-	-	212,815	212,815	-	-
2015	SPP	1470	Farmers' Electric Coop	U.S.	16,302	16,302	-	-	4,122	4,122	-	-	12,180	12,180	-	-
2015	SPP	1438	Golden Spread Electric Coop	U.S.	270,776	270,776	-	-	68,470	68,470	-	-	202,306	202,306	-	-
2015	SPP	1251	Grand River Dam Authority	U.S.	285,421	285,421	-	-	72,173	72,173	-	-	213,248	213,248	-	-

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

APPENDIX 2-B

Data Year	Regional Entity	ID	Entity	Country	Total ERO Assessments (NERC, RE & WIRAB Costs)				Total NERC Assessments				Total Regional Entity Assessments (Including WIRAB Assessments)			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total
2015	SPP	1648	Jonesboro City Water & Light	U.S.	73,972	73,972	-	-	18,705	18,705	-	-	55,267	55,267	-	-
2015	SPP	1252	Kansas City Power & Light (KCPL)	U.S.	839,765	839,765	-	-	212,347	212,347	-	-	627,419	627,419	-	-
2015	SPP	1439	Kansas Electric Power Coop., Inc	U.S.	122,967	122,967	-	-	31,094	31,094	-	-	91,873	91,873	-	-
2015	SPP	1440	Kansas Municipal Energy Agency (KCPL)	U.S.	80,031	80,031	-	-	20,237	20,237	-	-	59,794	59,794	-	-
2015	SPP	1637	Kansas Power Pool	U.S.	47,841	47,841	-	-	12,097	12,097	-	-	35,744	35,744	-	-
2015	SPP	1649	Kennett Board of Public Works	U.S.	8,118	8,118	-	-	2,053	2,053	-	-	6,065	6,065	-	-
2015	SPP	1598	KCP&L GMOCC (Greater Missouri Operations Company)	U.S.	460,735	460,735	-	-	116,503	116,503	-	-	344,232	344,232	-	-
2015	SPP	1471	Lafayette Utilities System	U.S.	114,051	114,051	-	-	28,839	28,839	-	-	85,211	85,211	-	-
2015	SPP	1472	Lea County Electric Coop	U.S.	64,045	64,045	-	-	16,195	16,195	-	-	47,850	47,850	-	-
2015	SPP	1253	Louisiana Energy & Power Authority (LEPA)	U.S.	55,680	55,680	-	-	14,079	14,079	-	-	41,600	41,600	-	-
2015	SPP	1650	Malden Board of Public Works	U.S.	2,731	2,731	-	-	691	691	-	-	2,041	2,041	-	-
2015	SPP	1441	Midwest Energy Inc.	U.S.	95,985	95,985	-	-	24,271	24,271	-	-	71,714	71,714	-	-
2015	SPP	1443	Missouri Joint Municipal Electric Utility Commission	U.S.	139,639	139,639	-	-	35,310	35,310	-	-	104,330	104,330	-	-
2015	SPP	1442	Northeast Texas Electric Cooperative, Inc.	U.S.	176,865	176,865	-	-	44,723	44,723	-	-	132,142	132,142	-	-
2015	SPP	1255	Oklahoma Gas and Electric Co.	U.S.	1,505,983	1,505,983	-	-	380,810	380,810	-	-	1,125,174	1,125,174	-	-
2015	SPP	1444	Oklahoma Municipal Power Auth	U.S.	155,272	155,272	-	-	39,263	39,263	-	-	116,009	116,009	-	-
2015	SPP	1639	OzMo Ozark Missouri, West Plains MO	U.S.	10,970	10,970	-	-	2,774	2,774	-	-	8,196	8,196	-	-
2015	SPP	1651	Paragould Light, Water & Cable	U.S.	32,762	32,762	-	-	8,284	8,284	-	-	24,478	24,478	-	-
2015	SPP	1652	Piggott Municipal Light, Water & Sewer	U.S.	2,153	2,153	-	-	545	545	-	-	1,609	1,609	-	-
2015	SPP	1653	Poplar Bluff Municipal Utilities	U.S.	20,978	20,978	-	-	5,304	5,304	-	-	15,673	15,673	-	-
2015	SPP	1561	Public Service Commission of Yazoo City of Mississippi	U.S.	6,356	6,356	-	-	1,607	1,607	-	-	4,749	4,749	-	-
2015	SPP	1473	Roosevelt County Electric Coop	U.S.	9,191	9,191	-	-	2,324	2,324	-	-	6,867	6,867	-	-
2015	SPP	1654	Sikeston Board of Municipal Utilities	U.S.	28,140	28,140	-	-	7,116	7,116	-	-	21,025	21,025	-	-
2015	SPP	1257	Southwestern Public Service Co. (SPS-XCEL)	U.S.	1,131,749	1,131,749	-	-	286,179	286,179	-	-	845,570	845,570	-	-
2015	SPP	1256	Sunflower Electric Power Cooperative	U.S.	239,502	239,502	-	-	60,562	60,562	-	-	178,941	178,941	-	-
2015	SPP	1445	Tex - La Electric Cooperative of Texas	U.S.	27,112	27,112	-	-	6,856	6,856	-	-	20,257	20,257	-	-
2015	SPP	1475	Tri County Electric Coop	U.S.	20,617	20,617	-	-	5,213	5,213	-	-	15,404	15,404	-	-
2015	SPP	1260	Westar Energy, Inc.	U.S.	1,072,633	1,072,633	-	-	271,231	271,231	-	-	801,402	801,402	-	-
2015	SPP	1259	Western Farmers Electric Cooperative	U.S.	502,057	502,057	-	-	126,952	126,952	-	-	375,105	375,105	-	-
2015	SPP	1501	West Texas Municipal Power Agency	U.S.	151,694	151,694	-	-	38,358	38,358	-	-	113,336	113,336	-	-
TOTAL SPP					12,169,883	12,169,883	-	-	3,077,330	3,077,330	-	-	9,092,553	9,092,553	-	-
2015	TRE	1019	ERCOT	U.S.	14,344,749	14,344,749	-	-	4,749,493	4,749,493	-	-	9,595,256	9,595,256	-	-
TOTAL ERCOT					14,344,749	14,344,749	-	-	4,749,493	4,749,493	-	-	9,595,256	9,595,256	-	-
2015	WECC		Alberta Electric System Operator	Canada	1,535,622	-	1,535,622	-	544,658	-	544,658	-	990,964	-	990,964	-
2015	WECC		British Columbia Hydro & Power Authority	Canada	2,860,513	-	2,860,513	-	857,145	-	857,145	-	2,003,368	-	2,003,368	-
2015	WECC		Comision Federal de Electricidad	Mexico	590,532	-	-	590,532	176,951	-	176,951	-	413,581	-	-	413,581
2015	WECC		Ajo Improvement District	U.S.	539	539	-	-	165	165	-	-	375	375	-	-
2015	WECC		Arizona Public Service Company	U.S.	1,329,326	1,329,326	-	-	405,457	405,457	-	-	923,869	923,869	-	-
2015	WECC		City of Williams	U.S.	1,981	1,981	-	-	604	604	-	-	1,377	1,377	-	-
2015	WECC		Electrical Districts 3	U.S.	32,231	32,231	-	-	9,831	9,831	-	-	22,400	22,400	-	-
2015	WECC		Majority Districts	U.S.	33,618	33,618	-	-	10,254	10,254	-	-	23,364	23,364	-	-
2015	WECC		Navajo Tribal Utility Authority	U.S.	876	876	-	-	267	267	-	-	609	609	-	-
2015	WECC		Tohono O'Odham Utility Authority	U.S.	2,867	2,867	-	-	874	874	-	-	1,993	1,993	-	-
2015	WECC		Town of Wickenburg	U.S.	1,212	1,212	-	-	370	370	-	-	842	842	-	-
2015	WECC		Avista Corporation	U.S.	422,511	422,511	-	-	128,870	128,870	-	-	293,641	293,641	-	-
2015	WECC		Big Bend Electric Cooperative, Inc.	U.S.	6,897	6,897	-	-	2,104	2,104	-	-	4,793	4,793	-	-
2015	WECC		City of Cheney	U.S.	6,579	6,579	-	-	2,007	2,007	-	-	4,572	4,572	-	-
2015	WECC		City of Chewelah	U.S.	1,015	1,015	-	-	310	310	-	-	705	705	-	-
2015	WECC		City of Plummer	U.S.	1,500	1,500	-	-	458	458	-	-	1,042	1,042	-	-
2015	WECC		Clearwater Cooperative, Inc	U.S.	7,225	7,225	-	-	2,204	2,204	-	-	5,022	5,022	-	-
2015	WECC		Consolidated Irrigation District No. 19	U.S.	356	356	-	-	109	109	-	-	248	248	-	-
2015	WECC		Idaho County Light and Power Cooperative Association, Inc.	U.S.	2,551	2,551	-	-	778	778	-	-	1,773	1,773	-	-
2015	WECC		Inland Power and Light Company	U.S.	21,017	21,017	-	-	6,410	6,410	-	-	14,606	14,606	-	-
2015	WECC		Kaiser Aluminum Fabricated Products LLC	U.S.	14,038	14,038	-	-	4,282	4,282	-	-	9,756	9,756	-	-
2015	WECC		Kootenai Electric Cooperative, Inc.	U.S.	21,136	21,136	-	-	6,447	6,447	-	-	14,690	14,690	-	-
2015	WECC		Modern Electric Water Company	U.S.	10,489	10,489	-	-	3,199	3,199	-	-	7,290	7,290	-	-
2015	WECC		Northern Lights, Inc.	U.S.	1,542	1,542	-	-	470	470	-	-	1,071	1,071	-	-
2015	WECC		Pend Oreille County PUD No. 1	U.S.	37,621	37,621	-	-	11,475	11,475	-	-	26,146	26,146	-	-
2015	WECC		PUD No. 1 of Asotin County	U.S.	247	247	-	-	75	75	-	-	172	172	-	-
2015	WECC		PUD No. 2 of Grant County	U.S.	4,354	4,354	-	-	1,328	1,328	-	-	3,026	3,026	-	-
2015	WECC		U.S. BOR East Greenacres (Rathdrum)	U.S.	189	189	-	-	58	58	-	-	131	131	-	-
2015	WECC		U.S. Bor Spokane Indian Development	U.S.	164	164	-	-	50	50	-	-	114	114	-	-
2015	WECC		US Air Force Base, Fairchild	U.S.	2,172	2,172	-	-	662	662	-	-	1,509	1,509	-	-
2015	WECC		City of Redding	U.S.	35,177	35,177	-	-	10,729	10,729	-	-	24,448	24,448	-	-
2015	WECC		City of Roseville	U.S.	55,187	55,187	-	-	16,832	16,832	-	-	38,354	38,354	-	-

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total ERO Assessments (NERC, RE & WIRAB Costs)				Total NERC Assessments				Total Regional Entity Assessments (Including WIRAB Assessments)			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total
2015	WECC		Modesto Irrigation District	U.S.	117,031	117,031	-	-	35,696	35,696	-	-	81,336	81,336	-	-
2015	WECC		Sacramento Municipal Utility District	U.S.	503,077	503,077	-	-	153,443	153,443	-	-	349,634	349,634	-	-
2015	WECC		Western Area Power Administration - Sierra Nevada Region	U.S.	57,456	57,456	-	-	17,525	17,525	-	-	39,932	39,932	-	-
2015	WECC		Bonneville Power Administration	U.S.	2,397,290	2,397,290	-	-	731,197	731,197	-	-	1,666,093	1,666,093	-	-
2015	WECC		California Independent System Operator	U.S.	10,292,085	10,292,085	-	-	3,139,186	3,139,186	-	-	7,152,900	7,152,900	-	-
2015	WECC		El Paso Electric Company	U.S.	377,422	377,422	-	-	115,117	115,117	-	-	262,305	262,305	-	-
2015	WECC		Bonneville Power Administration	U.S.	81,289	81,289	-	-	24,794	24,794	-	-	56,495	56,495	-	-
2015	WECC		Idaho Power Company	U.S.	683,639	683,639	-	-	208,517	208,517	-	-	475,122	475,122	-	-
2015	WECC		PacifiCorp	U.S.	92	92	-	-	28	28	-	-	64	64	-	-
2015	WECC		Imperial Irrigation District	U.S.	164,553	164,553	-	-	50,190	50,190	-	-	114,363	114,363	-	-
2015	WECC		Los Angeles Department of Water and Power	U.S.	1,292,973	1,292,973	-	-	394,369	394,369	-	-	898,603	898,603	-	-
2015	WECC		City of Henderson	U.S.	1,894	1,894	-	-	578	578	-	-	1,316	1,316	-	-
2015	WECC		City of Las Vegas	U.S.	1,963	1,963	-	-	599	599	-	-	1,365	1,365	-	-
2015	WECC		City of North Las Vegas	U.S.	943	943	-	-	288	288	-	-	656	656	-	-
2015	WECC		Clark County Water Resources	U.S.	3,724	3,724	-	-	1,136	1,136	-	-	2,588	2,588	-	-
2015	WECC		Colorado River Commission of Nevada	U.S.	40,262	40,262	-	-	12,280	12,280	-	-	27,982	27,982	-	-
2015	WECC		Las Vegas Valley Water District	U.S.	4,459	4,459	-	-	1,360	1,360	-	-	3,099	3,099	-	-
2015	WECC		Nevada Power Company dba NV Energy	U.S.	1,008,632	1,008,632	-	-	307,643	307,643	-	-	700,990	700,990	-	-
2015	WECC		Overton Power District No. 5	U.S.	17,514	17,514	-	-	5,342	5,342	-	-	12,172	12,172	-	-
2015	WECC		Southern Nevada Water Authority	U.S.	5,222	5,222	-	-	1,593	1,593	-	-	3,629	3,629	-	-
2015	WECC		Bonneville Power Administration	U.S.	34,522	34,522	-	-	10,530	10,530	-	-	23,993	23,993	-	-
2015	WECC		Basin Electric Power Cooperative	U.S.	18,442	18,442	-	-	5,625	5,625	-	-	12,817	12,817	-	-
2015	WECC		NorthWestern Corp. dba NorthWestern Energy, LLC	U.S.	413,388	413,388	-	-	126,087	126,087	-	-	287,301	287,301	-	-
2015	WECC		Southern Montana Electric Generation & Transmission	U.S.	16,773	16,773	-	-	5,116	5,116	-	-	11,657	11,657	-	-
2015	WECC		Western Area Power Administration-Upper Great Plains Region	U.S.	330	330	-	-	101	101	-	-	229	229	-	-
2015	WECC		PacifiCorp	U.S.	2,206,508	2,206,508	-	-	673,006	673,006	-	-	1,533,502	1,533,502	-	-
2015	WECC		PacifiCorp West (PACW)	U.S.	938,861	938,861	-	-	286,362	286,362	-	-	652,499	652,499	-	-
2015	WECC		Bonneville Power Administration	U.S.	410	410	-	-	125	125	-	-	285	285	-	-
2015	WECC		Canby Public Utility Board	U.S.	6,946	6,946	-	-	2,119	2,119	-	-	4,828	4,828	-	-
2015	WECC		Columbia River PUD	U.S.	12,628	12,628	-	-	3,852	3,852	-	-	8,776	8,776	-	-
2015	WECC		Constellation New Energy	U.S.	3,375	3,375	-	-	1,029	1,029	-	-	2,345	2,345	-	-
2015	WECC		Noble Americas Energy Solutions, LLC	U.S.	73,912	73,912	-	-	22,544	22,544	-	-	51,368	51,368	-	-
2015	WECC		PacifiCorp	U.S.	192	192	-	-	58	58	-	-	133	133	-	-
2015	WECC		Portland General Electric Company	U.S.	827,854	827,854	-	-	252,503	252,503	-	-	575,350	575,350	-	-
2015	WECC		Shell Energy North America	U.S.	964	964	-	-	294	294	-	-	670	670	-	-
2015	WECC		West Oregon Electric Cooperative, Inc.	U.S.	548	548	-	-	167	167	-	-	381	381	-	-
2015	WECC		Arkansas River Power Authority (ARPA)	U.S.	12,041	12,041	-	-	3,673	3,673	-	-	8,368	8,368	-	-
2015	WECC		Black Hills Colorado Electric	U.S.	91,618	91,618	-	-	27,944	27,944	-	-	63,674	63,674	-	-
2015	WECC		Burlington	U.S.	2,290	2,290	-	-	699	699	-	-	1,592	1,592	-	-
2015	WECC		Colorado Springs Utilities	U.S.	1,300	1,300	-	-	396	396	-	-	903	903	-	-
2015	WECC		Grand Valley Power	U.S.	10,752	10,752	-	-	3,280	3,280	-	-	7,473	7,473	-	-
2015	WECC		Holy Cross Energy	U.S.	51,112	51,112	-	-	15,590	15,590	-	-	35,522	35,522	-	-
2015	WECC		Intermountain Rural Electric Association	U.S.	98,808	98,808	-	-	30,138	30,138	-	-	68,671	68,671	-	-
2015	WECC		Municipal Energy Agency of Nebraska	U.S.	7,749	7,749	-	-	2,363	2,363	-	-	5,385	5,385	-	-
2015	WECC		Platte River Power Authority	U.S.	145,244	145,244	-	-	44,301	44,301	-	-	100,943	100,943	-	-
2015	WECC		Public Service Company of Colorado (Xcel)	U.S.	1,560,678	1,560,678	-	-	476,022	476,022	-	-	1,084,656	1,084,656	-	-
2015	WECC		Raton Public Service	U.S.	2,292	2,292	-	-	699	699	-	-	1,593	1,593	-	-
2015	WECC		Town of Center	U.S.	650	650	-	-	198	198	-	-	451	451	-	-
2015	WECC		Tri-State Generation & Transmission Assoc. Inc - Reliability	U.S.	113,199	113,199	-	-	34,527	34,527	-	-	78,672	78,672	-	-
2015	WECC		Western Area Power - Loveland, CO	U.S.	1,478	1,478	-	-	451	451	-	-	1,028	1,028	-	-
2015	WECC		Yampa Valley Electric Association	U.S.	24,065	24,065	-	-	7,340	7,340	-	-	16,725	16,725	-	-
2015	WECC		City of Aztec Electric Dept	U.S.	2,106	2,106	-	-	642	642	-	-	1,464	1,464	-	-
2015	WECC		City of Gallup	U.S.	10,101	10,101	-	-	3,081	3,081	-	-	7,020	7,020	-	-
2015	WECC		Jicarilla Apache Nation Power Authority	U.S.	997	997	-	-	304	304	-	-	693	693	-	-
2015	WECC		Navajo Tribal Utility Authority	U.S.	10,127	10,127	-	-	3,089	3,089	-	-	7,038	7,038	-	-
2015	WECC		Navapache Electric Cooperative, Inc.	U.S.	19,395	19,395	-	-	5,916	5,916	-	-	13,480	13,480	-	-
2015	WECC		Public Service Company of New Mexico	U.S.	424,897	424,897	-	-	129,598	129,598	-	-	295,299	295,299	-	-
2015	WECC		The Incorporated County of Los Alamos	U.S.	25,298	25,298	-	-	7,716	7,716	-	-	17,582	17,582	-	-
2015	WECC		Tri-State Generation & Transmission Association, Inc.	U.S.	140,863	140,863	-	-	42,965	42,965	-	-	97,898	97,898	-	-
2015	WECC		US Dept of Energy - Kirtland AFB	U.S.	19,132	19,132	-	-	5,835	5,835	-	-	13,296	13,296	-	-
2015	WECC		Public Utility District No. 1 of Chelan County	U.S.	170,826	170,826	-	-	52,104	52,104	-	-	118,722	118,722	-	-
2015	WECC		PUD No. 1 of Douglas County	U.S.	35,131	35,131	-	-	10,715	10,715	-	-	24,416	24,416	-	-
2015	WECC		Okanogan PUD	U.S.	29,127	29,127	-	-	8,884	8,884	-	-	20,243	20,243	-	-
2015	WECC		BPA - Douglas Pumping	U.S.	1,270	1,270	-	-	387	387	-	-	883	883	-	-
2015	WECC		BPA - Okanogan Pumping	U.S.	1,715	1,715	-	-	523	523	-	-	1,192	1,192	-	-
2015	WECC		BPA - Okanogan REA	U.S.	2,676	2,676	-	-	816	816	-	-	1,860	1,860	-	-
2015	WECC		BPA - USBR Load	U.S.	6,473	6,473	-	-	1,974	1,974	-	-	4,498	4,498	-	-

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total ERO Assessments (NERC, RE & WIRAB Costs)				Total NERC Assessments				Total Regional Entity Assessments (Including WIRAB Assessments)			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total
2015	WECC		BPA - Big Bend/Schrag Load	U.S.	2,007	2,007	-	-	612	612	-	-	1,395	1,395	-	-
2015	WECC		BPA - Kittitas Load	U.S.	345	345	-	-	105	105	-	-	240	240	-	-
2015	WECC		Douglas Palisades / PUD No. 1 of DC	U.S.	871	871	-	-	266	266	-	-	605	605	-	-
2015	WECC		PUD No. 2 of Grant County	U.S.	203,518	203,518	-	-	62,075	62,075	-	-	141,443	141,443	-	-
2015	WECC		City of Blaine	U.S.	3,460	3,460	-	-	1,055	1,055	-	-	2,404	2,404	-	-
2015	WECC		City of Sumas	U.S.	1,308	1,308	-	-	399	399	-	-	909	909	-	-
2015	WECC		Port of Seattle - Seattle-Tacoma International Airport	U.S.	6,414	6,414	-	-	1,956	1,956	-	-	4,457	4,457	-	-
2015	WECC		PUD No. 1 of Kittitas County	U.S.	721	721	-	-	220	220	-	-	501	501	-	-
2015	WECC		PUD No. 1 of Whatcom County	U.S.	293	293	-	-	89	89	-	-	204	204	-	-
2015	WECC		Puget Sound Energy, Inc.	U.S.	1,055,789	1,055,789	-	-	322,026	322,026	-	-	733,763	733,763	-	-
2015	WECC		Tanner Electric Cooperative	U.S.	4,268	4,268	-	-	1,302	1,302	-	-	2,966	2,966	-	-
2015	WECC		Salt River Project	U.S.	1,309,872	1,309,872	-	-	399,524	399,524	-	-	910,348	910,348	-	-
2015	WECC		Seattle City Light	U.S.	432,720	432,720	-	-	131,984	131,984	-	-	300,736	300,736	-	-
2015	WECC		Barrick Goldstrike Mines Inc.	U.S.	71,714	71,714	-	-	21,874	21,874	-	-	49,841	49,841	-	-
2015	WECC		City of Fallon	U.S.	4,032	4,032	-	-	1,230	1,230	-	-	2,802	2,802	-	-
2015	WECC		Harney Electric Cooperative, Inc.	U.S.	14,053	14,053	-	-	4,286	4,286	-	-	9,766	9,766	-	-
2015	WECC		Mt. Wheeler Power	U.S.	24,338	24,338	-	-	7,423	7,423	-	-	16,915	16,915	-	-
2015	WECC		Sierra Pacific Power Company dba NV Energy	U.S.	381,726	381,726	-	-	116,430	116,430	-	-	265,296	265,296	-	-
2015	WECC		Truckee Donner Public Utility District	U.S.	6,876	6,876	-	-	2,097	2,097	-	-	4,779	4,779	-	-
2015	WECC		Wells Rural Electric Cooperative	U.S.	45,102	45,102	-	-	13,757	13,757	-	-	31,346	31,346	-	-
2015	WECC		City of Tacoma DBA Tacoma Power	U.S.	215,369	215,369	-	-	65,690	65,690	-	-	149,679	149,679	-	-
2015	WECC		Tucson Electric Power Company	U.S.	666,330	666,330	-	-	203,237	203,237	-	-	463,093	463,093	-	-
2015	WECC		Merced Irrigation District	U.S.	21,222	21,222	-	-	6,473	6,473	-	-	14,749	14,749	-	-
2015	WECC		Turlock Irrigation District	U.S.	95,978	95,978	-	-	29,274	29,274	-	-	66,704	66,704	-	-
2015	WECC		Basin Electric Power Cooperative	U.S.	120,890	120,890	-	-	36,873	36,873	-	-	84,017	84,017	-	-
2015	WECC		Black Hills Power/Cheyenne Light Fuel & Power	U.S.	160,585	160,585	-	-	48,980	48,980	-	-	111,605	111,605	-	-
2015	WECC		Black Hills State University South Dakota	U.S.	868	868	-	-	265	265	-	-	603	603	-	-
2015	WECC		City of Page	U.S.	4,102	4,102	-	-	1,251	1,251	-	-	2,851	2,851	-	-
2015	WECC		Colorado Springs Utilities	U.S.	204,209	204,209	-	-	62,286	62,286	-	-	141,923	141,923	-	-
2015	WECC		Deseret Generation & Transmission Cooperative	U.S.	5,164	5,164	-	-	1,575	1,575	-	-	3,589	3,589	-	-
2015	WECC		City of Farmington	U.S.	48,010	48,010	-	-	14,644	14,644	-	-	33,367	33,367	-	-
2015	WECC		Municipal Energy Agency of Nebraska	U.S.	28,241	28,241	-	-	8,614	8,614	-	-	19,627	19,627	-	-
2015	WECC		Navajo Agricultural Products Industry (NAPI)	U.S.	124	124	-	-	38	38	-	-	86	86	-	-
2015	WECC		Nebraska Public Power Marketing	U.S.	114	114	-	-	35	35	-	-	79	79	-	-
2015	WECC		PacifiCorp	U.S.	5,008	5,008	-	-	1,528	1,528	-	-	3,481	3,481	-	-
2015	WECC		Public Service Company of Colorado (Xcel)	U.S.	3,336	3,336	-	-	1,018	1,018	-	-	2,318	2,318	-	-
2015	WECC		Town of Fredonia	U.S.	461	461	-	-	141	141	-	-	321	321	-	-
2015	WECC		Tri-State Generation & Transmission Assoc. Inc - Reliability	U.S.	336,623	336,623	-	-	102,673	102,673	-	-	233,950	233,950	-	-
2015	WECC		Western Area Power - Loveland, CO	U.S.	104,359	104,359	-	-	31,831	31,831	-	-	72,529	72,529	-	-
2015	WECC		Western Area Power Administration - CRSP	U.S.	95,629	95,629	-	-	29,168	29,168	-	-	66,461	66,461	-	-
2015	WECC		Wyoming Municipal Power Agency	U.S.	11,770	11,770	-	-	3,590	3,590	-	-	8,180	8,180	-	-
2015	WECC		Basin Electric Power Cooperative	U.S.	2,717	2,717	-	-	829	829	-	-	1,889	1,889	-	-
2015	WECC		Southern Montana Electric Generation & Transmission	U.S.	570	570	-	-	174	174	-	-	396	396	-	-
2015	WECC		Central Montana Electric Power Cooperative	U.S.	2,766	2,766	-	-	844	844	-	-	1,922	1,922	-	-
2015	WECC		Montana-Dakota Utilities Co.	U.S.	1,059	1,059	-	-	323	323	-	-	736	736	-	-
2015	WECC		NorthWestern Corp. dba NorthWestern Energy, LLC	U.S.	10,534	10,534	-	-	3,213	3,213	-	-	7,321	7,321	-	-
2015	WECC		Western Area Power Administration-Upper Great Plains Region	U.S.	18,527	18,527	-	-	5,651	5,651	-	-	12,876	12,876	-	-
2015	WECC		Aha Macav Power Service	U.S.	715	715	-	-	218	218	-	-	497	497	-	-
2015	WECC		Bureau of Reclamation (Wellfield) - c/o DSM EMMO	U.S.	455	455	-	-	139	139	-	-	316	316	-	-
2015	WECC		Central Arizona Water Conservation District	U.S.	108,426	108,426	-	-	33,071	33,071	-	-	75,355	75,355	-	-
2015	WECC		City of Mesa	U.S.	11,569	11,569	-	-	3,529	3,529	-	-	8,040	8,040	-	-
2015	WECC		City of Needles	U.S.	1,328	1,328	-	-	405	405	-	-	923	923	-	-
2015	WECC		Colorado River Agency-Bureau of Indian Affairs	U.S.	1,060	1,060	-	-	323	323	-	-	737	737	-	-
2015	WECC		Electrical District #2	U.S.	8,689	8,689	-	-	2,650	2,650	-	-	6,039	6,039	-	-
2015	WECC		Electrical District #2 - Coolidge Generating Station	U.S.	410	410	-	-	125	125	-	-	285	285	-	-
2015	WECC		Silver State Energy - c/o Colorado River Commission of Nevada	U.S.	28,891	28,891	-	-	8,812	8,812	-	-	20,079	20,079	-	-
2015	WECC		Arizona Electric Power Cooperative, Inc	U.S.	117,674	117,674	-	-	35,892	35,892	-	-	81,782	81,782	-	-
2015	WECC		U.S. Army Yuma Proving Ground	U.S.	887	887	-	-	271	271	-	-	617	617	-	-
2015	WECC		Wellton-Mohawk Irrigation & Drainage District	U.S.	323	323	-	-	99	99	-	-	225	225	-	-
2015	WECC		Western Area Power Administration-Desert Southwest Region	U.S.	71,389	71,389	-	-	21,774	21,774	-	-	49,615	49,615	-	-
TOTAL WECC					37,757,683	32,771,016	4,396,135	590,532	11,574,231	9,995,477	1,401,802	176,951	26,183,452	22,775,539	2,994,332	413,581
TOTAL ERO					170,907,780	154,832,467	15,484,781	590,532	59,856,314	54,326,337	5,353,026	176,951	111,051,466	100,506,130	10,131,755	413,581

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total ERO Assessments (NERC, RE & WIRAB Costs)				Total NERC Assessments				Total Regional Entity Assessments (Including WIRAB Assessments)				
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	
Summary by Regional Entity																	
2015	FRCC				9,363,266	9,363,266	-	-	3,199,370	3,199,370	-	-	6,163,896	6,163,896	-	-	
2015	MRO				14,368,560	11,934,833	2,433,728	-	3,874,215	3,217,546	656,669	-	10,494,345	8,717,286	1,777,059	-	
2015	NPCC				21,484,314	12,829,396	8,654,918	-	7,229,254	3,934,700	3,294,554	-	14,255,060	8,894,696	5,360,364	-	
2015	RF				31,727,536	31,727,536	-	-	12,166,655	12,166,655	-	-	19,560,881	19,560,881	-	-	
2015	SERC				29,691,789	29,691,789	-	-	13,985,766	13,985,766	-	-	15,706,023	15,706,023	-	-	
2015	SPP				12,169,883	12,169,883	-	-	3,077,330	3,077,330	-	-	9,092,553	9,092,553	-	-	
2015	TRE				14,344,749	14,344,749	-	-	4,749,493	4,749,493	-	-	9,595,256	9,595,256	-	-	
2015	WECC				37,757,683	32,771,016	4,396,135	590,532	11,574,231	9,995,477	1,401,802	176,951	26,183,452	22,775,539	2,994,332	413,581	
Total					170,907,780	154,832,467	15,484,781	590,532	59,856,314	54,326,337	5,353,026	176,951	111,051,466	100,506,130	10,131,755	413,581	

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NERC Assessments				NERC NEL Assessments				Penalty Sanctions		NERC Compliance Credits			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Mexico Total
2015	FRCC	1074	Alachua, City of	U.S.	1,764	1,764	-	-	1,746	1,746	-	-	(36)	(36)	53	53	-	-
2015	FRCC	1075	Bartow, City of	U.S.	3,929	3,929	-	-	3,890	3,890	-	-	(80)	(80)	119	119	-	-
2015	FRCC	1076	Chattahoochee, City of	U.S.	537	537	-	-	532	532	-	-	(11)	(11)	16	16	-	-
2015	FRCC	1077	Florida Keys Electric Cooperative Assn	U.S.	10,692	10,692	-	-	10,586	10,586	-	-	(216)	(216)	323	323	-	-
2015	FRCC	1078	Florida Power & Light Co.	U.S.	1,582,256	1,582,256	-	-	1,566,563	1,566,563	-	-	(32,038)	(32,038)	47,731	47,731	-	-
2015	FRCC	1079	Florida Public Utilities Company	U.S.	4,802	4,802	-	-	4,755	4,755	-	-	(97)	(97)	145	145	-	-
2015	FRCC	1080	Gainesville Regional Utilities	U.S.	24,681	24,681	-	-	24,437	24,437	-	-	(500)	(500)	745	745	-	-
2015	FRCC	1081	Homestead, City of	U.S.	7,678	7,678	-	-	7,602	7,602	-	-	(155)	(155)	232	232	-	-
2015	FRCC	1082	JEA	U.S.	170,959	170,959	-	-	169,264	169,264	-	-	(3,462)	(3,462)	5,157	5,157	-	-
2015	FRCC	1083	Lakeland Electric	U.S.	42,630	42,630	-	-	42,207	42,207	-	-	(863)	(863)	1,286	1,286	-	-
2015	FRCC	1626	Lee County Electric Cooperative, Inc	U.S.	55,408	55,408	-	-	54,858	54,858	-	-	(1,122)	(1,122)	1,671	1,671	-	-
2015	FRCC	1661	City of Lake Worth	U.S.	6,505	6,505	-	-	6,440	6,440	-	-	(132)	(132)	196	196	-	-
2015	FRCC	1084	Mount Dora, City of	U.S.	1,288	1,288	-	-	1,275	1,275	-	-	(26)	(26)	39	39	-	-
2015	FRCC	1085	New Smyrna Beach, Utilities Commission of	U.S.	5,905	5,905	-	-	5,846	5,846	-	-	(120)	(120)	178	178	-	-
2015	FRCC	1086	Orlando Utilities Commission	U.S.	86,349	86,349	-	-	85,492	85,492	-	-	(1,748)	(1,748)	2,605	2,605	-	-
2015	FRCC	1087	Duke Energy Florida	U.S.	560,393	560,393	-	-	554,835	554,835	-	-	(11,347)	(11,347)	16,905	16,905	-	-
2015	FRCC	1088	Quincy, City of	U.S.	1,827	1,827	-	-	1,809	1,809	-	-	(37)	(37)	55	55	-	-
2015	FRCC	1089	Reedy Creek Improvement District	U.S.	16,665	16,665	-	-	16,499	16,499	-	-	(337)	(337)	503	503	-	-
2015	FRCC	1090	St. Cloud, City of (OUC)	U.S.	9,505	9,505	-	-	9,411	9,411	-	-	(192)	(192)	287	287	-	-
2015	FRCC	1091	Tallahassee, City of	U.S.	37,857	37,857	-	-	37,481	37,481	-	-	(767)	(767)	1,142	1,142	-	-
2015	FRCC	1092	Tampa Electric Company	U.S.	274,176	274,176	-	-	271,457	271,457	-	-	(5,552)	(5,552)	8,271	8,271	-	-
2015	FRCC	1603	City of Vero Beach	U.S.	10,637	10,637	-	-	10,532	10,532	-	-	(215)	(215)	321	321	-	-
2015	FRCC	1093	Wauchula, City of	U.S.	886	886	-	-	878	878	-	-	(18)	(18)	27	27	-	-
2015	FRCC	1094	Williston, City of	U.S.	480	480	-	-	475	475	-	-	(10)	(10)	14	14	-	-
2015	FRCC	1095	Winter Park, City of	U.S.	6,299	6,299	-	-	6,237	6,237	-	-	(128)	(128)	190	190	-	-
2015	FRCC	1072	Florida Municipal Power Agency	U.S.	81,200	81,200	-	-	80,395	80,395	-	-	(1,644)	(1,644)	2,450	2,450	-	-
2015	FRCC	1073	Seminole Electric Cooperative	U.S.	194,061	194,061	-	-	192,137	192,137	-	-	(3,929)	(3,929)	5,854	5,854	-	-
			TOTAL FRCC		3,199,370	3,199,370	-	-	3,167,637	3,167,637	-	-	(64,781)	(64,781)	96,513	96,513	-	-
2015	MRO	1199	Basin Electric Power Cooperative	U.S.	232,054	232,054	-	-	229,753	229,753	-	-	(4,699)	(4,699)	7,000	7,000	-	-
2015	MRO	1201	Central Iowa Power Cooperative (CIPCO)	U.S.	37,142	37,142	-	-	36,773	36,773	-	-	(752)	(752)	1,120	1,120	-	-
2015	MRO	1204	Corn Belt Power Cooperative	U.S.	25,646	25,646	-	-	25,392	25,392	-	-	(519)	(519)	774	774	-	-
2015	MRO	1207	Dairyland Power Cooperative	U.S.	73,582	73,582	-	-	72,852	72,852	-	-	(1,490)	(1,490)	2,220	2,220	-	-
2015	MRO	1210	Great River Energy	U.S.	185,040	185,040	-	-	183,204	183,204	-	-	(3,747)	(3,747)	5,582	5,582	-	-
2015	MRO	1222	Minnkota Power Cooperative, Inc.	U.S.	58,611	58,611	-	-	58,030	58,030	-	-	(1,187)	(1,187)	1,768	1,768	-	-
2015	MRO	1230	Nebraska Public Power District	U.S.	182,922	182,922	-	-	181,108	181,108	-	-	(3,704)	(3,704)	5,518	5,518	-	-
2015	MRO	1232	Omaha Public Power District	U.S.	149,051	149,051	-	-	147,572	147,572	-	-	(3,018)	(3,018)	4,496	4,496	-	-
2015	MRO	1237	Southern Montana Generation and Transmission	U.S.	136	136	-	-	134	134	-	-	(3)	(3)	4	4	-	-
2015	MRO	1240	Western Area Power Administration (UM)	U.S.	75,286	75,286	-	-	74,539	74,539	-	-	(1,524)	(1,524)	2,271	2,271	-	-
2015	MRO	1239	Western Area Power Administration (LM)	U.S.	1,919	1,919	-	-	1,900	1,900	-	-	(39)	(39)	58	58	-	-
2015	MRO	1217	Manitoba Hydro	CAN	327,573	-	327,573	-	317,887	-	317,887	-	-	-	9,686	-	9,686	-
2015	MRO	1235	SaskPower	CAN	329,096	-	329,096	-	319,365	-	319,365	-	-	-	9,731	-	9,731	-
2015	MRO	1195	Alliant Energy (Alliant East - WPL & Alliant West IPL)	U.S.	394,649	394,649	-	-	390,735	390,735	-	-	(7,991)	(7,991)	11,905	11,905	-	-
2015	MRO	1710	Dahlberg Electric Company	U.S.	1,581	1,581	-	-	1,565	1,565	-	-	(32)	(32)	48	48	-	-
2015	MRO	1216	Madison, Gas and Electric	U.S.	46,811	46,811	-	-	46,347	46,347	-	-	(948)	(948)	1,412	1,412	-	-
2015	MRO	1220	MidAmerican Energy Company	U.S.	327,340	327,340	-	-	324,093	324,093	-	-	(6,628)	(6,628)	9,875	9,875	-	-
2015	MRO	1221	Minnesota Power	U.S.	166,736	166,736	-	-	165,082	165,082	-	-	(3,376)	(3,376)	5,030	5,030	-	-
2015	MRO	1226	Montana-Dakota Utilities Co.	U.S.	44,179	44,179	-	-	43,741	43,741	-	-	(895)	(895)	1,333	1,333	-	-
2015	MRO	1711	North Central Power Company	U.S.	4,773	4,773	-	-	4,726	4,726	-	-	(97)	(97)	144	144	-	-
2015	MRO	1231	NorthWestern Energy	U.S.	21,067	21,067	-	-	20,858	20,858	-	-	(427)	(427)	636	636	-	-
2015	MRO	1712	NorthWestern Wisconsin	U.S.	2,492	2,492	-	-	2,467	2,467	-	-	(50)	(50)	75	75	-	-
2015	MRO	1233	Otter Tail Power Company	U.S.	64,356	64,356	-	-	63,717	63,717	-	-	(1,303)	(1,303)	1,941	1,941	-	-
2015	MRO	1664	Wisconsin Public Service (WPS)	U.S.	165,279	165,279	-	-	163,640	163,640	-	-	(3,347)	(3,347)	4,986	4,986	-	-
2015	MRO	1665	Upper Peninsula Power Company (UPPCO)	U.S.	10,360	10,360	-	-	10,258	10,258	-	-	(210)	(210)	313	313	-	-
2015	MRO	1244	Xcel Energy Company (NSP)	U.S.	606,882	606,882	-	-	600,863	600,863	-	-	(12,288)	(12,288)	18,307	18,307	-	-
2015	MRO	1196	Ames Municipal Electric System	U.S.	10,986	10,986	-	-	10,877	10,877	-	-	(222)	(222)	331	331	-	-
2015	MRO	1604	Atlantic Municipal Utilities	U.S.	1,100	1,100	-	-	1,089	1,089	-	-	(22)	(22)	33	33	-	-
2015	MRO	1476	Badger Power Marketing Authority of Wisconsin, Inc.	U.S.	5,239	5,239	-	-	5,187	5,187	-	-	(106)	(106)	158	158	-	-
2015	MRO	1713	Bloomer Electric & Water Co.	U.S.	757	757	-	-	750	750	-	-	(15)	(15)	23	23	-	-
2015	MRO	1714	Village of Caddott	U.S.	190	190	-	-	188	188	-	-	(4)	(4)	6	6	-	-
2015	MRO	1200	Cedar Falls Municipal Utilities	U.S.	7,017	7,017	-	-	6,947	6,947	-	-	(142)	(142)	212	212	-	-
2015	MRO	1477	Central Minnesota Municipal Power Agency (CMMPA)	U.S.	6,352	6,352	-	-	6,289	6,289	-	-	(129)	(129)	192	192	-	-
2015	MRO	1715	Village of Centuria	U.S.	82	82	-	-	81	81	-	-	(2)	(2)	2	2	-	-
2015	MRO	1716	Eldridge Electric and Water Utilities	U.S.	576	576	-	-	570	570	-	-	(12)	(12)	17	17	-	-
2015	MRO	1203	City of Escanaba	U.S.	1,995	1,995	-	-	1,976	1,976	-	-	(40)	(40)	60	60	-	-
2015	MRO	1205	Falls City Water & Light Department	U.S.	776	776	-	-	768	768	-	-	(16)	(16)	23	23	-	-
2015	MRO	1206	Fremont Department of Utilities	U.S.	5,575	5,575	-	-	5,520	5,520	-	-	(113)	(113)	168	168	-	-
2015	MRO	1208	Geneseo Municipal Utilities	U.S.	873	873	-	-	865	865	-	-	(18)	(18)	26	26	-	-
2015	MRO	1209	Grand Island Utilities Department	U.S.	10,163	10,163	-	-	10,062	10,062	-	-	(206)	(206)	307	307	-	-
2015	MRO	1717	Great Lakes Utilities	U.S.	5,344	5,344	-	-	5,291	5,291	-	-	(108)	(108)	161	161	-	-
2015	MRO	1718	City of Guttenberg	U.S.	249	249	-	-	246	246	-	-	(5)	(5)	8	8	-	-
2015	MRO	1606	Harlan Municipal Utilities	U.S.	862	862	-	-	854	854	-	-	(17)	(17)	26	26	-	-
2015	MRO	1211	Hastings Utilities	U.S.	5,657	5,657	-	-	5,601	5,601	-	-	(115)	(115)	171	171	-	-
2015	MRO	1212	Heartland Consumers Power District	U.S.	11,728	11,728	-	-	11,612	11,612	-	-	(237)	(237)	354	354	-	-
2015	MRO	1213	Hutchinson Utilities Commission	U.S.	4,119	4,119	-	-	4,078	4,078	-	-	(83)	(83)	124	124	-	-

Data Year	Regional Entity	ID	Entity	Country	Total NERC Assessments				NERC NEL Assessments				Penalty Sanctions		NERC Compliance Credits			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Mexico Total
2015	MRO	1719	City of Kasota	U.S.	53	53	-	-	53	53	-	-	(1)	(1)	2	2	-	-
2015	MRO	1215	Lincoln Electric System	U.S.	43,649	43,649	-	-	43,217	43,217	-	-	(884)	(884)	1,317	1,317	-	-
2015	MRO	1218	Manitowoc Public Utilities	U.S.	7,489	7,489	-	-	7,415	7,415	-	-	(152)	(152)	226	226	-	-
2015	MRO	1223	Missouri River Energy Services	U.S.	31,764	31,764	-	-	31,449	31,449	-	-	(643)	(643)	958	958	-	-
2015	MRO	1224	MN Municipal Power Agency (MMPA)	U.S.	20,924	20,924	-	-	20,716	20,716	-	-	(424)	(424)	631	631	-	-
2015	MRO	1607	Montezuma Municipal Light & Power	U.S.	403	403	-	-	399	399	-	-	(8)	(8)	12	12	-	-
2015	MRO	1227	Municipal Energy Agency of Nebraska	U.S.	15,140	15,140	-	-	14,989	14,989	-	-	(307)	(307)	457	457	-	-
2015	MRO	1228	Muscataine Power and Water	U.S.	11,954	11,954	-	-	11,836	11,836	-	-	(242)	(242)	361	361	-	-
2015	MRO	1229	Nebraska City Utilities	U.S.	2,294	2,294	-	-	2,271	2,271	-	-	(46)	(46)	69	69	-	-
2015	MRO	1720	Resale Power Group of Iowa	U.S.	7,375	7,375	-	-	7,302	7,302	-	-	(149)	(149)	222	222	-	-
2015	MRO	1721	Rice Lake Utilities	U.S.	2,246	2,246	-	-	2,224	2,224	-	-	(45)	(45)	68	68	-	-
2015	MRO	1234	Rochester Public Utilities	U.S.	27	27	-	-	27	27	-	-	(1)	(1)	1	1	-	-
2015	MRO	1236	Southern Minnesota Municipal Power Agency	U.S.	38,013	38,013	-	-	37,636	37,636	-	-	(770)	(770)	1,147	1,147	-	-
2015	MRO	1722	City of Spooner	U.S.	421	421	-	-	417	417	-	-	(9)	(9)	13	13	-	-
2015	MRO	1723	Village of Trempealeau	U.S.	212	212	-	-	210	210	-	-	(4)	(4)	6	6	-	-
2015	MRO	1241	Willmar Municipal Utilities	U.S.	3,882	3,882	-	-	3,844	3,844	-	-	(79)	(79)	117	117	-	-
2015	MRO	1242	Wisconsin Public Power, Inc. (East and West regions)	U.S.	74,166	74,166	-	-	73,431	73,431	-	-	(1,502)	(1,502)	2,237	2,237	-	-
TOTAL MRO					3,874,215	3,217,546	656,669	-	3,822,887	3,185,634	637,253	-	(65,149)	(65,149)	116,478	97,061	19,416	-
2015	NPCC	1336	New England	U.S.	1,731,311	1,731,311	-	-	1,714,139	1,714,139	-	-	(35,056)	(35,056)	52,227	52,227	-	-
2015	NPCC	1339	New York	U.S.	2,203,390	2,203,390	-	-	2,181,536	2,181,536	-	-	(44,614)	(44,614)	66,468	66,468	-	-
2015	NPCC	1337	Ontario	Canada	1,212,884	-	1,212,884	-	1,849,928	-	1,849,928	-	-	-	(637,044)	-	(637,044)	-
2015	NPCC	1341	Quebec	Canada	1,803,289	-	1,803,289	-	2,492,850	-	2,492,850	-	-	-	(689,561)	-	(689,561)	-
2015	NPCC	1705	New Brunswick	Canada	125,585	-	125,585	-	191,714	-	191,714	-	-	-	(66,129)	-	(66,129)	-
2015	NPCC	1340	Nova Scotia	Canada	152,796	-	152,796	-	148,278	-	148,278	-	-	-	4,518	-	4,518	-
TOTAL NPCC					7,229,254	3,934,700	3,294,554	-	8,578,445	3,895,675	4,682,770	-	(79,670)	(79,670)	(1,269,521)	118,695	(1,388,216)	-
2015	RF	1102	Cannelton Utilities	U.S.	214	214	-	-	212	212	-	-	(4)	(4)	6	6	-	-
2015	RF	1106	City of Croswell	U.S.	544	544	-	-	538	538	-	-	(11)	(11)	16	16	-	-
2015	RF	1490	City of Lansing	U.S.	29,874	29,874	-	-	29,578	29,578	-	-	(605)	(605)	901	901	-	-
2015	RF	1120	Cloverland Electric Cooperative	U.S.	10,117	10,117	-	-	10,017	10,017	-	-	(205)	(205)	305	305	-	-
2015	RF	1122	CMS ERM Michigan LLC	U.S.	1,443	1,443	-	-	1,428	1,428	-	-	(29)	(29)	44	44	-	-
2015	RF	1124	Constellation New Energy (MECS-CONS)	U.S.	11,738	11,738	-	-	11,621	11,621	-	-	(238)	(238)	354	354	-	-
2015	RF	1123	Constellation New Energy (MECS-DET)	U.S.	13,713	13,713	-	-	13,577	13,577	-	-	(278)	(278)	414	414	-	-
2015	RF	1126	Consumers Energy Company	U.S.	449,919	449,919	-	-	445,456	445,456	-	-	(9,110)	(9,110)	13,572	13,572	-	-
2015	RF	1128	Detroit Edison Company	U.S.	621,102	621,102	-	-	614,942	614,942	-	-	(12,576)	(12,576)	18,736	18,736	-	-
2015	RF	1166	Duke Energy Indiana	U.S.	402,756	402,756	-	-	398,762	398,762	-	-	(8,155)	(8,155)	12,150	12,150	-	-
2015	RF	1135	Ferdinand Municipal Light & Water	U.S.	633	633	-	-	627	627	-	-	(13)	(13)	19	19	-	-
2015	RF	1646	FirstEnergy Solutions (MECS-CONS)	U.S.	9,520	9,520	-	-	9,426	9,426	-	-	(193)	(193)	287	287	-	-
2015	RF	1549	FirstEnergy Solutions (MECS-DET)	U.S.	21,723	21,723	-	-	21,507	21,507	-	-	(440)	(440)	655	655	-	-
2015	RF	1145	Hoosier Energy	U.S.	102,021	102,021	-	-	101,009	101,009	-	-	(2,066)	(2,066)	3,078	3,078	-	-
2015	RF	1148	Indiana Municipal Power Agency (DUKE CIN)	U.S.	42,500	42,500	-	-	42,079	42,079	-	-	(861)	(861)	1,282	1,282	-	-
2015	RF	1485	Indiana Municipal Power Agency (NIPSCO)	U.S.	5,856	5,856	-	-	5,798	5,798	-	-	(119)	(119)	177	177	-	-
2015	RF	1486	Indiana Municipal Power Agency (SIGE)	U.S.	8,002	8,002	-	-	7,922	7,922	-	-	(162)	(162)	241	241	-	-
2015	RF	1149	Indianapolis Power & Light Co.	U.S.	195,733	195,733	-	-	193,792	193,792	-	-	(3,963)	(3,963)	5,905	5,905	-	-
2015	RF	1553	Integrus Energy Services (MECS-CONS)	U.S.	13,979	13,979	-	-	13,841	13,841	-	-	(283)	(283)	422	422	-	-
2015	RF	1554	Integrus Energy Services (MECS-DET)	U.S.	14,264	14,264	-	-	14,122	14,122	-	-	(289)	(289)	430	430	-	-
2015	RF	1666	Integrus Energy Services (WEPC)	U.S.	6,109	6,109	-	-	6,048	6,048	-	-	(124)	(124)	184	184	-	-
2015	RF	1614	Just Energy (MECS-DET)	U.S.	608	608	-	-	602	602	-	-	(12)	(12)	18	18	-	-
2015	RF	1154	Michigan Public Power Agency	U.S.	46,257	46,257	-	-	45,799	45,799	-	-	(937)	(937)	1,395	1,395	-	-
2015	RF	1155	Michigan South Central Power Agency	U.S.	9,301	9,301	-	-	9,208	9,208	-	-	(188)	(188)	281	281	-	-
2015	RF	1158	MidAmerican Energy Company Retail	U.S.	410	410	-	-	406	406	-	-	(8)	(8)	12	12	-	-
2015	RF	1163	Northern Indiana Public Service Co.	U.S.	237,105	237,105	-	-	234,753	234,753	-	-	(4,801)	(4,801)	7,153	7,153	-	-
2015	RF	1164	Ontonagon County Rural Electrification Assoc.	U.S.	389	389	-	-	385	385	-	-	(8)	(8)	12	12	-	-
2015	RF	1265	PJM Interconnection, LLC	U.S.	9,306,304	9,306,304	-	-	9,214,002	9,214,002	-	-	(188,434)	(188,434)	280,737	280,737	-	-
2015	RF	1172	Noble Americas Energy Solutions (MECS-CONS)	U.S.	5,539	5,539	-	-	5,484	5,484	-	-	(112)	(112)	167	167	-	-
2015	RF	1171	Noble Americas Energy Solutions (MECS-DET)	U.S.	8,534	8,534	-	-	8,450	8,450	-	-	(173)	(173)	257	257	-	-
2015	RF	1176	Direct Energy (fka:Strategic Energy,LLC) (MECS-CONS)	U.S.	2,622	2,622	-	-	2,596	2,596	-	-	(53)	(53)	79	79	-	-
2015	RF	1174	Direct Energy (fka:Strategic Energy,LLC) (MECS-DET)	U.S.	8,492	8,492	-	-	8,408	8,408	-	-	(172)	(172)	256	256	-	-
2015	RF	1581	Spartan Renewable Energy	U.S.	1,008	1,008	-	-	998	998	-	-	(20)	(20)	30	30	-	-
2015	RF	1180	Thumb Electric Cooperative	U.S.	2,487	2,487	-	-	2,462	2,462	-	-	(50)	(50)	75	75	-	-
2015	RF	1662	Ohio Valley Electric Corporation	U.S.	5,974	5,974	-	-	5,915	5,915	-	-	(121)	(121)	180	180	-	-
2015	RF	1181	Vectren Energy Delivery of IN	U.S.	78,175	78,175	-	-	77,400	77,400	-	-	(1,583)	(1,583)	2,358	2,358	-	-
2015	RF	1183	Village of Sebawaing	U.S.	626	626	-	-	620	620	-	-	(13)	(13)	19	19	-	-
2015	RF	1184	Wabash Valley Power Association Inc. (DUKE CIN)	U.S.	38,451	38,451	-	-	38,070	38,070	-	-	(779)	(779)	1,160	1,160	-	-
2015	RF	1488	Wabash Valley Power Association Inc.(NIPSCO)	U.S.	22,685	22,685	-	-	22,460	22,460	-	-	(459)	(459)	684	684	-	-
2015	RF	1185	Wisconsin Electric Power Co.	U.S.	380,350	380,350	-	-	376,578	376,578	-	-	(7,701)	(7,701)	11,474	11,474	-	-
2015	RF	1189	Wolverine Power Marketing Cooperative	U.S.	11,384	11,384	-	-	11,271	11,271	-	-	(231)	(231)	343	343	-	-
2015	RF	1191	Wolverine Power Supply Cooperative	U.S.	36,227	36,227	-	-	35,868	35,868	-	-	(734)	(734)	1,093	1,093	-	-
2015	RF	1190	Wolverine Power Marketing Cooperative(MECS-DET)	U.S.	1,966	1,966	-	-	1,947	1,947	-	-	(40)	(40)	59	59	-	-
TOTAL RELIABILITYFIRST					12,166,655	12,166,655	-	-	12,045,983	12,045,983	-	-	(246,351)	(246,351)	367,023	367,023	-	-
2015	SERC	1267	Alabama Municipal Electric Authority	U.S.	46,715	46,715	-	-	46,251	46,251	-	-	(946)	(946)	1,409	1,409	-	-
2015	SERC	1268	Alabama Power Company	U.S.	808,616	808,616	-	-	800,596	800,596	-	-	(16,373)	(16,373)	24,393	24,393	-	-
2015	SERC	1269	Ameren - Illinois	U.S.	622,811	622,811	-	-	616,634	616,634	-	-	(12,611)	(12,611)	18,788	18,788	-	-

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NERC Assessments				NERC NEL Assessments				Penalty Sanctions		NERC Compliance Credits			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Mexico Total
2015	SERC	1271	Ameren - Missouri	U.S.	552,197	552,197	-	-	546,721	546,721	-	-	(11,181)	(11,181)	16,658	16,658	-	-
2015	SERC	1272	APGI - Yadkin Division	U.S.	212	212	-	-	210	210	-	-	(4)	(4)	6	6	-	-
2015	SERC	1273	Associated Electric Cooperative Inc.	U.S.	256,759	256,759	-	-	254,212	254,212	-	-	(5,199)	(5,199)	7,745	7,745	-	-
2015	SERC	1582	Beauregard Electric Cooperative, Inc.	U.S.	14,786	14,786	-	-	14,639	14,639	-	-	(299)	(299)	446	446	-	-
2015	SERC	1462	Benton Utility District	U.S.	3,278	3,278	-	-	3,246	3,246	-	-	(66)	(66)	99	99	-	-
2015	SERC	1274	Big Rivers Electric Corporation	U.S.	51,792	51,792	-	-	51,278	51,278	-	-	(1,049)	(1,049)	1,562	1,562	-	-
2015	SERC	1275	Black Warrior EMC	U.S.	5,908	5,908	-	-	5,849	5,849	-	-	(120)	(120)	178	178	-	-
2015	SERC	1276	Blue Ridge EMC	U.S.	18,647	18,647	-	-	18,462	18,462	-	-	(378)	(378)	563	563	-	-
2015	SERC	1628	Brazos Electric Power Cooperative, Inc.	U.S.	6,500	6,500	-	-	6,436	6,436	-	-	(132)	(132)	196	196	-	-
2015	SERC	1463	Canton, MS	U.S.	1,785	1,785	-	-	1,767	1,767	-	-	(36)	(36)	54	54	-	-
2015	SERC	1277	Central Electric Power Cooperative Inc.	U.S.	223,795	223,795	-	-	221,575	221,575	-	-	(4,531)	(4,531)	6,751	6,751	-	-
2015	SERC	1667	Century Aluminum - Hawesville	U.S.	44,440	44,440	-	-	43,999	43,999	-	-	(900)	(900)	1,341	1,341	-	-
2015	SERC	1668	Century Aluminum - Seabee	U.S.	45,740	45,740	-	-	45,286	45,286	-	-	(926)	(926)	1,380	1,380	-	-
2015	SERC	1278	City of Blountstown FL	U.S.	521	521	-	-	516	516	-	-	(11)	(11)	16	16	-	-
2015	SERC	1279	City of Camden SC	U.S.	2,725	2,725	-	-	2,698	2,698	-	-	(55)	(55)	82	82	-	-
2015	SERC	1280	City of Collins MS	U.S.	642	642	-	-	635	635	-	-	(13)	(13)	19	19	-	-
2015	SERC	1281	City of Columbia MO	U.S.	16,336	16,336	-	-	16,174	16,174	-	-	(331)	(331)	493	493	-	-
2015	SERC	1282	City of Conway AR (Conway Corporation)	U.S.	13,834	13,834	-	-	13,697	13,697	-	-	(280)	(280)	417	417	-	-
2015	SERC	1284	City of Evergreen AL	U.S.	783	783	-	-	775	775	-	-	(16)	(16)	24	24	-	-
2015	SERC	1285	City of Hampton GA	U.S.	425	425	-	-	421	421	-	-	(9)	(9)	13	13	-	-
2015	SERC	1286	City of Hartford AL	U.S.	417	417	-	-	413	413	-	-	(8)	(8)	13	13	-	-
2015	SERC	1287	City of Henderson (KY) Municipal Power & Light	U.S.	8,524	8,524	-	-	8,440	8,440	-	-	(173)	(173)	257	257	-	-
2015	SERC	1288	City of North Little Rock AR (DENL)	U.S.	13,198	13,198	-	-	13,067	13,067	-	-	(267)	(267)	398	398	-	-
2015	SERC	1289	City of Orangeburg SC Department of Public Utilities	U.S.	11,564	11,564	-	-	11,450	11,450	-	-	(234)	(234)	349	349	-	-
2015	SERC	1290	City of Robertsdale AL	U.S.	1,197	1,197	-	-	1,185	1,185	-	-	(24)	(24)	36	36	-	-
2015	SERC	1291	City of Ruston LA (DERS)	U.S.	3,800	3,800	-	-	3,763	3,763	-	-	(77)	(77)	115	115	-	-
2015	SERC	1292	Seneca Light & Power	U.S.	2,231	2,231	-	-	2,209	2,209	-	-	(45)	(45)	67	67	-	-
2015	SERC	1115	City of Springfield (CWLP)	U.S.	23,963	23,963	-	-	23,725	23,725	-	-	(485)	(485)	723	723	-	-
2015	SERC	1465	City of Thayer, MO	U.S.	261	261	-	-	258	258	-	-	(5)	(5)	8	8	-	-
2015	SERC	1293	City of Troy AL	U.S.	5,824	5,824	-	-	5,767	5,767	-	-	(118)	(118)	176	176	-	-
2015	SERC	1294	City of West Memphis AR (West Memphis Utilities)	U.S.	5,350	5,350	-	-	5,296	5,296	-	-	(108)	(108)	161	161	-	-
2015	SERC	1583	Claiborne Electric Cooperative, Inc.	U.S.	9,112	9,112	-	-	9,022	9,022	-	-	(185)	(185)	275	275	-	-
2015	SERC	1584	Concordia Electric Cooperative, Inc.	U.S.	3,437	3,437	-	-	3,402	3,402	-	-	(70)	(70)	104	104	-	-
2015	SERC	1283	Dalton Utilities	U.S.	23,702	23,702	-	-	23,467	23,467	-	-	(480)	(480)	715	715	-	-
2015	SERC	1585	Dixie Electric Membership Corporation	U.S.	29,231	29,231	-	-	28,941	28,941	-	-	(592)	(592)	882	882	-	-
2015	SERC	1295	Dominion Virginia Power	U.S.	1,168,970	1,168,970	-	-	1,157,376	1,157,376	-	-	(23,669)	(23,669)	35,263	35,263	-	-
2015	SERC	1296	Duke Energy Carolinas, LLC	U.S.	1,157,612	1,157,612	-	-	1,146,131	1,146,131	-	-	(23,439)	(23,439)	34,921	34,921	-	-
2015	SERC	1466	Durant, MS	U.S.	391	391	-	-	387	387	-	-	(8)	(8)	12	12	-	-
2015	SERC	1478	LG&E and KU Services Company as agent for LG&E Company and KUCompany	U.S.	475,205	475,205	-	-	470,492	470,492	-	-	(9,622)	(9,622)	14,335	14,335	-	-
2015	SERC	1297	East Kentucky Power Cooperative	U.S.	181,182	181,182	-	-	179,385	179,385	-	-	(3,669)	(3,669)	5,466	5,466	-	-
2015	SERC	1298	East Mississippi Electric Power Association	U.S.	5,978	5,978	-	-	5,918	5,918	-	-	(121)	(121)	180	180	-	-
2015	SERC	1669	Electricities of North Carolina Inc	U.S.	161,031	161,031	-	-	159,434	159,434	-	-	(3,261)	(3,261)	4,858	4,858	-	-
2015	SERC	1300	Energy/United EMC	U.S.	33,416	33,416	-	-	33,085	33,085	-	-	(677)	(677)	1,008	1,008	-	-
2015	SERC	1301	Entergy	U.S.	1,602,659	1,602,659	-	-	1,586,763	1,586,763	-	-	(32,451)	(32,451)	48,346	48,346	-	-
2015	SERC	1302	Fayetteville (NC) Public Works Commission	U.S.	29,457	29,457	-	-	29,165	29,165	-	-	(596)	(596)	889	889	-	-
2015	SERC	1303	Florida Public Utilities (FL Panhandle Load)	U.S.	4,290	4,290	-	-	4,247	4,247	-	-	(87)	(87)	129	129	-	-
2015	SERC	1304	French Broad EMC	U.S.	7,047	7,047	-	-	6,977	6,977	-	-	(143)	(143)	213	213	-	-
2015	SERC	1305	Georgia Power Company	U.S.	1,181,698	1,181,698	-	-	1,169,978	1,169,978	-	-	(23,927)	(23,927)	35,647	35,647	-	-
2015	SERC	1306	Georgia System Optns Corporation	U.S.	536,139	536,139	-	-	530,821	530,821	-	-	(10,856)	(10,856)	16,173	16,173	-	-
2015	SERC	1479	Greenwood (MS) Utilities Commission	U.S.	3,963	3,963	-	-	3,924	3,924	-	-	(80)	(80)	120	120	-	-
2015	SERC	1307	Greenwood (SC) Commissioners of Public Works	U.S.	4,502	4,502	-	-	4,457	4,457	-	-	(91)	(91)	136	136	-	-
2015	SERC	1308	Gulf Power Company	U.S.	158,910	158,910	-	-	157,334	157,334	-	-	(3,218)	(3,218)	4,794	4,794	-	-
2015	SERC	1586	Haywood EMC	U.S.	4,208	4,208	-	-	4,166	4,166	-	-	(85)	(85)	127	127	-	-
2015	SERC	1309	Illinois Municipal Electric Agency	U.S.	25,994	25,994	-	-	25,736	25,736	-	-	(526)	(526)	784	784	-	-
2015	SERC	1480	Itta Bena, MS	U.S.	293	293	-	-	290	290	-	-	(6)	(6)	9	9	-	-
2015	SERC	1587	Jefferson Davis Electric Cooperative, Inc.	U.S.	3,935	3,935	-	-	3,896	3,896	-	-	(80)	(80)	119	119	-	-
2015	SERC	1617	Kentucky Municipal Power	U.S.	9,246	9,246	-	-	9,155	9,155	-	-	(187)	(187)	279	279	-	-
2015	SERC	1481	Kosciusko, MS	U.S.	1,035	1,035	-	-	1,024	1,024	-	-	(21)	(21)	31	31	-	-
2015	SERC	1482	Leland, MS	U.S.	461	461	-	-	457	457	-	-	(9)	(9)	14	14	-	-
2015	SERC	1313	McCormick Commission of Public Works	U.S.	285	285	-	-	282	282	-	-	(6)	(6)	9	9	-	-
2015	SERC	1314	Mississippi Power Company	U.S.	144,238	144,238	-	-	142,807	142,807	-	-	(2,921)	(2,921)	4,351	4,351	-	-
2015	SERC	1630	Mt. Carmel Public Utility	U.S.	1,470	1,470	-	-	1,456	1,456	-	-	(30)	(30)	44	44	-	-
2015	SERC	1315	Municipal Electric Authority of Georgia	U.S.	149,098	149,098	-	-	147,619	147,619	-	-	(3,019)	(3,019)	4,498	4,498	-	-
2015	SERC	1316	N.C. Electric Membership Corp.	U.S.	174,201	174,201	-	-	172,474	172,474	-	-	(3,527)	(3,527)	5,255	5,255	-	-
2015	SERC	1588	Northeast Louisiana Power Cooperative, Inc.	U.S.	3,779	3,779	-	-	3,742	3,742	-	-	(77)	(77)	114	114	-	-
2015	SERC	1574	Northern Virginia Electric Cooperative	U.S.	59,610	59,610	-	-	59,019	59,019	-	-	(1,207)	(1,207)	1,798	1,798	-	-
2015	SERC	1319	Old Dominion Electric Cooperative	U.S.	86,011	86,011	-	-	85,158	85,158	-	-	(1,742)	(1,742)	2,595	2,595	-	-
2015	SERC	1618	Osceola (Arkansas) Municipal Light and Power	U.S.	2,204	2,204	-	-	2,182	2,182	-	-	(45)	(45)	66	66	-	-
2015	SERC	1320	Owensboro (KY) Municipal Utilities	U.S.	11,414	11,414	-	-	11,301	11,301	-	-	(231)	(231)	344	344	-	-
2015	SERC	1321	Piedmont EMC in Duke and Progress Areas	U.S.	7,125	7,125	-	-	7,055	7,055	-	-	(144)	(144)	215	215	-	-
2015	SERC	1323	Piedmont Municipal Power Agency (PMPA)	U.S.	31,921	31,921	-	-	31,604	31,604	-	-	(646)	(646)	963	963	-	-
2015	SERC	1589	Pointe Coupee Electric Memb. Corp.	U.S.	3,406	3,406	-	-	3,372	3,372	-	-	(69)	(69)	103	103	-	-
2015	SERC	1266	PowerSouth Energy	U.S.	119,380	119,380	-	-	118,196	118,196	-	-	(2,417)	(2,417)	3,601	3,601	-	-
2015	SERC	1330	Prairie Power, Inc.	U.S.	21,056	21,056	-	-	20,847	20,847	-	-	(426)	(426)	635	635	-	-
2015	SERC	1324	Duke Energy Progress	U.S.	638,753	638,753	-	-	632,417	632,417	-	-	(12,933)	(12,933)	19,269	19,269	-	-

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Data Year	Regional Entity	ID	Entity	Country	Total NERC Assessments				NERC NEL Assessments				Penalty Sanctions		NERC Compliance Credits			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Mexico Total
2015	SERC	1325	Rutherford EMC	U.S.	18,436	18,436	-	-	18,253	18,253	-	-	(373)	(373)	556	556	-	-
2015	SERC	1631	Sam Rayburn G&T Electric Cooperative Inc.	U.S.	25,211	25,211	-	-	24,961	24,961	-	-	(510)	(510)	761	761	-	-
2015	SERC	1326	South Carolina Electric & Gas Company	U.S.	318,268	318,268	-	-	315,111	315,111	-	-	(6,444)	(6,444)	9,601	9,601	-	-
2015	SERC	1327	South Carolina Public Service Authority	U.S.	156,509	156,509	-	-	154,957	154,957	-	-	(3,169)	(3,169)	4,721	4,721	-	-
2015	SERC	1590	South Louisiana Electric Cooperative Association	U.S.	8,699	8,699	-	-	8,613	8,613	-	-	(176)	(176)	262	262	-	-
2015	SERC	1328	South Mississippi Electric Power Association	U.S.	137,555	137,555	-	-	136,191	136,191	-	-	(2,785)	(2,785)	4,150	4,150	-	-
2015	SERC	1329	Southern Illinois Power Cooperative	U.S.	22,657	22,657	-	-	22,432	22,432	-	-	(459)	(459)	683	683	-	-
2015	SERC	1591	Southwest Louisiana Electric Membership Corporation	U.S.	35,522	35,522	-	-	35,170	35,170	-	-	(719)	(719)	1,072	1,072	-	-
2015	SERC	1619	Southwestern Electric Cooperative, Inc.	U.S.	6,205	6,205	-	-	6,143	6,143	-	-	(126)	(126)	187	187	-	-
2015	SERC	1331	Tennessee Valley Authority	U.S.	2,141,027	2,141,027	-	-	2,119,791	2,119,791	-	-	(43,352)	(43,352)	64,587	64,587	-	-
2015	SERC	1632	Tex-La Electric Cooperative of Texas, Inc	U.S.	2,666	2,666	-	-	2,640	2,640	-	-	(54)	(54)	80	80	-	-
2015	SERC	1332	Tombigbee Electric Cooperative Inc.	U.S.	1,780	1,780	-	-	1,762	1,762	-	-	(36)	(36)	54	54	-	-
2015	SERC	1594	Town of Sharpburg, N.C.	U.S.	277	277	-	-	274	274	-	-	(6)	(6)	8	8	-	-
2015	SERC	1595	Town of Stantonburg, N.C. JRO	U.S.	779	779	-	-	771	771	-	-	(16)	(16)	23	23	-	-
2015	SERC	1333	Town of Waynesville NC	U.S.	1,195	1,195	-	-	1,183	1,183	-	-	(24)	(24)	36	36	-	-
2015	SERC	1334	Town of Wintnersboro SC	U.S.	862	862	-	-	854	854	-	-	(17)	(17)	26	26	-	-
2015	SERC	1335	Town of Winterville NC	U.S.	733	733	-	-	725	725	-	-	(15)	(15)	22	22	-	-
2015	SERC	1597	Washington-St.Tammany Electric Cooperative, Inc.	U.S.	14,753	14,753	-	-	14,607	14,607	-	-	(299)	(299)	445	445	-	-
TOTAL SERC					13,985,766	13,985,766	-	-	13,847,051	13,847,051	-	-	(283,184)	(283,184)	421,898	421,898	-	-
2015	SPP	1246	American Electric Power	U.S.	520,620	520,620	-	-	515,457	515,457	-	-	(10,542)	(10,542)	15,705	15,705	-	-
2015	SPP	1707	AEP-VEMCO	U.S.	9,401	9,401	-	-	9,308	9,308	-	-	(190)	(190)	284	284	-	-
2015	SPP	1435	Arkansas Electric Cooperative Corporation	U.S.	185,405	185,405	-	-	183,567	183,567	-	-	(3,754)	(3,754)	5,593	5,593	-	-
2015	SPP	1247	Board of Public Utilities (Kansas City KS)	U.S.	32,842	32,842	-	-	32,516	32,516	-	-	(665)	(665)	991	991	-	-
2015	SPP	1620	Board of Public Utilities, City of McPherson, Kansas	U.S.	12,230	12,230	-	-	12,109	12,109	-	-	(248)	(248)	369	369	-	-
2015	SPP	1647	Carthage City Water & Light	U.S.	4,096	4,096	-	-	4,056	4,056	-	-	(83)	(83)	124	124	-	-
2015	SPP	1469	Central Valley Electric Cooperative	U.S.	11,621	11,621	-	-	11,506	11,506	-	-	(235)	(235)	351	351	-	-
2015	SPP	1556	City of Bentonville	U.S.	9,102	9,102	-	-	9,012	9,012	-	-	(184)	(184)	275	275	-	-
2015	SPP	1557	City of Clarkdale, Mississippi	U.S.	2,268	2,268	-	-	2,245	2,245	-	-	(46)	(46)	68	68	-	-
2015	SPP	1558	Hope Water & Light (HWL)	U.S.	3,863	3,863	-	-	3,824	3,824	-	-	(78)	(78)	117	117	-	-
2015	SPP	1708	City of Abbeville	U.S.	2,028	2,028	-	-	2,008	2,008	-	-	(41)	(41)	61	61	-	-
2015	SPP	1559	City of Minden	U.S.	2,119	2,119	-	-	2,098	2,098	-	-	(43)	(43)	64	64	-	-
2015	SPP	1709	City of Nixa	U.S.	2,229	2,229	-	-	2,207	2,207	-	-	(45)	(45)	67	67	-	-
2015	SPP	1703	City of Chanute	U.S.	6,909	6,909	-	-	6,840	6,840	-	-	(140)	(140)	208	208	-	-
2015	SPP	1636	City of Prescott	U.S.	1,193	1,193	-	-	1,181	1,181	-	-	(24)	(24)	36	36	-	-
2015	SPP	1248	Independence Power & Light (Independence, MO)	U.S.	14,036	14,036	-	-	13,897	13,897	-	-	(284)	(284)	423	423	-	-
2015	SPP	1436	City Utilities of Springfield, MO	U.S.	42,883	42,883	-	-	42,457	42,457	-	-	(868)	(868)	1,294	1,294	-	-
2015	SPP	1249	Cleco Power LLC	U.S.	171,398	171,398	-	-	169,698	169,698	-	-	(3,470)	(3,470)	5,170	5,170	-	-
2015	SPP	1437	East Texas Electric Coop, Inc.	U.S.	5,774	5,774	-	-	5,717	5,717	-	-	(117)	(117)	174	174	-	-
2015	SPP	1250	The Empire District Electric Company	U.S.	72,026	72,026	-	-	71,312	71,312	-	-	(1,458)	(1,458)	2,173	2,173	-	-
2015	SPP	1470	Farmers' Electric Coop	U.S.	4,122	4,122	-	-	4,081	4,081	-	-	(83)	(83)	124	124	-	-
2015	SPP	1438	Golden Spread Electric Coop	U.S.	68,470	68,470	-	-	67,790	67,790	-	-	(1,386)	(1,386)	2,065	2,065	-	-
2015	SPP	1251	Grand River Dam Authority	U.S.	72,173	72,173	-	-	71,457	71,457	-	-	(1,461)	(1,461)	2,177	2,177	-	-
2015	SPP	1648	Jonesboro City Water & Light	U.S.	18,705	18,705	-	-	18,519	18,519	-	-	(379)	(379)	564	564	-	-
2015	SPP	1252	Kansas City Power & Light (KCPL)	U.S.	212,347	212,347	-	-	210,241	210,241	-	-	(4,300)	(4,300)	6,406	6,406	-	-
2015	SPP	1439	Kansas Electric Power Coop., Inc	U.S.	31,094	31,094	-	-	30,785	30,785	-	-	(630)	(630)	938	938	-	-
2015	SPP	1440	Kansas Municipal Energy Agency (KCPL)	U.S.	20,237	20,237	-	-	20,036	20,036	-	-	(410)	(410)	610	610	-	-
2015	SPP	1637	Kansas Power Pool	U.S.	12,097	12,097	-	-	11,977	11,977	-	-	(245)	(245)	365	365	-	-
2015	SPP	1649	Kennett Board of Public Works	U.S.	2,053	2,053	-	-	2,032	2,032	-	-	(42)	(42)	62	62	-	-
2015	SPP	1598	KCP&L GMOC (Greater Missouri Operations Company)	U.S.	116,503	116,503	-	-	115,348	115,348	-	-	(2,359)	(2,359)	3,514	3,514	-	-
2015	SPP	1471	Lafayette Utilities System	U.S.	28,839	28,839	-	-	28,553	28,553	-	-	(584)	(584)	870	870	-	-
2015	SPP	1472	Lea County Electric Coop	U.S.	16,195	16,195	-	-	16,034	16,034	-	-	(328)	(328)	489	489	-	-
2015	SPP	1253	Louisiana Energy & Power Authority (LEPA)	U.S.	14,079	14,079	-	-	13,940	13,940	-	-	(285)	(285)	425	425	-	-
2015	SPP	1650	Malden Board of Public Works	U.S.	691	691	-	-	684	684	-	-	(14)	(14)	21	21	-	-
2015	SPP	1441	Midwest Energy Inc.	U.S.	24,271	24,271	-	-	24,030	24,030	-	-	(491)	(491)	732	732	-	-
2015	SPP	1443	Missouri Joint Municipal Electric Utility Commission	U.S.	35,310	35,310	-	-	34,960	34,960	-	-	(715)	(715)	1,065	1,065	-	-
2015	SPP	1442	Northeast Texas Electric Cooperative, Inc.	U.S.	44,723	44,723	-	-	44,279	44,279	-	-	(906)	(906)	1,349	1,349	-	-
2015	SPP	1255	Oklahoma Gas and Electric Co.	U.S.	380,810	380,810	-	-	377,033	377,033	-	-	(7,711)	(7,711)	11,488	11,488	-	-
2015	SPP	1444	Oklahoma Municipal Power Auth.	U.S.	39,263	39,263	-	-	38,873	38,873	-	-	(795)	(795)	1,184	1,184	-	-
2015	SPP	1639	OzMo Ozark Missouri, West Plains MO	U.S.	2,774	2,774	-	-	2,746	2,746	-	-	(56)	(56)	84	84	-	-
2015	SPP	1651	Paragould Light, Water & Cable	U.S.	8,284	8,284	-	-	8,202	8,202	-	-	(168)	(168)	250	250	-	-
2015	SPP	1652	Piggott Municipal Light, Water & Sewer	U.S.	545	545	-	-	539	539	-	-	(11)	(11)	16	16	-	-
2015	SPP	1653	Poplar Bluff Municipal Utilities	U.S.	5,304	5,304	-	-	5,252	5,252	-	-	(107)	(107)	160	160	-	-
2015	SPP	1561	Public Service Commission of Yazoo City of Mississippi	U.S.	1,607	1,607	-	-	1,591	1,591	-	-	(33)	(33)	48	48	-	-
2015	SPP	1473	Roosevelt County Electric Coop	U.S.	2,324	2,324	-	-	2,301	2,301	-	-	(47)	(47)	70	70	-	-
2015	SPP	1654	Sikeston Board of Municipal Utilities	U.S.	7,116	7,116	-	-	7,045	7,045	-	-	(144)	(144)	215	215	-	-
2015	SPP	1257	Southwestern Public Service Co. (SPS-XCEL)	U.S.	286,179	286,179	-	-	283,341	283,341	-	-	(5,795)	(5,795)	8,633	8,633	-	-
2015	SPP	1256	Sunflower Electric Power Cooperative	U.S.	60,562	60,562	-	-	59,961	59,961	-	-	(1,226)	(1,226)	1,827	1,827	-	-
2015	SPP	1445	Tex - La Electric Cooperative of Texas	U.S.	6,856	6,856	-	-	6,788	6,788	-	-	(139)	(139)	207	207	-	-
2015	SPP	1475	Tri County Electric Coop	U.S.	5,213	5,213	-	-	5,162	5,162	-	-	(106)	(106)	157	157	-	-
2015	SPP	1260	Westar Energy, Inc.	U.S.	271,231	271,231	-	-	268,540	268,540	-	-	(5,492)	(5,492)	8,182	8,182	-	-
2015	SPP	1259	Western Farmers Electric Cooperative	U.S.	126,952	126,952	-	-	125,693	125,693	-	-	(2,571)	(2,571)	3,830	3,830	-	-
2015	SPP	1501	West Texas Municipal Power Agency	U.S.	38,358	38,358	-	-	37,978	37,978	-	-	(777)	(777)	1,157	1,157	-	-
TOTAL SPP					3,077,330	3,077,330	-	-	3,046,808	3,046,808	-	-	(62,310)	(62,310)	92,832	92,832	-	-

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NERC Assessments				NERC NEL Assessments				Penalty Sanctions		NERC Compliance Credits			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Mexico Total
2015	TRE	1019	ERCOT	U.S.	4,749,493	4,749,493	-	-	4,702,386	4,702,386	-	-	(96,168)	(96,168)	143,275	143,275	-	-
			TOTAL ERCOT		4,749,493	4,749,493	-	-	4,702,386	4,702,386	-	-	(96,168)	(96,168)	143,275	143,275	-	-
2015	WECC		Alberta Electric System Operator	Canada	544,658	-	544,658	-	845,257	-	845,257	-	-	-	(300,599)	-	(300,599)	-
2015	WECC		British Columbia Hydro & Power Authority	Canada	857,145	-	857,145	-	831,801	-	831,801	-	-	-	25,344	25,344	-	-
2015	WECC		Comision Federal de Electricidad	Mexico	176,951	-	-	176,951	171,719	-	-	171,719	-	-	5,232	-	-	5,232
2015	WECC		Ajo Improvement District	U.S.	165	165	-	-	163	163	-	-	(3)	(3)	5	5	-	-
2015	WECC		Arizona Public Service Company	U.S.	405,457	405,457	-	-	401,436	401,436	-	-	(8,210)	(8,210)	12,231	12,231	-	-
2015	WECC		City of Williams	U.S.	604	604	-	-	598	598	-	-	(12)	(12)	18	18	-	-
2015	WECC		Electrical Districts 3	U.S.	9,831	9,831	-	-	9,733	9,733	-	-	(199)	(199)	297	297	-	-
2015	WECC		Majority Districts	U.S.	10,254	10,254	-	-	10,152	10,152	-	-	(208)	(208)	309	309	-	-
2015	WECC		Navajo Tribal Utility Authority	U.S.	267	267	-	-	264	264	-	-	(5)	(5)	8	8	-	-
2015	WECC		Tohono O'odham Utility Authority	U.S.	874	874	-	-	866	866	-	-	(18)	(18)	26	26	-	-
2015	WECC		Town of Wickenburg	U.S.	370	370	-	-	366	366	-	-	(7)	(7)	11	11	-	-
2015	WECC		Avista Corporation	U.S.	128,870	128,870	-	-	127,592	127,592	-	-	(2,609)	(2,609)	3,888	3,888	-	-
2015	WECC		Big Bend Electric Cooperative, Inc.	U.S.	2,104	2,104	-	-	2,083	2,083	-	-	(43)	(43)	63	63	-	-
2015	WECC		City of Cheney	U.S.	2,007	2,007	-	-	1,987	1,987	-	-	(41)	(41)	61	61	-	-
2015	WECC		City of Chewelah	U.S.	310	310	-	-	306	306	-	-	(6)	(6)	9	9	-	-
2015	WECC		City of Plummer	U.S.	458	458	-	-	453	453	-	-	(9)	(9)	14	14	-	-
2015	WECC		Clearwater Cooperative, Inc.	U.S.	2,204	2,204	-	-	2,182	2,182	-	-	(45)	(45)	66	66	-	-
2015	WECC		Consolidated Irrigation District No. 19	U.S.	109	109	-	-	108	108	-	-	(2)	(2)	3	3	-	-
2015	WECC		Idaho County Light and Power Cooperative Association, Inc.	U.S.	778	778	-	-	770	770	-	-	(16)	(16)	23	23	-	-
2015	WECC		Inland Power and Light Company	U.S.	6,410	6,410	-	-	6,347	6,347	-	-	(130)	(130)	193	193	-	-
2015	WECC		Kaiser Aluminum Fabricated Products LLC	U.S.	4,282	4,282	-	-	4,239	4,239	-	-	(87)	(87)	129	129	-	-
2015	WECC		Kootenai Electric Cooperative, Inc.	U.S.	6,447	6,447	-	-	6,383	6,383	-	-	(131)	(131)	194	194	-	-
2015	WECC		Modern Electric Water Company	U.S.	3,199	3,199	-	-	3,168	3,168	-	-	(65)	(65)	97	97	-	-
2015	WECC		Northern Lights, Inc.	U.S.	470	470	-	-	466	466	-	-	(10)	(10)	14	14	-	-
2015	WECC		Pend Oreille County PUD No. 1	U.S.	11,475	11,475	-	-	11,361	11,361	-	-	(232)	(232)	346	346	-	-
2015	WECC		PUD No. 1 of Asotin County	U.S.	75	75	-	-	75	75	-	-	(2)	(2)	2	2	-	-
2015	WECC		PUD No. 2 of Grant County	U.S.	1,328	1,328	-	-	1,315	1,315	-	-	(27)	(27)	40	40	-	-
2015	WECC		U.S. BOR East Greenacres (Rathdrum)	U.S.	58	58	-	-	57	57	-	-	(1)	(1)	2	2	-	-
2015	WECC		U.S. Bor Spokane Indian Development	U.S.	50	50	-	-	49	49	-	-	(1)	(1)	2	2	-	-
2015	WECC		US Air Force Base, Fairchild	U.S.	662	662	-	-	656	656	-	-	(13)	(13)	20	20	-	-
2015	WECC		City of Redding	U.S.	10,729	10,729	-	-	10,623	10,623	-	-	(217)	(217)	324	324	-	-
2015	WECC		City of Roseville	U.S.	16,832	16,832	-	-	16,665	16,665	-	-	(341)	(341)	508	508	-	-
2015	WECC		Modesto Irrigation District	U.S.	35,696	35,696	-	-	35,342	35,342	-	-	(723)	(723)	1,077	1,077	-	-
2015	WECC		Sacramento Municipal Utility District	U.S.	153,443	153,443	-	-	151,922	151,922	-	-	(3,107)	(3,107)	4,629	4,629	-	-
2015	WECC		Western Area Power Administration - Sierra Nevada Region	U.S.	17,525	17,525	-	-	17,351	17,351	-	-	(355)	(355)	529	529	-	-
2015	WECC		Bonneville Power Administration	U.S.	731,197	731,197	-	-	723,944	723,944	-	-	(14,805)	(14,805)	22,057	22,057	-	-
2015	WECC		California Independent System Operator	U.S.	3,139,186	3,139,186	-	-	3,108,050	3,108,050	-	-	(63,562)	(63,562)	94,698	94,698	-	-
2015	WECC		El Paso Electric Company	U.S.	115,117	115,117	-	-	113,976	113,976	-	-	(2,331)	(2,331)	3,473	3,473	-	-
2015	WECC		Bonneville Power Administration	U.S.	24,794	24,794	-	-	24,548	24,548	-	-	(502)	(502)	748	748	-	-
2015	WECC		Idaho Power Company	U.S.	208,517	208,517	-	-	206,448	206,448	-	-	(4,222)	(4,222)	6,290	6,290	-	-
2015	WECC		PacifiCorp	U.S.	28	28	-	-	28	28	-	-	(1)	(1)	1	1	-	-
2015	WECC		Imperial Irrigation District	U.S.	50,190	50,190	-	-	49,693	49,693	-	-	(1,016)	(1,016)	1,514	1,514	-	-
2015	WECC		Los Angeles Department of Water and Power	U.S.	394,369	394,369	-	-	390,458	390,458	-	-	(7,985)	(7,985)	11,897	11,897	-	-
2015	WECC		City of Henderson	U.S.	578	578	-	-	572	572	-	-	(12)	(12)	17	17	-	-
2015	WECC		City of Las Vegas	U.S.	599	599	-	-	593	593	-	-	(12)	(12)	18	18	-	-
2015	WECC		City of North Las Vegas	U.S.	288	288	-	-	285	285	-	-	(6)	(6)	9	9	-	-
2015	WECC		Clark County Water Resources	U.S.	1,136	1,136	-	-	1,125	1,125	-	-	(23)	(23)	34	34	-	-
2015	WECC		Colorado River Commission of Nevada	U.S.	12,280	12,280	-	-	12,159	12,159	-	-	(249)	(249)	370	370	-	-
2015	WECC		Las Vegas Valley Water District	U.S.	1,360	1,360	-	-	1,346	1,346	-	-	(28)	(28)	41	41	-	-
2015	WECC		Nevada Power Company dba NV Energy	U.S.	307,643	307,643	-	-	304,591	304,591	-	-	(6,229)	(6,229)	9,280	9,280	-	-
2015	WECC		Overton Power District No. 5	U.S.	5,342	5,342	-	-	5,289	5,289	-	-	(108)	(108)	161	161	-	-
2015	WECC		Southern Nevada Water Authority	U.S.	1,593	1,593	-	-	1,577	1,577	-	-	(32)	(32)	48	48	-	-
2015	WECC		Bonneville Power Administration	U.S.	10,530	10,530	-	-	10,425	10,425	-	-	(213)	(213)	318	318	-	-
2015	WECC		Basin Electric Power Cooperative	U.S.	5,625	5,625	-	-	5,569	5,569	-	-	(114)	(114)	170	170	-	-
2015	WECC		NorthWestern Corp. dba NorthWestern Energy, LLC	U.S.	126,087	126,087	-	-	124,837	124,837	-	-	(2,553)	(2,553)	3,804	3,804	-	-
2015	WECC		Southern Montana Electric Generation & Transmission	U.S.	5,116	5,116	-	-	5,065	5,065	-	-	(104)	(104)	154	154	-	-
2015	WECC		Western Area Power Administration-Upper Great Plains Region	U.S.	101	101	-	-	100	100	-	-	(2)	(2)	3	3	-	-
2015	WECC		PacifiCorp	U.S.	673,006	673,006	-	-	666,331	666,331	-	-	(13,627)	(13,627)	20,302	20,302	-	-
2015	WECC		PacifiCorp West (PACW)	U.S.	286,362	286,362	-	-	283,521	283,521	-	-	(5,798)	(5,798)	8,638	8,638	-	-
2015	WECC		Bonneville Power Administration	U.S.	125	125	-	-	124	124	-	-	(3)	(3)	4	4	-	-
2015	WECC		Canby Public Utility Board	U.S.	2,119	2,119	-	-	2,098	2,098	-	-	(43)	(43)	64	64	-	-
2015	WECC		Columbia River PUD	U.S.	3,852	3,852	-	-	3,813	3,813	-	-	(78)	(78)	116	116	-	-
2015	WECC		Constellation New Energy	U.S.	1,029	1,029	-	-	1,019	1,019	-	-	(21)	(21)	31	31	-	-
2015	WECC		Noble Americas Energy Solutions, LLC	U.S.	22,544	22,544	-	-	22,320	22,320	-	-	(456)	(456)	680	680	-	-
2015	WECC		PacifiCorp	U.S.	58	58	-	-	58	58	-	-	(1)	(1)	2	2	-	-
2015	WECC		Portland General Electric Company	U.S.	252,503	252,503	-	-	249,999	249,999	-	-	(5,113)	(5,113)	7,617	7,617	-	-
2015	WECC		Shell Energy North America	U.S.	294	294	-	-	291	291	-	-	(6)	(6)	9	9	-	-
2015	WECC		West Oregon Electric Cooperative, Inc.	U.S.	167	167	-	-	166	166	-	-	(3)	(3)	5	5	-	-
2015	WECC		Arkansas River Power Authority (ARPA)	U.S.	3,673	3,673	-	-	3,636	3,636	-	-	(74)	(74)	111	111	-	-
2015	WECC		Black Hills Colorado Electric	U.S.	27,944	27,944	-	-	27,667	27,667	-	-	(566)	(566)	843	843	-	-
2015	WECC		Burlington	U.S.	699	699	-	-	692	692	-	-	(14)	(14)				

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Data Year	Regional Entity	ID	Entity	Country	Total NERC Assessments				NERC NEL Assessments				Penalty Sanctions		NERC Compliance Credits			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Mexico Total
2015	WECC		Grand Valley Power	U.S.	3,280	3,280	-	-	3,247	3,247	-	-	(66)	(66)	99	99	-	-
2015	WECC		Holy Cross Energy	U.S.	15,590	15,590	-	-	15,435	15,435	-	-	(316)	(316)	470	470	-	-
2015	WECC		Intermountain Rural Electric Association	U.S.	30,138	30,138	-	-	29,839	29,839	-	-	(610)	(610)	909	909	-	-
2015	WECC		Municipal Energy Agency of Nebraska	U.S.	2,363	2,363	-	-	2,340	2,340	-	-	(48)	(48)	71	71	-	-
2015	WECC		Platte River Power Authority	U.S.	44,301	44,301	-	-	43,861	43,861	-	-	(897)	(897)	1,336	1,336	-	-
2015	WECC		Public Service Company of Colorado (Xcel)	U.S.	476,022	476,022	-	-	471,301	471,301	-	-	(9,638)	(9,638)	14,360	14,360	-	-
2015	WECC		Raton Public Service	U.S.	699	699	-	-	692	692	-	-	(14)	(14)	21	21	-	-
2015	WECC		Town of Center	U.S.	198	198	-	-	196	196	-	-	(4)	(4)	6	6	-	-
2015	WECC		Tri-State Generation & Transmission Assoc. Inc - Reliability	U.S.	34,527	34,527	-	-	34,184	34,184	-	-	(699)	(699)	1,042	1,042	-	-
2015	WECC		Western Area Power - Loveland, CO	U.S.	451	451	-	-	446	446	-	-	(9)	(9)	14	14	-	-
2015	WECC		Yampa Valley Electric Association	U.S.	7,340	7,340	-	-	7,267	7,267	-	-	(149)	(149)	221	221	-	-
2015	WECC		City of Aztec Electric Dept	U.S.	642	642	-	-	636	636	-	-	(13)	(13)	19	19	-	-
2015	WECC		City of Gallup	U.S.	3,081	3,081	-	-	3,050	3,050	-	-	(62)	(62)	93	93	-	-
2015	WECC		Jicarilla Apache Nation Power Authority	U.S.	304	304	-	-	301	301	-	-	(6)	(6)	9	9	-	-
2015	WECC		Navajo Tribal Utility Authority	U.S.	3,089	3,089	-	-	3,058	3,058	-	-	(63)	(63)	93	93	-	-
2015	WECC		Navapache Electric Cooperative, Inc.	U.S.	5,916	5,916	-	-	5,857	5,857	-	-	(120)	(120)	178	178	-	-
2015	WECC		Public Service Company of New Mexico	U.S.	129,598	129,598	-	-	128,312	128,312	-	-	(2,624)	(2,624)	3,909	3,909	-	-
2015	WECC		The Incorporated County of Los Alamos	U.S.	7,716	7,716	-	-	7,640	7,640	-	-	(156)	(156)	233	233	-	-
2015	WECC		Tri-State Generation & Transmission Association, Inc.	U.S.	42,965	42,965	-	-	42,538	42,538	-	-	(870)	(870)	1,296	1,296	-	-
2015	WECC		US Dept of Energy - Kirtland AFB	U.S.	5,835	5,835	-	-	5,777	5,777	-	-	(118)	(118)	176	176	-	-
2015	WECC		Public Utility District No. 1 of Chelan County	U.S.	52,104	52,104	-	-	51,587	51,587	-	-	(1,055)	(1,055)	1,572	1,572	-	-
2015	WECC		PUD No. 1 of Douglas County	U.S.	10,715	10,715	-	-	10,609	10,609	-	-	(217)	(217)	323	323	-	-
2015	WECC		Okanogan PUD	U.S.	8,884	8,884	-	-	8,796	8,796	-	-	(180)	(180)	268	268	-	-
2015	WECC		BPA - Douglas Pumping	U.S.	387	387	-	-	384	384	-	-	(8)	(8)	12	12	-	-
2015	WECC		BPA - Okanogan Pumping	U.S.	523	523	-	-	518	518	-	-	(11)	(11)	16	16	-	-
2015	WECC		BPA - Okanogan REA	U.S.	816	816	-	-	808	808	-	-	(17)	(17)	25	25	-	-
2015	WECC		BPA - USBR Load	U.S.	1,974	1,974	-	-	1,955	1,955	-	-	(40)	(40)	60	60	-	-
2015	WECC		BPA - Big Bend/Schrag Load	U.S.	612	612	-	-	606	606	-	-	(12)	(12)	18	18	-	-
2015	WECC		BPA - Kittitas Load	U.S.	105	105	-	-	104	104	-	-	(2)	(2)	3	3	-	-
2015	WECC		Douglas Palisades / PUD No. 1 of DC	U.S.	266	266	-	-	263	263	-	-	(5)	(5)	8	8	-	-
2015	WECC		PUD No. 2 of Grant County	U.S.	62,075	62,075	-	-	61,459	61,459	-	-	(1,257)	(1,257)	1,873	1,873	-	-
2015	WECC		City of Blaine	U.S.	1,055	1,055	-	-	1,045	1,045	-	-	(21)	(21)	32	32	-	-
2015	WECC		City of Sumas	U.S.	399	399	-	-	395	395	-	-	(8)	(8)	12	12	-	-
2015	WECC		Port of Seattle - Seattle-Tacoma International Airport	U.S.	1,956	1,956	-	-	1,937	1,937	-	-	(40)	(40)	59	59	-	-
2015	WECC		PUD No. 1 of Kittitas County	U.S.	220	220	-	-	218	218	-	-	(4)	(4)	7	7	-	-
2015	WECC		PUD No. 1 of Whatcom County	U.S.	89	89	-	-	88	88	-	-	(2)	(2)	3	3	-	-
2015	WECC		Puget Sound Energy, Inc.	U.S.	322,026	322,026	-	-	318,832	318,832	-	-	(6,520)	(6,520)	9,714	9,714	-	-
2015	WECC		Tanner Electric Cooperative	U.S.	1,302	1,302	-	-	1,289	1,289	-	-	(26)	(26)	39	39	-	-
2015	WECC		Salt River Project	U.S.	399,524	399,524	-	-	395,561	395,561	-	-	(8,090)	(8,090)	12,052	12,052	-	-
2015	WECC		Seattle City Light	U.S.	131,984	131,984	-	-	130,675	130,675	-	-	(2,672)	(2,672)	3,981	3,981	-	-
2015	WECC		Barrick Goldstrike Mines Inc.	U.S.	21,874	21,874	-	-	21,657	21,657	-	-	(443)	(443)	660	660	-	-
2015	WECC		City of Fallon	U.S.	1,230	1,230	-	-	1,218	1,218	-	-	(25)	(25)	37	37	-	-
2015	WECC		Harney Electric Cooperative, Inc.	U.S.	4,286	4,286	-	-	4,244	4,244	-	-	(87)	(87)	129	129	-	-
2015	WECC		Mt. Wheeler Power	U.S.	7,423	7,423	-	-	7,350	7,350	-	-	(150)	(150)	224	224	-	-
2015	WECC		Sierra Pacific Power Company dba NV Energy	U.S.	116,430	116,430	-	-	115,275	115,275	-	-	(2,357)	(2,357)	3,512	3,512	-	-
2015	WECC		Truckee Donner Public Utility District	U.S.	2,097	2,097	-	-	2,077	2,077	-	-	(42)	(42)	63	63	-	-
2015	WECC		Wells Rural Electric Cooperative	U.S.	13,757	13,757	-	-	13,620	13,620	-	-	(279)	(279)	415	415	-	-
2015	WECC		City of Tacoma DBA Tacoma Power	U.S.	65,690	65,690	-	-	65,038	65,038	-	-	(1,330)	(1,330)	1,982	1,982	-	-
2015	WECC		Tucson Electric Power Company	U.S.	203,237	203,237	-	-	201,221	201,221	-	-	(4,115)	(4,115)	6,131	6,131	-	-
2015	WECC		Merced Irrigation District	U.S.	6,473	6,473	-	-	6,409	6,409	-	-	(131)	(131)	195	195	-	-
2015	WECC		Turlock Irrigation District	U.S.	29,274	29,274	-	-	28,984	28,984	-	-	(593)	(593)	883	883	-	-
2015	WECC		Basin Electric Power Cooperative	U.S.	36,873	36,873	-	-	36,507	36,507	-	-	(747)	(747)	1,112	1,112	-	-
2015	WECC		Black Hills Power/Cheyenne Light Fuel & Power	U.S.	48,980	48,980	-	-	48,494	48,494	-	-	(992)	(992)	1,478	1,478	-	-
2015	WECC		Black Hills State University South Dakota	U.S.	265	265	-	-	262	262	-	-	(5)	(5)	8	8	-	-
2015	WECC		City of Page	U.S.	1,251	1,251	-	-	1,239	1,239	-	-	(25)	(25)	38	38	-	-
2015	WECC		Colorado Springs Utilities	U.S.	62,286	62,286	-	-	61,668	61,668	-	-	(1,261)	(1,261)	1,879	1,879	-	-
2015	WECC		Deseret Generation & Transmission Cooperative	U.S.	1,575	1,575	-	-	1,559	1,559	-	-	(32)	(32)	48	48	-	-
2015	WECC		City of Farmington	U.S.	14,644	14,644	-	-	14,498	14,498	-	-	(297)	(297)	442	442	-	-
2015	WECC		Municipal Energy Agency of Nebraska	U.S.	8,614	8,614	-	-	8,528	8,528	-	-	(174)	(174)	260	260	-	-
2015	WECC		Navajo Agricultural Products Industry (NAPI)	U.S.	38	38	-	-	38	38	-	-	(1)	(1)	1	1	-	-
2015	WECC		Nebraska Public Power Marketing	U.S.	35	35	-	-	34	34	-	-	(1)	(1)	1	1	-	-
2015	WECC		PacificCorp	U.S.	1,528	1,528	-	-	1,512	1,512	-	-	(31)	(31)	46	46	-	-
2015	WECC		Public Service Company of Colorado (Xcel)	U.S.	1,018	1,018	-	-	1,007	1,007	-	-	(21)	(21)	31	31	-	-
2015	WECC		Town of Fredonia	U.S.	141	141	-	-	139	139	-	-	(3)	(3)	4	4	-	-
2015	WECC		Tri-State Generation & Transmission Assoc. Inc - Reliability	U.S.	102,673	102,673	-	-	101,655	101,655	-	-	(2,079)	(2,079)	3,097	3,097	-	-
2015	WECC		Western Area Power - Loveland, CO	U.S.	31,831	31,831	-	-	31,515	31,515	-	-	(645)	(645)	960	960	-	-
2015	WECC		Western Area Power Administration - CRSP	U.S.	29,168	29,168	-	-	28,878	28,878	-	-	(591)	(591)	880	880	-	-
2015	WECC		Wyoming Municipal Power Agency	U.S.	3,590	3,590	-	-	3,554	3,554	-	-	(73)	(73)	108	108	-	-
2015	WECC		Basin Electric Power Cooperative	U.S.	829	829	-	-	821	821	-	-	(17)	(17)	25	25	-	-
2015	WECC		Southern Montana Electric Generation & Transmission	U.S.	174	174	-	-	172	172	-	-	(4)	(4)	5	5	-	-
2015	WECC		Central Montana Electric Power Cooperative	U.S.	844	844	-	-	835	835	-	-	(17)	(17)	25	25	-	-
2015	WECC		Montana-Dakota Utilities Co.	U.S.	323	323	-	-	320	320	-	-	(7)	(7)	10	10	-	-
2015	WECC		NorthWestern Corp. dba NorthWestern Energy, LLC	U.S.	3,213	3,213	-	-	3,181	3,181	-	-	(65)	(65)	97	97	-	-
2015	WECC		Western Area Power Administration-Upper Great Plains Region	U.S.	5,651	5,651	-	-	5,595	5,595	-	-	(114)	(114)	170	170	-	-
2015	WECC		Aha Macav Power Service	U.S.	218	218	-	-	216	216	-	-	(4)	(4)	7	7	-	-

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total NERC Assessments				NERC NEL Assessments				Penalty Sanctions		NERC Compliance Credits			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Mexico Total
2015	WECC		Bureau of Reclamation (Wellfield) - c/o DSW EMMO	U.S.	139	139	-	-	137	137	-	-	(3)	(3)	4	4	-	-
2015	WECC		Central Arizona Water Conservation District	U.S.	33,071	33,071	-	-	32,743	32,743	-	-	(670)	(670)	998	998	-	-
2015	WECC		City of Mesa	U.S.	3,529	3,529	-	-	3,494	3,494	-	-	(71)	(71)	106	106	-	-
2015	WECC		City of Needles	U.S.	405	405	-	-	401	401	-	-	(8)	(8)	12	12	-	-
2015	WECC		Colorado River Agency-Bureau of Indian Affairs	U.S.	323	323	-	-	320	320	-	-	(7)	(7)	10	10	-	-
2015	WECC		Electrical District #2	U.S.	2,650	2,650	-	-	2,624	2,624	-	-	(54)	(54)	80	80	-	-
2015	WECC		Electrical District #2 - Coolidge Generating Station	U.S.	125	125	-	-	124	124	-	-	(3)	(3)	4	4	-	-
2015	WECC		Silver State Energy - c/o Colorado River Commission of Nevada	U.S.	8,812	8,812	-	-	8,725	8,725	-	-	(178)	(178)	266	266	-	-
2015	WECC		Arizona Electric Power Cooperative, Inc	U.S.	35,892	35,892	-	-	35,536	35,536	-	-	(727)	(727)	1,083	1,083	-	-
2015	WECC		U.S. Army Yuma Proving Ground	U.S.	271	271	-	-	268	268	-	-	(5)	(5)	8	8	-	-
2015	WECC		Wellton-Mohawk Irrigation & Drainage District	U.S.	99	99	-	-	98	98	-	-	(2)	(2)	3	3	-	-
2015	WECC		Western Area Power Administration-Desert Southwest Region	U.S.	21,774	21,774	-	-	21,558	21,558	-	-	(441)	(441)	657	657	-	-
TOTAL WECC					11,574,231	9,995,477	1,401,802	176,951	11,745,116	9,896,339	1,677,058	171,719	(202,388)	(202,388)	31,503	301,526	(275,255)	5,232
TOTAL ERO					59,856,314	54,326,337	5,353,026	176,951	60,956,314	53,787,514	6,997,081	171,719	(1,100,000)	(1,100,000)	0	1,638,823	(1,644,055)	5,232
Summary by Regional Entity																		
2015	FRCC				3,199,370	3,199,370	-	-	3,167,637	3,167,637	-	-	(64,781)	(64,781)	96,513	96,513	-	-
2015	MRO				3,874,215	3,217,546	656,669	-	3,822,887	3,185,634	637,253	-	(65,149)	(65,149)	116,478	97,061	19,416	-
2015	NPCC				7,229,254	3,934,700	3,294,554	-	8,578,445	3,895,675	4,682,770	-	(79,670)	(79,670)	(1,269,521)	118,695	(1,388,216)	-
2015	RF				12,166,655	12,166,655	-	-	12,045,983	12,045,983	-	-	(246,351)	(246,351)	367,023	367,023	-	-
2015	SERC				13,985,766	13,985,766	-	-	13,847,051	13,847,051	-	-	(283,184)	(283,184)	421,898	421,898	-	-
2015	SPP				3,077,330	3,077,330	-	-	3,046,808	3,046,808	-	-	(62,310)	(62,310)	92,832	92,832	-	-
2015	TRE				4,749,493	4,749,493	-	-	4,702,386	4,702,386	-	-	(96,168)	(96,168)	143,275	143,275	-	-
2015	WECC				11,574,231	9,995,477	1,401,802	176,951	11,745,116	9,896,339	1,677,058	171,719	(202,388)	(202,388)	31,503	301,526	(275,255)	5,232
Total					59,856,314	54,326,337	5,353,026	176,951	60,956,314	53,787,514	6,997,081	171,719	(1,100,000)	(1,100,000)	0	1,638,823	(1,644,055)	5,232

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

APPENDIX 2-D

Data Year	Regional Entity	ID	Entity	Country	Total Regional Entity Assessments (Including WIRAB Assessments)				Regional Entity NEL Assessments				Penalty Sanctions - US Only		NPCC CORC Program			WECC Compliance Assessments (ex.AESO)				WIRAB Assessments			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total
2015	FRCC	1074	Alachua, City of	U.S.	3,398	3,398	-	-	3,451	3,451	-	-	(52)	(52)											
2015	FRCC	1075	Bartow, City of	U.S.	7,569	7,569	-	-	7,686	7,686	-	-	(117)	(117)											
2015	FRCC	1076	Chattahoochee, City of	U.S.	1,035	1,035	-	-	1,051	1,051	-	-	(16)	(16)											
2015	FRCC	1077	Florida Keys Electric Cooperative Assn	U.S.	20,598	20,598	-	-	20,916	20,916	-	-	(317)	(317)											
2015	FRCC	1078	Florida Power & Light Co.	U.S.	3,048,370	3,048,370	-	-	3,095,352	3,095,352	-	-	(46,982)	(46,982)											
2015	FRCC	1079	Florida Public Utilities Company	U.S.	9,242	9,242	-	-	9,395	9,395	-	-	(143)	(143)											
2015	FRCC	1080	Gainesville Regional Utilities	U.S.	47,551	47,551	-	-	48,284	48,284	-	-	(733)	(733)											
2015	FRCC	1081	Homestead, City of	U.S.	14,792	14,792	-	-	15,020	15,020	-	-	(228)	(228)											
2015	FRCC	1082	JEA	U.S.	329,369	329,369	-	-	334,446	334,446	-	-	(5,076)	(5,076)											
2015	FRCC	1083	Lakeland Electric	U.S.	82,131	82,131	-	-	83,396	83,396	-	-	(1,266)	(1,266)											
2015	FRCC	1626	Lee County Electric Cooperative, Inc	U.S.	106,749	106,749	-	-	108,394	108,394	-	-	(1,645)	(1,645)											
2015	FRCC	1661	City of Lake Worth	U.S.	12,532	12,532	-	-	12,726	12,726	-	-	(193)	(193)											
2015	FRCC	1084	Mount Dora, City of	U.S.	2,482	2,482	-	-	2,520	2,520	-	-	(38)	(38)											
2015	FRCC	1085	New Smyrna Beach, Utilities Commission of	U.S.	11,376	11,376	-	-	11,552	11,552	-	-	(176)	(176)											
2015	FRCC	1086	Orlando Utilities Commission	U.S.	166,359	166,359	-	-	168,923	168,923	-	-	(2,564)	(2,564)											
2015	FRCC	1087	Duke Energy Florida	U.S.	1,079,651	1,079,651	-	-	1,096,291	1,096,291	-	-	(16,640)	(16,640)											
2015	FRCC	1088	Quincy, City of	U.S.	3,521	3,521	-	-	3,575	3,575	-	-	(54)	(54)											
2015	FRCC	1089	Reedy Creek Improvement District	U.S.	32,106	32,106	-	-	32,601	32,601	-	-	(495)	(495)											
2015	FRCC	1090	St. Cloud, City of (OUC)	U.S.	18,313	18,313	-	-	18,595	18,595	-	-	(282)	(282)											
2015	FRCC	1091	Tallahassee, City of	U.S.	72,935	72,935	-	-	74,059	74,059	-	-	(1,124)	(1,124)											
2015	FRCC	1092	Tampa Electric Company	U.S.	528,226	528,226	-	-	536,368	536,368	-	-	(8,141)	(8,141)											
2015	FRCC	1603	City of Vero Beach	U.S.	20,493	20,493	-	-	20,809	20,809	-	-	(316)	(316)											
2015	FRCC	1093	Wauchula, City of	U.S.	1,708	1,708	-	-	1,734	1,734	-	-	(26)	(26)											
2015	FRCC	1094	Williston, City of	U.S.	925	925	-	-	939	939	-	-	(14)	(14)											
2015	FRCC	1095	Winter Park, City of	U.S.	12,136	12,136	-	-	12,323	12,323	-	-	(187)	(187)											
2015	FRCC	1072	Florida Municipal Power Agency	U.S.	156,440	156,440	-	-	158,851	158,851	-	-	(2,411)	(2,411)											
2015	FRCC	1073	Seminole Electric Cooperative	U.S.	373,878	373,878	-	-	379,641	379,641	-	-	(5,762)	(5,762)											
			TOTAL FRCC		6,163,896	6,163,896	-	-	6,258,896	6,258,896	-	-	(95,000)	(95,000)											
2015	MRO	1199	Basin Electric Power Cooperative	U.S.	628,704	628,704	-	-	640,694	640,694	-	-	(11,990)	(11,990)											
2015	MRO	1201	Central Iowa Power Cooperative (CIPCO)	U.S.	102,628	102,628	-	-	102,547	102,547	-	-	(1,918)	(1,918)											
2015	MRO	1204	Corn Belt Power Cooperative	U.S.	69,483	69,483	-	-	70,808	70,808	-	-	(1,325)	(1,325)											
2015	MRO	1207	Dairyland Power Cooperative	U.S.	199,356	199,356	-	-	203,158	203,158	-	-	(3,802)	(3,802)											
2015	MRO	1210	Great River Energy	U.S.	501,327	501,327	-	-	510,888	510,888	-	-	(9,561)	(9,561)											
2015	MRO	1222	Minnesota Power Cooperative, Inc.	U.S.	158,795	158,795	-	-	161,824	161,824	-	-	(3,028)	(3,028)											
2015	MRO	1230	Nebraska Public Power District	U.S.	495,591	495,591	-	-	505,042	505,042	-	-	(9,452)	(9,452)											
2015	MRO	1232	Omaha Public Power District	U.S.	403,823	403,823	-	-	411,524	411,524	-	-	(7,701)	(7,701)											
2015	MRO	1237	Southern Montana Generation and Transmission	U.S.	367	367	-	-	374	374	-	-	(7)	(7)											
2015	MRO	1240	Western Area Power Administration (UW)	U.S.	203,972	203,972	-	-	207,862	207,862	-	-	(3,890)	(3,890)											
2015	MRO	1239	Western Area Power Administration (UW)	U.S.	5,300	5,300	-	-	5,300	5,300	-	-	(99)	(99)											
2015	MRO	1217	Manitoba Hydro	CAN	886,468	-	886,468	-	886,468	-	886,468	-	-	-	-										
2015	MRO	1235	SaskPower	CAN	890,590	-	890,590	-	890,590	-	890,590	-	-	-	-										
2015	MRO	1195	Alliant Energy (Alliant East - WPL & Alliant West IPL)	U.S.	1,069,222	1,069,222	-	-	1,089,614	1,089,614	-	-	(20,391)	(20,391)											
2015	MRO	1710	Dahlberg Electric Company	U.S.	4,282	4,282	-	-	4,364	4,364	-	-	(82)	(82)											
2015	MRO	1216	Madison, Gas and Electric	U.S.	126,826	126,826	-	-	129,244	129,244	-	-	(2,419)	(2,419)											
2015	MRO	1220	MidAmerican Energy Company	U.S.	886,861	886,861	-	-	903,775	903,775	-	-	(16,914)	(16,914)											
2015	MRO	1221	Minnesota Power	U.S.	451,737	451,737	-	-	460,353	460,353	-	-	(8,615)	(8,615)											
2015	MRO	1226	Montana-Dakota Utilities Co.	U.S.	119,693	119,693	-	-	121,676	121,676	-	-	(2,283)	(2,283)											
2015	MRO	1711	North Central Power Company	U.S.	12,932	12,932	-	-	13,178	13,178	-	-	(247)	(247)											
2015	MRO	1231	NorthWestern Energy	U.S.	57,078	57,078	-	-	58,166	58,166	-	-	(1,089)	(1,089)											
2015	MRO	1712	NorthWestern Wisconsin	U.S.	6,750	6,750	-	-	6,879	6,879	-	-	(129)	(129)											
2015	MRO	1233	Otter Tail Power Company	U.S.	174,359	174,359	-	-	177,684	177,684	-	-	(3,325)	(3,325)											
2015	MRO	1664	Wisconsin Public Service (WPS)	U.S.	447,790	447,790	-	-	456,330	456,330	-	-	(8,540)	(8,540)											
2015	MRO	1665	Upper Peninsula Power Company (UPPCO)	U.S.	28,069	28,069	-	-	28,605	28,605	-	-	(535)	(535)											
2015	MRO	1244	Xcel Energy Company (NSP)	U.S.	1,644,223	1,644,223	-	-	1,675,580	1,675,580	-	-	(31,357)	(31,357)											
2015	MRO	1196	Ames Municipal Electric System	U.S.	29,764	29,764	-	-	30,331	30,331	-	-	(568)	(568)											
2015	MRO	1604	Atlantic Municipal Utilities	U.S.	2,980	2,980	-	-	3,037	3,037	-	-	(57)	(57)											
2015	MRO	1476	Badger Power Marketing Authority of Wisconsin, Inc.	U.S.	14,194	14,194	-	-	14,464	14,464	-	-	(271)	(271)											
2015	MRO	1713	Bloomer Electric & Water Co.	U.S.	2,052	2,052	-	-	2,091	2,091	-	-	(39)	(39)											
2015	MRO	1714	Village of Caddott	U.S.	514	514	-	-	523	523	-	-	(10)	(10)											
2015	MRO	1200	Cedar Falls Municipal Utilities	U.S.	19,011	19,011	-	-	19,373	19,373	-	-	(363)	(363)											
2015	MRO	1477	Central Minnesota Municipal Power Agency (CMMPA)	U.S.	17,209	17,209	-	-	17,537	17,537	-	-	(328)	(328)											
2015	MRO	1715	Village of Centuria	U.S.	221	221	-	-	225	225	-	-	(4)	(4)											
2015	MRO	1716	Eldridge Electric and Water Utilities	U.S.	1,561	1,561	-	-	1,591	1,591	-	-	(30)	(30)											
2015	MRO	1203	City of Escamba	U.S.	5,406	5,406	-	-	5,509	5,509	-	-	(103)	(103)											
2015	MRO	1205	Falls City Water & Light Department	U.S.	2,101	2,101	-	-	2,141	2,141	-	-	(40)	(40)											
2015	MRO	1206	Fremont Department of Utilities	U.S.	15,104	15,104	-	-	15,392	15,392	-	-	(288)	(288)											
2015	MRO	1208	Geneseo Municipal Utilities	U.S.	2,366	2,366	-	-	2,412	2,412	-	-	(45)	(45)											
2015	MRO	1209	Grand Island Utilities Department	U.S.	27,533	27,533	-	-	28,058	28,058	-	-	(525)	(525)											
2015	MRO	1717	Great Lakes Utilities	U.S.	14,479	14,479	-	-	14,756	14,756	-	-	(276)	(276)											
2015	MRO	1718	City of Guttenberg	U.S.	674	674	-	-	687	687	-	-	(13)	(13)											
2015	MRO	1606	Harlan Municipal Utilities	U.S.	2,336	2,336	-	-	2,381	2,381	-	-	(45)	(45)											
2015	MRO	1211	Hastings Utilities	U.S.	15,328	15,328	-	-	15,620	15,620	-	-	(292)	(292)											

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total Regional Entity Assessments (Including WIRAB Assessments)				Regional Entity NEL Assessments				Penalty Sanctions - US Only		NPCC CORC Program			WECC Compliance Assessments (ex.AESO)				WIRAB Assessments																				
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total																	
2015	SERC	1298	East Mississippi Electric Power Association	U.S.	6,713	6,713	-	-	6,796	6,796	-	-	(83)	(83)																												
2015	SERC	1669	Electricities of North Carolina Inc	U.S.	180,838	180,838	-	-	183,083	183,083	-	-	(2,245)	(2,245)																												
2015	SERC	1300	EnergyUnited EMC	U.S.	37,527	37,527	-	-	37,993	37,993	-	-	(466)	(466)																												
2015	SERC	1301	Entergy	U.S.	1,799,787	1,799,787	-	-	1,822,132	1,822,132	-	-	(22,345)	(22,345)																												
2015	SERC	1302	Fayetteville (NC) Public Works Commission	U.S.	33,080	33,080	-	-	33,491	33,491	-	-	(411)	(411)																												
2015	SERC	1303	Florida Public Utilities (FL Panhandle Load)	U.S.	4,817	4,817	-	-	4,877	4,877	-	-	(60)	(60)																												
2015	SERC	1304	French Broad EMC	U.S.	7,914	7,914	-	-	8,012	8,012	-	-	(98)	(98)																												
2015	SERC	1305	Georgia Power Company	U.S.	1,327,048	1,327,048	-	-	1,343,524	1,343,524	-	-	(16,476)	(16,476)																												
2015	SERC	1306	Georgia System Optns Corporation	U.S.	602,084	602,084	-	-	609,559	609,559	-	-	(7,475)	(7,475)																												
2015	SERC	1479	Greenwood (MS) Utilities Commission	U.S.	4,450	4,450	-	-	4,506	4,506	-	-	(55)	(55)																												
2015	SERC	1307	Greenwood (SC) Commissioners of Public Works	U.S.	5,055	5,055	-	-	5,118	5,118	-	-	(63)	(63)																												
2015	SERC	1308	Gulf Power Company	U.S.	178,457	178,457	-	-	180,672	180,672	-	-	(2,216)	(2,216)																												
2015	SERC	1586	Haywood EMC	U.S.	4,726	4,726	-	-	4,784	4,784	-	-	(59)	(59)																												
2015	SERC	1309	Illinois Municipal Electric Agency	U.S.	29,191	29,191	-	-	29,554	29,554	-	-	(362)	(362)																												
2015	SERC	1480	Itta Bena, MS	U.S.	329	329	-	-	333	333	-	-	(4)	(4)																												
2015	SERC	1587	Jefferson Davis Electric Cooperative, Inc.	U.S.	4,419	4,419	-	-	4,473	4,473	-	-	(55)	(55)																												
2015	SERC	1617	Kentucky Municipal Power	U.S.	10,384	10,384	-	-	10,513	10,513	-	-	(129)	(129)																												
2015	SERC	1481	Kosciusko, MS	U.S.	1,162	1,162	-	-	1,176	1,176	-	-	(14)	(14)																												
2015	SERC	1482	Leland, MS	U.S.	518	518	-	-	525	525	-	-	(6)	(6)																												
2015	SERC	1313	McCormick Commission of Public Works	U.S.	320	320	-	-	324	324	-	-	(4)	(4)																												
2015	SERC	1314	Mississippi Power Company	U.S.	161,979	161,979	-	-	163,990	163,990	-	-	(2,011)	(2,011)																												
2015	SERC	1630	Mt. Carmel Public Utility	U.S.	1,651	1,651	-	-	1,672	1,672	-	-	(21)	(21)																												
2015	SERC	1315	Municipal Electric Authority of Georgia	U.S.	167,417	167,417	-	-	169,415	169,415	-	-	(2,079)	(2,079)																												
2015	SERC	1316	N.C. Electric Membership Corp.	U.S.	195,628	195,628	-	-	198,057	198,057	-	-	(2,429)	(2,429)																												
2015	SERC	1588	Northeast Louisiana Power Cooperative, Inc.	U.S.	4,244	4,244	-	-	4,297	4,297	-	-	(53)	(53)																												
2015	SERC	1574	Northern Virginia Electric Cooperative	U.S.	66,942	66,942	-	-	67,773	67,773	-	-	(831)	(831)																												
2015	SERC	1319	Old Dominion Electric Cooperative	U.S.	96,590	96,590	-	-	97,790	97,790	-	-	(1,199)	(1,199)																												
2015	SERC	1618	Osceola (Arkansas) Municipal Light and Power	U.S.	2,475	2,475	-	-	2,506	2,506	-	-	(31)	(31)																												
2015	SERC	1320	Owensboro (KY) Municipal Utilities	U.S.	12,818	12,818	-	-	12,977	12,977	-	-	(159)	(159)																												
2015	SERC	1321	Piedmont EMC in Duke and Progress Areas	U.S.	8,002	8,002	-	-	8,101	8,101	-	-	(99)	(99)																												
2015	SERC	1323	Piedmont Municipal Power Agency (PMPA)	U.S.	35,847	35,847	-	-	36,292	36,292	-	-	(445)	(445)																												
2015	SERC	1589	Pointe Coupee Electric Memb. Corp.	U.S.	3,825	3,825	-	-	3,872	3,872	-	-	(47)	(47)																												
2015	SERC	1266	PowerSouth Energy	U.S.	134,063	134,063	-	-	135,728	135,728	-	-	(1,664)	(1,664)																												
2015	SERC	1330	Prairie Power, Inc.	U.S.	23,646	23,646	-	-	23,940	23,940	-	-	(294)	(294)																												
2015	SERC	1324	Duke Energy Progress	U.S.	717,320	717,320	-	-	726,226	726,226	-	-	(8,906)	(8,906)																												
2015	SERC	1325	Rutherford EMC	U.S.	20,704	20,704	-	-	20,961	20,961	-	-	(257)	(257)																												
2015	SERC	1631	Sam Rayburn G&T Electric Cooperative Inc.	U.S.	28,312	28,312	-	-	28,663	28,663	-	-	(352)	(352)																												
2015	SERC	1326	South Carolina Electric & Gas Company	U.S.	357,415	357,415	-	-	361,853	361,853	-	-	(4,438)	(4,438)																												
2015	SERC	1327	South Carolina Public Service Authority	U.S.	175,760	175,760	-	-	177,942	177,942	-	-	(2,182)	(2,182)																												
2015	SERC	1590	South Louisiana Electric Cooperative Association	U.S.	9,769	9,769	-	-	9,891	9,891	-	-	(121)	(121)																												
2015	SERC	1328	South Mississippi Electric Power Association	U.S.	154,475	154,475	-	-	156,393	156,393	-	-	(1,918)	(1,918)																												
2015	SERC	1329	Southern Illinois Power Cooperative	U.S.	25,444	25,444	-	-	25,760	25,760	-	-	(316)	(316)																												
2015	SERC	1591	Southwest Louisiana Electric Membership Corporation	U.S.	39,891	39,																																				

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

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					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total														
2015	SPP	1652	Piggott Municipal Light, Water & Sewer	U.S.	1,609	1,609	-	-	1,674	1,674	-	-	-	(65)	(65)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2015	SPP	1653	Poplar Bluff Municipal Utilities	U.S.	15,673	15,673	-	-	16,310	16,310	-	-	-	(637)	(637)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
2015	SPP	1561	Public Service Commission of Yazoo City of Mississippi	U.S.	4,749	4,749	-	-	4,942	4,942	-	-	-	(193)	(193)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2015	SPP	1473	Roosevelt County Electric Coop	U.S.	6,867	6,867	-	-	7,146	7,146	-	-	-	(279)	(279)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2015	SPP	1654	Sikeston Board of Municipal Utilities	U.S.	21,025	21,025	-	-	21,880	21,880	-	-	-	(855)	(855)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2015	SPP	1257	Southwestern Public Service Co. (SPS-XCEL)	U.S.	845,950	845,950	-	-	879,950	879,950	-	-	-	(34,000)	(34,000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2015	SPP	1256	Sunflower Electric Power Cooperative	U.S.	178,941	178,941	-	-	186,217	186,217	-	-	-	(7,277)	(7,277)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2015	SPP	1445	Tex - La Electric Cooperative of Texas	U.S.	20,257	20,257	-	-	21,080	21,080	-	-	-	(824)	(824)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2015	SPP	1475	Tri County Electric Coop	U.S.	15,404	15,404	-	-	16,030	16,030	-	-	-	(626)	(626)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2015	SPP	1260	Westar Energy, Inc.	U.S.	801,402	801,402	-	-	833,991	833,991	-	-	-	(32,589)	(32,589)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2015	SPP	1259	Western Farmers Electric Cooperative	U.S.	375,105	375,105	-	-	390,359	390,359	-	-	-	(15,254)	(15,254)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2015	SPP	1501	West Texas Municipal Power Agency	U.S.	113,336	113,336	-	-	117,945	117,945	-	-	-	(4,609)	(4,609)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
TOTAL SPP					9,092,553	9,092,553	-	-	9,462,303	9,462,303	-	-	-	(369,750)	(369,750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	TRE	1019	ERCOT	U.S.	9,595,256	9,595,256	-	-	9,645,256	9,645,256	-	-	-	(50,000)	(50,000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TOTAL ERCOT					9,595,256	9,595,256	-	-	9,645,256	9,645,256	-	-	-	(50,000)	(50,000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	WECC		Alberta Electric System Operator	Canada	990,964	-	990,964	-	1,895,710	-	1,895,710	-	-	-	-	-	-	-	-	-	(969,620)	-	(969,620)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	WECC		British Columbia Hydro & Power Authority	Canada	2,003,368	-	2,003,368	-	1,865,532	-	1,865,532	-	-	-	-	-	-	-	-	-	73,995	-	73,995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	WECC		Comision Federal de Electricidad	Mexico	413,581	-	-	413,581	385,125	-	-	385,125	-	-	385,125	-	-	-	-	-	15,276	-	15,276	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Ajo Improvement District	U.S.	375	375	-	-	365	365	-	-	-	(17)	(17)	-	-	-	-	-	14	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2015	WECC		Arizona Public Service Company	U.S.	923,869	923,869	-	-	900,325	900,325	-	-	-	(42,978)	(42,978)	-	-	-	-	-	35,711	-	35,711	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		City of Wilmette	U.S.	1,347	1,347	-	-	1,341	1,341	-	-	-	(6)	(6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Electrical Districts 3	U.S.	22,400	22,400	-	-	21,829	21,829	-	-	-	(1,042)	(1,042)	-	-	-	-	-	866	-	866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Majority Districts	U.S.	23,364	23,364	-	-	22,769	22,769	-	-	-	(1,087)	(1,087)	-	-	-	-	-	903	-	903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Navajo Tribal Utility Authority	U.S.	609	609	-	-	593	593	-	-	-	(28)	(28)	-	-	-	-	-	24	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Tohono O'odham Utility Authority	U.S.	1,993	1,993	-	-	1,942	1,942	-	-	-	(93)	(93)	-	-	-	-	-	77	-	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Town of Wickenburg	U.S.	842	842	-	-	821	821	-	-	-	(39)	(39)	-	-	-	-	-	33	-	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Avista Corporation	U.S.	293,641	293,641	-	-	286,158	286,158	-	-	-	(13,660)	(13,660)	-	-	-	-	-	11,350	-	11,350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	WECC		Big Bend Electric Cooperative, Inc.	U.S.	4,793	4,793	-	-	4,671	4,671	-	-	-	(223)	(223)	-	-	-	-	-	185	-	185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		City of Cheney	U.S.	4,572	4,572	-	-	4,456	4,456	-	-	-	(213)	(213)	-	-	-	-	-	177	-	177	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		City of Chewelah	U.S.	705	705	-	-	687	687	-	-	-	(33)	(33)	-	-	-	-	-	27	-	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		City of Plummer	U.S.	1,042	1,042	-	-	1,016	1,016	-	-	-	(48)	(48)	-	-	-	-	-	40	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Clearwater Cooperative, Inc	U.S.	5,022	5,022	-	-	4,894	4,894	-	-	-	(234)	(234)	-	-	-	-	-	194	-	194	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Consolidated Irrigation District No. 19	U.S.	248	248	-	-	241	241	-	-	-	(12)	(12)	-	-	-	-	-	10	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Idaho County Light and Power Cooperative Association, Inc.	U.S.	1,773	1,773	-	-	1,728	1,728	-	-	-	(82)	(82)	-	-	-	-	-	69	-	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Inland Power and Light Company	U.S.	14,606	14,606	-	-	14,234	14,234	-	-	-	(679)	(679)	-	-	-	-	-	565	-	565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Kaiser Aluminum Fabricated Products LLC	U.S.	9,576	9,576	-	-	9,507	9,507	-	-	-	(454)	(454)	-	-	-	-	-	377	-	377	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Kootenai Electric Cooperative, Inc.	U.S.	14,690	14,690	-	-	14,315	14,315	-	-	-	(683)	(683)	-	-	-	-	-	568	-	568	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Modern Electric Water Company	U.S.	7,390	7,390	-	-	7,104	7,104	-	-	-	(339)	(339)	-	-	-	-	-	282	-	282	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Northern Lights, Inc.	U.S.	1,071	1,071	-	-	1,044	1,044	-	-	-	(50)	(50)	-	-	-	-	-	41	-	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		Pend Oreille County PUD No. 1	U.S.	26,146	26,146	-	-	25,480	25,480	-	-	-	(1,216)	(1,216)	-	-	-	-	-	1,011	-	1,011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	WECC		PUD No. 1 of Asotin County	U.S.	172	172	-	-	168	168	-	-	-	(8)	(8)	-	-	-	-	-	7	-	7	-	-	-													

2015 NEL Calculations and Allocations to Load Serving Entities (or Designee) for the 2017 NERC and RE Assessments

Data Year	Regional Entity	ID	Entity	Country	Total Regional Entity Assessments (Including WIRAB Assessments)				Regional Entity NEL Assessments				Penalty Sanctions - US Only		NPCC CORC Program			WECC Compliance Assessments (ex.AESO)				WIRAB Assessments			
					Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Total	US Total	Canada Total	Total	US Total	Canada Total	Mexico Total	Total	US Total	Canada Total	Mexico Total
2015	WECC		Town of Center	U.S.	451	451	-	-	440	440	-	-	(21)	(21)				17	17			15	15		
2015	WECC		Tri-State Generation & Transmission Assoc. Inc - Reliability	U.S.	78,672	78,672	-	-	76,667	76,667	-	-	(3,660)	(3,660)				3,041	3,041			2,624	2,624		
2015	WECC		Western Area Power - Loveland, CO	U.S.	1,028	1,028	-	-	1,001	1,001	-	-	(48)	(48)				40	40			34	34		
2015	WECC		Yampa Valley Electric Association	U.S.	16,275	16,275	-	-	16,299	16,299	-	-	(778)	(778)				646	646			558	558		
2015	WECC		City of Artec Electric Dept	U.S.	1,464	1,464	-	-	1,426	1,426	-	-	(68)	(68)				57	57			49	49		
2015	WECC		City of Gallup	U.S.	7,020	7,020	-	-	6,841	6,841	-	-	(327)	(327)				271	271			234	234		
2015	WECC		Jicarilla Apache Nation Power Authority	U.S.	693	693	-	-	676	676	-	-	(32)	(32)				27	27			23	23		
2015	WECC		Navajo Tribal Utility Authority	U.S.	7,038	7,038	-	-	6,859	6,859	-	-	(327)	(327)				272	272			235	235		
2015	WECC		Navopache Electric Cooperative, Inc.	U.S.	13,480	13,480	-	-	13,136	13,136	-	-	(627)	(627)				521	521			450	450		
2015	WECC		Public Service Company of New Mexico	U.S.	295,299	295,299	-	-	287,774	287,774	-	-	(13,737)	(13,737)				11,414	11,414			9,848	9,848		
2015	WECC		The Incorporated County of Los Alamos	U.S.	17,582	17,582	-	-	17,134	17,134	-	-	(818)	(818)				680	680			586	586		
2015	WECC		Tri-State Generation & Transmission Association, Inc.	U.S.	97,898	97,898	-	-	95,404	95,404	-	-	(4,554)	(4,554)				3,784	3,784			3,265	3,265		
2015	WECC		US Dept of Energy - Kirtland AFB	U.S.	13,296	13,296	-	-	12,957	12,957	-	-	(619)	(619)				514	514			443	443		
2015	WECC		Public Utility District No. 1 of Chelan County	U.S.	118,722	118,722	-	-	115,697	115,697	-	-	(5,523)	(5,523)				4,589	4,589			3,959	3,959		
2015	WECC		PUD No. 1 of Douglas County	U.S.	20,416	20,416	-	-	23,793	23,793	-	-	(1,136)	(1,136)				944	944			814	814		
2015	WECC		Okanogan PUD	U.S.	20,243	20,243	-	-	19,727	19,727	-	-	(942)	(942)				782	782			675	675		
2015	WECC		BPA - Douglas Pumping	U.S.	883	883	-	-	860	860	-	-	(41)	(41)				34	34			29	29		
2015	WECC		BPA - Okanogan Pumping	U.S.	1,192	1,192	-	-	1,162	1,162	-	-	(55)	(55)				46	46			40	40		
2015	WECC		BPA - Okanogan REA	U.S.	1,860	1,860	-	-	1,812	1,812	-	-	(87)	(87)				72	72			62	62		
2015	WECC		BPA - USBR Load	U.S.	4,498	4,498	-	-	4,384	4,384	-	-	(209)	(209)				174	174			150	150		
2015	WECC		BPA - Big Bend/Schrag Load	U.S.	1,359	1,359	-	-	1,359	1,359	-	-	(65)	(65)				54	54			47	47		
2015	WECC		BPA - Kittitas Load	U.S.	240	240	-	-	234	234	-	-	(11)	(11)				9	9			8	8		
2015	WECC		Douglas/Paliskades / PUD No. 1 of DC	U.S.	608	608	-	-	690	690	-	-	(28)	(28)				23	23			20	20		
2015	WECC		PUD No. 2 of Grant County	U.S.	141,443	141,443	-	-	137,839	137,839	-	-	(6,580)	(6,580)				5,467	5,467			4,717	4,717		
2015	WECC		City of Blaine	U.S.	2,404	2,404	-	-	2,343	2,343	-	-	(112)	(112)				93	93			80	80		
2015	WECC		City of Sumas	U.S.	909	909	-	-	886	886	-	-	(42)	(42)				35	35			30	30		
2015	WECC		Port of Seattle - Seattle-Tacoma International Airport	U.S.	4,457	4,457	-	-	4,344	4,344	-	-	(207)	(207)				172	172			149	149		
2015	WECC		PUD No. 1 of Kittitas County	U.S.	501	501	-	-	488	488	-	-	(23)	(23)				19	19			17	17		
2015	WECC		PUD No. 1 of Whatcom County	U.S.	204	204	-	-	198	198	-	-	(9)	(9)				8	8			7	7		
2015	WECC		Puget Sound Energy, Inc.	U.S.	733,763	733,763	-	-	715,064	715,064	-	-	(34,134)	(34,134)				28,362	28,362			24,471	24,471		
2015	WECC		Tanner Electric Cooperative	U.S.	2,966	2,966	-	-	2,801	2,801	-	-	(138)	(138)				115	115			99	99		
2015	WECC		Salt River Project	U.S.	910,348	910,348	-	-	887,149	887,149	-	-	(42,349)	(42,349)				35,188	35,188			30,360	30,360		
2015	WECC		Seattle City Light	U.S.	300,736	300,736	-	-	293,072	293,072	-	-	(13,990)	(13,990)				11,624	11,624			10,029	10,029		
2015	WECC		Barrick Goldstrike Mines Inc.	U.S.	49,841	49,841	-	-	48,571	48,571	-	-	(2,319)	(2,319)				1,927	1,927			1,662	1,662		
2015	WECC		City of Fallon	U.S.	2,802	2,802	-	-	2,731	2,731	-	-	(130)	(130)				108	108			93	93		
2015	WECC		Harney Electric Cooperative, Inc.	U.S.	9,766	9,766	-	-	9,518	9,518	-	-	(454)	(454)				378	378			326	326		
2015	WECC		Mt. Wheeler Power	U.S.	16,915	16,915	-	-	16,484	16,484	-	-	(787)	(787)				654	654			564	564		
2015	WECC		Sierra Pacific Power Company dba NV Energy	U.S.	265,296	265,296	-	-	258,535	258,535	-	-	(12,341)	(12,341)				10,255	10,255			8,848	8,848		
2015	WECC		Truckee Donner Public Utility District	U.S.	4,779	4,779	-	-	4,657	4,657	-	-	(222)	(222)				185	185			159	159		
2015	WECC		Wells Rural Electric Cooperative	U.S.	31,346	31,346	-	-	30,547	30,547	-	-	(1,458)	(1,458)				1,212	1,212			1,045	1,045		
2015	WECC		City of Tacoma DBA Tacoma Power	U.S.	149,679	149,679	-	-	145,865	145,865	-	-	(6,963)	(6,963)				5,786	5,786			4,992	4,992		
2015	WECC		Tucson Electric Power Company	U.S.	463,093	463,093	-	-	451,292	451,292	-	-	(21,543)	(21,543)				17,900	17,900			15,444	15,444		
2015	WECC		Merced Irrigation District	U.S.	14,749	14,749	-	-	14,373	14,373	-	-	(686)	(686)				570	570			492	492		
2015	WECC		Turlock Irrigation District	U.S.	66,704	66,704	-	-	65,004	65,004	-	-	(3,103)	(3,103)				2,578	2,578			2,225	2,225		
2015	WECC		Basin Electric Power Cooperative	U.S.	84,017	84,017	-	-	81,876	81,876	-	-	(3,908)	(3,908)				3,248	3,248			2,802	2,802		
2015	WECC		Black Hills Power/Cheyenne Light Fuel & Power	U.S.	111,605	111,605	-	-	108,761	108,761	-	-	(5,192)	(5,192)				4,314	4,314			3,722	3,722		
2015	WECC		Black Hills State University South Dakota	U.S.	603	603	-	-	588	588	-	-	(28)	(28)				23	23			20	20		
2015	WECC		City of Pape	U.S.	2,851	2,851	-	-	2,778	2,778	-	-	(33)	(33)				110	110			95	95		
2015	WECC		Colorado Springs Utilities	U.S.	141,923	141,923	-	-	138,306	138,306	-	-	(6,602)	(6,602)				5,486	5,486			4,733	4,733		
2015	WECC		Deseret Generation & Transmission Cooperative	U.S.	3,589	3,589	-	-	3,498	3,498	-	-	(167)	(167)				139	139			120	120		
2015	WECC		City of Farmington	U.S.	33,367	33,367	-	-	32,516	32,516	-	-	(1,552)	(1,552)				1,290	1,290			1,113	1,113		
2015	WECC		Municipal Energy Agency of Nebraska	U.S.	19,627	19,627	-	-	19,127	19,127	-	-	(913)	(913)				759	759			655	655		
2015	WECC		Navajo Agricultural Products Industry (NAPI)	U.S.	86	86	-	-	84	84	-	-	(4)	(4)				3	3			3	3		
2015	WECC		Nebraska Public Power Marketing	U.S.	79	79	-	-	77	77	-	-	(4)	(4)				3	3			3	3		
2015	WECC		PacificCorp	U.S.	3,481	3,481	-	-	3,392	3,392	-	-	(62)	(62)				135	135			116	116		
2015	WECC		Public Service Company of Colorado (Xcel)	U.S.	2,318	2,318	-	-	2,259	2,259	-	-	(108)	(108)				90	90			77	77		
2015	WECC		Town of Fredonia	U.S.	321	321	-	-	312	312	-	-	(15)	(15)				12	12			11	11		
2015	WECC		Tri-State Generation & Transmission Assoc. Inc - Reliability	U.S.	233,950	233,950	-	-	227,988	227,988	-	-	(10,883)	(10,883)				9,043	9,043			7,802	7,802		
2015	WECC		Western Area Power - Loveland, CO	U.S.	72,529	72,529	-	-	70,680	70,680	-	-	(3,374)	(3,374)											

**NORTH AMERICAN ELECTRIC RELIABILITY
CORPORATION**

2017 BUSINESS PLAN AND BUDGET FILING

ATTACHMENT 3

NORTHEAST POWER COORDINATING COUNCIL, INC.

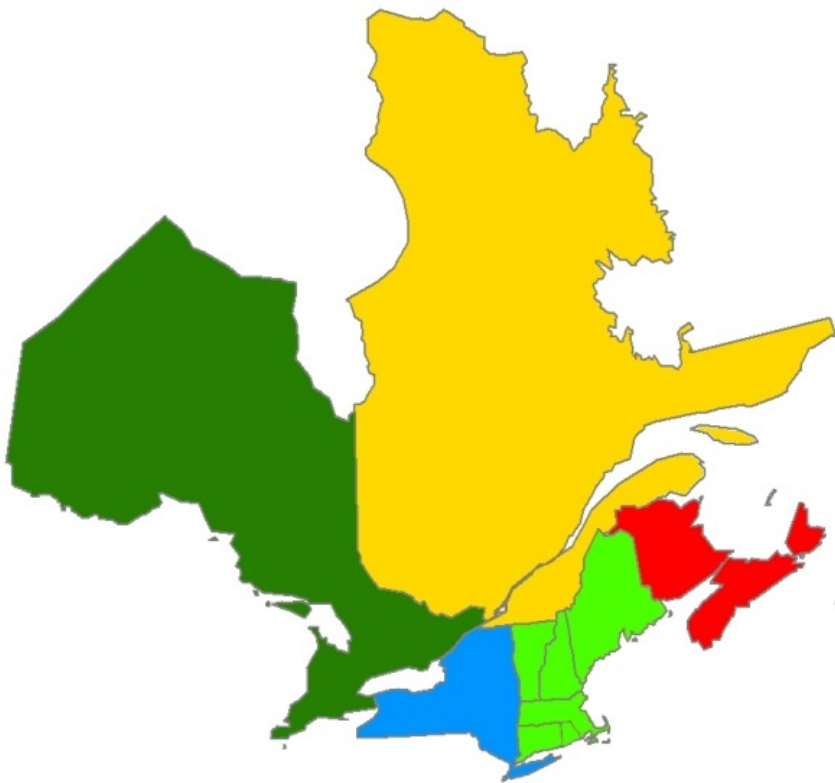
PROPOSED 2017 BUSINESS PLAN AND BUDGET



NORTHEAST POWER COORDINATING COUNCIL, INC.
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Northeast Power Coordinating Council, Inc. (NPCC)

2017 Business Plan and Budget



**Approved by the
NPCC Board of Directors
at its June 30, 2016 Meeting and
Resubmitted to NERC July 25, 2016**

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Introduction

Total NPCC Resources				
(in whole dollars)				
	2017 Budget	U.S.	Canada	Mexico
Regional Entity Division FTEs	36.86			
Criteria Services Division FTEs	2.14			
Total FTEs	39.0			
Regional Entity Division Expenses	\$15,121,054			
Criteria Services Division Expenses	\$1,036,896			
Total Expenses	\$16,157,950			
Regional Entity Division Inc(Dec) in Fixed Assets	\$26,000			
Criteria Services Division Inc(Dec) in Fixed Assets	(\$10,000)			
Total Inc(Dec) in Fixed Assets	\$16,000			
Regional Entity Division Working Capital Requirement**	(\$827,994)			
Criteria Services Division Working Capital Requirement***	\$78,971			
Total Working Capital Requirement	(\$749,023)			
Total Regional Entity Division Funding Requirement	\$14,319,061			
Total Criteria Services Division Funding Requirement	\$1,105,867			
Total Funding Requirement	\$15,424,927			
Regional Entity Division Assessments	\$14,255,061	\$8,894,696	\$5,360,364	
Regional Entity Division Assessments Percentage	100.0%	62.4%	37.6%	
Criteria Services Division Membership Fees	\$1,105,867	\$502,200	\$603,666	
Total NPCC Assessments & Membership Fees	\$15,360,927	\$9,396,896	\$5,964,031	
NEL	635,349,000	288,527,000	346,822,000	
NEL %	100%	45.41%	54.59%	

** Refer to Table B-1 on page 63 in Section B.

*** Refer to the Reserve Analysis on page 80 in Section C.

2017 Overview of Total NPCC Resource Requirements

Due to the international nature of NPCC, the total resource requirements including both Regional Entity division and Criteria Services division are identified above. The individual divisional explanations are contained in subsequent sections.

NPCC proposes to decrease its total budget and assessments by -0.3% comprising a Regional Entity total budget increase of 0.5% and a Criteria Services division total budget decrease of -11.3%. The proposed 2017 funding requirements will be satisfied by a Regional Entity division assessment of \$14,255,061 and Criteria Services division fees of \$1,105,867, for a total of \$15,360,927. This is an overall decrease of -0.3% compared to the 2016 total assessments and fees of \$15,409,738. NPCC believes that the Region remains an effective provider of Regional Entity and Criteria Services division functions. NPCC's corporate culture centers on consistent delivery of excellent results at a cost that is considerate of the longstanding tradition in the Northeast of affordable and reliable electricity.

Organizational Overview

Northeast Power Coordinating Council, Inc. (NPCC) is a 501(c)(6) not-for-profit corporation in the state of New York responsible for promoting and improving the reliability of the international, interconnected bulk power systems in Northeastern North America through (i) the development of Regional Reliability Standards and compliance assessment and enforcement of

continent-wide and Regional Reliability Standards, coordination of system planning, design and operations, and assessment of reliability (collectively, Regional Entity activities), and (ii) the establishment of Regionally-specific criteria, and monitoring and enforcement of compliance with such criteria (collectively, criteria services activities). NPCC provides the functions and services for Northeastern North America of a cross-border Regional Entity through a Regional Entity division, as well as Regionally-specific criteria services for Northeastern North America through a criteria services division. NPCC's website is www.npcc.org.

The NPCC Region covers nearly 1.2 million square miles and is populated by more than 56 million people. NPCC U.S. includes the six New England states and the state of New York. NPCC Canada includes the provinces of Ontario, Québec and the Maritime provinces of New Brunswick and Nova Scotia. In total, from a net energy for load perspective, NPCC is approximately 45% U.S. and 55% Canadian. With regard to Canada, approximately 70% of Canadian net energy for load is within the NPCC Region.

Effective January 1, 2016, NPCC executed an Amended and Restated Regional Delegation Agreement with the North American Electric Reliability Corporation (NERC) that delegates to NPCC certain responsibilities and authorities of a cross-border Regional Entity as defined by *Section 215* of the Federal Power Act in the U.S. In addition, NPCC has executed Memoranda of Understanding or Agreements with Canadian provincial regulatory and/or governmental authorities in Ontario, Québec, New Brunswick and Nova Scotia.

In this 2017 business plan, NPCC has included activities consistent with NERC initiatives including the enhancement of reliability assessments, risk-based registration, risk-based compliance monitoring and enforcement, expanded training for compliance auditing, and increased situation awareness.

It is imperative that NPCC maintain its ability to carry out delegated authorities and responsibilities. NPCC has a flat 2017 targeted staffing level of 39 power industry professionals and support personnel. Details of the 2017 business plans and budget for each program area are included in Section A for the Regional Entity division. The 2017 Regional Entity division schedules are shown in Section B. Section C details the 2017 criteria services division business plan and budget.

Membership and Governance

NPCC monitors approximately 212 registered entities and some 426 functions in the Region for compliance with mandatory Reliability Standards. NPCC currently has approximately 77 members. There are two categories of membership, General and Full. The two categories distinguish between Regional Entity delegated services that are provided in support of the U.S. FERC and Canadian provincial MOUs or Agreements with regulatory and/or governmental authorities, and Criteria Services which FERC references as U.S. non-delegated activities.

General Membership is voluntary and is open to any person or entity, including any entity participating in the Registered Ballot Body of the Electric Reliability Organization (ERO) that has an interest in the reliable operation of the Northeastern North American bulk power system. General Members which are also registered entities within the NPCC Region are subject to compliance with Reliability Standards, consistent with their registration, and also receive additional services from the Regional Entity division of NPCC.

Full Membership is available to Members which are already General Members and participate in electricity markets in the Northeast. Independent system operators (ISOs), Regional transmission organizations (RTOs), Transcos and other organizations or entities that perform the Balancing Authority function operating in Northeastern North America are expected to be Full Members of NPCC. The New York State Reliability Council and any other sub-regional reliability councils which may be formed are also expected to be Full Members. Full Members are subject to compliance with Regionally-specific more stringent reliability criteria for their generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area and which are identified utilizing a reliability impact-based methodology, in addition to Reliability Standards, and receive additional services from the Criteria Services division of NPCC, which is not funded through the ERO.

Since January 1, 2012 NPCC is governed by a Board of Directors consisting of seven stakeholder voting sectors consisting of a maximum of two directors per sector, an independent sector consisting of two independent directors, an independent Board Chair with voting rights to preclude board deadlocks, and the President and CEO. Within NPCC, no two sectors can control and no one sector can block action. The voting sectors on the NPCC Board of Directors include:

Sector 1) Transmission Owners

Sector 2) Reliability Coordinators

Sector 3) Transmission Dependent Utilities, Distribution Companies, Load Serving Entities

Sector 4) Generator Owners

Sector 5) Marketers, Brokers and Aggregators

Sector 6) Regulators

Sector 7) Sub-Regional Reliability Councils, Customers, other Regional Entities and Interested Entities

Sector 8) Independent

A Finance and Audit Committee (FAC), a Pension Committee (PC), a Corporate Governance and Nominating Committee (CGNC), and a Management Development and Compensation Committee (MDCC) advise the Board on finance, governance, compensation and human resource matters consistent with their approved charters. The Board endorses a non-employee, Certified Public Accountant for election by the NPCC Members as Treasurer of the corporation. The Treasurer chairs the FAC and works with the Chief Operating Officer who provides oversight of the finances of the corporation. The Treasurer reports to the Board on the corporation's financial position, on FAC activities, on tax code requirements, and on independent annual audit results and accounting practices.

The Regional Standards Committee (RSC), the Compliance Committee (CC), the Reliability Coordinating Committee (RCC), and the Public Information Committee, consistent with their approved scopes, are responsible for various reliability issues. The RSC, CC and RCC also provide technical policy recommendations to the Board. All General and Full Members are eligible for representation on the technical committees.

Industry technical experts from within the membership provide valuable input to the Board through various working groups and task forces as well as the committees. The *Amended and Restated Bylaws* establishes NPCC's independence from users, owners and operators of the bulk power system through the enhanced governance structure while providing fair stakeholder representation in the election of the Board of Directors and officers. The members, from each of the seven stakeholder voting sectors, vote to elect directors in their respective sector. The

Amended and Restated Bylaws establish criteria for board service for both stakeholder and independent directors. Independent Directors are drawn from diverse backgrounds and possess a broad range of industry expertise, perspectives, experiences, skill sets and knowledge to contribute to the effective functioning of a hybrid board structure.

Compliance and enforcement activities are carried out by the NPCC compliance staff and are independent of all users, owners and operators of the international bulk electric system. Compliance activities are governed in the United States by the *Amended and Restated Regional Delegation Agreement* between NERC and NPCC, delegating portions of NERC's authority as the ERO to NPCC. NPCC compliance activities in Canada are governed by an individual provincial Memorandum of Understanding (MOU) or Agreements with each province providing the unique parameters for compliance and enforcement activities for each of the provinces. A MOU between the Independent Electricity System Operator in Ontario (IESO), NERC and NPCC establishes roles and responsibilities with regard to that province. NPCC, NERC and the New Brunswick Energy and Utilities Board are parties to a MOU that sets forth reliability activities for New Brunswick. The Régie de l'énergie, NERC and NPCC executed an Agreement regarding the implementation of the Québec reliability standards compliance monitoring and enforcement program. NPCC, NERC and Nova Scotia executed a MOU that sets forth the mutual understanding of the parties in relation to the approval and implementation of NERC Reliability Standards and NPCC Regional reliability criteria for the province of Nova Scotia.

International Foundation

The Regional Entity functions and services differ according to particular regulatory backstop:

a) U.S. Foundation

The Federal Energy Regulatory Commission (FERC) certified NERC as the Electric Reliability Organization (ERO) on July 20, 2006. The ERO is responsible for developing and enforcing reliability standards within the United States. In executing part of its responsibilities, NERC delegates authority to the Regional Entities to perform certain functions through delegation agreements. Ensuring the reliability of the bulk power system in the State of New York and the six New England States was delegated from NERC to NPCC through the Amended and Restated Regional Delegation Agreement.

b) Ontario

On February 5, 2010, NERC, NPCC and the IESO amended and restated their earlier MOU, dated November 29, 2006, setting forth their mutual understanding as regards NERC's and NPCC's status in Ontario with respect to standard and criteria development, compliance enforcement, and other related matters. The IESO, whose statutory responsibilities include making and enforcing reliability standards, and making and enforcing Ontario market rules that govern the IESO-controlled grid and the wholesale electricity market, was established April 1, 1999 as the Independent Electricity Market Operator in Ontario under the *Electricity Act, 1998* (Ontario). The IESO is subject to the regulatory oversight of the Ontario Energy Board (OEB).

Among other things, the MOU recognizes that NERC and NPCC are standards authorities under the *Electricity Act, 1998* (Ontario). Additionally, under the authority of that same legislation, and as memorialized in the MOU, the NERC reliability standards and NPCC reliability criteria have effect in Ontario. However a 2008 amendment to the *Electricity Act, 1998* (Ontario) allows the OEB to review these standards and criteria and issue orders preventing their implementation and remanding them back to NERC and NPCC.

The IESO is subject to compliance monitoring and enforcement by NPCC. The IESO is also subject to compliance monitoring and enforcement of the Ontario market rules by the IESO's Market Assessment and Compliance Division (MACD) that operates at arm's length from the IESO's business units. The MOU notes that where MACD, NERC, and NPCC engage in investigations pursuant to their respective mandates regarding compliance, MACD can request to take the lead. Moreover, of the three, MACD is the only entity that can assess financial penalties for any Ontario market participant's or the IESO's non-compliance with Ontario market rules, which includes non-compliance with NERC standards and NPCC criteria.

The MOU provides for a peer review process to promote the common compliance and enforcement objectives of NERC/NPCC and MACD. From the perspective of NPCC and NERC, this process, in part, is meant to assure registered entities outside of Ontario that the MACD program is rigorous, thorough and reliable.

The IESO is subject to NPCC assessments of compliance, including audits, as well as NPCC remedial action directives to correct non-compliance. In the event that the IESO disagrees with NPCC's finding of a violation or associated assessment of sanctions in connection with standards and criteria, the IESO has a right to a compliance hearing with NPCC.

c) Québec

The Régie de l'énergie, NERC and NPCC are parties to the May 8, 2009 *Agreement on the Development of Electric Power Transmission Reliability Standards and of Procedures and a Program for the Monitoring of the Application of These Standards for Québec* (the 2009 Agreement). Under the terms of the 2009 Agreement, the Régie de l'énergie, which is charged with ensuring the reliability of the electric transmission in Québec, retained NPCC and NERC as experts to develop reliability standards and monitoring program procedures for the Province.

The Régie de l'énergie, NERC and NPCC are parties to the September 24, 2014, *Agreement on the Implementation of the Québec Reliability Standards Compliance Monitoring and Enforcement Program* (the 2014 Agreement). Through the 2014 Agreement, the Régie de l'énergie retains the services of NPCC to monitor and assess the compliance of registered entities in Québec with the reliability standards adopted by the Régie with respect to electric power transmission in Québec.

On April 1, 2015, the Québec Reliability Standards Compliance Monitoring and Enforcement Program ("QCMEP"), which was developed jointly by the Régie de l'énergie, NPCC and NERC, came into effect. Together, the 2014 Agreement and the QCMEP detail the procedures and program for monitoring and enforcing mandatory electric power transmission reliability standards in Québec.

The Régie de l'énergie is a public body established by the *Act respecting the Régie de l'énergie* (the Act). Pursuant to its authority under the Act, the Régie de l'énergie, through a series of decisions in 2007, designated Hydro-Québec Contrôle des mouvements d'énergie (HQCME), a division of Hydro-Québec TransÉnergie, as the Reliability Coordinator for Québec. In accordance with its mandate and as recognized in the 2009 Agreement, it is this entity that is responsible for the filing with the Régie de l'énergie for approval of reliability standards in Québec. HQCME has filed for the approval of certain reliability standards and the Régie de l'énergie has made certain reliability standards mandatory in Québec and is continuing proceedings to make additional reliability standards mandatory in Québec.

The Hydro-Québec companies, including Hydro-Québec TransÉnergie and Hydro-Québec Production have been subject to voluntarily compliance monitoring and enforcement, including comprehensive audits by NPCC. NPCC plans to continue to these voluntary compliance monitoring and enforcement activities for any standards that have not yet been declared in effect by the Régie de l'énergie. Additionally, NPCC has and continues to proceed with its reliability assurance activities within Québec, including but not limited to events analysis, Reliability Assessment and Performance Analysis and compliance investigations, consistent with the NPCC *Amended and Restated Bylaws*.

d) New Brunswick

The New Brunswick Energy and Utilities Board (“NBEUB”) and NPCC entered into a Service Contract dated October 1, 2013, whereby NPCC provides services for the NBEUB. The NBEUB is an independent, quasi-judicial board that regulates New Brunswick’s electricity sector. The NBEUB has the responsibility under the Electricity Act to adopt and enforce reliability standards in New Brunswick.

Effective October 1, 2013, the Electricity Act (NB) and implementing regulations (together, “NB Electricity Act”) amended how Reliability Standards are approved, monitored, and enforced in the province of New Brunswick. The NB Electricity Act designates NPCC as a compliance body and NERC as a standards body within the meaning of the NB Electricity Act. The October 1, 2013 Agreement between NPCC and the NBEUB is intended to be the preliminary step with respect to the implementation of the NB Electricity Act for reliability standards.

With respect to the approval of reliability standards, the NB Electricity Act provides that all of the NERC Reliability Standards that were effective in New Brunswick prior to October 1, 2013 continue to be effective in New Brunswick after October 1, 2013. Additionally, the New Brunswick Power Corporation (“NB Power”) is required to file for approval, modification, or retirement of NERC Reliability Standards 60 days after a NERC Reliability Standard is approved, modified, or retired by the Federal Energy Regulatory Commission (“FERC”). The NBEUB rules on the filed Reliability Standard after considering (a) the potential impact on the reliability of the bulk power system, (b) the potential cost and benefits (c) the public interest, and (d) any other factors that the NBUEB considers relevant. The Electricity Act requires the NBEUB to notify NPCC and NERC of an application by NB Power with respect to reliability standards and provide for a 60 day comment period. The NBEUB is required to approve the reliability standards if there are not substantive modifications proposed from the FERC approved NERC Reliability Standard and there were no substantive comments filed. Amendments to the reliability standard to make them compatible with New Brunswick or Canadian law are considered non-substantive. The approval of reliability standards may be subject to a hearing for several reasons, including substantive comments from NPCC or NERC.

With respect to the monitoring and enforcement of the Reliability Standards in New Brunswick, the NB Electricity Act provides for NPCC to identify entities that must register with the NBEUB in the New Brunswick specific registry. Additionally, NPCC may carry out the compliance monitoring and assessment for the NBEUB and assist and advise the enforcement for the NBEUB, including financial penalties. NPCC is also permitted to carry out or exercise any power in the implementing regulations that is specific to the NBEUB, as provided for in the Service Contract. Additionally, NPCC has the powers of an inspector, which permits NPCC to audit and spot check entities within New Brunswick.

e) Nova Scotia

Nova Scotia Power Incorporated (NSPI), NPCC and NERC are parties to a May 11, 2010 Memorandum of Understanding regarding the approval and implementation of mandatory NERC reliability standards and NPCC Regional reliability criteria. Pursuant to the MOU's terms, NERC and NPCC filed standards and criteria with the Nova Scotia Utility and Review Board (NSUARB) for approval on June 30, 2010 and June 29, 2010, respectively. A decision from the NSUARB on both NERC and NPCC filings was rendered on July 20, 2011. Hence, the standards and criteria are mandatory in Nova Scotia and NSPI will be subject to the NERC compliance monitoring and enforcement program, as implemented by NPCC.

NPCC will conduct compliance and enforcement activities with respect to the standards and forward any non-compliance information and recommendations to the NSUARB. The NSUARB maintains the final authority with respect to enforcement in Nova Scotia and based on the recommendations from NPCC, may determine whether a violation has occurred and, if so, what remedial measures or non-monetary penalties should be imposed.

Regional Entity Division Functional Scope

NPCC's Regional Entity division functions in support of the ERO include:

- Active participation in the development of North American Reliability Standards for the bulk electric system, and as needed development of Reliability Standards applicable within the NPCC cross-border Regional Entity
- Monitoring and enforcement of approved Reliability Standards, including the registration of responsible entities, and as needed certification of such entities
- Assessment of the present and future reliability of the bulk power system
- Operational coordination and situation awareness support
- Event analysis and identifying lessons learned to improve reliability
- Effective training and education of reliability personnel
- Promoting the protection of critical electric infrastructure

In recognition of the delegated compliance role of Regional Entities as an important means to enhancing reliability, NPCC has designated a significant percentage of its staff resources to compliance monitoring and enforcement. NPCC has also developed and deployed a robust set of online tools for gathering data, analysis, and tracking of compliance information to support its ability to carry out its responsibilities in a cost effective manner.

NPCC has organized the remaining staff into program areas consistent with ERO Act 2005 to address the other functions listed above. These experts in operations, planning and reliability analysis assist registered entities in assessing and improving reliability. It is in support of these areas that NPCC engages the majority of industry experts on its technical committees.

2017 Key Assumptions and 2017 Goals and Key Deliverables

NERC and the eight Regional Entities collaborated in the development of a common operating model with complementary roles and responsibilities, an ERO Enterprise Strategic Plan, and a set of business planning assumptions, goals, metrics and key deliverables for the 2016 through 2019 period. The results from that collaboration, which incorporated risks identified by the Reliability Issues Steering Committee, are included as a set of Shared Business Plan and Budget

Assumptions that will be contained in Exhibit A to the NERC 2017 Business Plan and Budget and may be referenced by the users of this document. NPCC activities that support ERO Enterprise Goals are detailed in each of the following program area sections.

2017 Overview of Regional Entity Division Cost Impacts

The proposed Regional Entity division assessment of \$14,255,061 to support the budget is a decrease of 0.7% compared to the 2016 assessment of \$14,349,196.

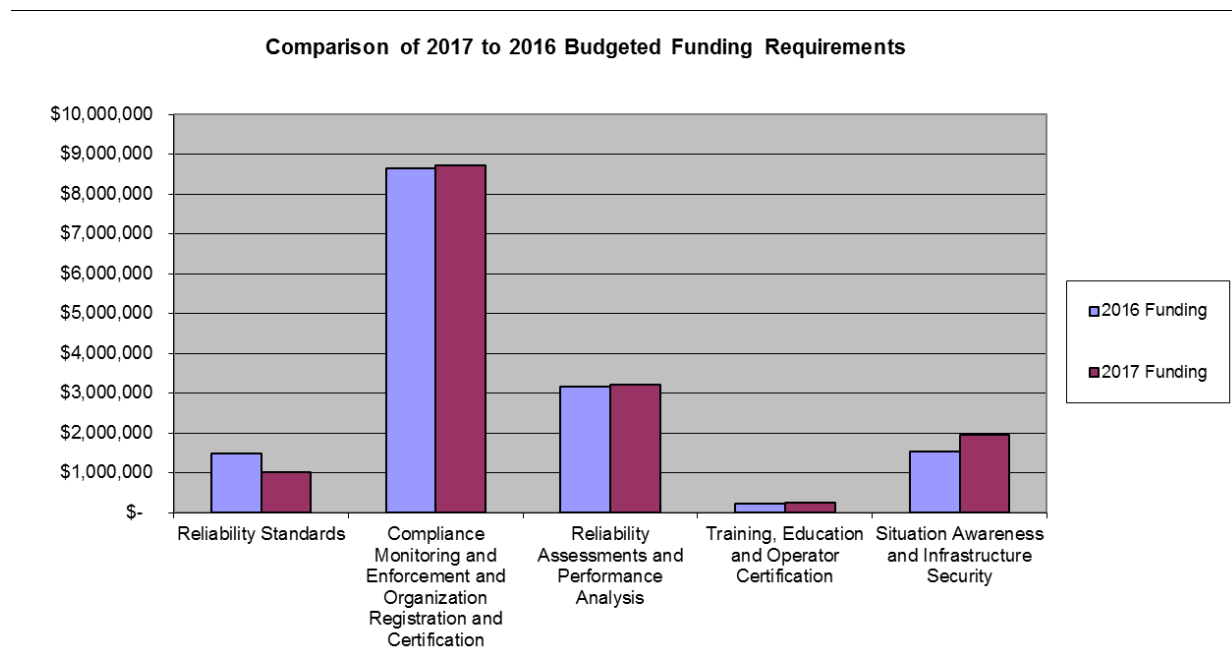
2016 Projections

Current year projections are taken into consideration in development of the budget. Expenses are currently projected to be on budget in all areas or slightly under budget. 2016 Projections reflect expectations based on the first quarter variance report. It is anticipated that projections could change throughout 2016 and would be reflected in each subsequent quarter's variance report.

Summary by Program

Program	Budget 2016	Projection 2016	Budget 2017	Variance	
				2017 Budget v 2016 Budget	Variance %
Reliability Standards	\$ 1,487,419	\$ 1,292,419	\$ 1,022,328	\$ (465,091)	-31.3%
Compliance Monitoring and Enforcement and Organization Registration and Certification	\$ 8,650,196	\$ 8,650,196	\$ 8,726,049	\$ 75,853	0.9%
Reliability Assessments and Performance Analysis	\$ 3,171,574	\$ 3,276,574	\$ 3,206,966	\$ 35,392	1.1%
Training, Education and Operator Certification	\$ 219,956	\$ 219,956	\$ 248,658	\$ 28,702	13.0%
Situation Awareness and Infrastructure Security	\$ 1,543,852	\$ 1,543,852	\$ 1,943,053	\$ 399,201	25.9%
Total	\$ 15,072,998	\$ 14,982,998	\$ 15,147,054	\$ 74,057	0.5%

This chart does not include allocation of working capital requirements among the Program Areas.



This chart does not include allocation of working capital requirements among the Program Areas.

Personnel Analysis

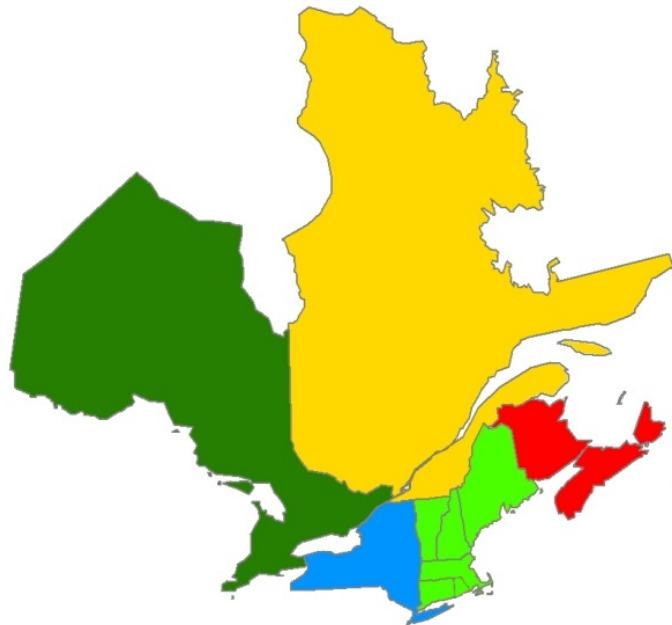
Total FTE's by Program Area	Budget 2016	Projection 2016	Direct FTEs 2017 Budget	Shared FTEs ¹ 2017 Budget	Total FTEs 2017 Budget	Change from 2016 Budget
REGIONAL ENTITY DIVISION						
Operational Programs						
Reliability Standards	2.93	1.93	1.00	0.93	1.93	-1.00
Compliance Monitoring and Enforcement and Organization Registration and Certification	16.00	17.00	17.00	0.00	17.00	1.00
Training, Education, and Operator Certification	0.10	0.10	0.10	0.00	0.10	0.00
Reliability Assessment and Performance Analysis	5.83	5.83	4.90	0.93	5.83	0.00
Situation Awareness and Infrastructure Security	3.00	4.00	4.00	0.00	4.00	1.00
Total FTEs Operational Programs	27.86	28.86	27.00	1.86	28.86	1.00
Administrative Programs						
Technical Committees and Member Forums	0.50	0.50	0.50	0.00	0.50	0.00
General and Administrative	2.50	2.50	2.50	0.00	2.50	0.00
Information Technology	3.00	2.00	2.00	0.00	2.00	-1.00
Legal and Regulatory	1.00	1.00	1.00	0.00	1.00	0.00
Human Resources	1.00	1.00	1.00	0.00	1.00	0.00
Accounting and Finance	1.00	1.00	1.00	0.00	1.00	0.00
Total FTEs Administrative Programs	9.00	8.00	8.00	0.00	8.00	-1.00
Total FTEs	36.86	36.86	35.00	1.86	36.86	0.00

¹A shared FTE is defined as an employee who performs both Regional Entity and Criteria Services division functions.

2016 Budget and Projection and 2017 Budget Comparisons

Statement of Activities and Capital Expenditures						
2016 Budget & Projection, and 2017 Budget						
REGIONAL ENTITY DIVISION						
				Variance ⁽²⁾		Variance
	2016	2016	2016 Projection	v 2016 Budget	2017	v 2016 Budget
	Budget	Projection	Over(Under)	Budget	Over(Under)	Over(Under)
Funding						
ERO Funding						
ERO Assessments	\$ 14,349,196	\$ 14,349,196	\$ -	\$ 14,255,061	\$ (94,136)	
Penalty Sanctions ⁽¹⁾	67,000	67,000	-	-	(67,000)	
Total ERO Funding	\$ 14,416,196	\$ 14,416,196	\$ -	\$ 14,255,061	\$ (161,136)	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	64,000	64,000	-	64,000	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Total Funding (A)	\$ 14,480,196	\$ 14,480,196	\$ -	\$ 14,319,061	\$ (161,136)	
Expenses						
Personnel Expenses						
Salaries	\$ 6,561,470	\$ 6,561,470	\$ -	\$ 6,758,926	\$ 197,456	
Payroll Taxes	399,057	399,057	(0)	404,319	5,262	
Benefits	1,364,799	1,364,799	0	1,415,603	50,804	
Retirement Costs	833,118	833,118	-	847,223	14,105	
Total Personnel Expenses	\$ 9,158,445	\$ 9,158,445	\$ 0	\$ 9,426,071	\$ 267,627	
Meeting Expenses						
Meetings	\$ 394,000	\$ 394,000	\$ -	\$ 377,100	\$ (16,900)	
Travel	907,100	907,100	-	855,232	(51,868)	
Conference Calls	47,000	47,000	-	37,000	(10,000)	
Total Meeting Expenses	\$ 1,348,100	\$ 1,348,100	\$ -	\$ 1,269,332	\$ (78,768)	
Operating Expenses						
Consultants & Contracts	\$ 2,223,500	\$ 2,223,500	\$ -	\$ 2,009,000	\$ (214,500)	
Office Rent	802,500	802,500	-	809,700	7,200	
Office Costs	639,500	639,500	-	679,100	39,600	
Professional Services	1,011,000	1,011,000	-	1,041,000	30,000	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	41,000	41,000	-	50,000	9,000	
Depreciation	231,821	231,821	-	250,000	18,179	
Total Operating Expenses	\$ 4,949,321	\$ 4,949,321	\$ -	\$ 4,838,800	\$ (110,521)	
Total Direct Expenses	\$ 15,455,866	\$ 15,455,866	\$ 0	\$ 15,534,203	\$ 78,338	
Indirect Expenses	\$ (427,047)	\$ (427,047)	\$ -	\$ (413,149)	\$ 13,898	
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Expenses (B)	\$ 15,028,819	\$ 15,028,819	\$ 0	\$ 15,121,054	\$ 92,236	
Change in Assets	\$ (548,622)	\$ (548,622)	\$ (0)	\$ (801,994)	\$ (253,371)	
Fixed Assets						
Depreciation	\$ (231,821)	\$ (231,821)	\$ -	\$ (250,000)	\$ (18,179)	
Computer & Software CapEx	276,000	276,000	-	276,000	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	-	-	-	0	-	
Inc(Dec) in Fixed Assets (C)	44,179	44,179	-	26,000	(18,179)	
TOTAL BUDGET (=B+C)	\$ 15,072,998	\$ 15,072,998	\$ 0	\$ 15,147,054	\$ 74,057	
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	\$ (592,801)	\$ (592,801)	\$ (0)	\$ (827,994)	\$ (235,192)	
⁽¹⁾ \$0 of penalty sanctions collected to date and prior to June 30, 2016.						
⁽²⁾ 2016 Projections reflect expectations based on the 1st quarter statement of activities. It is anticipated that projections could change throughout 2016 and would be reflected in each subsequent quarter's statement of activities.						

Section A – Regional Entity Division 2017 Business Plan and Budget



Section A — 2017 Regional Entity Division Business Plan and Budget

Reliability Standards Program

Reliability Standards Program Resources			
(in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	2.93	1.93	-1.00
Direct Expenses	\$913,958	\$658,082	(\$255,877)
Indirect Expenses	\$584,695	\$372,606	(\$212,089)
Other Non-Operating Expenses	\$0	\$0	\$0
Inc(Dec) in Fixed Assets	(\$11,234)	(\$8,359)	\$2,875
Total Funding Requirement	\$1,487,419	\$1,022,328	(\$465,091)

Program Scope and Functional Description

The NPCC Reliability Standards Program Area operates in accordance with NPCC’s filed and approved Delegation Agreement and NERC Rules of Procedure Section 300. The program supports the ERO standards program area roles and responsibilities, the 2017 ERO Enterprise Strategic Plan and 2017-2019 Shared Business Plan and Budget Assumptions. NPCC’s Reliability Standards Program Area provides supporting activities for stakeholders and the ERO for the development of reliability standards which are clear, responsive to reliability and security risks, practical to implement, “results based”, and are cost effective. The primary objectives of NPCC’s Reliability Standards Program Area is to support the development of ERO standards which establishes “results-based” requirements for addressing reliability risks with due consideration given to cost effectiveness. NPCC supports the ERO efforts to develop reliability standards in a timely and efficient manner and which are responsive to FERC Directives and industry risk. The standards must ensure the bulk electric system is planned, operated, and maintained in a manner that minimizes risks of cascading failures, avoids damage to major equipment, is responsive to risks, or limits interruptions of bulk power supply.

At a Regional level, the standards program develops, and maintains NPCC Regional Reliability Standards, ERO Standards Variances for the northeast as required, and ensures that NPCC’s Regional reliability criteria, contained in the form of Directories, are “not inconsistent with” any applicable NERC and Regional Reliability Standards, in accordance with the NERC Rules of Procedure.

The NPCC Reliability Standards Program Area supports and participates in the development, revision, and maintenance of NERC ERO Reliability Standards, initiates new continent-wide reliability standards through the NERC Standards Authorization Request (SAR) process when necessary, and provides a forum for the comprehensive review and improvement of existing and developing reliability standards. NPCC also supports the NERC Enhanced Periodic Review process to review existing NERC standards and participates directly in the activities of the NERC Standing Periodic Review Team to grade existing standards. The NPCC Regional Standards Program Area also facilitates and assists stakeholders with initiating SARs and Requests for Interpretation of ERO standards for those entities within the NPCC footprint. In 2016 NPCC developed feedback mechanisms from the Compliance, Event Analysis, RAPA and

Criteria Services program area which will provide a process to identify and improve standards. The standards program area will receive input from these other program areas and take appropriate action to support the revision, retirement, or development of new standards to improve the ERO set of reliability standards and improve reliability of the Bulk Electric System. To ensure transparency and stakeholder input, many of the activities of the NPCC Reliability Standards Program Area are conducted with oversight and participation from the NPCC Regional Standards Committee (RSC).

The NPCC Reliability Standards Program Area supports the reliability of the bulk electric system by:

- Facilitating active participation of NPCC Regional industry stakeholders in all NERC Reliability Standards activities to promote the development of results-based, cost effective, clear and concise quality standards in a timely and efficient manner.
- Providing selective support for standard development activities as outlined in the NERC 2017-2019 Reliability Standards Development Plan
- Participating in the Enhanced Periodic Review Standing Team for NERC reliability standards which will evaluate the need to revise existing standards
- Providing a forum for all NPCC representatives on the NERC drafting teams to raise issues, socialize concepts, and receive feedback on the standards during the development process to enhance efficiency and timeliness of standards development
- Assisting NERC with the evaluation of the standards from a “cost effectiveness” perspective
- Promoting awareness by holding Regional workshops to provide outreach and conducting Regional Standards Committee meetings to inform and educate stakeholders on standards being developed, modified or maintained.
- Utilizing feedback mechanisms from Compliance, Event Analysis and RAPA to identify and initiate improvements to NERC standards.
- Actively participate and review the work of the NERC Reliability Issues Steering Committee (RISC) which identifies emerging risks to the BES.
- Coordinating and sharing activities with Standards Program Areas from other Regions.
- Developing and maintaining Regional Standards as necessary to address Regional reliability related issues or risks and ensure those standards are “not inconsistent with” the NERC continent wide standards.
- Pursuing retirement of Regional Standards through promoting the reliability objectives of those Regional Standards into the NERC Continent-wide standards and developing Variances to the NERC standards where possible to capture the reliability objectives of the Regional Standards.
- Maintaining and abiding by the NPCC Regional Standard Processes Manual assuring compliance with all FERC filed documents with respect to standards development.

2017 Key Assumptions

- Facilitate stakeholder review, comment on, and develop ballot recommendations or list of Regional issues, for all NERC Reliability Standards Projects under development or revision prior to the end of ballots
- Participate in the northeast stakeholder efforts to develop Standards Authorization Requests (SARs) and Regional SARs to further improve standards in response to any potential inadequacies in reliability or to improve or correct standards.

- Continually review reliability requirements of ERO and NPCC Regional Standards, NPCC Criteria and ensure consistency and alignment, remove redundancies, and adopt revised Functional Model language when appropriate.
- Review all FERC orders and provincial regulations as they relate to the standards, their revision and adoption
- Conduct and support regulatory and/or governmental provincial filings on a periodic basis based on individual provincial laws and requirements outlined in the Memorandum of Understandings for each province.
- Enhance NPCC standards website pages to provide uniform and clear information to the stakeholders while also providing the historical and archived information to support NERC and FERC approvals and expanding requirements

2017 Goals and Key Deliverables

The Reliability Standards program goals and objectives for 2017 are grouped into six categories:

1) Participate in the ERO Results-Based Standards Development

- Participate in the development and revision of the NERC three year Reliability Standards Development Plan through review, commenting, and other RSC activities
- Participate in the NERC Standards Committee strategic initiatives to measure the effectiveness and quality of standards, participate in standards EPR activities, and address any outstanding FERC Directives.
- Support Cost of Risk Reduction Analysis (CRRRA), timely development, and quality of content attributes of new standards
- Participate in the development of ERO Reliability Standards within NERC’s three-year standards work plan with the emphasis placed on reducing the amount of new FERC Directives issues by closer coordination with the Commission staff
- Conduct thorough reviews of all NERC standards being developed or revised and coordinate comments for Northeastern North America driving consensus to the extent possible through the Enhance Periodic Review Standing team and processes
- Assist NERC’s review of all industry “Requests for Interpretations” of standards
- NPCC staff, along with NPCC solicited regional drafting team volunteers, will participate in the drafting of ERO standards affecting or potentially affecting reliability in the Eastern Interconnection and provide support for review and development of comments and propose improvements
- NPCC and its members will review and coordinate potential member’s comments on FERC staff informal assessments as appropriate
- Participate in pre-ballot reviews of ERO standards and provide consensus recommendations of the NPCC Members to the NERC Standards Drafting Team (SDT) and provide a list of any unaddressed issues to allow the Members to cast a ballot based on regional concerns
- Review and identify issues on FERC NOPRs and NOIs for any and all standards related issues as appropriate
- Coordinate and evaluate proposed standards utilizing NPCC’s technical task forces, working groups and committees
- Educate and notify stakeholders and regulators about issues related to standards development through various means such as webinars and workshops
- Provide outreach to industry trade groups such as the North American Generator Forum and North American Transmission Forum

- Provide a forum for NPCC review of proposed and posted standards related documents from the NERC Critical Infrastructure Protection Committee (CIPC) and NPCC Task Force on Infrastructure Security and Technology (TFIST) such as but not limited to whitepapers and technical guidelines
- Participate in NERC’s Standards Committee prioritization process, to identify immediate standards needs and prioritize standards projects based on need
- Participate in the NERC RISC by providing a regional point of contact for all potential reliability related risks and gaps within the Northeast or as noted by NPCC stakeholders
- Participate in and provide support to critical standards, such as CIP, Balancing Authority Controls, Voltage and Reactive Control, Real Time Tools, Frequency Response, etc.
- Identify and initiate regional Variances to the NERC Reliability Standards as soon as possible, allowing incorporation into the continent wide standard at its inception
- Identify potential drivers for standards revisions based on revisions to the BES to a bright line criteria and any document revisions required as a result of consideration of the “Exception Process”.
- Provide continued insights to NERC, based on NPCC experiences, regarding strategy for developing cost effectiveness analysis for standards and support activities to identify “benefits” for the draft standards.
- Provide support and assistance to the ERO, as needed, for conducting Quality Review activities on NERC continent-wide standards
- Continue to develop new and innovative processes to better utilize the limited internal and external resources in the Region to enable sufficient technical review of posted standards and related materials
- Support the ERO and the relationships with FERC and applicable provincial governmental authorities for standards development activities as necessary to accomplish the ERO’s strategic goals and objectives
- Participate in the improvement of NERC standards through lessons learned and various regional feedback mechanisms with Compliance, RAPA, Event Analysis, etc.
- Provide support to the Compliance Guidance Policy activities.

2) Regional Standards Development

- NPCC does not plan on developing further Regional Standards but reserves the right to do so if a reliability issue exists that is not appropriate for continent-wide development and also will perform clarifications as needed to existing approved Regional Standards
- Conduct reviews for opportunities to include Regional Standards as Variances into the associated NERC continent wide standards as they individually undergo Enhanced Periodic Reviews
- Conduct reviews of regional standards as necessitated by the revision and approval of any associated Continent-wide NERC reliability standards

3) Standards Improvement

- Achieve NPCC Northeastern North American reliability goals and objectives by initiating, participating in, and efficiently completing standards related activities
- Leverage internet and web based tools functionality to ensure inter-Regional consistency and quality of Regional Reliability Standards
- Support long-term strategy for standards improvement and initiate implementation
- Continually identify additional future Regional Standard opportunities if continent-wide standards are not an appropriate solution

- Ensure the topics addressed by the Reliability Standards parallel changing industry needs
- Participate in reliability metrics activities to identify potential measures for benchmarking of reliability to determine if an adequate level of reliability is being achieved through the Enhanced Periodic Review Standing Team activities
- Support and develop cost-effectiveness CRRA analysis activities to determine if any potential incremental increases in costs of implementing a standard have sufficient enough reliability benefit to implement that standard
- Identify any emerging interconnection wide reliability issues which may need standards solutions and forward to the NERC Reliability Issues Steering Committee.
- Identify opportunities to increase reliability through the revision of standards and their associated requirements

4) Business Practices Interface

- Coordinate the review of standards through NPCC RSC, staff, and other members participating in activities of the North American Electric Standards Review Board (NAESB)
- Identify potential market related issues for Regional Standards through NPCC RSC coordination and reviews

5) Opportunities for Process Improvement

- Review the NERC Standards Development Process for possible revisions to consider efficient and effective standards development and CRRA while maintaining the ANSI accreditation for standards development
- Refine the records retention programs to ensure sufficient documentation exists for regulatory approvals
- Develop and implement document management systems to allow the efficient and effective revisions of documents, control of authorship and security of documents
- Identify improvements in process for feedback loops to ensure that event analysis, investigation lessons learned, and compliance issues involving violations are fed into the standards program area, as appropriate for review and potential consideration when revising standards
- Support the Functional Model Advisory Group activities to refine functions, tasks and responsibilities of applicable entities as needed
- Solicit and provide outreach to FERC in future revisions to the Regional Standard Processes Manual

6) Communications

- Improve the notifications process to assure awareness of dates and proceedings of all standard development activities
- Strengthen the relationship with the industry's technical committees to ensure adequate input to standards development, such as the North American Generator Forum.
- Participate in NPCC and NERC workshops as necessary, to provided outreach, promote awareness and educate the industry on standards related activities
- Participate in consensus building activities and notification process(es) to engage stakeholders and provide notification to NPCC's subject matter experts for the need to review standards. Provide the associated coordination for this review utilizing subject matter experts, both internal and external to the Regional Entity staff

-
- Promote the requirements and reliability objectives of the NERC standards as appropriate to the NPCC members of the NERC Registered Ballot Body in order to achieve consensus and support of beneficial standards and to promote the ERO Enterprise.

Based on the portion of professional/technical staff time and other resources devoted to Reliability Standards development, NPCC estimates that it will expend approximately 7% of its resources on this activity.

Resource Requirements

Personnel

- Reallocation of staff during 2016 resulted in a decrease of one full time employee in the Reliability Standards program. NPCC anticipates no need to hire additional personnel in this program area in 2017.

Consultants and contracts

- Consultant and contractor costs are expected to remain at 2016 levels due to a full complement of staff and internal subject matter expertise to evaluate standards and criteria and fulfill all ERO delegated functions assigned to the Reliability Standards Program Area.

Reliability Standards Program

Funding sources and related expenses for the Reliability Standards section of the 2017 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures 2016 Budget & Projection, and 2017 Budget						
Reliability Standards						
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)	
Funding						
ERO Funding						
ERO Assessments	\$ 1,480,373	\$ 1,480,373	\$ -	\$ 1,022,328	\$ (458,045)	
Penalty Sanctions	7,046	7,046	-	-	(7,046)	
Total ERO Funding	\$ 1,487,419	\$ 1,487,419	\$ -	\$ 1,022,328	\$ (465,091)	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Total Funding (A)	\$ 1,487,419	\$ 1,487,419	\$ -	\$ 1,022,328	\$ (465,091)	
Expenses						
Personnel Expenses						
Salaries	\$ 548,639	\$ 410,639	\$ (138,000)	\$ 370,220	\$ (178,419)	
Payroll Taxes	32,229	22,229	(10,000)	21,273	(10,956)	
Benefits	116,140	99,140	(17,000)	97,411	(18,729)	
Retirement Costs	61,950	46,950	(15,000)	43,020	(18,929)	
Total Personnel Expenses	\$ 758,958	\$ 578,958	\$ (180,000)	\$ 531,925	\$ (227,034)	
Meeting Expenses						
Meetings	\$ 20,000	\$ 20,000	\$ -	\$ 13,000	\$ (7,000)	
Travel	125,000	110,000	(15,000)	103,157	(21,843)	
Conference Calls	-	-	-	-	-	
Total Meeting Expenses	\$ 145,000	\$ 130,000	\$ (15,000)	\$ 116,157	\$ (28,843)	
Operating Expenses						
Consultants & Contracts	\$ 10,000	\$ 10,000	\$ -	\$ 10,000	\$ -	
Office Rent	-	-	-	-	-	
Office Costs	-	-	-	-	-	
Professional Services	-	-	-	-	-	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Depreciation	-	-	-	-	-	
Total Operating Expenses	\$ 10,000	\$ 10,000	\$ -	\$ 10,000	\$ -	
Total Direct Expenses	\$ 913,958	\$ 718,958	\$ (195,000)	\$ 658,082	\$ (255,877)	
Indirect Expenses	\$ 584,695	\$ 584,695	\$ -	\$ 372,606	\$ (212,089)	
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Expenses (B)	\$ 1,498,654	\$ 1,303,654	\$ (195,000)	\$ 1,030,688	\$ (467,966)	
Change in Assets	\$ (11,234)	\$ 183,766	\$ 195,000	\$ (8,359)	\$ 2,875	
Fixed Assets						
Depreciation	\$ -	-	\$ -	-	\$ -	
Computer & Software CapEx	-	-	-	-	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	(11,234)	(11,234)	-	(8,359)	2,875	
Inc(Dec) in Fixed Assets (C)	(11,234)	(11,234)	-	(8,359)	2,875	
TOTAL BUDGET (=B+C)	\$ 1,487,419	\$ 1,292,419	\$ (195,000)	\$ 1,022,328	\$ (465,091)	
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	\$ 0	\$ 195,000	\$ 195,000	\$ 0	\$ 0	

Compliance Monitoring and Enforcement and Organization Registration and Certification Program

Compliance Monitoring and Enforcement and Organization Registration and Certification Program Resources			
(in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	16.00	17.00	1.00
Direct Expenses	\$5,367,667	\$5,366,656	(\$1,011)
Indirect Expenses	\$3,192,876	\$3,282,024	\$89,148
Other Non-Operating Expenses	\$0	\$0	\$0
Inc(Dec) in Fixed Assets	\$89,653	\$77,369	(\$12,284)
Total Funding Requirement	\$8,650,196	\$8,726,049	\$75,853

Program Scope and Functional Description

The Compliance Monitoring and Enforcement and Organization Registration and Certification Program (CORC) Program scope covers: 1) the identification, registration and certification of those entities responsible for meeting the NERC Reliability Standards and any approved Regional Standards; 2) the implementation of the risk-based NERC Compliance Monitoring and Enforcement Program (CMEP) in the United States, including the compliance monitoring, assessment and enforcement of NERC Reliability Standards and Regional Reliability Standards. and 3) the implementation of compliance monitoring, assessment and enforcement recommendations in accordance with individual executed MOUs or Agreements in the Canadian Provinces of Ontario, Québec, New Brunswick and Nova Scotia.

The NPCC Compliance Committee (CC) is charged with providing objective stakeholder policy input to NPCC's implementation of the CMEP in the U.S. and compliance related activities under the above mentioned MOUs in the NPCC portion of Canada. With regard to NERC Reliability Standards and Regional Reliability Standards, the CC provides an oversight role of the independent NPCC compliance staff's implementation of the CMEP. In this oversight role the CC will review and endorse the processes used by the NPCC compliance staff in the conduct of the CMEP.

The NPCC compliance staff makes the initial and final determination of alleged violations and determines appropriate penalties and sanctions in accordance with the NERC *Sanction Guidelines*. To accomplish this objective, NPCC's compliance staff is further divided into four sub- program areas: Compliance Implementation and Registration; Compliance Entity Risk Assessment, Compliance Monitoring; Compliance Enforcement; and Compliance Investigation:

Compliance Implementation, Registration and Certification

The Compliance Implementation and Registration sub-program is responsible for:

- a) Using the risk-based registration model to maintain an accurate registry assuring that all entities that are required to meet the NERC and Regional Reliability Standards have been identified.
- b) Engaging with those registered entities who are requesting that a reduced number of requirements be applicable to them based on registration materiality and other considerations;
- c) Representing NPCC on the NERC –led Review Panel whose role is to make decisions related to resolving any identified registration issues;
- d) Development and maintenance of all CMEP Compliance Procedures, Compliance Instructions and all other CMEP related documentation;
- e) Development and maintenance of Performance Metrics that are used to measure the quality and effectiveness of CMEP Implementation and its impact on the reliability of the Bulk Electric System;
- f) Coordinating the implementation of NPCC Compliance Staff responsibilities as they pertain to the executed MOU with each of the Canadian Provinces in the NPCC Region.
- g) Day-to-day implementation of the CMEP;
- h) Development of annual CMEP Implementation Plan;
- i) Monitoring and assessment of guided self-certification, self-report, exception reporting, periodic data and complaint submittals;
- j) Development and maintenance of CMEP Data Administration Application (CDAA);
- k) Development and maintenance of compliance website.
- l) Continue to support the anticipated expansion of the number of registered entities in NPCC due to the implementation of the FERC Order related to the definition of Bulk Electric System
- m) Conduct certification(s) of newly identified Transmission Operators (TOPs) and the re-certification of entity modifications, as needed.
- n) Maintain database of BES assets subject to NERC and NPCC Reliability Standards
- o) Participation on various NERC and NPCC working groups to influence changes to Compliance processes, and support commonality of registration, monitoring, auditing, and enforcement approaches.

Compliance Monitoring Program

The Compliance Monitoring Program is charged with conducting both on-site and off-site compliance audits, spot checks, and guided self-certifications of NERC Reliability Standards in accordance with the NERC Rules of Procedure and associated NPCC procedures developed under the NPCC Compliance Implementation Program. NPCC's Compliance Monitoring Area provides supporting activities by implementation of the risk-based Compliance Monitoring and Enforcement Program (CMEP); and by use of consistent compliance monitoring practices focused on higher reliability risks. NPCC uses risk profiles from the IRAs (inherent risk assessments) as a baseline evaluation of reliability risks of an entity. NPCC also uses IRA summaries to guide its efforts to identifying key focus areas and evolving reliability risks. The result is a list of reliability requirements that merit a continued level of focus.

NPCC also supports the ERO Enterprise learning effort, as well as NERC oversight of program implementation. In collaboration with NERC, NPCC supports outreach programs in new CIP

versions and in implementation of CIP-014 with anticipated expansion in the number of registered entities that require guidance. Compliance engagements are performed on the basis of risk to the BES and take into account the ERO reliability risk priorities. The Reliability Assessment (RA) group performs an Inherent Risk Assessment (IRA) of all registered entities and forwards results to the manager of compliance to develop a schedule. Previous performed IRAs are amended and updated based on identified triggers. The yearly schedule is produced consistent with Risk Assessment of registered entities and the desired frequency of CMEP engagements. The schedule is posted annually on NERC and NPCC public websites.

Flexibility may be used in the predefined frequency based on the risk assessment and performance based assessment of each entity scheduled for an audit, and changes requiring certification. NPCC compliance monitoring is focused on the most significant risks to the BES. CMEP engagement may be in the form of an audit, spot check or guided self-certification and are led by qualified senior NPCC Staff. Compliance Oversight Plans are developed for registered entities to address the relevant risks. NPCC also conducts outreach, training, and education as necessary to support the implementation of new Reliability Standards.

Findings include the identification of any possible violations. Contents and processing of audit and spot check reports are in accordance with NERC directives for reporting. Specific lessons learned are factored into the program to promote continuous improvement and are presented at workshops. An annual comprehensive guided self-certification program is established based on the NERC and NPCC Risk Elements. Spot checks are based on NPCC's assessment of follow-ups on entities that have previously violated a Reliability Standard, follow-up on entities that have been involved in a significant system event, and other requirements which at the discretion of NPCC could pose a higher risk to reliability if not followed properly.

Resources from the Compliance Audit Program are also used to implement the Certification process for entities intending to register as new TOPs, BAs or RCs, as well as certification reviews of changes made by existing TOPs, BAs and RCs that meet the threshold requiring same. These actions are performed in support of the Compliance Registration Program which encompasses the Certification process. Resources for this activity, which is independent of the audit process, depend on the scope, function, and location of the entity being certified.

Compliance Entity Risk Assessment

The Entity Risk Assessment group conducts activity that is the basis for CMEP engagement scoping. They conduct an entity's Inherent Risk Assessment prior to scoping the compliance engagement to determine which CMEP tool will be used.

Entity risk also includes an assessment of an entity's Internal Controls which is used for further reducing requirements of the engagement. Internal Controls Evaluation (ICE) is voluntary and must be agreed to by the entity.

Compliance Investigation

A Compliance Investigation (CI) may be initiated at any time by NPCC in response to a system disturbance, complaint, or possible violation of a Reliability Standard identified by any other means. The CI process requires the establishment of an investigation team that coordinates with NERC and FERC as necessary; and also coordinates with the Situation Awareness Program Area.

Compliance Enforcement

In processing identified violations NPCC Compliance Enforcement will strive to promote both timeliness and transparency of compliance results utilizing a risk-based compliance enforcement approach, including those efforts associated with meeting the enforcement metrics described below. In addition NPCC will promote the use of self-identification of non-compliance and implementation of discretion, including increased utilization of streamlined tracks such as FFT and discretion as shown below.

Compliance Enforcement responsibilities:

- a) Issuing all applicable notices including the Notice of Preliminary Screen; Notice of Compliance Exception; Notice of Possible Violation (NOPV), Notice of Find, Fix and Track (FFT) Treatment; Notice of Alleged Violation (NOAV), and the Notice of Confirmed Violation (NOCV);
- b) Conducting comprehensive enforcement investigations based on the facts and circumstances related to all possible violations of Reliability Standards, whether identified in an audit, a self-report, complaint, or other source, and determining whether further action is warranted;
- c) Reviewing, approving, submitting to NERC and tracking the progress of all mitigation plans /mitigating activities associated with confirmed violations;
- d) Coordinating settlement activities once they have been initiated and submitting settlement agreements to NERC for approval;
- d) Identifying and processing applicable moderate violations for the FFT Process;
- e) Administer both the compliance exception process and the self-logging process for identified minimal violations;
- f) Coordinate the identification of possible NERC Reliability Standards revisions and submit issue for proper implementation. Revisions will be based on experiences observed from compliance monitoring activities, enforcement investigations, and event analysis. Work closely with NPCC Reliability Stands Program Area
- g) Follow up on verifying that proposed Reliability Standards have been implemented and are effective in improving the standards.
- h) Participating in the Hearing Process by representing NPCC before the Hearing Body. Compliance Hearings would be conducted at NPCC under the supervision of a qualified, independent hearing officer contracted by NPCC;
- i) Issuing Remedial Action Directives when appropriate; and
- j) Implementing the risk-based compliance enforcement model including :
 - a. Notifying the registered entity, within 60 days on average, whether a non-compliance will proceed through enforcement, be treated as a compliance exception or additional information is needed (“Triage”);
- k) Develop and monitor a set of enforcement metrics that support NERC’s Strategic Plan and Oversight Program

2017 Key Assumptions and Cost Impacts

2016	Projected 2017
4 Large On-Site Audits	4 On-Site O&P Audits
9 On-Site CIP Audits	5 On-Site CIP Audits
5 Large Off-Site Audits	30 Off-Site O&P Audits
15 Medium Off-Site Audits	
10 Small Off-Site Audits	
24 Off-Site CIP Audits	25 Off-Site CIP Audits
150 Spot Checks	15 Spot Checks
	25 Guided self-certifications
	35 Inherent Risk Assessments
	10 On-site Internal Control Evaluations
4 TFE Part B reviews	4 On-Site TFE Reviews
100 Violations (Estimated)	100 Violations (Estimated)
Settlements Covering 50 Violations	Settlements Covering 50 Violations
2 Hearings (Unbudgeted)	2 Hearings (Unbudgeted)
1 CI (Estimated)	1 CI (Estimated)
2 Entity Certifications	4 Entity Certifications

- Regarding the Compliance Audit Program, Technical Feasibility Exception (TFE) reviews are conducted both on-site at the entity's facility and at the NPCC offices when possible. TFE's continue to be requested as entities replace and install new equipment/devices/components that meet the criteria set forth in Rules of Procedure Appendix 4D. Compliance estimates four on-site reviews will be performed in 2017.
- Decrease in audit costs reflects Risk Assessment activity that is the basis for entity engagement scoping. The Risk Assessment includes an assessment of an entity's Internal Controls which is used for future reduction in engagement scoping and frequency of engagements.
- Potential increases due to the newly identified role related to implementing the QCMEP in Quebec and the continuing role of implementing the NB CMEP in New Brunswick.
- The 2017 Business Plan projects no increases in Enforcement Processing activities over the 2016 Budget.
- The 2017 Business Plan projects the need for 1 Compliance Investigation. These Compliance Investigations are manpower intensive for NPCC staff (requiring allocation of more resources and potentially higher than normal costs)

2017 Goals and Key Deliverables

- Conduct 2017 CMEP consistent with a risk-based compliance monitoring and enforcement model, assessing Inherent Risk Assessment; conducting voluntary Internal Control Evaluation; and expanding the use of compliance exceptions and the self-logging program for disposition of minimal violations. The CMEP would monitor and enforce all applicable NERC Reliability Standards and applicable Regional Reliability Standards.
 - Continue to process identified violations as effectively as possible, including the timely identification of a violation and its disposition method (e.g. compliance

- exceptions; FFT; etc.), and the timely issuance of appropriate notification to the registered entity and NERC;
- Continue to implement settlement process when applicable and send proper notifications to NERC and FERC and continue to enhance the settlement process by modifying existing practices and adopting new practices to reduce the duration of settlement negotiations without sacrificing the rigor and quality of the negotiated settlements;
- Develop and analyze appropriate performance metrics that track settlement process duration and utilize results of analysis to further enhance process.
- Conduct necessary Hearings related to resolution of outstanding disputes regarding violations and/or sanctions. Send results of hearings to NERC and FERC.
- Identify potential issues related to NERC Reliability Standards as a result of compliance monitoring, enforcement and event analysis activities.
- Implement proposed changes to NERC Reliability Standards utilizing existing mechanisms.
- Verify effectiveness of proposed changes to reliability standards.
- Provide detailed response to NERC Annual FFT/Compliance Exception Survey;
- Implement compliance responsibilities identified in the approved Canadian MOUs;
- Annual report to NERC and Régie on NPCC implementation of QCMEP
- Annual report to NERC and New Brunswick Electric Utility Board (NBEUB) on NPCC implementation of NB CMEP.
- Review and revise NPCC Compliance Registry based on FERC approved risk-based approach;
- Evaluate CMEP and Canadian entity compliance program implementation with the objective of establishing a long-term strategy for compliance improvement, and initiate the implementation of the long term strategy;
- Provide NPCC Regional Entity input, through participation in appropriate NERC compliance committees, on policy and implementation issues related to compliance and enforcement including the development of compliance elements for all new or revised NERC Reliability Standards;
- Provide required information to NERC on a timely basis including reporting of alleged violations and confirmed violations
- Track the progress of, report status of, and approve mitigation plans and mitigating activities;
- Conduct 2017 Compliance Engagement Schedule based on risk to the BES and number of registered entities and promote RAI initiatives by:
 - Utilizing the Audit Checklist and Auditor’s Handbook for all on-site and off-site audits
 - Preparing an Inherent Risk Assessment for all scheduled engagements and Internal Control Assessment for all entities that volunteer for one;
- On-site CIP audits may be combined with scheduled 2017 on-site audits;
- Assure that NPCC Staff is trained to conduct Entity Risk Assessment and CMEP engagements including CIP Compliance Audit training;
- Assure that NPCC Staff is trained to conduct Certification of entities intending to Register as BA, RC or TOP for the first time, or Certification Reviews of changes by existing BAs, RCs or TOPs that meet the criteria requiring a Certification Review;

- Continue to implement compliance reform consistent with a risk-based approach by being an integral participant in committees and workgroups that are involved in the development of polices related to the implementation of a risk-based compliance and enforcement model;
- Continue to expand the utilization of compliance exception and self-logging, as it relates to the processing of minimal violations;
- NPCC will collaborate with NERC to promote better coordination, planning, delivery and management of training efforts across the enterprise through a unified learning management system (LMS), without adversely impacting region-specific training requirements;
- Continue to implement physical security outreach and cyber security outreach by visiting registered entity sites to perform an assessment of their physical security, evaluate their cyber security and supply recommendations for improvements;
- Enhance the CDAA to expand its capabilities from both the registered entity perspective and the NPCC Compliance staff perspective;
- Conduct 2017 Compliance Workshops and interim information sessions for registered entities as necessary as a part of Training and Education program area.
- Continue to promote practices to enhance the benefits of the self-reporting of violations by the registered entity. This could include the emphasis on the benefits of a registered entity improving its internal processes used for identifying and submitting self-reports, improvement in the way Regional Entities process self-reports, and the streamlining and standardizing of the amount and type of data needed to evaluate a self-report.

Based on the portion of professional/technical staff time and other resources devoted to Compliance monitoring and enforcement and organizational registration and certification, NPCC estimates that it will expend 57% of its resources on this activity.

Resource Requirements

Personnel

- There is an increase of one FTE in 2017 from the 2016 budget. This is the result of reprioritization during 2016 based on the increased activity in the Compliance area related to risk based initiatives and the ongoing effort to reduce consulting and contractor expenses.

Consultants and contracts

- In 2017, contractor costs will continue to decrease due to the implementation of the risk-based approach in 2015. With a risk and performance based assessment of each registered entity, compliance engagements will transition to a periodicity more reflective of the risk profile of the entity such that some will result in audits which are more in-depth while others may have a reduced scope which will result in spot checks or guided self-certifications.

Compliance Monitoring and Enforcement and Organization Registration and Certification Program

Funding sources and related expenses for the compliance enforcement and organization registration and certification section of the 2017 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures						
2016 Budget & Projection, and 2017 Budget						
Compliance Monitoring and Enforcement and Organization Registration and Certification						
	2016	2016	Variance	2017	Variance	
	Budget	Projection	2016 Projection v 2016 Budget Over(Under)	Budget	2017 Budget v 2016 Budget Over(Under)	
Funding						
ERO Funding						
ERO Assessments	\$ 8,611,718	\$ 8,611,718	\$ -	\$ 8,084,046	\$ (527,672)	
Penalty Sanctions	38,478	38,478	-	-	(38,478)	
Total ERO Funding	\$ 8,650,196	\$ 8,650,196	\$ -	\$ 8,084,046	\$ (566,150)	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Total Funding (A)	\$ 8,650,196	\$ 8,650,196	\$ -	\$ 8,084,046	\$ (566,150)	
Expenses						
Personnel Expenses						
Salaries	\$ 2,494,251	\$ 2,632,251	\$ 138,000	\$ 2,749,908	\$ 255,657	
Payroll Taxes	166,018	176,018	10,000	179,504	13,487	
Benefits	491,904	508,904	17,000	519,457	27,553	
Retirement Costs	268,494	283,494	15,000	290,486	21,992	
Total Personnel Expenses	\$ 3,420,667	\$ 3,600,667	\$ 180,000	\$ 3,739,356	\$ 318,689	
Meeting Expenses						
Meetings	\$ 32,000	\$ 32,000	\$ -	\$ 23,800	\$ (8,200)	
Travel	355,000	370,000	15,000	329,500	(25,500)	
Conference Calls	-	-	-	-	-	
Total Meeting Expenses	\$ 387,000	\$ 402,000	\$ 15,000	\$ 353,300	\$ (33,700)	
Operating Expenses						
Consultants & Contracts	\$ 1,560,000	\$ 1,365,000	\$ (195,000)	\$ 1,274,000	\$ (286,000)	
Office Rent	-	-	-	-	-	
Office Costs	-	-	-	-	-	
Professional Services	-	-	-	-	-	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Depreciation	-	-	-	-	-	
Total Operating Expenses	\$ 1,560,000	\$ 1,365,000	\$ (195,000)	\$ 1,274,000	\$ (286,000)	
Total Direct Expenses	\$ 5,367,667	\$ 5,367,667	\$ -	\$ 5,366,656	\$ (1,011)	
Indirect Expenses	\$ 3,192,876	\$ 3,192,876	\$ -	\$ 3,282,024	\$ 89,148	
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Expenses (B)	\$ 8,560,543	\$ 8,560,543	\$ -	\$ 8,648,680	\$ 88,137	
Change in Assets	\$ 89,653	\$ 89,653	\$ -	\$ (564,634)	\$ (654,287)	
Fixed Assets						
Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	
Computer & Software CapEx	151,000	151,000	-	151,000	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	(61,347)	(61,347)	-	(73,631)	(12,284)	
Inc(Dec) in Fixed Assets (C)	89,653	89,653	-	77,369	(12,284)	
TOTAL BUDGET (=B+C)	\$ 8,650,196	\$ 8,650,196	\$ -	\$ 8,726,049	\$ 75,853	
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	\$ -	\$ -	\$ -	\$ (642,003)	\$ (642,003)	

Reliability Assessment and Performance Analysis Program

Reliability Assessment and Performance Analysis Program Resources			
(in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	5.83	5.83	0.00
Direct Expenses	\$2,030,523	\$2,106,675	\$76,152
Indirect Expenses	\$1,163,404	\$1,125,541	(\$37,863)
Other Non-Operating Expenses	\$0	\$0	\$0
Inc(Dec) in Fixed Assets	(\$22,353)	(\$25,251)	(\$2,898)
Total Funding Requirement	\$3,171,574	\$3,206,966	\$35,392

Program Scope and Functional Description

NPCC, through its top technical committee, the Reliability Coordinating Committee (RCC), integrates the deliverables of its Task Force's and Working Group's Reliability Assessment and Performance Analysis related activities. Consistent with the applicable NERC Reliability Standards, these efforts include:

- Reviewing the adequacy of the NPCC systems to supply load considering forecast demand, installed and planned supply and demand resources and required reserves; and,
- Assessing the impact of planned transmission and resource additions or modifications on NPCC system reliability.

Seasonal assessments of the overall NPCC resource adequacy assessments are performed and possible actions to mitigate any potential problems are identified. NPCC reviews operations and disturbances both internal and external to the Region in order to identify any lessons to be learned and recommends any necessary follow-up actions.

If appropriate, enhancements to Regional Standards or NPCC's more stringent, Regionally-specific reliability requirements are also recommended. NPCC promotes and conducts both inter-Area and inter-Regional studies to enhance reliability and operational effectiveness, and provides a forum for the discussion and coordination of operating issues within the NPCC Region and with other Regions.

2017 Key Focus Areas

In collaboration with NERC, Key Focus area activities for 2017 include:

- ✓ Integration of RAPA information systems for assessments and associated data requirements, including expanded and enhanced enterprise-wide data collection and analysis systems and capabilities for performance analyses, with a focus on independent and technically sound reliability assessments supporting delivery of high quality reports (e.g., Long-Term Reliability Assessment, short-term special assessments, probabilistic scenario assessments, and the State of Reliability Report).
- ✓ Development of assessment and performance analysis techniques as well as resource capabilities and tools, including probabilistic and scenario evaluations, which address the impacts of new technologies, changing resource or demand resource composition, and environmental related regulations or legislation; support for ERO activities to identify

key reliability risks and appropriate risk control projects designed to enhance reliability or mitigate risks.

- Developing and tracking of metrics associated with Essential Reliability Services;
 - Developing of appropriately tailored analysis and overall assessment, including guidance for registered entities, of high impact, low frequency BES risks, including physical security and geomagnetic disturbance (GMD) vulnerability;
 - Providing technical resources to support up to four short-term special reliability assessments (6-18 month horizon replacing the current summer and winter assessments), which focus on specific reliability issue risk areas and geographic areas with specific reliability concerns, while also allowing for regional assessments;
 - Supporting the common approach developed for NERC reliability assessments to ensure consistent treatment of resource and reliability evaluations;
 - Advancing analytical capabilities for identifying and determining reliability risks and conducting various reliability assessments by:
 - Integrating the analysis and measures of the identified essential reliability services into the NERC 2017 Long-Term Reliability Assessment;
 - Requiring advanced powerflow and stability analysis tools and objective expert input for transmission/deliverability assessments and studies;
 - Maturing and developing interconnection-wide analysis groups to support the assessment of interconnection-wide risks, such as frequency response;
 - Providing technical resources and reliability leadership for the advancement of probabilistic analyses supporting the Long-Term Reliability Assessment;
 - Enhancing the capability for post event analysis, including ensuring the timely and accurate compilation and creation of steady state and dynamic simulation model cases for use in the investigation and analysis of major power system disturbance events.
- ✓ NPCC supports, through the Eastern Interconnection base case designee agreement, the development of long-term sustainable interconnection-wide powerflow and dynamics model cases under Reliability Standards MOD-032 and MOD-033 that exhibit the accuracy and fidelity reflecting actual BES reliability performance and dynamic conditions.
- ✓ Provision of technical resources to support the effective and continuous improvement of the models that incorporate recognition of reliability behavior of loads and generation associated with the changing resource mix.

Eastern Interconnection Reliability Assessment Group

The primary function of the Eastern Interconnection Reliability Assessment Group (ERAG) is to support reliability of the bulk-power system in the Eastern Interconnection through periodic reviews of generation and transmission expansion. These assessments are conducted by the ERAG Steering Committees. The assessment-related activities indicated for the ERAG Management and Steering Committees below, are done in support of ERO Goal 3a. (“3a. “Risks to Reliability are identified and prioritized based on reliability impacts, cost and practicality of assessments, projected resources, and emerging issues.”) In addition, ERAG has the responsibility to facilitate the development of the annual set of seasonal and future steady state and dynamic simulation base cases for use by the Regional Entities and other industry groups in the Eastern Interconnection. This is done through the ERAG Multi-Regional Modeling Working

Group (MMWG). The base case compilation and development-related activities indicated for the ERAG Management and MMWG below are done in support of ERO Goal 3d. (“3d. Reliability models and data accurately represent system behavior and are shared among stakeholders.”) NPCC participates in the ERAG activities as one of the six Eastern Interconnection Regional Entities.

NPCC supports maintenance of the BESnet application and the processing of the Regional BES Exception Requests (ERs), including technical validation of the definition and exception requests periodic reviews of network changes affecting BES determinations, as well as requests for registration and certification reviews. Processing of requests for BES Exceptions are not expected to significantly impact resources requirements in this program area for 2017.

NPCC RAPA staff participates with the ERAG Management Committee, ERAG Steering Committee and ERAG Working Group and acts as the liaison between the ERAG MMWG and the NPCC SS-37 Working Group; activities include:

ERAG Management Committee Activities

- ✓ Oversee the steady state and dynamic simulation base case data compilation and development;
- ✓ Oversee ERAG Multi-Regional Modeling Working Group (MMWG) changes to the dynamics base cases;
- ✓ Oversee MMWG effort to make necessary changes to the modeling of governor-turbine control systems to achieve frequency response that more closely reflects actual response during system frequency deviation events;
- ✓ Oversee the ERAG assessments of anticipated inter-Regional, inter-Balancing Authority transfer limit conditions and sensitivities. ERAG is considering different assessment approaches to enhance the way assessments are conducted to provide more industry value from the assessment results. Coordinate the effort with NERC Assessment Program staff;
- ✓ Develop ERAG Strategic Direction (i.e. anticipated new developments in MMWG process and system assessments); Resolve any issues with application of the ERAG MMWG non-disclosure agreement process so that base cases and assessments have sufficient protections in place for use and transmittal of confidential data and information; and
- ✓ Develop and approve the ERAG activity budgets.

Multi-Regional Modeling Working Group Items

- ✓ Facilitate the completion of the steady state and dynamic simulation base case data compilation and development for the 2017 series of cases. This will include 12 steady state base cases and 8 dynamic simulation base cases;
- ✓ Check and confirm that the dynamic model data passes all applicable checks and acceptance criteria. Include 60 second steady state simulation of each case to detect numerical errors;
- ✓ Apply changes to the MMWG dynamics case so they are available for interconnection dynamics studies.
- ✓ Incorporate dispatch information into the future and seasonal ERAG MMWG base cases so that the dispatches are more closely aligned with economic dispatch practices;
- ✓ Apply the web-based System Dynamics Data Base program during the development of the 2017 series of dynamics base cases;

- ✓ Continue to improve the representations of the governor-turbine plant control models at most generators. Recommend the necessary changes in the models for specific generators;
- ✓ Apply MMWG base case non-disclosure agreement process so that MMWG cases continue to have sufficient protections in place for use and transmittal of confidential data and information;
- ✓ Verify that procedures in the MMWG manual are followed.

System Assessments

- ✓ Conduct the 2017 ERAG Assessments and prepare the ERAG Assessment Reports, including, the assessments of anticipated inter-Regional, inter-Balancing Authority transfer limit conditions and sensitivities;
- ✓ Consider different assessment approaches to enhance the way assessments are conducted; and,
- ✓ Coordinate Assessment efforts with the NERC Reliability Assessment and System Analysis (RASA) Program staff to incorporate any risk-based or other approaches to supplement NERC Assessments.

NERC Activities

NPCC will provide the Regional perspective with judicious NPCC RAPA staff participation on selective NERC Planning and Operating Committees and key related NERC Subcommittees, Task Forces and Working Groups which could include:

- ✓ Essential Reliability Services Working Group (ERSWG);
- ✓ Distributed Energy Resources Task Force (DERTF);
- ✓ Load Modeling Task Force (LMTF);
- ✓ Protection System Mis-operations Task Force (PSMTF);
- ✓ Spare Equipment Working Group (SEWG);
- ✓ Demand Response Availability Data System Working Group (DADSWG);
- ✓ Generating Availability Data System Working Group (GADSWG);
- ✓ Transmission Availability Data System Working Group (TADSWG);
- ✓ Modeling Working Group (MWG);
- ✓ Reliability Assessment Subcommittee (RAS);
- ✓ System Analysis and Modeling Subcommittee (SAMS);
- ✓ Performance Analysis Subcommittee (PAS);
- ✓ Misoperation Information Data Analysis System (MIDAS); and,
- ✓ Incorporating any probabilistic reliability metrics required for the 2017 NERC Long-Term Reliability Assessment through the NPCC 2017 Long Range Adequacy Overview.

ERO – Executive Management Group (EMG) Activities

Provide analytic support for the ERO-EMG

- ✓ Bulk Electric System Exception Process Working Group (BEPWG);
- ✓ ERO-RAPA Group; and,
- ✓ Other activities as directed by the ERO-Executive Management Group.

2017 Goals and Key Deliverables

Task Force on Coordination of Planning

The primary mission of the NPCC Task Force on Coordination of Planning (TFCP) is to promote reliability through the coordination of NPCC Area and NERC planning processes and activities.

In addition, the TFCP provides technical support regarding operating expertise to the NPCC Regional Standards Committee and the NPCC Compliance Committee as requested, and provides support and technical input for related BES risks identified by the NERC Reliability Issues Steering Committee (RISC) and the NERC Essential Reliability Services Task Force.

Key TFCP Reliability Assessment and Performance Analysis Deliverables:

- Coordinate NPCC responses to NERC Essential Reliability Services Task Force recommendations with the Task Force on Coordination of Operation and the Task Force on System Studies to ensure that developments in the NERC PC and its Subcommittees are addressed;
- Coordinate the development of additional Criteria as necessary, and track any new and developing standards through the Regional Standards Committee (RSC);
- Monitor the development of Bulk Power System (BPS) Regional Standard;
- Monitor the actions of the NERC Systems Analysis and Modeling Subcommittee (SAMS) in the areas of resource adequacy, system protection and system control;
- Oversee the Directory No. 1 Implementation Plan (Dated: September 30, 2015);
- Conduct the annual NPCC Interregional Long Range Adequacy Overview and associated NERC ProbA
- Lead the NPCC Task Forces in reviewing and revising the *A10 Criteria*– NPCC Classification of Bulk Power System Elements;
- Evaluate and approve Area Transmission Reviews;
- Evaluate and approve Area Reviews of Resource Adequacy;
- Coordinate, monitor, review, and make recommendations on the retirement of existing in-service Special Protection Systems (SPS); and the implementation of proposed new or modified Special Protection Systems;
- Review the practice within the NPCC for the use of an SPS with input from the other task force groups;
- Support related reliability activities, including consideration of any requests for sub-regional assessments or NPCC’s identification of the necessity for such assessments consistent with NERC Rules of Procedure section 805, associated with implementation of the U.S. EPA Clean Power Plan;
- Monitor industry practices and make recommendations to NPCC on transmission adequacy standards related to intermittent generation such as wind or solar-photovoltaic and demand-side resources;
- Coordinate to ensure that further UVLS analysis beyond the initial feasibility/screening study is completed according to schedules set by the RCC and the NERC PC;
- Conduct a review of NPCC Interconnection Assistance Reliability Benefits;
- Monitor the actions of applicable NERC Subcommittees in the areas of resource adequacy, system protection and system control;
- Review the load shape assumption used in NPCC Multi-Area Probabilistic Reliability Assessments;
- Review and comment on the development of NERC Standards through the RSC;
- Monitor the developments in fuel supply, demand resources, energy efficiency, and conservation methods including all intermittent renewable resources, including embedded distributed resources.
- Support the NPCC Regional Standards Committee (RSC) as required;
- Keep informed on studies and developments with neighboring systems which might impact NPCC;

- Monitor the process for the annual review and updating of the NPCC Electric System Regional Map and the NPCC Load, Capacity, Energy, Fuel and Transmission Report (LCEF&T);
- Facilitate Wide-Area Planning through participation in regional activities and coordinate inter-Area reliability analysis;
- Keep informed of the NERC Planning Committee and other subcommittee activities to determine their impact on the NPCC and any potential adjustments to NPCC Criteria;
- Coordinate with NERC regarding the development of standards for dynamic system controls;
- Review Events Analysis Lessons Learned using the Events Analysis discussion/review template.

Task Force on System Studies

The primary mission of the NPCC Task Force on System Studies (TFSS) is to provide active overall coordination of system studies of the reliability of the interconnected bulk power systems and for the review of certain NPCC documents. In addition, the TFSS provides technical support regarding operating expertise to the NPCC Regional Standards Committee and the NPCC Compliance Committee, and provides support and technical input for related BES risks identified by the NERC Reliability Issues Steering Committee (RISC) and the NERC Essential Reliability Services Task Force.

Key TFSS Reliability Assessment and Performance Analysis Deliverables:

- ✓ Review and recommend approval of Area Transmission Reviews, in accordance with the “Guidelines and Procedures for NPCC Area Transmission Reviews” (Appendix B of Directory No. 1), based on material presented by the Areas. These reviews assess the impact of planned transmission and resource additions or modifications on system reliability, and determine the Area’s conformance with the Basic Criteria. Through the Area Transmission Reviews, re-evaluate the performance and classification of existing SPSs and Dynamic Control Systems, as appropriate;
- ✓ Review and classify new and modified Special Protection Systems, in accordance with the Appendix B, Procedure for the Review of a Special Protection Systems, of NPCC Directory No. 7, “*Special Protection Systems*”;
- ✓ Review and Implement the NPCC A-10 Criteria:
 - Coordinate with TFCP a review and revision of the A-10 document in 2016.
 - Review and recommend approval of changes to the NPCC list of bulk power system elements, in accordance with the “*Classification of Bulk Power System Elements*” (Document A-10); and,
 - Update the NPCC BPS List.
- ✓ Review and process Multiple Circuit Tower exclusions in accordance with NPCC Directory No. 1, Appendix E;
- ✓ Update the Multiple Circuit Tower Exclusion List;
- ✓ Perform bi-annual review and update of the Major Project List;
- ✓ Participate in the development and submission of NPCC comments/inputs into the development of regional and/or continent-wide reliability standards that address the NERC Reliability Standards.
- ✓ As RCC directs, provide support and technical input, for Task Force related BES risks as identified by the NERC Reliability Issues Steering Committee (RISC);
- ✓ Update the NPCC Electric System Map.

Through the SS-37 Working Group - Annually develop a library of power flow base cases and associated dynamic cases . The NPCC cases will also be used to support the development of the library of power flow and dynamic cases for the Eastern Interconnection; in addition:

- ✓ On an as needed basis, update SS-37 Procedure Manual and other SS-37 documents including the Master Tieline Data and Interchange Schedule;
- ✓ provide mid-term updates to the ten-year-out cases in the NPCC Library;
- ✓ Coordinate with SS-38 to support the performance of event replication by benchmarking against actual system performance;
- ✓ Review existing regional criteria and procedures for validation of data used in power flow and dynamic simulations and if the existing criteria or procedures are found to be deficient, propose changes to provide for adequate data validation.
- ✓ Coordinate management of governor models used in studies with the SS-38 Working Group.

Through the SS-38 Working Group:

- ✓ Complete examination of the impact of distributed generation;
- ✓ Consider the development of a uniform approach, as requested by TFSP, for identifying BES Elements that meet one or more of the Criteria in R1 of PRC-026-1;
- ✓ Review and develop comment on draft NERC standards, as needed;
- ✓ Work with software vendors and NERC Modeling Working Group (MWG) to enhance the capability for dynamic simulations;
- ✓ Coordinate with SS-37 to perform event replication by benchmarking against actual system performance.

Through the SS-38 Load Modeling Working Group:

- ✓ Continue to investigate the use of dynamic load models for transient stability studies;
 - Investigate the use of load monitoring equipment to aid in the benchmarking of dynamic load models used in transient stability studies.

Task Force on System Protection (TFSP)

The purpose of the NPCC Task Force on System Protection (TFSP) is to promote the reliable and efficient operation of the interconnected bulk power systems in Northeastern North America through the establishment of directories, criteria, guidelines, and procedures and coordination of design, relative to the protection associated with the bulk power systems. In addition, the TFSP provides technical support regarding operating expertise to the NPCC Regional Standards Committee and the NPCC Compliance Committee, and provides support and technical input for related BES risks identified by the NERC Reliability Issues Steering Committee (RISC) and the NERC Essential Reliability Services Task Force.

Key TFSP Reliability Assessment and Performance Analysis Deliverables:

- ✓ Assess proposed protection systems and special protection systems for compliance with Directory No. 4 and Directory No. 7 ;
- ✓ Participate or serve as lead Task Force in the implementation of applicable Regional NERC Reliability Standards;
- ✓ Conduct review/development of the following Documents:
 - Document C-45 - Procedure for Analysis and Reporting of Protection System Misoperations. Update will incorporate new procedure associated with NERC Section 1600 Data Request;

- Develop a new Directory (Directory No. 11) for Disturbance Monitoring to house more specific NPCC criteria, guides, and procedures;
- Serve as lead Task Force working in conjunction with TFCP and TFSS on Directory No. 7 – NPCC Special Protection Systems revisions required to ensure consistency with the development of the new NERC standard on Remedial Action Schemes.
- Develop a New Guideline for Tele-protection Communication Reliability
- ✓ Review and respond to Questions, Requests for Interpretations and/or Clarifications related to NPCC Standards, Directories, and Criteria, as needed;
- ✓ Participate in the ongoing development and submission of NPCC inputs/comments into the development of protection related NERC Reliability Standards;
- ✓ Review NPCC misoperations of protection systems and Special Protection System (aka Remedial Action Schemes) and participate in providing the NPCC input for NERC Metric ALR4-1 on Protection Misoperations;
- ✓ Review and analyze the performance of protection systems of power system disturbances, lessons learned, and events inside as well as outside NPCC;
- ✓ Support NERC in its effort through the ERO-RAPA group to continue relay misoperations performance analysis to reduce protection system misoperations, inform the RCC on relay misoperations trends, and share good practices;
- ✓ Review mitigations and/or progress reports for BPS Risk Reduction Implementation and annually report to the RCC on the status of this implementation;
- ✓ Provide support and technical input for Task Force related BES risks as identified by the NERC Reliability Issues Steering Committee (RISC). Conduct a thorough review, provide comments as necessary and act on posted materials as directed. Task Force assessments and recommendations will be forwarded to the RCC for approval and submittal to NERC via the NERC Risk Control Process;
- ✓ Collaborate with System Studies on development of disturbance monitoring recommendation for load transformers as part of effort to develop Directory No. 11; and,
- ✓ Maintain ongoing log of protection relay failures.

Task Force on Coordination of Operation

The NPCC Task Force on Coordination of Operation (TFCO) facilitates the coordination of operations among the NPCC Reliability Coordinator areas and adjacent NERC Regions to enhance the reliability of the bulk power system. In addition, the TFCO provides technical support regarding operating expertise to the NPCC Regional Standards Committee and the NPCC Compliance Committee, and provides support and technical input for related BES risks identified by the NERC Reliability Issues Steering Committee (RISC) and the NERC Essential Reliability Services Task Force.

Key TFCO Reliability Assessment and Performance Analysis Deliverables:

- ✓ Review and analyze the performance of Simultaneous Activation of Reserve (SAR) implementation following an event to enhance the SAR process;
- ✓ Provide recommendations to enhance the programs of the annual spring and autumn NPCC System Operator Seminars;
- ✓ Share lessons learned among training staff from the NPCC RCs and utilize to make training program enhancements;
- ✓ Develop and securely disseminate the annual compilation of “Facilities for Notification.”
- ✓ Present to the TFCO an annual summary of operating tool failures and lessons learned for the preceding year;

- ✓ Perform a voluntary Critical Operating Tool Analysis Survey accompanied with the previous surveys recommendation to disseminate and assess the implementation of best practices and recommendations;
- ✓ Complete a triennial review of the RC area restoration plans;
- ✓ Support an annual enhanced, wide area restoration drill among the Reliability Coordinator areas of NPCC and their neighboring Reliability Coordinators incorporating the annual review of the NPCC regional restoration plan;
- ✓ Conduct pre-seasonal NPCC Reliability Assessments incorporating multi-area probabilistic reliability simulation results in each assessment. Coordinate the NPCC input for the annual data for the NERC Reliability Assessment Subcommittee.
- ✓ Conduct reviews of applicable NPCC Directories, Criteria, Guides and Procedures in accordance with their applicable review dates:
 - Directory No. 2 – “*Emergency Operations*”
 - Directory No. 5 – “*Reserve*”
- ✓ Assess the dependency of successful system operations on current telecommunication systems.

NPCC Regulatory/Governmental Affairs Advisory Group

The purpose of the NPCC Regulatory/Governmental Affairs Advisory Group is to promote NPCC interaction and coordination with Federal/State/Provincial governmental and/or regulatory agencies on a coordinated Regional basis, and identify and develop policy input for NPCC and Northeast Regional governmental and/or regulatory bodies.

The NPCC Governmental/Regulatory Affairs Advisory Group provides a forum where industry and governmental and/or regulatory representatives can exchange views and strive to develop consensus policy recommendations on reliability issues specific to the NPCC Region (Northeastern United States and Eastern Canada) and share actionable information among NPCC, NERC and other related governmental and/or regulatory agencies related to Regional energy and reliability matters.

Activities for 2017 include continued outreach to NPCC’s state electricity and environmental regulators stressing the importance of understanding the reliability considerations, such as the identified Essential Reliability Services when formulating State Implementation Plans for the EPA Clean Power Plan compliance. This includes focus on issues concerning regional planning, the characteristics of distributed energy resources, the timing of new generation resources and transmission infrastructure projects and use of the rule’s Reliability Safety Valve.

Based on the portion of professional/technical staff time and other resources devoted to Reliability Assessment and Performance Analysis, NPCC estimates that it will expend 21% of its resources on these activities.

Resource Requirements

Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2017.

Consultants and contracts

- Increase in RAPA consulting and contracts expense is associated with an anticipated increase in emerging risk reliability studies.

Reliability Assessment and Performance Analysis Program

Funding sources and related expenses for the Reliability Assessment and Performance Analysis section of the 2017 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures						
2016 Budget & Projection, and 2017 Budget						
Reliability Assessment and Performance Analysis						
	2016	2016	Variance	2017	Variance	
	Budget	Projection	2016 Projection	Budget	2017 Budget	
			v 2016 Budget		v 2016 Budget	
			Over(Under)		Over(Under)	
Funding						
ERO Funding						
ERO Assessments	\$ 3,157,554	\$ 3,157,554	\$ -	\$ 3,206,966	\$ 49,412	
Penalty Sanctions	14,020	14,020	-	-	(14,020)	
Total ERO Funding	\$ 3,171,574	\$ 3,171,574	\$ -	\$ 3,206,966	\$ 35,392	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Total Funding (A)	\$ 3,171,574	\$ 3,171,574	\$ -	\$ 3,206,966	\$ 35,392	
Expenses						
Personnel Expenses						
Salaries	\$ 1,031,149	\$ 1,031,149	\$ -	\$ 1,084,994	\$ 53,845	
Payroll Taxes	64,284	64,284	-	65,373	1,089	
Benefits	212,345	212,345	-	214,688	2,343	
Retirement Costs	116,395	116,395	-	121,271	4,876	
Total Personnel Expenses	\$ 1,424,173	\$ 1,424,173	\$ -	\$ 1,486,325	\$ 62,152	
Meeting Expenses						
Meetings	\$ 45,000	\$ 45,000	\$ -	\$ 20,500	\$ (24,500)	
Travel	186,850	186,850	-	186,850	-	
Conference Calls	-	-	-	-	-	
Total Meeting Expenses	\$ 231,850	\$ 231,850	\$ -	\$ 207,350	\$ (24,500)	
Operating Expenses						
Consultants & Contracts	\$ 374,500	\$ 479,500	\$ 105,000	\$ 413,000	\$ 38,500	
Office Rent	-	-	-	-	-	
Office Costs	-	-	-	-	-	
Professional Services	-	-	-	-	-	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Depreciation	-	-	-	-	-	
Total Operating Expenses	\$ 374,500	\$ 479,500	\$ 105,000	\$ 413,000	\$ 38,500	
Total Direct Expenses	\$ 2,030,523	\$ 2,135,523	\$ 105,000	\$ 2,106,675	\$ 76,152	
Indirect Expenses	\$ 1,163,404	\$ 1,163,404	\$ -	\$ 1,125,541	\$ (37,863)	
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Expenses (B)	\$ 3,193,927	\$ 3,298,927	\$ 105,000	\$ 3,232,217	\$ 38,289	
Change in Assets	\$ (22,353)	\$ (127,353)	\$ (105,000)	\$ (25,251)	\$ (2,898)	
Fixed Assets						
Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	
Computer & Software CapEx	-	-	-	-	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	(22,353)	(22,353)	-	(25,251)	(2,898)	
Inc(Dec) in Fixed Assets (C)	(22,353)	(22,353)	-	(25,251)	(2,898)	
TOTAL BUDGET (=B+C)	3,171,574	3,276,574	105,000	3,206,966	35,392	
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	\$ 0	\$ (105,000)	\$ (105,000)	\$ 0	\$ 0	

Training, Education, and Operator Certification Program

Training, Education, and Operator Certification Program Resources			
(in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	0.10	0.10	0.00
Direct Expenses	\$200,384	\$229,785	\$29,401
Indirect Expenses	\$19,955	\$19,306	(\$649)
Other Non-Operating Expenses	\$0	\$0	\$0
Inc(Dec) in Fixed Assets	(\$383)	(\$433)	(\$50)
Total Funding Requirement	\$219,956	\$248,658	\$28,702

Program Scope and Functional Description

The NPCC Training, Education, and Operator Certification program supports NERC Rules of Procedure Section 900. The program provides education and training necessary to understand and operate the bulk electric system. The target audience of the program is bulk power system operating personnel - including system operations personnel, operations support personnel (engineering and information technology), supervisors and managers, and training personnel. NPCC staff training and development is incorporated within each respective program area.

Training Program Background and Description

This NPCC Program establishes and coordinates training for system operators relating to inter-Reliability Coordinator area matters, criteria, terminology, standards and operating procedures and instructions. It includes development and execution training seminars, held twice yearly, at which: 1) potential operational problems for the coming season are discussed, 2) the implementation of NPCC Directories and NERC Standards are discussed, 3) major industry issues that are important for system operators are discussed, 4) significant disturbances are reviewed for lessons learned and 5) table-top drills and communication and coordination exercises are conducted. The seminars promote camaraderie and better communication among system operators from the NPCC Reliability Coordinator (RC) areas and the Nova Scotia Balancing Authority (BA) area.

This Program also provides for: 1) sharing of existing training techniques and methods, 2) evaluation of new techniques and training aids as they become available; 3) opportunities to consolidate training among the NPCC RCs and BAs, which includes opportunities to share training material and training sessions and 4) exchange of information on internal methods of system operator selection and training. The training activities indicated below are done in support of ERG Goal 5b. (“5b. The ERO Enterprise acquires, engages, and retains highly qualified talent suited to the mission.”)

Funding Drivers and Reliability Benefits

- Provide two high-quality continuing education seminars for system operators
 - System operators participating in the Seminars: 1) get exposure to NPCC issues and current industry operations topics, 2) review recent NPCC or major external disturbances, 3) review key operations-related content in NPCC Directories and NERC Standards, and 4) participate in hands on “table top exercises” pertaining

- to system operation practices. PJM system operators and trainers are also invited to and normally attend and participate in these seminars.
- Seminar attendees also receive Continuing Education Hours (CEHs) (normally 3.5 to 4 CEHs) and operator trainers from each RC / BA area can utilize the seminar content by including it in their internal training programs to provide CEHs to all system operators
 - The seminars help to improve system operation coordination through better contact among operators
 - Continually review and revise the curriculum of the training seminars to better emphasize NERC standards, Regional Standards and business practices, NPCC wide-area operations and Regionally-specific criteria and procedures.
 - Enhance the system operator's awareness and knowledge of the standards, criteria and procedures they apply in real time operation.
 - Provide more sharing of new training approaches, exchange of information on internal methods of system operator selection, training material and training sessions.
 - Enhance efficiency and cost savings in the training programs in the NPCC RC / BA areas
 - Provide a forum among NPCC RC/BA areas for sharing of approaches to meet the requirements of the NERC PER standards. The sharing of approaches used by some NPCC Areas to address any changes needed to existing system operator training programs due to PER-005-2 requirements is valuable to CO-2 Working Group members.
 - Implement changes needed for the NPCC Reliability Coordinator / Balancing Authority Areas to meet proposed expanded Systematic Approach to Training (SAT) requirement for operations support staff in PER-005-2.
 - NPCC will conduct two Standards and Compliance workshops in 2017, for NPCC Stakeholders, for the express purpose of providing the most current and applicable information related to the development of NERC and Regional Reliability Standards and the implementation of the Compliance Monitoring and Enforcement Program (CMEP).

2017 Key Assumptions

NPCC regularly conducts seminars as well as Spring and Fall Standards and Compliance workshops specifically designed, primarily through the conduct of targeted breakout class room sessions and presentations on current industry related activities, to provide for the most efficient exchange of information between the NPCC Compliance and Standards Staff and the NPCC Stakeholders. Presentations in the past have been conducted by FERC, NERC and Stakeholder representatives in addition to NPCC Staff members. To supplement these workshops, NPCC is also considering expanding the use of on-line webinars. These webinars will focus on a specific topic pertinent to developments related to compliance program implementation, standards development or technical topics.

NPCC also regularly conducts spring and fall System Operator Seminars. These seminars involve system operators from the NPCC RC/BA Areas and PJM. These will be held in early May and early November.

2017 Goals and Key Deliverables

- Prepare and conduct the 2017 Spring and Fall NPCC System Operator Seminars.
- Implement the PER-005-2 expanded SAT training requirements within the NPCC RC/BA Area programs.

- Expand the content of the Reliability Coordinator training programs, to meet the requirements generated by PER-005-2, as necessary.
- Continue collaboration and sharing of the intended RC/BA approaches, experiences and materials to task identification and training development associated with NERC Standard PER-005-2. Create and expand the restricted-access NPCC repository of training resources and learning verification activities addressing fundamental power system topics, training methods and operation procedure training exercises, which may be shared as elements of operator training in compliance with NERC Standard PER-005, “System Personnel Training”.
- Participate in NERC Staff Training Group activities and provide NPCC input to the development of training policies by this group.

Based on the portion of professional/technical staff time and other resources devoted to training, education, and operator certification, NPCC estimates that it will expend 2% of its resources on this activity.

Resource Requirements

Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2017.

Training, Education, and Operator Certification Program

Funding sources and related expenses for the training, education, and operator certification section of the 2017 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures						
2016 Budget & Projection, and 2017 Budget						
Training, Education, and Operator Certification						
	2016	2016	Variance	2017	Variance	
Funding	Budget	Projection	2016 Projection v 2016 Budget Over(Under)	Budget	2017 Budget v 2016 Budget Over(Under)	
ERO Funding						
ERO Assessments	\$ 155,715	\$ 155,715	\$ -	\$ 184,658	\$ 28,943	
Penalty Sanctions	240	240	-	-	(240)	
Total ERO Funding	\$ 155,956	\$ 155,956	\$ -	\$ 184,658	\$ 28,702	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	64,000	64,000	-	64,000	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Total Funding (A)	\$ 219,956	\$ 219,956	\$ -	\$ 248,658	\$ 28,702	
Expenses						
Personnel Expenses						
Salaries	\$ 19,073	\$ 19,073	\$ -	\$ 21,012	\$ 1,939	
Payroll Taxes	1,311	1,311	-	1,396	85	
Benefits	5,452	5,452	-	4,801	(651)	
Retirement Costs	2,397	2,397	-	2,641	244	
Total Personnel Expenses	\$ 28,234	\$ 28,234	\$ -	\$ 29,850	\$ 1,616	
Meeting Expenses						
Meetings	\$ 157,000	\$ 157,000	\$ -	\$ 186,300	\$ 29,300	
Travel	15,150	15,150	-	13,635	(1,515)	
Conference Calls	-	-	-	-	-	
Total Meeting Expenses	\$ 172,150	\$ 172,150	\$ -	\$ 199,935	\$ 27,785	
Operating Expenses						
Consultants & Contracts	\$ -	\$ -	\$ -	\$ -	\$ -	
Office Rent	-	-	-	-	-	
Office Costs	-	-	-	-	-	
Professional Services	-	-	-	-	-	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Depreciation	-	-	-	-	-	
Total Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Direct Expenses	\$ 200,384	\$ 200,384	\$ -	\$ 229,785	\$ 29,401	
Indirect Expenses	\$ 19,955	\$ 19,955	\$ -	\$ 19,306	\$ (649)	
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Expenses (B)	\$ 220,339	\$ 220,339	\$ -	\$ 249,091	\$ 28,752	
Change in Assets	\$ (383)	\$ (383)	\$ -	\$ (433)	\$ (50)	
Fixed Assets						
Depreciation	\$ -	-	\$ -	\$ -	\$ -	
Computer & Software CapEx	-	-	-	-	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	(383)	(383)	-	(433)	(50)	
Inc(Dec) in Fixed Assets (C)	(383)	(383)	-	(433)	(50)	
TOTAL BUDGET (=B+C)	219,956	219,956	-	248,658	28,702	
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	\$ (0)	\$ (0)	\$ -	\$ (0)	\$ (0)	

Situation Awareness and Infrastructure Security Program

Situation Awareness and Infrastructure Security Program Resources			
(in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	3.00	4.00	1.00
Direct Expenses	\$956,690	\$1,188,137	\$231,447
Indirect Expenses	\$598,664	\$772,241	\$173,577
Other Non-Operating Expenses	\$0	\$0	\$0
Inc(Dec) in Fixed Assets	(\$11,503)	(\$17,325)	(\$5,822)
Total Funding Requirement	\$1,543,852	\$1,943,053	\$399,201

Program Scope and Functional Description

The Situation Awareness and Infrastructure Security Program is the combination of near real time awareness of conditions on the bulk power system with the programs necessary to increase the physical and cyber security of the electricity infrastructure, including the operation and maintenance of tools and other support services for the benefit of Reliability Coordinators and the system operators within the registered entities. Maintaining the real-time awareness of conditions on the interconnected bulk power systems by the NPCC Reliability Coordinator is critical to maintaining reliable operation within NPCC, including the communication of information concerning system conditions and abnormal events among the neighboring system operators responsible for the reliable operation of the bulk power systems. When a disturbance does occur, it is critical to use the event as a learning opportunity and provide a forum for the active coordination of reliability and operation among the NPCC Reliability Coordinator areas and neighboring NERC Regions to enhance the reliability of the interconnected bulk power system through the lessons to be learned which can be gleaned from such an event.

Event Analysis Program

NERC and the industry follow three avenues in the analysis of a disturbance: the identification of lessons to be learned, a formal cause code analysis and a review of applicable standards.

The Event Analysis Program recognizes that many events which occur on the bulk power system beyond those identified through NERC Reliability Standard EOP-004-2, "Event Reporting," can have varying levels of significance to the electric system, providing otherwise unrealized lessons to be learned from these events and the trending of such events to identify possible reliability concerns. By integrating a "bottom-up" approach to a disturbance review within the framework of the NERC Event Analysis Program, consistency, comparability, flexibility and timeliness in the event analysis process will be promoted by NPCC, the registered entities and NERC in a collaborative initiative. Upon the identification of an event, the goal of the Event Analysis Program is to:

- identify what transpired;
- categorize the event within the NERC Event Analysis Program;
- establish the sequence of events;
- understand the essential root causes of the event;
- identify recommendations or corrective actions; and

- develop and disseminate to the industry lessons to be learned so that the operational reliability of the bulk power system can be further enhanced.

In assessing any system event, it is recognized that, if the timely dissemination of lessons learned from an event or disturbance is to be realized, any potential compliance implications associated with an event must be addressed and dismissed. Throughout an event analysis effort, to make this process successful and complete, and to solidify the “bottom-up” approach, registered entities are encouraged to establish a liaison between the event analysis and compliance functions internal to the registered entity during the event analysis process. This serves to facilitate the development of a registered entity compliance self-assessment report which will perform a sufficiency review of the reliability standards deemed applicable to the event, assisting in the self-reporting of possible violations should any be discovered.

To complete this effort, the entity, the Region and NERC staff will collaborate to assess the NERC Event Analysis Report and perform a formal cause code analysis, identifying a root cause and publish any pertinent lessons learned gathered from the disturbance.

The adoption by NERC of the Event Analysis Program brings clarity and certainty about what system events are relevant to analyze and to what level of detail, targeting potential risks to the reliability of the bulk power system for detailed and in depth analysis; only concise and succinct reviews are desired for more minor events. It also delineates the expectations of roles and responsibilities of the registered entities, NPCC and NERC in a uniform review of system disturbances by the industry, and, ultimately, the program promotes the timely development and dissemination of valuable lessons learned to the industry. The identification and tracking of emerging common risks through the assessment of events will further distinguish trends which may be of concern to reliability. By rigorously pursuing the lesser events on the system and learning from these disturbances, larger events can be avoided or mitigated.

NPCC Staff works step-by-step with the registered entity in the total event analysis process, permitting the entity to assume the primary role in the development of the initial analysis, lessons learned which may benefit the industry and the Standards sufficiency review and cause coding for trending and reporting. NPCC staff, throughout the process, guides, supports and stands as an advocate of the registered entity as they continue to develop an improved culture of reliability and compliance.

Situational Awareness

Operational Status

On an ongoing, but non-real time basis, NPCC monitors the operational status of the bulk power system and coordinates normal and pre-emergency communication, awareness and assistance in addition to the same during an emergency among the Reliability Coordinators within NPCC: the New Brunswick Power Corporation, Hydro-Québec Contrôle de mouvements d'énergie (HQCME, a division of Hydro-Québec TransÉnergie), the ISO New England, Inc., the New York ISO and the Independent Electricity System Operator in Ontario; and its neighboring RCs: the Midcontinent ISO and PJM. The industry is notified of significant bulk power system events that have occurred in one Reliability Coordinator Area, and which have the potential to impact reliability in other NPCC Reliability Coordinator Areas or Regions external to NPCC. These events include contingencies on the bulk power system, potential shortfalls of operating reserve, operating problems, potential security threats and potential threats or disruptions to the cyber systems.

The “NPCC Emergency Preparedness Conference Call Procedures” provide a mechanism that enables the Reliability Coordinator in NPCC, and, as circumstances may require, their counterparts in neighboring Regions, to rapidly communicate the status of current operating conditions, to facilitate the procurement of assistance during emergency conditions and to identify potential physical or cyber threats to the system.

Items of particular concern that can be discussed during the calls may include, but are not limited to, the following: anticipated weather conditions critical to the system or systems experiencing or projecting resource deficiencies; load forecast; largest first and second contingencies; potential need for emergency transfers; operating reserve requirements and expected available operating reserve capacity deficiencies; potential fuel shortages or potential fuel supply disruptions which could lead to energy shortfalls; identified or projected voltage conditions; status of short term transactions; additional capability available within four hours and additional capability available within twelve hours; generator outages; significant transmission outages; expected transfer limits and limiting elements; anticipated implementation of NERC Transmission Loading Relief (TLR); changes in the status of relay protection systems; arming of special protection systems not normally armed; and/or the application of abnormal operating procedures.

NPCC has also established a daily conference call to serve as a complement to the NPCC Emergency Preparedness Conference Call. The participants of the call are the Reliability Coordinators within NPCC and its neighboring RCs, the Midcontinent ISO and PJM. The conference call is implemented through a bridge, the initiation of the call quickly ringing all pre-selected telephones simultaneously. The goal of the call is to alert all Reliability Coordinators of emerging problems. If no system difficulties are anticipated for the day, no unnecessary information is to be discussed. Subjects for discussion are limited to credible events which could impact the ability of an entity to serve its load and meet its operating reserve obligations or would impose a burden to the interconnection, including the following: Projected Load; Adverse Weather; Operating Reserve; Generation; Transmission; and Sabotage. If conditions worsen in the course of the day, the NPCC Emergency Preparedness Conference Call will be implemented.

NPCC also monitors the status of the bulk power system through the NERC Situational Awareness-FERC, NERC, Regions (SAFNR) initiative, a near real-time operating display for the United States portion of the Reliability Coordinators footprints of North America. Transmission voltage levels of 230 kV and above are displayed, and the tool provides the ability to “drill down” to detailed bus information, including generation outputs and bus voltages.

To ensure the capability for continued voice communications among NPCC and its Reliability Coordinators, a satellite telephone network was also established, and it is tested on a monthly basis. This back-up communications system will function in the event of a collapse of the Public Switched Telephone Network (PSTN), permitting continued cross-border voice communications among the Canadian Reliability Coordinators of NPCC, the Reliability Coordinators in the United States as well as NPCC Situation Awareness (SA) staff.

Critical Infrastructure Objectives

NPCC's critical infrastructure objectives are defined within the scope of the NPCC Task Force on Infrastructure Security & Technology, (TFIST) and include, but are not confined to:

- Providing a forum for NPCC review of proposed and posted documents from the NERC Critical Infrastructure Protection Committee (CIPC)
- Representing and advocating NPCC's position in the activities of NERC groups involved in the development and/or implementation of physical and cyber security

NPCC's 2017 critical infrastructure goals and objectives, supporting ERO Goal 3.c:

- Monitor the Homeland Security Information Network (HSIN), E- ISAC, NERC Alerts and Canadian Information Sharing and share information with NPCC's CO-8 System Operations Managers Working Group
- Review and submit comments on NERC proposed Reliability Standards, modified Reliability Standards, proposed Guidelines and modified Guidelines related to Infrastructure Security and Technology
- Keep current on all governmental agencies' and others applicable security recommendations and requirements, and keep the RCC and its committees appropriately informed, e.g. Sector Specific Plan.
- Review infrastructure security & technologies and provide recommendations to RCC to enhance physical and cyber security in compliance with NERC guidelines/standards
- Provide recommendations to RCC to enhance physical and cyber security, in compliance with NERC standards, based on assessments of available and emerging infrastructure security technologies, methodologies, and best practices.
- Sponsor periodic workshop presentations to address timely issues and update NPCC Members associated with infrastructure security and technology.
- Since RCC approved the Cross Border Emergency Telecommunications recommendation, insure that suggested annual testing happens and each Area can communicate with each other. [IST-2]
- As RCC directs, provide support and technical input, for Task Force related BES risks as identified by the NERC Reliability Issues Steering Committee (RISC). The Task Force will conduct a thorough review, provide comments as necessary and act on posted materials as directed. Task Force assessments and recommendations will be forwarded to the RCC for approval and submittal to NERC via NPCC Staff and the NERC Risk Control Process

System Operations Security Objectives

NPCC's system operations security objectives are defined within the scope of the NPCC Task Force on Coordination of Operation (TFCO) and include, but are not confined to:

- Coordinating inter-Regional pre-emergency actions in the event of a threat to the security of the Northeastern North American bulk power supply system
- Assisting in the development of real time operating tools assuring cyber security concerns are addressed

2017 Key Assumptions

- The monitoring of Lessons Learned will continue to be a major focus of NERC in 2017. This will include an added aspect of the voluntary Event Analysis Program, in response to a recommendation of the AC Substation Equipment Task Force (ACSETF), to solicit and collect detailed information on station equipment failures, for applicable, qualifying events to aid in future analysis of station equipment failures to identify trends that may be a threat to the reliability of the BES.
- Critical infrastructure protection will fully integrate the requirements of version 5 of the Cyber Standards in 2017.
- NERC will post updates to the critical infrastructure protection (CIP) Standards to address the three FERC Directives and the four industry concerns that were not satisfactorily responded to by the version 5 Transition Advisory Group.

2017 Goals and Key Deliverables

- Monitor the reliable implementation of version 5 of the Cyber Standards.
- Work directly with applicable NPCC Task Forces to provide an in depth assessment of Lessons Learned unique to the NPCC members and NPCC criteria.
- Promote NPCC's Event Analysis group's established process for sharing and dissemination of the detailed Event Analysis Report information among industry participants (registered entities).
- Take part in the planning of, preparation for and participation in the bi-annual GridEx IV exercise, incorporating the Lessons Learned generated by the GridEx III wide-area exercise.
- Utilize the NPCC's "what if" methodology to examine an event's potential impact under a different set of system conditions, to evaluate the proximity of a particular event to being a significant BPS requiring appropriate level of analysis with due weight to risk and impact.
- Establish a process/procedure for data capture and transfer aspects for post-disturbance (major disturbance and/or blackout events) system analysis, including requirements for regularly scheduled (annual) testing of the procedure implementation.

Based on the portion of professional/technical staff time and other resources devoted to situation awareness and infrastructure security, NPCC estimates that it will expend 13% of its resources on this activity.

Resource Requirements

Personnel

- Reallocation of staff during 2016 resulted in an increase of one full time employee in the Situation Awareness and Infrastructure Security program to support increased workload in this area.
- NPCC anticipates no need to hire additional personnel in this program area in 2017.

Situation Awareness and Infrastructure Security Program

Funding sources and related expenses for the situation awareness and infrastructure security section of the 2017 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures 2016 Budget & Projection, and 2017 Budget						
Situation Awareness and Infrastructure Security						
	2016 Budget	2016 Projection	Variance 2016 Projection v 2016 Budget Over(Under)	2017 Budget	Variance 2017 Budget v 2016 Budget Over(Under)	
Funding						
ERO Funding						
ERO Assessments	\$ 1,536,637	\$ 1,536,637	\$ -	\$ 1,943,053	\$ 406,416	
Penalty Sanctions	7,215	7,215	-	-	(7,215)	
Total ERO Funding	\$ 1,543,852	\$ 1,543,852	\$ -	\$ 1,943,053	\$ 399,201	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Total Funding (A)	\$ 1,543,852	\$ 1,543,852	\$ -	\$ 1,943,053	\$ 399,201	
Expenses						
Personnel Expenses						
Salaries	\$ 516,951	\$ 654,951	\$ 138,000	\$ 660,213	\$ 143,262	
Payroll Taxes	32,630	42,630	10,000	42,778	10,148	
Benefits	116,230	133,230	17,000	160,814	44,584	
Retirement Costs	53,880	68,880	15,000	72,333	18,453	
Total Personnel Expenses	\$ 719,690	\$ 899,690	\$ 180,000	\$ 936,137	\$ 216,447	
Meeting Expenses						
Meetings	\$ 15,000	\$ 15,000	\$ -	\$ 13,500	\$ (1,500)	
Travel	65,000	80,000	15,000	78,500	13,500	
Conference Calls	-	-	-	-	-	
Total Meeting Expenses	\$ 80,000	\$ 95,000	\$ 15,000	\$ 92,000	\$ 12,000	
Operating Expenses						
Consultants & Contracts	\$ 157,000	\$ 247,000	\$ 90,000	\$ 160,000	\$ 3,000	
Office Rent	-	-	-	-	-	
Office Costs	-	-	-	-	-	
Professional Services	-	-	-	-	-	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Depreciation	-	-	-	-	-	
Total Operating Expenses	\$ 157,000	\$ 247,000	\$ 90,000	\$ 160,000	\$ 3,000	
Total Direct Expenses	\$ 956,690	\$ 956,690	\$ 285,000	\$ 1,188,137	\$ 231,447	
Indirect Expenses	\$ 598,664	\$ 598,664	\$ -	\$ 772,241	\$ 173,577	
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Expenses (B)	\$ 1,555,355	\$ 1,555,355	\$ 285,000	\$ 1,960,378	\$ 405,023	
Change in Assets	\$ (11,503)	\$ (11,503)	\$ (285,000)	\$ (17,325)	\$ (5,822)	
Fixed Assets						
Depreciation	\$ -	-	\$ -	\$ -	\$ -	
Computer & Software CapEx	-	-	-	-	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	(11,503)	(11,503)	-	(17,325)	(5,822)	
Inc(Dec) in Fixed Assets (C)	(11,503)	(11,503)	-	(17,325)	(5,822)	
TOTAL BUDGET (=B+C)	1,543,852	1,543,852	285,000	1,943,053	399,201	
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	\$ (0)	\$ (0)	\$ (285,000)	\$ (0)	\$ 0	

Administrative Services

Administrative Services Program Resources						
(in whole dollars)						
	Direct Expenses and Fixed Assets			FTEs		
	2016 Budget	2017 Budget	Increase (Decrease)	2016 Budget	2017 Budget	Increase (Decrease)
Technical Committees and Members Forum	\$71,929	\$72,500	\$571	0.50	0.50	0.00
General and Administrative	\$3,345,139	\$3,245,691	(\$99,447)	2.50	2.50	0.00
Legal and Regulatory	\$639,905	\$648,680	\$8,775	1.00	1.00	0.00
Information Technology	\$1,233,263	\$1,185,675	(\$47,588)	3.00	2.00	-1.00
Human Resources	\$176,588	\$182,059	\$5,471	1.00	1.00	0.00
Finance and Accounting	\$519,820	\$525,262	\$5,442	1.00	1.00	0.00
Total Administrative Services	\$5,986,643	\$5,859,868	(\$126,775)	9.00	8.00	-1.00

Program Scope and Functional Description

Administrative services support the previously identified five program areas of: reliability standards; compliance monitoring and enforcement and organization registration and certification; training, education, and operator certification; reliability assessment and performance analysis; and situation awareness and infrastructure security. Administrative services consist of: technical committees and members' forums; general and administrative; legal and regulatory; information technology; human resources; and finance and accounting.

Methodology for Allocation of Administrative Services Expenses to Programs

NPCC total overhead expenses, such as office rent and office costs, will be charged to the Administrative Services Programs and then reallocated proportionately based on FTE to the programs through Indirect Expenses.

Administrative Services

Funding sources and related expenses for the Administrative Services section of the 2017 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures						
2016 Budget & Projection, and 2017 Budget						
ADMINISTRATIVE SERVICES						
	2016	2016	Variance	2017	Variance	
	Budget	Projection	2016 Projection	Budget	2017 Budget	
			v 2016 Budget		v 2016 Budget	
			Over(Under)		Over(Under)	
Funding						
ERO Funding						
ERO Assessments	\$ (592,801)	\$ (592,801)	\$ -	\$ (185,991)	\$ 406,811	
Penalty Sanctions	-	-	-	-	-	
Total ERO Funding	\$ (592,801)	\$ (592,801)	\$ -	\$ (185,991)	\$ 406,811	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Total Funding (A)	\$ (592,801)	\$ (592,801)	\$ -	\$ (185,991)	\$ 406,811	
Expenses						
Personnel Expenses						
Salaries	\$ 1,951,407	\$ 1,813,407	\$ (138,000)	\$ 1,872,579	\$ (78,828)	
Payroll Taxes	102,585	92,585	(10,000)	93,995	(8,590)	
Benefits	422,729	405,729	(17,000)	418,433	(4,296)	
Retirement Costs	330,001	315,001	(15,000)	317,471	(12,531)	
Total Personnel Expenses	\$ 2,806,722	\$ 2,626,722	\$ (180,000)	\$ 2,702,478	\$ (104,244)	
Meeting Expenses						
Meetings	\$ 125,000	\$ 125,000	\$ -	\$ 120,000	\$ (5,000)	
Travel	160,100	145,100	(15,000)	143,590	(16,510)	
Conference Calls	47,000	47,000	-	37,000	(10,000)	
Total Meeting Expenses	\$ 332,100	\$ 317,100	\$ (15,000)	\$ 300,590	\$ (31,510)	
Operating Expenses						
Consultants & Contracts	\$ 122,000	\$ 122,000	\$ -	\$ 152,000	\$ 30,000	
Office Rent	802,500	802,500	-	809,700	7,200	
Office Costs	639,500	639,500	-	679,100	39,600	
Professional Services	1,011,000	1,011,000	-	1,041,000	30,000	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	41,000	41,000	-	50,000	9,000	
Depreciation	231,821	231,821	-	250,000	18,179	
Total Operating Expenses	\$ 2,847,821	\$ 2,847,821	\$ -	\$ 2,981,800	\$ 133,979	
Total Direct Expenses	\$ 5,986,643	\$ 5,791,643	\$ (195,000)	\$ 5,984,868	\$ (1,775)	
Indirect Expenses	\$ (5,986,643)	\$ (5,986,643)	\$ -	\$ (5,984,868)	\$ 1,775	
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Expenses (B)	\$ -	\$ (195,000)	\$ (195,000)	\$ -	\$ 0	
Change in Assets	\$ (592,801)	\$ (397,801)	\$ 195,000	\$ (185,991)	\$ 406,811	
Fixed Assets						
Depreciation	(231,821)	(231,821)	\$ -	(250,000)	\$ (18,179)	
Computer & Software CapEx	125,000	125,000	-	125,000	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	106,821	106,821	-	125,000	18,179	
Inc(Dec) in Fixed Assets (C)	-	-	-	-	-	
TOTAL BUDGET (=B+C)	-	(195,000)	(195,000)	-	0	
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	\$ (592,801)	\$ (397,801)	\$ 195,000	\$ (185,991)	\$ 406,811	

Technical Committees and Member Forums

Program Scope and Functional Description

The success of the NPCC programs depends on the active and direct volunteerism and participation of its members. The stakeholders are the source of expertise in the industry. To promote the reliable and efficient operation of the interconnected bulk power systems in Northeastern North America, NPCC invites high level policy makers from Federal, Provincial and State regulatory and/or governmental authorities and senior executives within NPCC and NERC to identify and discuss emerging issues related to the reliability of the NPCC Region.

2017 Key Assumptions

- NPCC's standing committee and subgroup structure for effective stakeholder involvement will continue in 2017
- NPCC will continue to utilize methods to encourage active involvement in its Regional programs that require less stakeholder travel and face-to-face meetings, as the economy improves in 2017
- NPCC will continue to invest in technology and innovation to allow efficient collaboration on technical issues related to reliability

2017 Goals and Key Deliverables

The 2017 NPCC General Meeting provides an opportunity for NPCC Members to meet high level policy makers from Federal, Provincial and State regulatory and/or governmental authorities and senior NERC and NPCC executives to discuss topics related to the reliable planning and operation of the power system, including consideration of emerging reliability, critical infrastructure and environmental issues.

2017 Public Information Committee Goals and Objectives

The objective of the NPCC Public Information Committee is to highlight and summarize NPCC activities and accomplishments in the past year, disseminate and coordinate the appropriate release of information to the media, respond to related requests for information, and coordinate with related NPCC Area, NERC media and public information activities. Activities anticipated include, but are not limited to:

- Conducting the Media Event – release of the Summer 2017 NPCC Reliability Assessment
- Participation in NERC Regional communication initiatives:
 - Regional communications teleconferences as required
 - Coordination of Emergency or Blackout communications plans
 - Coordination with other NERC activities as required (i.e., situation awareness, event analysis, reliability assessments, etc.)

Resource Requirements

Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2017.

General and Administrative

Program Scope and Functional Description

The NPCC general and administrative function provides executive management of the corporation, management of NPCC office, and other administrative support programs.

NPCC total overhead expenses, such as office rent and office costs, will be charged to the Administrative Services Programs and then reallocated proportionately based on FTE to the programs through Indirect Expenses.

Resource Requirements

Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2017.

Consultants and contracts

- Increase in expense is associated with various consultants and contracts including a total remuneration study in 2017.

Office Rent

- Increase in landlord operating expenses and real estate taxes.

Professional Services

- Independent director search to be conducted in 2017.

Legal and Regulatory

Program Scope and Functional Description

NPCC's professional legal services provide counsel to the President and CEO, Board of Directors, Vice President and COO, Treasurer, General Counsel and staff on a wide range of legal and regulatory matters including legislation, corporate law, code of conduct, confidentiality, governance, employment law, tax matters, contract law and other areas affecting NPCC. In support of ERO Goal 5.c., NPCC's in-house counsel evaluates internal controls and corporate, operational, strategic and reputational risk, and participates in risk identification, evaluation and mitigation activities. In-house counsel provides legal advice to advance significant corporate policy and strategic planning initiatives and also provide legal support to other program areas on matters arising in connection with the performance of NPCC's delegated functions. In-house counsel draft agreements and pleadings and provide interpretations of relevant statutes, regulations, court opinions, and regulatory decisions of FERC, state agencies and provincial authorities. Outside counsel, as necessary, reviews items filed with the governmental agencies for legal sufficiency, maintains relationships with U.S. and Canadian jurisdictions and provides contract review.

Resource Requirements

Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2017.

Professional Services

- Professional services expense is projected to remain in line with 2016 levels.

Information Technology

Program Scope and Functional Description

NPCC's Information Technology services ensure information assets and the environment in which they operate are secure and in conformance to NPCC IT Policies and Procedures and all applicable Critical Electric Infrastructure Information protection and Confidentiality requirements. NPCC maintains an offsite backup server for continuity of essential operations in the event that its primary location is unavailable.

NPCC supports the ERO efforts to implement, operate and maintain software tools supporting common enterprise wide operations and leveraging ERO solutions which have been approved by the ERO Executive Management Group (EROEMG), which is comprised of the senior leadership of NERC and each of the Regional Entities. NPCC's budget assumes the availability of enterprise software tools as described in NERC's business plan and budget. If implementation of these software applications is delayed or otherwise not available as planned, NPCC could incur additional costs to implement ERO Enterprise-wide programs pending the availability of these applications.

NERC and the Regional Entities are committed to working collaboratively to minimize duplication of effort and investments, and improve operational efficiency. This collaboration continues to refine existing strategies, governance and procurement practices applicable to the development, operation and maintenance of enterprise architecture, software and data systems supporting complementary and combined NERC and Regional Entity operations.

The NERC information technology budget does not supplant NPCC's need for IT expenditures for specific regional projects and internal region specific IT support needs. NPCC's 2017 Business Plan and Budget assumes agreed-upon ERO Enterprise applications will be available and includes only NPCC costs for region specific support needs.

2017 Key Assumptions

- Continue to develop and maintain the compliance portal through collaboration with other Regional Entities and NERC (CUG).
- Support the Event Analysis program through continued participation in the tools used for the tracking and analysis of system events and identification of better practice elements.
- Support the Bulk Electric System Exception Process (BEP) to enable and facilitate tracking and processing of exceptions submitted. Maintenance of the BESNET support services such as updates, patching, coordinating issues with NERC.
- Support Cyber Security Reviews done by Compliance to provide advisory role during those reviews.

2017 Goals and Key Deliverables

Responsibilities encompass a variety of complex technical, administrative, and supervisory work in the development, installation, and maintenance of information technology systems. IT goals include, but are not limited to:

- Conduct initial implementation and utilization of a document management system
- Create an information security program and environment aimed at reducing breach of security risks
- Determine longer-term software and systems needs and hardware acquisitions
- Develop and implement information security standards and procedures

- Ensure all information systems are functional and secure, and that all applications running on those systems meet business requirements for performance, availability, and security
- Plan and implement organization-wide information systems, services, and network facilities, including local area networks, wide-area networks, and peripheral systems
- Provide outreach and education to NPCC members in IT best practices
- Continually improve Disaster Recovery and Business Continuity policies and practices to ensure continuity and reliability of IT and business related services

Resource Requirements

Personnel

- Reallocation of staff during 2016 resulted in a decrease of one full time employee in Information Technology. NPCC anticipates no need to hire additional personnel in this program area in 2017.

Office Costs

- Increase in IT office costs is primarily related to enhancements to increase security, which will be conducted on an ongoing basis in alignment with ERO goals.

Human Resources

Program Scope and Functional Description

NPCC has assembled an exceptional team of highly qualified employees to carry out the activities of NPCC. The human resources function, in adherence with applicable federal and state laws, designs, plans, and implements human resources policies and procedures, including: staffing; compensation; benefits; employee relations; training and development; and employee time tracking.

Resource Requirements

Personnel

- Temporary office services increased to assist in administrative services, particularly in the area of human resources.

Accounting and Finance

Program Scope and Functional Description

The accounting and finance function directs the overall financial plans and accounting practices of the organization; oversees treasury, accounting, budget, tax, and audit activities; and oversees financial and accounting system controls and standards. NPCC uses a CPA firm to prepare its unaudited statements of activities and financial statements for quarterly reviews. Independent audits have identified this system as a best practice.

2017 Goals and Key Deliverables

The objectives are to provide or obtain the financial and accounting services for NPCC and coordinate with NERC requirements:

- Utilize the NERC System of Accounts for consistency
- Utilize an accrual method of accounting for consistency with NERC in methodology
- Alignment of changes in budget and changes in aggregate assessment
- Cash Management
- Budget Development using the NERC budget template formats
- Forecasts and Projections
- Alignment of NPCC Committees, Task Forces and Working Groups with the programs
- Payroll and expense administration
- Preparation of unaudited Quarterly Financial Variance Reports
- IRS Reporting
- Annual Independent Audit initiated by the Regional Entity

Resource Requirements

Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2017.

Regional Entity Assessment Analysis

In the area of assessments there are distinct funding mechanisms as outlined in the following table. For the Regional Entity division, the North American Electric Reliability Corporation (NERC) will assess load serving entities (LSEs) or their designees (within NPCC the designees are the Balancing Authority Areas (BAAs) for New York, New England, New Brunswick, Nova Scotia, Ontario and Québec) based upon 2015 proportional Net Energy for Load (NEL) and other specific program area funding arrangements and make quarterly remittances to the Regional Entity on or about the 15th day of January, April, July and October. For funding associated with the criteria services division, the Independent System Operators/Balancing Authority Areas (ISO/BAAs) will be assessed by NPCC for their proportional share of the divisional budget based upon 2015 NEL within the Region. Non ISO/BAA Full Members will be assessed no membership fee.

NPCC Cost Allocation Methodology

The accompanying table provides information regarding cost allocation for both the Regional Entity division and the criteria services division of NPCC, including the details associated with the funding of the Compliance Program within the RE division. For purposes of determining assessments to support NPCC's resource requirements, costs are allocated among the BAAs within NPCC as the designees for the load-serving-entities in New York, New England, Ontario, Québec, New Brunswick and Nova Scotia.

In order to reflect and respect the international membership and nature of NPCC, any sub-regional reliability assessment costs in response to U.S. only regulatory initiatives will be considered for allocation to U.S. only BAAs consistent with NERC Rules of Procedure section 1102. Additionally, the compliance responsibilities and authorities within the U.S., and the specific compliance responsibilities within each of the Canadian provinces within NPCC, and the attendant costs of portions of the compliance program differ among the areas within the Regional Entity. Within the U.S. portion of NPCC all costs attributable to delegated (statutory) functions performed by NPCC, including all compliance functions, are assessed based on a NEL allocation. Within the Canadian portion of NPCC those costs attributable to compliance functions performed by NPCC on behalf of provincial governmental and/or regulatory authorities are allocated consistent with the unique Memoranda of Understanding or Agreements that have been entered into for those provinces. To address these different compliance regimes, NPCC developed a composite cost allocation methodology that allocates U.S. only reliability assessment and compliance costs on a fair and equitable basis within the Regional Entity.

As an initial step of that methodology, the NEL for each of the BAAs and their relative percentage to the NPCC total NEL is calculated for the most recent year for which data is available, the second previous year. In order to establish the RE division funding requirements for each Balancing Authority Area on a NEL basis for all programs except for Compliance, the proposed expenses and fixed assets of all other programs are calculated and the adjustment for the RE division cash reserve requirement is identified. Any penalty monies received from NPCC registered entities within the U.S. prior to June 30th of the year preceding the business plan and budget year are then allocated among the NPCC program areas based on their FTE ratio and between the U.S. BAAs based on their relative NELs. Consistent with each of the Canadian provincial MOUs and agreements, all penalty monies resulting from compliance actions within Canada, if any, would remain within the applicable province. The total budgeted fees for NPCC

workshop participation are indicated as a credit, with the resultant addition being the RE division assessment, without the compliance program costs, calculated on a NEL basis.

In accordance with the *NPCC Amended and Restated Bylaws* the CS division proposed expenses and fixed assets of all programs are calculated and the adjustment for the CS division cash reserve requirement is identified, with the resultant addition being the CS division funding requirement and assessment, calculated on a NEL basis

For costs associated with the RE division compliance program, NPCC's allocation methodology apportions 23.28% of the costs for the program, attributed to CORC Fundamentals (CF), between the BAAs in the United States and Canada on a NEL basis.

Audits and Investigations (AI) related costs, representing 51.98% of the costs of the compliance program, are allocated between U.S. and Canadian BAAs in NPCC, and among the Canadian provinces, using an audit-based methodology. The audit-based methodology incorporates relative costs based on categories of compliance audits which are reflective of their size and complexity, as well as the differing compliance program implementation models that are utilized in NPCC due to the international nature of the Regional Entity. The portion allocated to the U.S. BAAs in NPCC is calculated using the audit-based methodology, and this amount is then re-allocated between the New York and New England BAAs based on their relative NEL.

The remaining 24.74% of the costs of the compliance program represent Mitigation and Enforcement (ME) related costs and are allocated between U.S. and Canadian BAAs in NPCC, and among the Canadian provinces, using an enforcement activity based methodology. Based on historical data, NPCC reviewed each BAAs percentage of violations, mitigation plans and settlement agreements to determine each BAAs total average percentage of enforcement activities. The portion allocated to the U.S. BAAs in NPCC is calculated using the enforcement activity based methodology, and this amount is then re-allocated between the New York and New England BAAs based on their relative NEL.

Any penalty monies received from NPCC registered entities within the U.S. by June 30th of the year preceding the business plan and budget year are then allocated among the NPCC program areas based on their FTE ratio and between the U.S. BAAs based on their relative NELs, and then added to the total compliance program expenses and fixed assets to yield a total compliance program assessment.

The CORC actual vs budget variance from the most recent year for which audited financials are available is broken out from the rest of the Adjustment to Cash Reserve and assigned to the CORC program allocation of costs. Within Quebec these costs are funded directly by the regulator, therefore, the assignment of program area variances needs to respect those specific circumstances.

Finally, the total RE division funding requirements and assessments by BAA are tabulated and the total funding requirements and assessments for NPCC, both the RE and CS divisions, are combined.

NPCC 2017 Regional Entity (RE)
and Criteria Services (CS) Divisional Funding Information

A-1	B-1	B-1a.	C-1	C-1a.	D-1	E-1	F-1	G-1	H-1	I-1	J-1	K-1	L-1	M-1
(LSE Designees)	2015 Net Energy for Load (MWh)	2015 NPCC US NEL (MWh)	2015 NPCC NEL % of Total	2015 NPCC NEL % of U.S.	Associated with U.S. Only Reliability Study ¹	2017 ² NPCC RE Division Expenses & Fixed Assets Minus CORC and U.S. Only	Adjustment to RE Division Cash Reserve Requirement Less CORC Assigned	2017 ² NPCC RE Division Funding Requirement Minus CORC	2017 ² NPCC RE Division Assessment Minus CORC (G-1 plus H-1 plus I-1)	2017 NPCC CS Division Expenses & Fixed Assets	2017 NPCC CS Division Adjustment to Cash Reserve Requirement	2017 NPCC CS Division Funding Requirement (K-1 plus L-1)	2017 NPCC CS Division Requirement to Cash Reserve	2017 NPCC CS Division Requirement & Member Fees
New England	126,955,000	126,955,000	19.982%	44.001%	TBD	1,283,041	-37,165	1,245,876	0	-12,788	1,233,088	205,194	15,780	220,974
New York	161,572,000	161,572,000	25.430%	55.999%	TBD	1,632,889	-47,298	1,585,591	0	-16,275	1,569,316	261,144	20,083	281,227
Ontario	137,012,000	137,012,000	21.565%			1,384,680	-40,109	1,344,571	0	-13,801	1,330,769	221,448	17,030	238,478
Quebec	184,629,000	184,629,000	29.059%			1,865,910	-54,048	1,811,862	0	-18,598	1,793,264	298,410	22,949	321,359
New Brunswick	14,199,000	14,199,000	2.23%			143,499	-4,157	139,342	0	-1,430	137,912	22,949	1,765	24,714
Nova Scotia	10,982,000	10,982,000	1.728%			110,987	-3,215	107,772	0	-1,106	106,666	17,750	1,365	19,115
Total	635,349,000	288,527,000	100.000%	100.000%	\$0	\$6,421,005	-\$185,991	\$6,235,015	\$0	-\$64,000	\$6,171,015	\$1,026,896	\$78,971	\$1,105,867

A-2	B-2	C-2	D-2	E-2	F-2	G-2	H-2	I-2	J-2	K-2	L-2	M-2	N
2015 NEL Based Allocation of 23.28% of 2016 CORC Program Fundamentals ³	2017 Audit and Investigation Cost Allocation ⁴	2017 Audit and Investigation Allocation Methodology	2017 CORC Mitigation and Enforcement Cost Allocation ⁵	2017 Mitigation and Enforcement Allocation Methodology	2017 24.74% of CORC	2017 Total CORC Program Expenses & Fixed Assets	2017 Penalty Monies Applied to CORC Program	Assigned CORC Program 2015 Actual vs Budget Variance	2017 Total CORC Program Assessment (G-2 plus H-2 plus I-2)	2017 RE Division Total Funding Requirement (G-1 plus G-2)	2017 RE Division Total Assessment (J-1 plus J-2)	2017 NPCC Total Funding Requirement (M-1 plus M-2)	2017 NPCC Total Assessment & Member Fees (N-1 plus N-2)
New England	405,904	46,963%	1,669,867	38.143%	823,543	2,899,314	0	-212,988	2,686,325	4,145,190	3,919,413	4,366,164	4,140,387
New York	516,582	36.386%	2,110,473	31.446%	1,048,099	3,675,154	0	-269,187	3,405,967	5,260,746	4,975,283	5,541,972	5,256,510
Ontario	438,058	4.749%	215,389	3.780%	3,780%	735,064	3,780%	-54,600	680,465	2,079,635	2,011,234	2,318,114	2,249,712
Quebec	590,300	7.373%	334,407	8.519%	183,929	1,108,656	0	-81,465	1,027,171	2,920,498	2,820,435	3,241,857	3,141,794
New Brunswick	45,397	2.453%	110,440	0.472%	10,183	166,021	0.472%	-13,027	152,993	306,363	290,905	330,078	315,620
Nova Scotia	35,112	2.095%	94,999	0.544%	11,748	141,859	0.544%	-10,735	131,124	249,631	237,790	268,746	256,905
Total	\$2,031,354	100.000%	\$3,780,341	100.000%	\$1,871,642	\$8,726,049	\$0	-\$642,003	\$8,084,046	\$14,961,064	\$14,255,060	\$16,066,930	\$15,360,927

1 Any sub-regional reliability assessment costs in response to U.S. only regulatory initiatives will be considered for allocation to U.S. only BAs consistent with NERC Rules of Procedure section 1102.

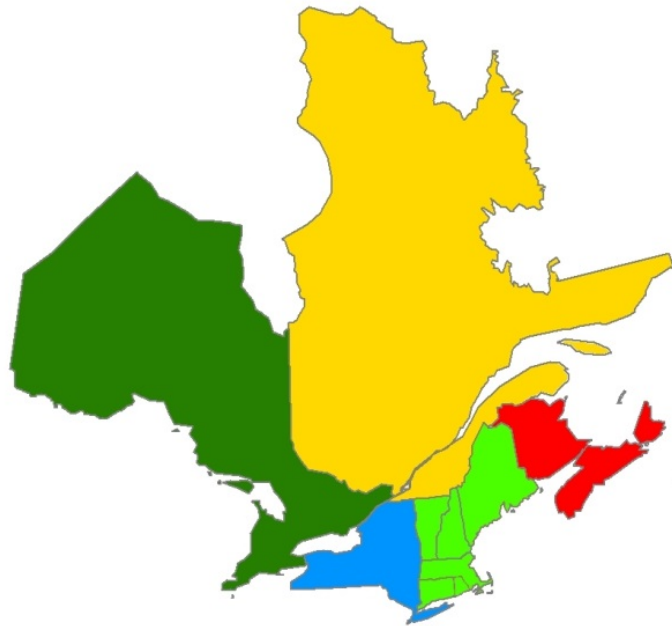
2 Consistent with NERC's Policy on Allocation of Certain Compliance and Enforcement Costs, the NPCC Board approved Allocation Methodologies for Certain NPCC Compliance Program Area Costs Assessed to Non-U.S. Entities.

3 CORC Program Fundamentals expenses of \$2,031,354 represent 23.28% of the Total CORC Program Costs and are allocated using the Regional NEL based methodology.

4 Audit and Investigation expenses of \$4,535,577 represent 51.98% of the Total CORC Program Costs. The Canadian costs are allocated utilizing an audit based methodology. The portion of \$3,349% attributable to U.S. NPCC is allocated between the New York and New England balancing authority areas based on their respective net energy for load (NEL) as shown in Columns B-1a. and C-1a. The ratios in C-1a. are applied to the 83.349% of U.S. audit costs to obtain the percentages (Column C-2, b) which are then applied to the 51.98% of CORC costs. Audit based allocation uses Compliance Registry Data registrants as of May 1, 2016.

5 Mitigation and Enforcement expenses of \$2,159,119 represent 24.74% of the Total CORC Program Costs. The Canadian costs are allocated utilizing an enforcement activity based methodology. The portion of 86.68% attributable to U.S. NPCC is allocated between the New York and New England balancing authority areas based on their respective net energy for load (NEL) as shown in Columns B-1a. and C-1a. The ratios in C-1a. are applied to the 83.349% of U.S. enforcement costs to obtain the percentages (Column C-2, b) which are then applied to the 24.74% of CORC costs.

Section B – Supplemental Financial Information 2017 Business Plan and Budget



Section B — Supplemental Financial Information

Reserve Balance

Table B-1 Reserve Balance

Working Capital and Operating Reserve Analysis 2016-2017			
REGIONAL ENTITY DIVISION			
	Total Reserve	Operating Reserve	Working Capital
Beginning Total Reserve, December 31, 2015	4,489,880	3,227,676	1,262,204
Plus: 2016 ERO Funding (from LSEs or designees)	14,349,196	14,349,196	0
Plus: 2016 Other funding sources	131,000	131,000	0
Less: 2016 Projected expenses & capital expenditures	(15,072,998)	(15,072,998)	0
Projected Total Reserve, December 31, 2016	3,897,079	2,634,875	1,262,204
Desired Total Reserve, December 31, 2017 ¹	3,069,085	1,806,881 ²	1,262,204
20.26% of Total Regional Entity Budget of \$15,147,054			
Less: Projected Working Capital and Operating Reserve, December 31, 2016	(3,897,079)	(2,634,875)	(1,262,204)
Increase(decrease) in assessments to achieve desired Total Reserve	(827,994)	(827,994)	0
2017 Expenses and Capital Expenditures	15,147,054		
Less: Penalty Sanctions ⁴	0		
Less: Other Funding Sources	(64,000)		
Adjustment to achieve desired Total Reserve balance	(827,994)		
2017 Assessment	14,255,060		

¹ Total Reserve within a range of 16.67% - 33.33% of Budget.

² Operating Reserve within a range from 8.33% to 25.00% of Budget. \$1,806,881 represents 11.93% of the 2017 budget of \$15,147,054

³ Working Capital equal to 8.33% of Budget. \$1,262,204 represents 8.33% of the 2017 budget of \$15,147,054

⁴ Represents collections July 1, 2015 to June 30, 2016.

Explanation of Changes in Reserve Policy from Prior Year

None

Breakdown by Statement of Activity Sections

The following detailed schedules are in support of the Regional Entity division Statement of Activities on page 13 of the 2017 Business Plan and Budget. All significant variances have been disclosed by program area in the preceding pages.

Penalty Sanctions

U.S. penalty monies received prior to June 30, 2016 are to be used to offset assessments in the 2017 Budget, as documented in the NERC Policy – Accounting, Financial Statement, and Budgetary Treatment of Penalties Imposed and Received for Violations of Reliability Standard. Penalty monies received from July 1, 2016 through June 30, 2017 will be used to offset U.S. load serving entity designee assessments in the 2017 Budget.

Allocation Method: U.S. penalty sanctions received have been allocated to the following Regional Entity division programs to reduce assessments: Reliability Standards; Compliance Monitoring & Enforcement and Organization Registration & Certification; Reliability Assessments and Performance Analysis; Training, Education and Operator Certification; and Situation Awareness and Infrastructure Security. U.S. penalty sanctions are allocated based upon the number of FTEs in the Program divided by the aggregate total FTEs in the Programs receiving the allocation.

No penalty sanctions were received from July 1, 2015 through June 30, 2016.

Table B-2 Penalty Sanctions

Penalty Sanctions Received Prior to June 30, 2016	Date Received	Amount Received
Total Penalties Received		\$ -

Table B-3 Supplemental Funding

Outside Funding Breakdown By Program (excluding ERO Assessments & Penalty Sanctions)	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget
Reliability Standards				
Total	\$ -	\$ -	\$ -	\$ -
Compliance Monitoring, Enforcement & Org. Registration				
	\$ -	\$ -	\$ -	\$ -
	-	-	-	-
Total	\$ -	\$ -	\$ -	\$ -
Reliability Assessment and Performance Analysis				
	\$ -	\$ -	\$ -	\$ -
	-	-	-	-
Total	\$ -	\$ -	\$ -	\$ -
Training and Education				
Workshops	\$ 64,000	\$ 64,000	\$ 64,000	\$ -
Total	\$ 64,000	\$ 64,000	\$ 64,000	\$ -
Situation Awareness and Infrastructure Security				
	\$ -	\$ -	\$ -	\$ -
Total	\$ -	\$ -	\$ -	\$ -
Technical Committees and Member Forums				
	\$ -	\$ -	\$ -	\$ -
Total	\$ -	\$ -	\$ -	\$ -
Administrative Services Programs				
	\$ -	\$ -	\$ -	\$ -
Total	\$ -	\$ -	\$ -	\$ -
Total Outside Funding	\$ 64,000	\$ 64,000	\$ 64,000	\$ -

Explanation of Significant Variances –2017 Budget versus 2016 Budget

- NPCC assumed no interest income because of continuing low market interest rates.

Table B-4 Personnel Expenses

Personnel Expenses	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Salaries					
Salary	\$ 6,531,470	\$ 6,531,470	\$ 6,718,926	\$ 187,456	2.9%
Employment Agency Fees	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	0.0%
Temporary Office Services	\$ 20,000	\$ 20,000	\$ 30,000	\$ 10,000	50.0%
Total Salaries	\$ 6,561,470	\$ 6,561,470	\$ 6,758,926	\$ 197,456	3.0%
Total Payroll Taxes	\$ 399,057	\$ 399,057	\$ 404,319	\$ 5,262	1.3%
Benefits					
Education Reimbursement	\$ 15,000	\$ 15,000	\$ 22,500	\$ 7,500	50.0%
Training and Seminars	\$ 36,860	\$ 36,860	\$ 36,860	\$ -	0.0%
Medical Insurance	\$ 763,048	\$ 763,048	\$ 790,034	\$ 26,986	3.5%
Life-LTD-STD Insurance	\$ 83,048	\$ 83,048	\$ 88,716	\$ 5,667	6.8%
Worker's Compensation	\$ 15,000	\$ 15,000	\$ 15,000	\$ -	0.0%
Vacation	\$ 451,843	\$ 451,843	\$ 462,494	\$ 10,651	2.4%
Relocation	\$ -	\$ -	\$ -	\$ -	-
Total Benefits	\$ 1,364,799	\$ 1,364,799	\$ 1,415,603	\$ 50,804	3.7%
Retirement					
Pension Contribution	\$ -	\$ -	\$ 37,000	\$ 37,000	-
Employee Savings Plan	\$ 713,118	\$ 713,118	\$ 727,223	\$ 14,105	2.0%
Savings Admin	\$ 60,000	\$ 60,000	\$ 45,000	\$ (15,000)	-25.0%
Deferred Compensation	\$ 60,000	\$ 60,000	\$ 38,000	\$ (22,000)	-36.7%
Total Retirement	\$ 833,118	\$ 833,118	\$ 847,223	\$ 14,105	1.7%
Total Personnel Costs	\$ 9,158,445	\$ 9,158,445	\$ 9,426,071	\$ 267,627	2.9%
FTEs	36.86	36.86	36.86	-	0.0%
Cost per FTE					
Salaries	\$ 178,011	\$ 178,011	\$ 183,367	\$ 5,357	3.0%
Payroll Taxes	\$ 10,826	\$ 10,826	\$ 10,969	\$ 143	1.3%
Benefits	\$ 37,027	\$ 37,027	\$ 38,405	\$ 1,378	3.7%
Retirement	\$ 22,602	\$ 22,602	\$ 22,985	\$ 383	1.7%
Total Cost per FTE	\$ 248,466	\$ 248,466	\$ 255,726	\$ 7,261	2.9%

Explanation of Significant Variances –2017 Budget versus 2016 Budget

- Temporary office services were increased to provide assistance in administrative services.
- Education reimbursement cost is based on additional employee that has expressed interest in pursuing an advanced degree.
- Savings admin decrease is due to termination of the defined benefit plan.

Table B-5 Meeting Expense

Meeting Expenses	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Meetings	\$ 394,000	\$ 394,000	\$ 377,100	\$ (16,900)	-4.3%
Travel	\$ 907,100	\$ 907,100	\$ 855,232	\$ (51,868)	-5.7%
Conference Calls	\$ 47,000	\$ 47,000	\$ 37,000	\$ (10,000)	-21.3%
Total Meeting Expenses	\$ 1,348,100	\$ 1,348,100	\$ 1,269,332	\$ (78,768)	-5.8%

Explanation of Significant Variances –2017 Budget versus 2016 Budget

- Continued efforts to limit the number of attendees to offsite meetings and hold more meetings on-site and via webinar.

Table B-6 Consultants and Contracts

Consultants	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Consultants					
Reliability Standards	\$ -	\$ -	\$ -	\$ -	-
Compliance Enforcement and Organization Registration and Certification	\$ 15,000	\$ 15,000	\$ -	\$ (15,000)	-100.0%
Reliability Assessment and Performance Analysis	\$ -	\$ -	\$ 35,000	\$ 35,000	-
Training and Education	\$ -	\$ -	\$ -	\$ -	-
Situation Awareness and Infrastructure Security	\$ -	\$ -	\$ -	\$ -	-
Member Forums	\$ -	\$ -	\$ -	\$ -	-
General and Administrative	\$ 33,000	\$ 33,000	\$ 30,000	\$ (3,000)	-9.1%
Legal and Regulatory	\$ -	\$ -	\$ -	\$ -	-
Information Technology	\$ -	\$ -	\$ -	\$ -	-
Human Resources	\$ -	\$ -	\$ -	\$ -	-
Accounting and Finance	\$ -	\$ -	\$ -	\$ -	-
Consultants Total	\$ 48,000	\$ 48,000	\$ 65,000	\$ 17,000	35.4%
Contracts	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Reliability Standards	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	0.0%
Compliance Enforcement and Organization Registration and Certification	\$ 1,545,000	\$ 1,350,000	\$ 1,274,000	\$ (271,000)	-17.5%
Reliability Assessment and Performance Analysis	\$ 374,500	\$ 479,500	\$ 378,000	\$ 3,500	0.9%
Training and Education	\$ -	\$ -	\$ -	\$ -	-
Situation Awareness and Infrastructure Security	\$ 157,000	\$ 247,000	\$ 160,000	\$ 3,000	1.9%
Member Forums	\$ -	\$ -	\$ -	\$ -	-
General and Administrative	\$ 82,000	\$ 82,000	\$ 115,000	\$ 33,000	40.2%
Legal and Regulatory	\$ -	\$ -	\$ -	\$ -	-
Information Technology	\$ -	\$ -	\$ -	\$ -	-
Human Resources	\$ -	\$ -	\$ -	\$ -	-
Accounting and Finance	\$ 7,000	\$ 7,000	\$ 7,000	\$ -	0.0%
Contracts Total	\$ 2,175,500	\$ 2,175,500	\$ 1,944,000	\$ (231,500)	-10.6%
Total Consultants and Contracts	\$ 2,223,500	\$ 2,223,500	\$ 2,009,000	\$ (214,500)	-9.6%

Explanation of Significant Variances –2017 Budget versus 2016 Budget

- Ongoing effort to decrease the use of consultants and contractors when possible. (See program area sections for detail regarding a specific program area.)

Table B-7 Office Rent

Office Rent	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Office Rent	\$ 650,000	\$ 650,000	\$ 650,000	\$ -	0.0%
Utilities	\$ 40,000	\$ 40,000	\$ 43,000	\$ 3,000	7.5%
Maintenance	\$ 40,000	\$ 40,000	\$ 40,000	\$ -	0.0%
Security	\$ 2,500	\$ 2,500	\$ 2,700	\$ 200	8.0%
Real Estate Taxes	\$ 70,000	\$ 70,000	\$ 74,000	\$ 4,000	5.7%
Total Office Rent	\$ 802,500	\$ 802,500	\$ 809,700	\$ 7,200	0.9%

Explanation of Significant Variances –2017 Budget versus 2016 Budget

- Increase in landlord operating expenses and real estate taxes.

Table B-8 Office Costs

Office Costs	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Telephone	\$ 112,000	\$ 112,000	\$ 112,000	\$ -	0.0%
Internet Expense	\$ 95,400	\$ 95,400	\$ 105,600	\$ 10,200	10.7%
Office Supplies	\$ 33,000	\$ 33,000	\$ 33,000	\$ -	0.0%
Computer Supplies and Maintenance	\$ 321,000	\$ 321,000	\$ 350,000	\$ 29,000	9.0%
Subscriptions & Publications	\$ 13,500	\$ 13,500	\$ 13,500	\$ -	0.0%
Dues	\$ 4,000	\$ 4,000	\$ 4,400	\$ 400	10.0%
Postage	\$ 1,200	\$ 1,200	\$ 1,200	\$ -	0.0%
Express Shipping	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	0.0%
Copying	\$ 26,400	\$ 26,400	\$ 26,400	\$ -	0.0%
Reports	\$ 6,000	\$ 6,000	\$ 6,000	\$ -	0.0%
Stationary and Office Forms	\$ 2,000	\$ 2,000	\$ 2,000	\$ -	0.0%
Equipment Repair/Service Contracts	\$ -	\$ -	\$ -	\$ -	-
Bank Charges	\$ 15,000	\$ 15,000	\$ 15,000	\$ -	0.0%
Sales and Use Tax	\$ -	\$ -	\$ -	\$ -	-
Merchant Credit Card Fees	\$ -	\$ -	\$ -	\$ -	-
Presentation and Publicity	\$ -	\$ -	\$ -	\$ -	-
Total Office Costs	\$ 639,500	\$ 639,500	\$ 679,100	\$ 39,600	6.2%

Explanation of Significant Variances –2017 Budget versus 2016 Budget

- Increase in IT office costs is primarily related to penetration testing, which will be conducted on an ongoing basis going forward in an effort to increase security in alignment with ERO goals.

Table B-9 Professional Services

Professional Services	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
BOT Fee	\$ 325,000	\$ 325,000	\$ 325,000	\$ -	0.0%
BOT Search Fee	\$ -	\$ -	\$ 20,000	\$ 20,000	-
Legal - Reorganization	\$ -	\$ -	\$ -	\$ -	-
Accounting & Auditing Fees	\$ 310,000	\$ 310,000	\$ 310,000	\$ -	0.0%
Legal Fees - Other	\$ 316,000	\$ 316,000	\$ 316,000	\$ -	0.0%
Insurance - Commercial	\$ 60,000	\$ 60,000	\$ 70,000	\$ 10,000	16.7%
Total Services	\$ 1,011,000	\$ 1,011,000	\$ 1,041,000	\$ 30,000	3.0%

Explanation of Significant Variances –2017 Budget versus 2016 Budget

- Search fee is associated with the anticipated search for an independent director in 2017 based on term expiration.

Table B-10 – Miscellaneous

Miscellaneous Expense	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Miscellaneous Expense	\$ 41,000	\$ 41,000	\$ 50,000	\$ 9,000	22.0%
Total Miscellaneous Expense	\$ 41,000	\$ 41,000	\$ 50,000	\$ 9,000	22.0%

Table B-11 Other Non-Operating Expenses

Other Non-Operating Expenses	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Interest Expense	\$ -	\$ -	\$ -	\$ -	-
Office Relocation	\$ -	\$ -	\$ -	\$ -	-
Total Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	-

Table B-12 Fixed Assets

Fixed Assets	Budget 2016	Projection 2016	Budget 2017	Variance 2017 Budget v 2016 Budget	Variance %
Depreciation	\$ (231,821)	\$ (231,821)	\$ (250,000)	\$ (18,179)	7.8%
Equipment CapEx	\$ -	\$ -	\$ -	\$ -	-
Computer & Software CapEx	\$ 276,000	\$ 276,000	\$ 276,000	\$ -	0.0%
Furniture & Fixtures CapEx	\$ -	\$ -	\$ -	\$ -	-
Leasehold Improvements	\$ -	\$ -	\$ -	\$ -	-
Allocation of Fixed Assets	\$ -	\$ -	\$ -	\$ -	-
Total Increase (Decrease) in Fixed Assets	\$ 44,179	\$ 44,179	\$ 26,000	\$ (18,179)	-41.1%

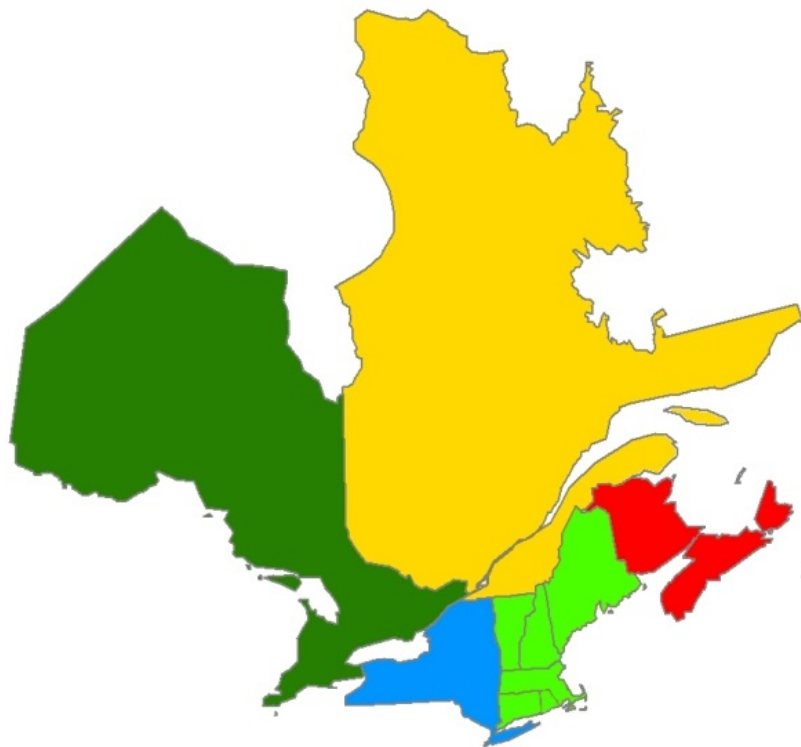
Table B-13 2018 and 2019 Projections

Statement of Activities and Capital Expenditures 2017 Budget & Projected 2018 and 2019 Budgets							
	2017 Budget	2018 Projection	\$ Change 17 v 18	% Change 17 v 18	2019 Projection	\$ Change 18 v 19	% Change 18 v 19
Funding							
ERO Funding							
ERO Assessments	\$ 14,255,061	\$ 14,586,670	\$ 331,610	2.3%	\$ 14,930,175	\$ 343,505	2.3%
Penalty Sanctions	-	-	-	-	-	-	-
Total ERO Funding	\$ 14,255,061	\$ 14,586,670	\$ 331,610	2.3%	\$ 14,930,175	\$ 343,505	2.3%
Membership Dues	-	-	-	-	-	-	-
Testing Fees	-	-	-	-	-	-	-
Services & Software	-	-	-	-	-	-	-
Workshops	64,000	64,000	-	0.0%	64,000	-	0.0%
Interest	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-
Total Funding (A)	\$ 14,319,061	\$ 14,650,670	\$ 331,610	2.3%	\$ 14,994,175	\$ 343,505	2.3%
Expenses							
Personnel Expenses							
Salaries	\$ 6,758,926	\$ 6,961,694	\$ 202,768	3.0%	\$ 7,170,545	\$ 208,851	3.0%
Payroll Taxes	404,319	416,449	12,130	3.0%	428,943	12,493	3.0%
Benefits	1,415,603	1,500,539	84,936	6.0%	1,590,572	90,032	6.0%
Retirement Costs	847,223	872,639	25,417	3.0%	898,818	26,179	3.0%
Total Personnel Expenses	\$ 9,426,071	\$ 9,751,322	\$ 325,250	3.5%	\$ 10,088,877	\$ 337,556	3.5%
Meeting Expenses							
Meetings	\$ 377,100	\$ 380,871	\$ 3,771	1.0%	\$ 384,680	\$ 3,809	1.0%
Travel	855,232	863,784	8,552	1.0%	872,422	8,638	1.0%
Conference Calls	37,000	37,370	370	1.0%	37,744	374	1.0%
Total Meeting Expenses	\$ 1,269,332	\$ 1,282,025	\$ 12,693	1.0%	\$ 1,294,846	\$ 12,820	1.0%
Operating Expenses							
Consultants & Contracts	\$ 2,009,000	\$ 2,009,000	-	0.0%	\$ 2,009,000	\$ -	0.0%
Office Rent	809,700	817,797	8,097	1.0%	825,975	8,178	1.0%
Office Costs	679,100	692,682	13,582	2.0%	706,536	13,854	2.0%
Professional Services	1,041,000	1,041,000	-	0.0%	1,041,000	-	0.0%
Miscellaneous	50,000	51,000	1,000	2.0%	52,020	1,020	2.0%
Depreciation	250,000	255,000	5,000	2.0%	260,100	5,100	2.0%
Total Operating Expenses	\$ 4,838,800	\$ 4,866,479	\$ 27,679	0.6%	\$ 4,894,631	\$ 28,152	0.6%
Total Direct Expenses	\$ 15,534,203	\$ 15,899,826	\$ 365,623	2.4%	\$ 16,278,354	\$ 378,528	2.4%
Indirect Expenses	\$ (413,149)	\$ (421,412)	\$ (8,263)	2.0%	\$ (429,840)	\$ (8,428)	2.0%
Other Non-Operating Expenses	\$ -	\$ -	\$ -	-	\$ -	\$ -	-
Total Expenses (B)	\$ 15,121,054	\$ 15,478,414	\$ 357,360	2.4%	\$ 15,848,513	\$ 370,099	2.4%
Change in Assets	\$ (801,994)	\$ (827,744)	\$ (25,750)	3.2%	\$ (854,338)	\$ (26,594)	3.2%
Fixed Assets							
Depreciation	\$ (250,000)	\$ (255,000)	\$ (5,000)	2.0%	\$ (260,100)	\$ (5,100)	2.0%
Computer & Software CapEx	276,000	276,000	-	0.0%	276,000	-	0.0%
Furniture & Fixtures CapEx	-	-	-	-	-	-	-
Equipment CapEx	-	-	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-	-	-
(Incr)Dec in Fixed Assets (C)	\$ 26,000	\$ 21,000	\$ (5,000)	-19.2%	\$ 15,900	\$ (5,100)	-24.3%
TOTAL BUDGET (=B+C)	\$ 15,147,054	\$ 15,499,414	\$ 352,360	2.3%	\$ 15,864,413	\$ 364,999	2.4%
TOTAL CHANGE IN WORKING CAPITAL	\$ (827,994)	\$ (848,744)	\$ (20,750)	2.5%	\$ (870,238)	\$ (21,494)	2.5%
FTEs	36.86	36.86	0	0.0%	36.86	0.00	0.0%

Assumptions

- No changes in assumptions
- Staffing remains flat
- Change in assessments is equal to change in total budget

Section C – Criteria Services Division Activities 2017 Business Plan and Budget



Section C —2017 Criteria Services Division Business Plan and Budget

Criteria Services Division			
(in whole dollars)			
	2016 Budget	2017 Budget	Increase (Decrease)
Total FTEs	2.14	2.14	0.00
Total Direct Expenses	\$738,525	\$623,747	(\$114,778)
Total Indirect Expenses	\$427,047	\$413,149	(\$13,898)
Other Non-Operating Expenses	\$0	\$0	\$0
Working Capital and Operating Reserves Requirement	(\$96,525)	\$78,971	\$175,496
Inc(Dec) in Fixed Assets	(\$8,506)	(\$10,000)	(\$1,494)
Funding Requirement	\$1,060,542	\$1,105,867	\$45,325

NPCC Regionally-Specific Criteria Services Background

NPCC Criteria Services division activities are based on the development, maintenance (including retirement when no longer needed), and promulgation of Regionally-specific more stringent criteria, as well as criteria establishing resource adequacy requirements within the Region. These criteria contain requirements which are more stringent, more specific or augment the existing NERC Reliability Standards requirements. These criteria require continual evaluation to ensure they are “not inconsistent with” any NERC reliability standards as the standards are approved by FERC and the applicable provincial governmental authorities, as per the NERC Rules of Procedure.

Membership and Governance

Full members are subject to compliance with Regionally-specific criteria, in addition to continent-wide Reliability Standards, and receive criteria-related services from the Criteria Services division.

Full Members, aside from those who perform the Balancing Authority function, are not assessed an annual membership fee. Those that perform Balancing Authority functions are assessed and remit a proportional net energy for load share of expenses for criteria services. NPCC would also directly assign criteria service division costs to a Balancing Authority Area or entity, where significant costs are incurred for that Balancing Authority Area. The funding for NPCC’s Criteria Services division is approved by the NPCC Board of Directors.

Criteria Services Division Functional Scope

Through its Criteria Services division, NPCC promotes the reliable and efficient operation of the international, interconnected bulk power systems in Northeastern North America through the establishment of Regionally-specific criteria, and monitoring and enforcement of compliance with such criteria.

NPCC provides Full Members with Regional reliability assurance services, and acts as the vehicle through which States and Provinces can fulfill their political mandates, with respect to resource adequacy, as well as overseeing the Northeastern North American electric infrastructure.

Major 2017 Assumptions and Cost Impacts

The Criteria Services division services are expected to remain stable throughout 2017

- The Criteria Compliance Enforcement Program (CCEP) review and evaluation process is the mechanism for monitoring key criteria attributes as determined by the respective NPCC Task Forces and the CC. in 2012.
- Past non-compliances, if any, followed the due process stated in the CCEP-1 process document and proper resolution/enforcement action taken.

2017 Primary Goals and Objectives

- Continue with the development and maintenance of a set of NPCC Directories which are “not inconsistent with” the NERC Reliability Standards and which clearly delineate the more stringent NPCC criteria requirements
 - The combination of North American and more-stringent NPCC Regional criteria provide for consistency and operational clarity while providing more robust defense in–depth, results based, criteria requirements to ensure BPS reliability
 - Continually review the criteria found in the NPCC Directories and the ERO standards to ensure no redundancies or inconsistencies exist.
 - Retire Directories and/or Criteria which have been overtaken by improved NERC standards
 - Continually file revised and updated more stringent requirements with the New York State Department of Public Service and Canadian Provinces as applicable
- Review, maintain, and revise the NPCC Regional Reliability Directories to facilitate compliance assessments and ensure the Criteria portions of the Directories are “not inconsistent” with, nor duplicative with, the approved and effective NERC Standards.
- The criteria services division and CCEP Working Group (reporting to the Compliance Committee) will work with the various Task Forces to develop Criteria Compliance Reporting Forms for any additional NPCC Directories to ensure that the more stringent or Regionally-specific criteria is being met.
- The criteria services division and CCEP working group will work with TFCO, TFCP, TFSS, and TFSP to review criteria and measures within each specific NPCC Directory to identify and develop them into specific reporting forms for approval.
- Continually review impact of Bulk Electric System definition on Directory and Criteria content and compliance reporting.
- Continually review potential impacts of Sector or NPCC organizational changes on the Directories and Criteria by performing a review of enforcement and arbitration processes as needed
- Assist Legal with preparation of revised Directories for Regulatory filings with the individual Provinces in accordance with their respective Memorandum of Understandings (MOUs) as well as the State of New York Public Service Commission
- Facilitate any requested clarifications for NPCC Criteria with the necessary subject matter experts and also identify any other potential opportunities for clarifications of the Criteria.

- Conduct review of the following Documents;
 - Directory#2 –*Emergency Operations* –the TFCO will review criteria in accordance with the NPCC Reliability Assurance Program (NRAP).
 - Directory#5- *Reserve* –the TFCO will review the criteria in consideration of recent revisions to the NERC BAL standards.
 - Directory 7 – NPCC Special Protection Systems – Serve as lead Task Force working in conjunction with TFCP and TFSS on revisions required to ensure consistency with the development of the new NERC standard on Remedial Action Schemes.
 - A-10 - *Classification of Bulk Power System Elements*-the TFCP will coordinate a periodic review of the methodology in accordance with the NPCC Reliability Assurance Program (NRAP).
 - Review and respond to Requests for Clarifications to existing NPCC Standards, Directories, and Criteria

NPCC Reliability Directory Maintenance and Development

The NPCC Regional Reliability Directories were developed to demonstrate that the NPCC more stringent criteria are “not inconsistent with” the NERC Reliability Standards as mandated by the NERC Rules of Procedure. The conversion of NPCC’s criteria into Directories was undertaken to remove any redundancies with the NERC or NPCC Regional Reliability Standards and to clearly delineate the more stringent NPCC criteria requirements, assign Functional Model designations to those responsible for compliance and create measurable compliance criteria. Subsequent to the initial establishment of the Directories, which also organized functionally related B Guidelines and C Procedures into a single Directory, the Directories were further reviewed to translate existing criteria language into a “requirement type” format. The development of the criteria into NERC style requirements facilitates the NPCC Region’s CCEP and also ensures the delineation of the more stringent and more specific Regional criteria from the latest approved and effective set of NERC ERO standards.

In 2017, work will continue with the maintenance, revision, or potential retirement of individual Directories to address any actual or anticipated redundancies with new or modified NERC or NPCC Reliability Standards. The ongoing review and maintenance of the Directories will require Task Force and Criteria Services staff to support this effort and to serve as subject matter experts. In addition to the ongoing review of the criteria within the Directories for potential duplicity with the NERC standards, any Directories that have not had the criteria translated into NERC style requirements will also be reviewed in order to achieve criteria ‘requirements’ which are clear, concise and measurable. Also, a standards style template will be applied to the existing Directories to make them more consistent with the look of the standards. As NERC standards improve, the need for NPCC Directories and the amount of criteria contained therein will decrease over time, however in the interim, significant review is necessary to ensure the criteria remain “not inconsistent with” the NERC standards as outlined in the NERC Rules of Procedure. NPCC will conduct internal reviews of all draft standards against Regional criteria and utilize subject matter experts to identify reliability and compliance related concerns. NPCC will file the revised NPCC Directories and notifications of retirements of Directories with the Canadian governmental and/or provincial Regulatory authorities within the NPCC “footprint”, on an as

needed basis, in accordance with established provincial procedures and agreements executed with NPCC.

The following Directories will either be under revision or reviewed for further development based on a schedule set forth in the NPCC Reliability Assessment Program:

NPCC Operations and Planning Directories

The following Directories are envisioned to remain active for 2017.

Directory #1, Design and Operation of the Bulk Power System.

This Directory documents NPCC's Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with all the existing NERC TPL, BAL, IRO, INT, MOD, TOP, PRC and VAR standards. The NPCC TFCP and TFCO completed a review of the Directory#1 criteria in 2015, during which the criteria was translated into NERC style requirements and revisions were enacted to ensure consistency with recent changes to the TPL and TOP standards.

Directory #2, Emergency Operations

This Directory documents NPCC's Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with all the existing NERC EOP and TOP standards. The NPCC Task Force on Coordination of Operation will lead this review and revision.

Directory # 4, System Protection Criteria

This Directory documents NPCC's Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with certain applicable NERC PRC standards. The NPCC Task Force on System Protection will lead this review and revision.

Directory # 5, Reserve

This Directory documents NPCC's Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with all the existing applicable NERC BAL, INT, and IRO standards. The NPCC Task Force on Coordination of Operation will lead this review and revision and ensure consistency with the BAL standards.

Directory # 7, Special Protection Systems

This Directory documents NPCC's Regionally-specific, more stringent criteria for application and approval of SPS. The NPCC Task Force on System Protection will lead this review and revision and ensure consistency with the Remedial Action Scheme PRC-012 standard.

Directory # 8, System Restoration

This Directory documents NPCC's Regionally-specific, more stringent criteria with which each applicable entity must plan for and perform power system restoration following a major or a total blackout, and demonstrates coordination and consistency with applicable NERC EOP standards. The NPCC Task Force on Coordination of Operation will lead this review and revision.

Directory # 11, *Disturbance Monitoring Equipment*,

This directory documents NPCC’s Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with certain existing NERC PRC standards. The NPCC Task Force on System Protection anticipates the development and approval of Directory#11 in order to facilitate the retirement of PRC -002-NPCC-1 and will lead this review and revision.

Directory # 12, *Automatic UFLS Program Requirements*,

This Directory documents NPCC’s Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with certain existing NERC and NPCC PRC standard(s). The NPCC Task Force on System Studies will lead this review and revision until such time as the NPCC PRC-006-01 UFLS Regional Standard is approved by the NPCC membership, NERC BOT, the FERC and all the applicable governmental authorities in the Provinces of Canada within NPCC’s footprint.

NPCC Criteria Compliance Background

The NPCC criteria services division assures the reliable operation of the bulk power system through implementation of a comprehensive compliance program. This program which includes monitoring, assessing and enforcing compliance with the more stringent, Regionally specific NPCC Criteria requirements, is known as the NPCC Criteria Compliance and Enforcement Program (CCEP) described in process document CCEP-1. This program was developed by the criteria services division and the CCEP Working Group under the purview of the NPCC Compliance Committee. The results of this program support the various Task Forces in their assessments of the NPCC criteria in meeting their goals for the Reliability Coordinating Committee as stated in Section A of this Business Plan.

The more stringent, Regionally-specific NPCC Criteria requirements reflect the unique operational and planning aspects of the bulk power system within the NPCC Region and are included in the NPCC “A” documents and their successors, the NPCC Directories.

NPCC issues non-monetary sanctions to enforce compliance with NPCC Criteria.

- The CCEP program is described in document CCEP-1, *NPCC Criteria Compliance and Enforcement Program (CCEP) Process Document*
- The implementation plan is described in document CCEP-2, *Implementation Plan for 2011 NPCC Criteria Compliance and Enforcement Program*
- On April 5, 2011, the above became effective upon Full Member approval of CCEP-1, and CCEP-2 and retired the following
 - NPCC Criteria A-8, Reliability Compliance and Enforcement Program (RCEP)
 - NPCC Guide B-22, Guidelines for Implementation of the NPCC Inc. Compliance Program
 - NPCC Procedure C-32, Review Process for NPCC Reliability Compliance Enforcement Program
 - Each of the above have been annotated as “retired effective 4/5/11 upon Full Member approval of CCEP-1... and CCEP-2...” on the NPCC public website

- The CCEP-1 document recognizes the applicability of NPCC’s Regionally-specific, more stringent reliability criteria to the Full Members of NPCC, consistent with the *Amended and Restated ByLaws*, and respects the provisions of the several Canadian Memoranda of Understanding in the execution of the processes described
- Provides a comprehensive CCEP Process Diagram showing the process of evaluating and approving Criteria Certification submittals, and additional processes and responsibilities in the event that non-compliances, disputes and sanctions arise
- Describes the roles and responsibilities of Reporting Members, the CC, the RCC and the Enforcement Panel in the compliance review and enforcement process
- Describes Levels of Non-Compliance, associated non-monetary Sanctions, Lateness Policy and the Arbitration/Dispute Resolution process
- Addresses Mitigation Plans for any violations under the enforcement process; and
- Lists the mandatory Certification Forms to be submitted for review by the Task Forces to ensure compliance with NPCC Directories are being met

The CCEP currently requires annual submittal of Certification Forms by the Reliability Coordinators and Balancing Authorities to confirm compliance with various NPCC Directories. Currently the required Certification forms are for Directory #1- *Area Transmission Review*, Directory #8 - *Key Facility List*, Directory #9 – *Generator Real Power Verification*, Directory #10 - *Verification of Generator Gross and Net Reactive Power Capability*, and Directory #12 - *UFLS Program Requirements*. In 2016 NPCC will consider an expansion of the CCEP to include compliance assessment activities to other active Directories.

The CCEP identifies those specific NPCC Directories that are subject to monitoring, assessment and enforcement.

The NPCC Compliance Committee (CC) has final approval of compliance assessments related to CCEP. The CCEP describes the roles and responsibilities of committees and panels used to resolve contested compliance and/or sanction or penalty determinations related to NPCC Directories.

Explanation of Significant Variances – 2017 Budget versus 2016 Budget

Resource Requirements

Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2017.
- Benefits and Retirement expense is reduced due to the termination of NPCC’s defined benefit pension plan.

2016 Budget and Projection and 2017 Budget Comparisons

Statement of Activities and Capital Expenditures						
2016 Budget & Projection, and 2017 Budget						
CRITERIA SERVICES DIVISION						
				Variance		Variance
	2016	2016	2016 Projection	v 2016 Budget	2017	2017 Budget
	Budget	Projection	v 2016 Budget	Over(Under)	Budget	v 2016 Budget
						Over(Under)
Funding						
ERO Funding						
ERO Assessments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Penalty Sanctions	-	-	-	-	-	-
Total ERO Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Membership Dues	1,060,542	1,060,542	-	-	1,105,867	45,325
Testing Fees	-	-	-	-	-	-
Services & Software	-	-	-	-	-	-
Workshops	-	-	-	-	-	-
Interest	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-
Total Funding (A)	\$ 1,060,542	\$ 1,060,542	\$ -	\$ -	\$ 1,105,867	\$ 45,325
Expenses						
Personnel Expenses						
Salaries	\$ 393,882	\$ 393,882	\$ -	\$ -	\$ 401,142	\$ 7,260
Payroll Taxes	23,275	23,275	-	-	23,301	26
Benefits	88,412	88,412	-	-	69,100	(19,313)
Retirement Costs	144,950	144,950	-	-	42,605	(102,345)
Total Personnel Expenses	\$ 650,519	\$ 650,519	\$ -	\$ -	\$ 536,147	\$ (114,372)
Meeting Expenses						
Meetings	\$ 6,500	\$ 6,500	\$ -	\$ -	\$ 5,000	\$ (1,500)
Travel	46,000	46,000	-	-	51,600	5,600
Conference Calls	-	-	-	-	-	-
Total Meeting Expenses	\$ 52,500	\$ 52,500	\$ -	\$ -	\$ 56,600	\$ 4,100
Operating Expenses						
Consultants & Contracts	\$ 25,000	\$ 25,000	\$ -	\$ -	\$ 18,000	\$ (7,000)
Office Rent	-	-	-	-	-	-
Office Costs	-	-	-	-	-	-
Professional Services	-	-	-	-	-	-
Computer & Equipment Leases	-	-	-	-	-	-
Miscellaneous	2,000	2,000	-	-	3,000	1,000
Depreciation	8,506	8,506	-	-	10,000	1,494
Total Operating Expenses	\$ 35,506	\$ 35,506	\$ -	\$ -	\$ 31,000	\$ (4,506)
Total Direct Expenses	\$ 738,525	\$ 738,525	\$ -	\$ -	\$ 623,747	\$ (114,778)
Indirect Expenses	\$ 427,047	\$ -	\$ -	\$ -	\$ 413,149	\$ (13,898)
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 1,165,572	\$ 1,165,572	\$ -	\$ -	\$ 1,036,896	\$ (128,677)
Change in Assets	\$ (105,031)	\$ (105,031)	\$ -	\$ -	\$ 68,971	\$ 174,002
Fixed Assets						
Depreciation	\$ (8,506)	(8,506)	\$ -	\$ -	\$ (10,000)	\$ (1,494)
Computer & Software CapEx	-	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-	-
Equipment CapEx	-	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-	-
Allocation of Fixed Assets	-	-	-	-	-	-
Inc(Dec) in Fixed Assets (C)	(8,506)	(8,506)	-	-	(10,000)	(1,494)
TOTAL BUDGET (=B+C)	1,157,066	1,157,066	-	-	1,026,896	(130,171)
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	\$ (96,525)	\$ (96,525)	\$ -	\$ -	\$ 78,971	\$ 175,496

Personnel Analysis

Total FTE's by Program Area	Budget 2016	Projection 2016	Direct FTEs 2017 Budget	Shared FTEs ¹ 2017 Budget	Total FTEs 2017 Budget	Change from 2016 Budget
CRITERIA SERVICES DIVISION						
Operational Programs						
Reliability Standards	1.07	1.07	1.00	0.07	1.07	0.00
Compliance Enforcement and Organization Registration and Certification	0.00	0.00	0.00	0.00	0.00	0.00
Training and Education	0.00	0.00	0.00	0.00	0.00	0.00
Reliability Assessment and Performance Analysis	1.07	1.07	1.00	0.07	1.07	0.00
Situation Awareness and Infrastructure Security	0.00	0.00	0.00	0.00	0.00	0.00
Total FTEs Operational Programs	2.14	2.14	2.00	0.14	2.14	0.00
Administrative Programs						
Member Forums	0.00	0.00	0.00	0.00	0.00	0.00
General and Administrative	0.00	0.00	0.00	0.00	0.00	0.00
Information Technology	0.00	0.00	0.00	0.00	0.00	0.00
Legal and Regulatory	0.00	0.00	0.00	0.00	0.00	0.00
Human Resources	0.00	0.00	0.00	0.00	0.00	0.00
Accounting and Finance	0.00	0.00	0.00	0.00	0.00	0.00
Total FTEs Administrative Programs	0.00	0.00	0.00	0.00	0.00	0.00
Total FTEs	2.14	2.14	2.00	0.14	2.14	0.00

¹A shared FTE is defined as an employee who performs both Regional Entity and Criteria Services division functions.

Reserve Analysis 2016 - 2017

Working Capital and Operating Reserve Analysis 2016-2017			
CRITERIA SERVICES DIVISION			
	Total Reserve	Operating Reserve	Working Capital
Beginning Total Reserve, December 31, 2015	188,696	99,941	88,755
2016 Non-Statutory Funding (from members)	1,060,542	1,060,542	0
2016 Other funding sources	0	0	0
Less: 2016 Projected expenses & fixed asset additions	(1,157,066)	(1,157,066)	0
Projected Total Reserve, December 31, 2016	92,171	3,416	88,755
Desired Total Reserve, December 31, 2017 ¹	171,142	85,571 ²	85,571 ³
Less: Projected Working Capital and Operating Reserve, December 31, 2016	(92,171)	(3,416)	(88,755)
Increase(decrease) in assessments to achieve desired Total Reserve	78,971	82,155	(3,184)
2017 Funding requirement for expenses and fixed asset additions	1,026,896		
Adjustment to achieve desired Working Capital and Operating Reserve balance	78,971		
2017 Funding and reserve requirement	1,105,867		

¹ Total Reserve within a range of 16.67% - 33.33% of Budget.

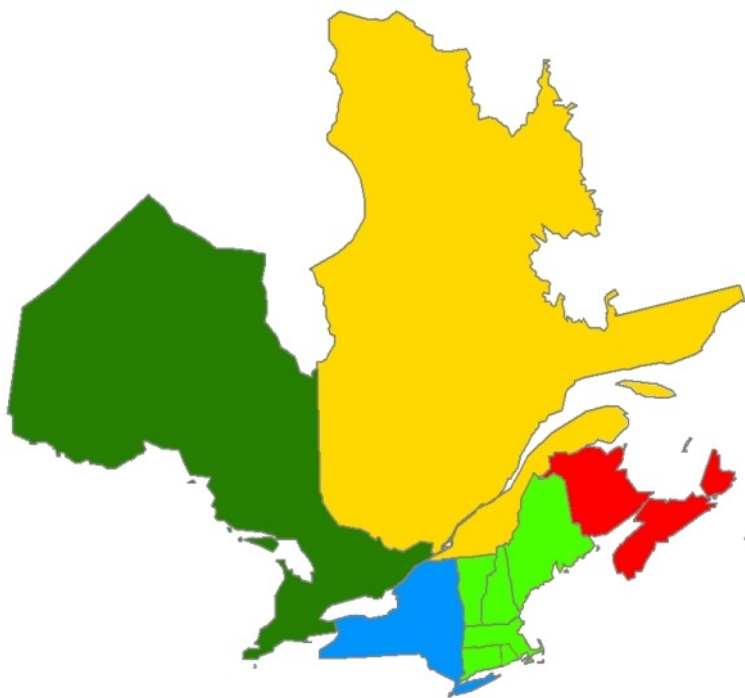
² Total NPCC Operating Reserve must be within a range from 8.33% to 25.00% of Budget. \$85,571 represents 8.33% of the 2017 CS budget of \$1,026,896.

³ Total NPCC Working Capital must equal 8.33% of Budget. \$85,571 represents 8.33% of the 2017 CS budget of \$1,026,896.

Explanation of Changes in Reserve Policy from Prior Year

None

Section D – Additional Consolidated Financial
Statements
2017 Business Plan and Budget



Section D — Additional Financial Statements

Statement of Financial Position

Statement of Financial Position				
2015 Audited, 2016 Projection, and 2017 Budget				
Regional Entity and Criteria Services Division				
	(Per Audit)	Projected	Budget	
	31-Dec-15	31-Dec-16	31-Dec-17	
ASSETS				
Cash	5,772,460	4,273,000	3,634,000	
Restricted cash	217,101	150,000	150,000	
Temporary cash investments	1,811,014	1,811,000	1,811,000	
Prepaid expenses	307,164	307,000	307,000	
Other assets	117,086	150,000	183,000	
Equipment and leasehold improvements, net	870,589	849,000	720,000	
Total Assets	9,095,414	7,540,000	6,805,000	
LIABILITIES AND NET ASSETS				
Liabilities				
Accrued expenses and other liabilities	2,004,110	2,039,000	2,109,000	
Deferred revenue	788,147	-	-	
Deferred rent	686,992	633,000	580,000	
Total Liabilities	3,479,249	2,672,000	2,689,000	
Net Assets - unrestricted	5,616,165	4,868,000	4,116,000	
Total Liabilities and Net Assets	9,095,414	7,540,000	6,805,000	

Section D — Additional Financial Statements

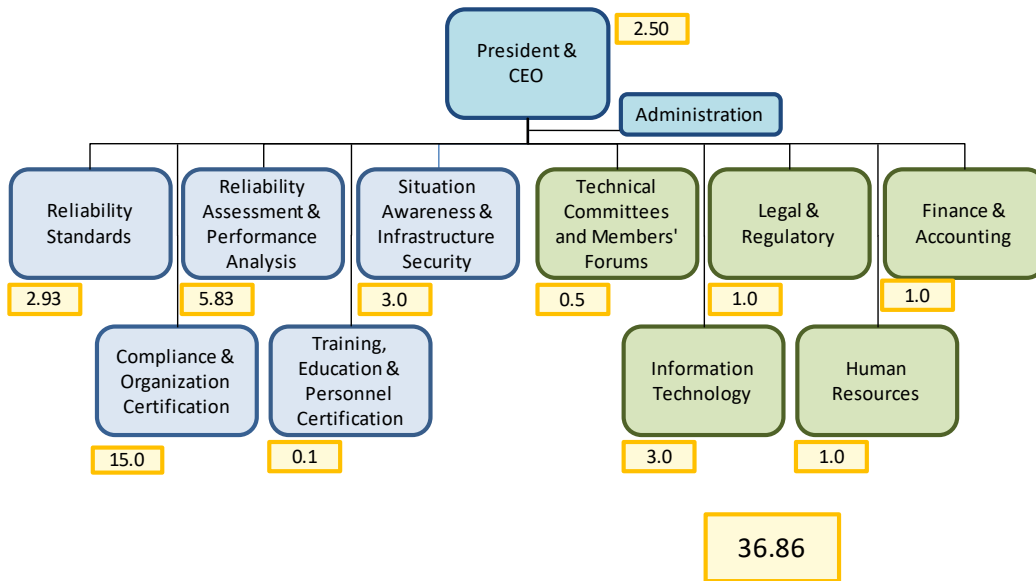
NPCC Statement of Activities 2017 Budget		RE Division Total	Reliability Standards (Section 300)	Compliance Monitoring and Enforcement and Organization Registration and Certification (Section 400 & 500)	Reliability Assessment and Performance Analysis (Section 800)	Training, Education, and Operator Certification (Section 900)	Situation Awareness and Infrastructure Security (Section 1000)	Administrative Services
Funding								
ERO Funding								
ERO Assessments	14,255,061	1,022,328	8,084,046	3,206,966	184,658	1,943,053	(185,991)	
Penalty Sanctions	-	-	-	-	-	-	-	
Total ERO Funding	14,255,061	1,022,328	8,084,046	3,206,966	184,658	1,943,053	(185,991)	
Membership Dues	-	-	-	-	-	-	-	
Testing Fees	-	-	-	-	-	-	-	
Services & Software	-	-	-	-	-	-	-	
Workshops	64,000	-	-	-	64,000	-	-	
Interest	-	-	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	-	-	
Total Funding (A)	14,319,061	1,022,328	8,084,046	3,206,966	248,658	1,943,053	(185,991)	
Expenses								
Personnel Expenses								
Salaries	6,758,926	370,220	2,749,908	1,084,994	21,012	660,213	1,872,579	
Payroll Taxes	404,319	21,273	179,504	65,373	1,396	42,778	93,995	
Benefits	1,415,603	97,411	519,457	214,688	4,801	160,814	418,433	
Retirement Costs	847,223	43,020	290,486	121,271	2,641	72,333	317,471	
Total Personnel Expenses	9,426,071	531,925	3,739,356	1,486,325	29,850	936,137	2,702,478	
Meeting Expenses								
Meetings	377,100	13,000	23,800	20,500	186,300	13,500	120,000	
Travel	855,232	103,157	329,500	186,850	13,635	78,500	143,590	
Conference Calls	37,000	-	-	-	-	-	37,000	
Total Meeting Expenses	1,269,332	116,157	353,300	207,350	199,935	92,000	300,590	
Operating Expenses								
Consultants & Contracts	2,009,000	10,000	1,274,000	413,000	-	160,000	152,000	
Office Rent	809,700	-	-	-	-	-	809,700	
Office Costs	679,100	-	-	-	-	-	679,100	
Professional Services	1,041,000	-	-	-	-	-	1,041,000	
Miscellaneous	50,000	-	-	-	-	-	50,000	
Depreciation	250,000	-	-	-	-	-	250,000	
Total Operating Expenses	4,838,800	10,000	1,274,000	413,000	-	160,000	2,981,800	
Total Direct Expenses	15,534,203	658,082	5,366,656	2,106,675	229,785	1,188,137	5,984,868	
Indirect Expenses	(413,149)	372,606	3,282,024	1,125,541	19,306	772,241	(5,984,868)	
Other Non-Operating Expenses	-	-	-	-	-	-	-	
Total Expenses (B)	15,121,054	1,030,688	8,648,680	3,232,217	249,091	1,960,378	-	
Change in Assets	(801,994)	(8,359)	(564,634)	(25,251)	(433)	(17,325)	(185,991)	
Fixed Assets								
Depreciation	(250,000)	-	-	-	-	-	(250,000)	
Computer & Software CapEx	276,000	-	151,000	-	-	-	125,000	
Furniture & Fixtures CapEx	-	-	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	-	-	
Allocation of Fixed Assets	0	(8,359)	(73,631)	(25,251)	(433)	(17,325)	125,000	
Inc (Dec) in Fixed Assets (C)	26,000	(8,359)	77,369	(25,251)	(433)	(17,325)	-	
TOTAL BUDGET (=B + C)	15,147,054	1,022,328	8,726,049	3,206,966	248,658	1,943,053	-	
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	(827,994)	0	(642,003)	0	(0)	(0)	(185,991)	

Section D — Additional Financial Statements

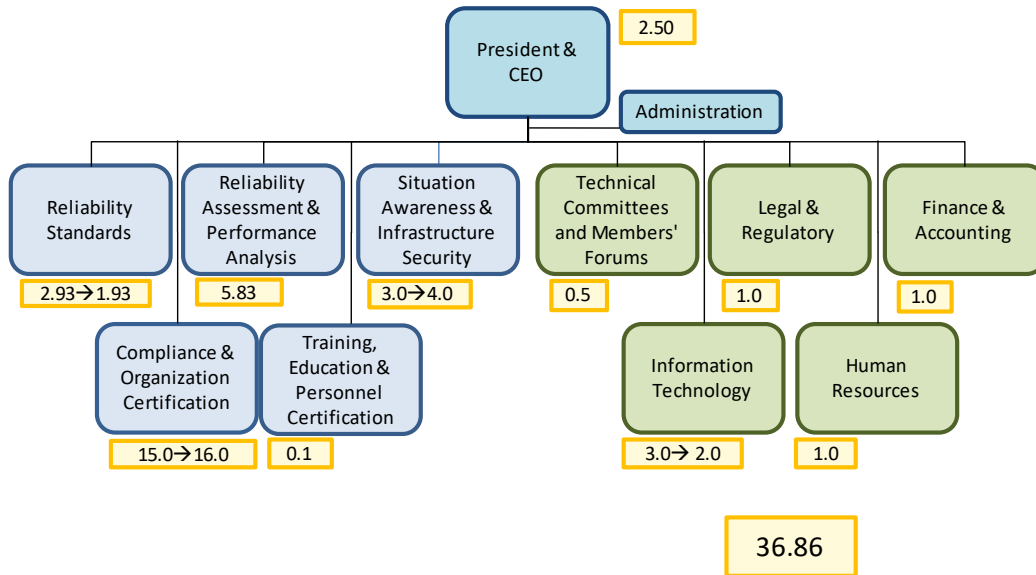
NPCC Statement of Activities 2017 Budget		CS Division Total	Criteria Development	Criteria Assessment	General and Administrative
Funding					
ERO Funding					
ERO Assessments		-			
Penalty Sanctions		-			
Total ERO Funding		-	-	-	-
Membership Dues		1,105,867	505,610	521,285	78,971
Testing Fees		-	-	-	-
Services & Software		-	-	-	-
Workshops		-	-	-	-
Interest		-	-	-	-
Miscellaneous		-	-	-	-
Total Funding (A)		1,105,867	505,610	521,285	78,971
Expenses					
Personnel Expenses					
Salaries		401,142	183,406	217,736	-
Payroll Taxes		23,301	10,849	12,452	-
Benefits		69,100	36,825	32,274	-
Retirement Costs		42,605	19,956	22,648	-
Total Personnel Expenses		536,147	251,036	285,111	-
Meeting Expenses					
Meetings		5,000	2,500	2,500	-
Travel		51,600	30,000	21,600	-
Conference Calls		-	-	-	-
Total Meeting Expenses		56,600	32,500	24,100	-
Operating Expenses					
Consultants & Contracts		18,000	14,000	4,000	-
Office Rent		-	-	-	-
Office Costs		-	-	-	-
Professional Services		-	-	-	-
Miscellaneous		3,000	1,500	1,500	-
Depreciation		10,000	5,000	5,000	-
Total Operating Expenses		31,000	20,500	10,500	-
Total Direct Expenses		623,747	304,036	319,711	-
Indirect Expenses		413,149	206,574	206,574	-
Other Non-Operating Expenses		-	-	-	-
Total Expenses (B)		1,036,896	510,610	526,285	-
Change in Assets		68,971	(5,000)	(5,000)	78,971
Fixed Assets					
Depreciation		(10,000)	(5,000)	(5,000)	-
Computer & Software CapEx		-	-	-	-
Furniture & Fixtures CapEx		-	-	-	-
Equipment CapEx		-	-	-	-
Leasehold Improvements		-	-	-	-
Allocation of Fixed Assets		-	-	-	-
Inc (Dec) in Fixed Assets (C)		(10,000)	(5,000)	(5,000)	-
TOTAL BUDGET (=B + C)		1,026,896	505,610	521,285	-
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)		78,971	-	-	78,971

Appendix A Staff Allocations

2016 Budget Staff Allocations - RE Division

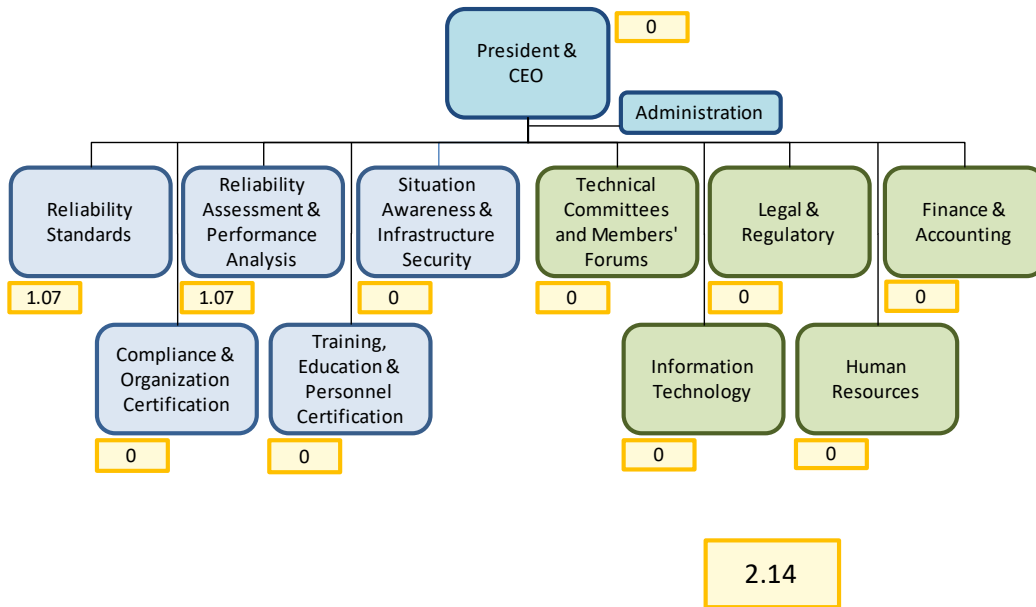


2017 Budget Staff Allocations - RE Division

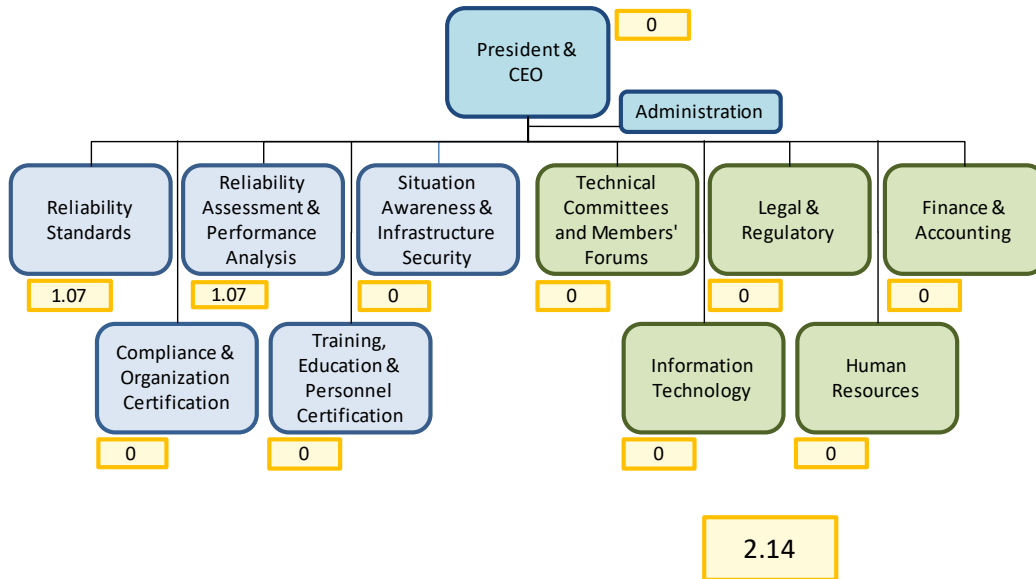


Section D — Additional Financial Statements

2016 Budget Staff Allocations - CS Division



2017 Budget Staff Allocations - CS Division



Appendix B Acronyms

This section lists acronyms used in this document.

Acronym	Definition
AI	Audits and Investigations
BAA	Balancing Authority Area
BEPWG	BES Exception Process Working Group
BES	Bulk Electric System
BOT	Board of Trustees
BPS	Bulk Power System
CC	Compliance Committee
CCEP	Criteria Compliance Enforcement Program
CDAA	CMEP Data Administration Application
CEAP	Cost Effective Analysis Process
CEH	Continuing Education Hour
CGNC	Corporate Governance and Nominating Committee
CIPC	Critical Infrastructure Protection Committee
CIPIS	Critical Information Protection Information Sharing
CMEP	Compliance Monitoring and Enforcement Program
CORC	Compliance Monitoring and Enforcement and Organization Registration and Certification Program
CPP	Clean Power Plan
CRRRA	Cost of Risk Reduction Analysis
CUG	Consortium Users Group
DADS	Demand Availability Data System
DADSWG	Demand Response Availability Data System Working Group
ERA	Entity Reliability Assessment
ERAG	Eastern Interconnection Reliability Assessment Group
ERO	Electric Reliability Organization
EUB	Electric Utility Board
EUB	Energy and Utilities Board
FAC	Finance and Audit Committee
FERC	Federal Energy Regulatory Commission
FFT	Find, Fix, Track
GADS	Generator Availability Data System
GADSWG	Generating Availability Data System Working Group
GMD	Geomagnetic Disturbance
HQCMÉ	Hydro-Québec Contrôle des mouvements d'énergie
HSIN	Homeland Security Information Network
ICE	Internal Controls Evaluation
IED	Intelligent Electronic Device
IERP	Independent Experts Review Panel Report
IESO	Independent Electricity System Operator
ISO	Independent System Operator
ITSG	IT Steering Group
LCEFT	Load, Capacity, Energy, Fuels, and Transmission
LMS	Learning Management System
LMWG	Load Modeling Working Group
LSE	Load Serving Entity
MACD	Market Assessment and Compliance Division of the IESO
MDCC	Management Development and Compensation Committee
ME	Mitigation and Enforcement
MMWG	Multi-Regional Modeling Working Group
MOU	Memorandum of Understanding
MPLS	Multiprotocol Label Switching
MVWG	Model Validation Working Group
NAESB	North American Electric Standards Review Board

Section D — Additional Financial Statements

Acronym	Definition
NEL	Net Energy for Load
NERC	North American Electric Reliability Corporation
NOAV	Notice of Alleged Violation
NOCV	Notice of Confirmed Violation
NOPR	Notice of Proposed Rulemaking
NOPV	Notice of Possible Violation
NPCC	Northeast Power Coordinating Council, Inc.
NRAP	NPCC Reliability Assessment program
NSPI	Nova Scotia Power Incorporated
NSUARB	Nova Scotia Utility and Review Board
OEB	Ontario Energy Board
PAS	Performance Analysis Subcommittee
PC	Pension Committee
PMOS	Project Management Oversight Subcommittee
PSMTF	Protection System Mis-operations Task Force
PSTN	Public Switched Telephone Network
QCMEP	Québec Reliability Standards Compliance Monitoring and Enforcement Program
RADS	Reliability Assessment Data System
RADWG	Reliability Assessment Data Working Group
RAS	Reliability Assessment Subcommittee
RC	Reliability Coordinator
RCC	Reliability Coordinating Committee
RISC	Reliability Issues Steering Committee
RSAW	Reliability Standards Audit Worksheet
RSC	Regional Standards Committee
RTO	Regional Transmission Organization
SAFNR	Situational Awareness-FERC, NERC, Regions
SAMS	System Analysis and Modeling Subcommittee
SAR	Standards Authorization Request
SAT	Systematic Approach to Training
SBS	Standards Balloting System
SCPS	Standards Committee Process Subcommittee
SDT	Standards Drafting Team
SEDS	Spare Equipment Database System
SEDTF	Spare Equipment Database Task Force
SPS	Special Protection Systems
TADS	Transmission Availability Data System
TADSWG	Transmission Availability Data System Working Group
TFCO	Task Force on Coordination of Operation
TFCP	Task Force on Coordination of Planning
TFE	Technical Feasibility Exception
TFIST	Task Force on Infrastructure Security and Technology
TFSP	Task Force on System Protection
TFSS	Task Force on System Studies
TLR	Transmission Loading Relief
TOP	Transmission Operator
UFLS	Underfrequency Load Shedding
UVLS	Under-Voltage Load Shedding
VRF	Violation Risk Factor
VSL	Violation Security Level

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**NORTH AMERICAN ELECTRIC RELIABILITY
CORPORATION**

2017 BUSINESS PLAN AND BUDGET FILING

ATTACHMENT 4

DISCUSSION OF COMMENTS RECEIVED

DURING DEVELOPMENT OF NERC'S

2017 BUSINESS PLAN AND BUDGET

ATTACHMENT 12

DISCUSSION OF COMMENTS RECEIVED DURING DEVELOPMENT OF NERC'S 2017 BUSINESS PLAN AND BUDGET

During the preparation of its 2017 Business Plan and Budget, NERC posted several drafts on its website for stakeholder review and comment. Formal comments were solicited on the first and second drafts. The final draft was posted as part of the agenda for the open Finance and Audit Committee meeting of August 10, 2016, during which an opportunity for comments from stakeholders was provided.

Comments on Draft #1 of the NERC Business Plan and Budget were received from the Canadian Electricity Association (“CEA”), the Ontario Independent Electricity System Operator (IESO), and the Member Executive Committee of the Electricity Subsector Coordinating Council (MEC-ESCC). Copies of these comments were posted on NERC’s website.¹ There were no written comments received on Draft #2 or the final draft of the NERC Business Plan and Budget. During the August 10, 2016 NERC Finance and Audit Committee meeting for presentation of the NERC, Regional Entity and WIRAB 2017 business plans and budgets and associated assessments, for a recommendation of approval, additional comments were received from stakeholders which NERC regarded as generally supportive.

During the February 2016 meetings of the NERC Member Representatives Committee and Board of Trustees, management indicated (as it had in the two preceding years) that it would be developing and posting an Accountability Matrix to track stakeholder recommendations and policy input, as well as management’s actions and response to this input. NERC tracks all policy input and related responses in detail and posts a summarized version of the Accountability Matrix on NERC’s Website. The current version of the detailed Accountability Matrix associated with the Business Plan and Budget is included as an attachment to this petition. Policy input, management responses, and the accountability matrix and posted summary are updated on a quarterly basis. The remainder of this Attachment 12 is comprised of: (1) the NERC Management Response to Comments Received from CEA, IESO, and the MEC-ESCC, and (2) the most recently-updated version of the Accountability Matrix, updated as of August 10, 2016. These documents show NERC’s responses and action items to the stakeholder comments received on Draft #1 of the 2017 Business Plan and Budget, as well as NERC’s responses and action items to policy input received from stakeholders.

¹ Copies of the comments received on the posted Draft #1 of the 2017 Business Plan and Budget are available at: <http://www.nerc.com/gov/bot/FINANCE/Pages/2017-NErc-Business-Plan-and-Budget.aspx>. The policy input received from stakeholders for the February 10-11, 2016 meeting of the NERC Board of Trustees is available at: http://www.nerc.com/gov/bot/Agenda%20highlights%20and%20Mintues%202013/Policy_Input_Package_February_2016_PUBLIC_POSTING.pdf.

NERC Business Plan & Budget – Draft 1 Management Response to Comments Received

Action

Review

Background

The deadline for comments on the first draft of NERC's 2017 Business Plan and Budget ended on June 30. Comments were submitted by the Canadian Electricity Association (CEA), the Ontario Independent Electricity System Operator (IESO) and the Electricity Sector Coordinating Council Member Executive Committee (MEC).

CEA supports NERC's assessment stabilization efforts and would like to have some additional understanding of the effect on Canadian entities. CEA also requests that NERC ensure that its assessment allocation policy is closely aligned with the reliability frameworks across Canada and avoids assessment of costs related to U.S. only programs or initiatives. Similar to the IESO, CEA also is concerned with the pattern of annual budget increases and suggests that given NERC's maturity the increases (if any) should be lower and flatter. CEA would also like to see a clearer link between budgeted expenditures and the priorities and risks identified in the Strategic Plan and more information regarding the interrelationship between NERC's strategic planning process and budgeting processes. CEA also noted that it would be helpful if NERC provided some degree of prioritization to budget expenditures so it can better understand the risk of reductions in budgets or budget increases. CEA invites NERC to proactively engage the sector in the redesign of the Strategic Planning Framework to ensure clear linkage between priorities, risks and program spending. The IESO's comments primarily focused on the percentage increase in the 2017 budget and projected increases for 2018 and 2019. MEC's comments support the company's proposed investment in the E-ISAC portal. This proposed investment, together with additional supporting information, is included in NERC's second draft of its 2017 business plan and budget.

Response to CEA and IESO Comments

1. Assessment Stabilization Initiative and Allocation Policy

The strategy to align assessments and budget increases in the U.S. will take several years as NERC manages the use of its Assessment Stabilization Reserve to address the historic effect of the application of U.S. penalty funding to reduce U.S. assessments. This reserve is currently funded entirely by U.S. penalties and NERC management has recommended periodic release of these reserves to manage this alignment strategy. The actual annual contributions and releases from the Assessment Stabilization Reserve are reviewed and

approved each year in connection with the approval of NERC's annual business plan and budget. NERC management does not currently anticipate the use of U.S. penalty funding, either through or outside of the Assessment Stabilization Reserve, to reduce Canadian assessments. Should surplus funding become available due to unanticipated budget underruns in a given year, a determination will be made whether those funds should be contributed to the Assessment Stabilization Reserve for release in a future period or applied to reduce assessments in the following budget year. In either case, under current policies, these surplus funds would be allocated to reduce assessments for all load serving entities, including those in Canada.

In recognition of reliability frameworks existing in Canada, during each budget cycle, the evaluation of Canadian credits and assessment allocations takes place under the general guidance of the NERC Board's Expanded Policy on Allocation of Certain Compliance and Enforcement Costs to recognize compliance and enforcement programs which are conducted within the various Canadian Provinces. NERC also excludes from Canadian assessments the cost of certain situation software tools (e.g. SAFNR) which are only utilized by the U.S. The company will continue to monitor and evaluate assessment and cost allocation methodologies to ensure ongoing alignment with the reliability framework throughout North America, including Canada.

2. *Alignment with Strategic Plan, Risk Priorities*

As recently discussed at the July 13, 2016 MRC Informational Session, NERC has initiatives underway, including additional opportunities for stakeholder input, to further align the strategic plan, metrics and business plan and budget development processes. This will be a topic of further discussion during the August MRC and Board meetings.¹

NERC's business plan and budget and accompanying presentation materials include documentation regarding the alignment of resources, resource allocation and supporting activities with the Strategic Plan and RISC priorities, including the priorities and supporting activities which the company and each department will focus on during 2017. These activities reflect coordination with and input from the member managed NERC standing committee's including the planning, operating, RISC, compliance and certification, standards, critical infrastructure protection and personal certification governance committees. Management also plans to present additional material as part of the presentation of the consolidated ERO Enterprise budget presentation regarding the alignment of both NERC and Regional Entity resources to the both the Strategic Plan and RISC priorities.

¹ During the [May 2016 Member Representatives Committee \(MRC\) meeting](#), NERC presented a framework to further improve ERO Enterprise strategic planning. As part of its August 2016 policy input letter, NERC is also requesting policy input from the MRC regarding this framework and the ERO Enterprise Strategic Plan.

3. Budget Increases

NERC management acknowledges and understands the cost pressures on not only Canadian entities, but all stakeholders. However, it is also essential that NERC maintain adequate funding to provide the necessary resources to fulfill its statutory responsibilities and to support the goals and objectives set forth in the Strategic Plan, standing committee work plans and related activities to ensure Bulk Electric System reliability. A significant portion of NERC's budget and funding requirements is driven by personnel costs. Hiring, training, and retaining a highly skilled workforce, even in a steady state of operations, creates upward pressure on personnel costs and NERC's budget. NERC is very focused on efficient and effective resource management, carefully evaluating the backfilling of vacancies and resource allocation and other costs to ease this upward budget pressure. In order to support operational and efficiency objectives, NERC also needs to make necessary investments in ERO Enterprise software applications and tools, as further described in the Information Technology section of NERC's 2017 business plan and budget.

Policy Input Area	Date	Source	Comment Summary	NERC Response/Notes
2017 Business Plan and Budget	February 2016	NPCC	NPCC recommends a modification of the NERC Cost Allocation Policy to incorporate a U.S.-only funding methodology for efforts and costs related to the Clean Power Plan assessments or other country or interconnection specific activities.	NERC does not believe that modification to its cost allocation methods are appropriate at this time. Any proposed changes in the future to account for sub-regional interconnection specific studies will be reviewed based on the specific facts presented at that time.
2017 Business Plan and Budget	February 2016	ISO/RTO	In the risk-based CMEP implementation area, encourage NERC to work with the Compliance and Certification Committee (CCC) to identify impediments to the self-logging process and identify improvements that can be implemented in 2016. NERC should also develop metrics to monitor the progress of entities entering the self-logging program.	NERC has worked with the CCC on metrics for self-logging and is using those metrics. NERC is also doing a qualitative review of the program this year in conjunction with FERC staff.
2017 Business Plan and Budget	February 2016	MRO	As the ERO develops the 2017 BP&Bs, the MRO Board encourages establishing a NERC Field Operations Group to coordinate, collaborate and oversee the business of executing these delegated functions.	NERC does not envision structural changes at this time. NERC will continue developing its leadership through coaching and training to ensure leaders are able to support, coach and provide direction to the Regions. NERC will work collaboratively with the Regions in furthering controls around oversight of areas of greatest importance, providing more definition on what success looks like and how it will be monitored and measured.

Policy Input Area	Date	Source	Comment Summary	NERC Response/Notes
2017 Business Plan and Budget	February 2016	CEA	Compliance Assurance ranks as one of the top-funded line items in NERC's BP&B. CEA therefore encourages NERC to demonstrate in its 2017 BP&B how resources will continue to bolster activities intended to support registered entity compliance - especially in view of past experience with and imminent implementation deadlines for challenging, complex standards (i.e., CIP V5).	NERC and the Regional Entities are committed to providing necessary support to registered entities in these areas. Their business plans and budgets will further describe the key activities which will be undertaken to provide necessary training, outreach and support.
2017 Business Plan and Budget	February 2016	SM-TDUs/APPA/TAPS/LPPC	Recommend that NERC combine the "Changing Resource Mix" and "Risks in Resource Planning" projects into a single strategic initiative focused on the impact of statutory and regulatory requirements that affect resource planning and reliable operations.	Will be considered in connection with the development of the 2017-2020 Strategic Plan.
2017 Business Plan and Budget	February 2016	CEA	The 2017 BP&B should clearly identify the lasting efficiencies and savings which will be accrued under transformation to risk-based programs and "steady-state."	NERC continues to further identify efficiencies and savings in each BP&B. In the 2017 budget document, additional language was included to address these issues and NERC anticipates that this language will be continually enhanced in future budget documents.
2017 Business Plan and Budget	February 2016	EEI	Development of the 2017 business plan and budget should include careful consideration to ensure sustainable efforts in standards development, and compliance and enforcement, recognizing these two program areas have matured and stabilized.	The 2017 BP&B includes language that discussed the maturation of these areas and as they continue to stabilize and mature in future years, NERC will continue to provide updates to these areas in the BP&B.
2017 Business Plan and Budget	February 2016	CEA	CEA appreciated inclusion of the pie chart analysis and expense breakdown by program area in the 2016 BP&B materials presented to the Board Finance and Audit Committee in August 2015. CEA encourages a similar approach in the 2017 BP&B itself, illustrating programs and activities across the ERO.	Similar, and in some cases improved, analysis was included in the 2017 BP&B.

Policy Input Area	Date	Source	Comment Summary	NERC Response/Notes
2017 Business Plan and Budget	February 2016	CEA	CEA wishes to reiterate its prior request that NERC first seek efficiencies within the existing NERC budget as a means to fulfill incremental E-ISAC resource needs (if any).	NERC is committed to operating in the most efficient and cost effective manner. Efficiencies are always sought before and while considering additional needs in any department.
2017 Business Plan and Budget	February 2016	CEA	CEA recommends that NERC improve disclosure of investments made and committed in support of the ERO Enterprise IT strategy, as well as reporting of benefits realized (both qualitative and quantitative), relative to the original business case.	Additional text was included in the IT section of the 2017 BP&B to further discuss projects and efficiencies gained. This is an ongoing process and NERC will continue provide additional information on this topic in the future as it becomes available
2017 Business Plan and Budget	February 2016	CEA	CEA recommends greater visibility in linking the core priorities articulated in the Strategic Plan with the allocation of resources for specific activities in the BP&B.	Significant additional language was added to the 2017 BP&B to show linkages between the strategic plan and NERC activities.
2017 Business Plan and Budget	February 2016	Merchant Electricity Generators and Electricity Marketers	G&M's were unable to distinguish what NERC specifically plans to keep working on in 2016, initiate in 2016, or formulate in 2016 to initiate in 2017. Both the Strategic Plan and the Business Plan & Budget list items that are sometimes the same but described differently. The two documents do not seem to sleeve together seamlessly. Importantly, it is difficult to see the specific tasks associated with a priority initiative and understand the timeline for that initiative's objectives.	The 2017 BP&B was completed under the framework of the 2016-2019 Strategic Plan document. For future periods, NERC is working to better coordinate the two processes (the strategic plan and the budget) so that both are completed in a more seamless manner. This was discussed at the last Board meeting in August 2016 and efforts are underway to achieve this coordination.

Policy Input Area	Date	Source	Comment Summary	NERC Response/Notes
2017 Business Plan and Budget	February 2016	SM-TDUs/APPA/TAPS/LPPC	SM-TDUs request that the NERC Board and Management give clear assurances that the ERO Enterprise will afford compliance discretion to Transmission Owners (TOs) with respect to application of CIP Version 5 Medium or High Impact requirements if such registered entities in good faith self-identify TO control centers as Low Impact. NERC should make cybersecurity a high priority and have adequate resources to develop guidance and outreach for these new entrants into the CIP compliance realm. This guidance must be delivered timely to be of use to compliance managers.	The ERO Enterprise worked with individual TO registered entities to determine the appropriate risk-based compliance monitoring for their entity. This approach was discussed with broader industry at the February 2016 BOTCC meeting. Cybersecurity is a priority which will be discussed in the 2017 BP&B.
2017 Business Plan and Budget	February 2016	NAGF	ERO should concentrate the priorities and activities in its 2017 Business Plan and Budget (BP&B) Development on ERO Strategic Goal 3, to Identify the most significant risks to reliability, and Strategic Goal 4, to identify, evaluate, and independently assesses emerging risks to reliability. Specifically, the NAGF believes the priorities and activities should focus on the analysis of system performance, the evaluation of Essential Reliability Services and the evaluation of physical and cyber security controls. In addition, discussions should continue to develop options for responding to extreme physical and weather events.	As demonstrated in the updated graphs on the linkage between strategic goals and NERC resources, Goals 3 and 4 are the areas that have the greatest resource need, and both of these areas provide significant input into all other areas of the NERC programs. Detailed work plans for these strategic goals are set by the RISC, the Board, and through various working groups involving NERC and industry stakeholders.
2017 Business Plan and Budget	February 2016	SM-TDUs/APPA/TAPS/LPPC	Recommend an increased focus on the impact of environmental regulations, greater transparency on the methods NERC uses for BES risk assessment and continued focus on implementation of ongoing initiatives such as risk-based compliance, the BES exception process, risk-based registration and the transition of standards to an “enhanced maintenance” mode.	Additional language was included in the 2017 BP&B to discuss the numerous analytic projects and programs at NERC, as well as discussions on the maturation of risk-based compliance and standards.

Policy Input Area	Date	Source	Comment Summary	NERC Response/Notes
2017 Business Plan and Budget	February 2016	MRO	<p>Recommends that NERC and the Regional Entities consider instituting a “zero-based budget process,” which requires every cost be justified on its own merit, rather than simply justifying incremental cost changes from year to year.</p>	<p>NERC and the Regional Entities continue to enhance the process by which they formulate and communicate the recommended budget. At NERC, budgeted costs are reviewed in great detail to ascertain where reallocations and efficiencies can be obtain, and all costs are reviewed for necessity. While most presentations to stakeholders and the Board reference incremental movements from prior year, the internal process to justify NERC’s budget is much more comprehensive.</p>
2017 Business Plan and Budget	February 2016	ISO/RTO	<p>For standards stabilization, before any drafting activity begins, the Periodic Review Team should specifically identify what, if any, changes need to be made. The recommendations should go to ballot to let the industry decide whether the standard is acceptable as-is and if the standard is opened for changes, which specific changes should be made. Establishing a set of criteria to help determine if a standard needs to be revised would also be beneficial.</p>	<p>Whether the standard is acceptable as-is or specific changes should be made would be addressed through the enhanced periodic review process. The Periodic Review Team recommends changes to the standard before any drafting activity begins. That recommendation is subject to direct industry comment when a Standard Authorization Request is posted, and again when proposed standard changes are posted for comment and ballot by the drafting team charged with implementing the periodic review recommendation. This process is informed by an established set of criteria embodied in the Enhanced Periodic Review template the periodic review team is required to use.</p>

Policy Input Area	Date	Source	Comment Summary	NERC Response/Notes
2017 Business Plan and Budget	February 2016	ISO/RTO	For standard stabilization, recommend that the RISC develop a repeatable framework that could be used to evaluate a suggested new standard and determines the most effective tool(s) to address the issue.	RISC triages and provides front-end, high-level leadership for issues of strategic importance to bulk power system (BPS) reliability and offers high-level stakeholder leadership engagement and input on issues that impact BPS reliability. They establish a common understanding of the scope, priority, and goals for the development of solutions to address these issues, including the use of solutions other than the development of new or revised reliability standards. In doing so, the RISC provides a framework for steering, developing, formalizing, and organizing recommendations to help NERC and the industry effectively focus their resources on the critical issues needed to best improve the reliability of the BPS.
2017 Business Plan and Budget	February 2016	SM-TDUs/APPA/TAPS/LPPC	With respect to the BES exception process, we recommend that the Board direct NERC staff to explore ways to make more information publicly available so that stakeholders can both judge the effectiveness of the program and assess whether a particular exception request is likely to be granted.	Information is shared in accordance with the NERC Rules of Procedure. NERC has enhanced its Case Notes to include more detail on recently decided Exception Requests that have been posted publicly. NERC has also developed a Risk Assessment Considerations During NERC Review of Exception Requests document posted publicly in February 2016, that explains how NERC looks at risk and aggregate impacts.

Policy Input Area	Date	Source	Comment Summary	NERC Response/Notes
2017 Business Plan and Budget	February 2016	SM-TDUs/APPA/TAPS/LPPC	For RBR, the selection of Regional Entity participants for the NERC-led panel should be transparent, with publication of how the members are selected and their expertise.	NERC and the Regional Entities each identified core NERC-led panel members who will draw from other Regional subject matter experts as needed per the submittal.
2017 Business Plan and Budget	February 2016	EI	While the CPP work absorbed considerable resources over the past year, EEI recommends that NERC in its proposed 2017 budget seek to identify with as much confidence as possible the nature and scope of work in order to ensure maintenance of effort based on identified long-term reliability risks.	Work related to assessments is discussed at length in the 2017 BP&B, including areas where additional resources may be needed. While NERC intends to provide as much predictability as possible for assessment work (including CPP and other regulatory efforts), some of that work is requested or prioritized outside and potentially after the BP&B process.
2017 Business Plan and Budget	February 2016	SM-TDUs/APPA/TAPS/LPPC	For RBR, NERC should develop a clear and repeatable process for evaluating case-by-case requests, in accordance with the NERC Rules of Procedures.	A guide on how to make decisions has been posted on the NERC website on the Organization Registration web page (RBR implementation guidance).
2017 Business Plan and Budget	February 2016	NPCC	NPCC recommends that NERC's 2017 business plan and budget incorporate plans to enhance the effectiveness of the E-ISAC and to provide direct reliability benefits including information sharing and analytical support for all registered entities and Regional Entities.	The discussion about the E-ISAC was enhanced for the 2017 BP&B, including additional text about the new portal and other data exchange efforts underway to ensure information sharing and analytics are provided to industry.
2017 Business Plan and Budget	February 2016	ISO/RTO	For prioritizing resilience activities towards those that address multiple risks, recommend NERC consider creating a web page for each risk that highlights the issue, what has been done to address the risk, what is still being done, and include resources the industry can use. FEMA's natural disaster website appears to be a good model.	NERC, in conjunction with the RISC, will consider this recommendation as they evaluate resilience activities.

Policy Input Area	Date	Source	Comment Summary	NERC Response/Notes
2017 Business Plan and Budget	February 2016	SM-TDUs/APPA/TAPS/LPPC	For RBR, NERC staff should develop metrics to show the program's success and progress.	The ERO Enterprise will report progress to the NERC Board/BOTCC as appropriate. Additionally, industry will have ongoing visibility to the status of the program, as all decisions will be posted on the website.
2017 Business Plan and Budget	February 2016	EEI	In the reliability assessment program area, NERC needs to ensure that it has resources sufficient to effectively plan and manage a sustainable effort, and to ensure that published work rests on thorough analysis.	This is an ongoing effort and the process by which NERC completes and publishes assessments is steadily improving. Significant discussion has taken place in recent Board meetings about the process. And during the May Board meeting, NERC discussed the assumptions and analytics in great detail leading toward the most recent assessments being published.
2017 Business Plan and Budget	February 2016	NPCC	NPCC recommends that the ERO Enterprise focus its assessments of emerging risks to bulk electric system reliability, through the re-allocation of personnel and resources from the standards and compliance program areas to the reliability assessment and performance analysis (RAPA) program area.	Both the Standards and Compliance areas have seen more stabilization in recent years, and resources have been allocated to analytical areas in response to RISC, Board, and stakeholder priorities. This is evidenced in the 2017 and prior BP&Bs.
2017 Business Plan and Budget	February 2016	SM-TDUs/APPA/TAPS/LPPC	The term "steady state" is at best a misnomer and should be discarded to call things as they are: NERC is well under way to conducting what might be best described as "enhanced maintenance" of a fundamentally sound body of standards that still have a number of quality and clarity concerns to be addressed.	NERC is considering refining the terminology to better reflect the current state of standards.

Policy Input Area	Date	Source	Comment Summary	NERC Response/Notes
2017 Business Plan and Budget	February 2016	Merchant Electricity Generators and Electricity Marketers	A clearer description connecting initiatives and Reliability Issues Steering Committee (RISC) priorities to tasks would be an improvement.	The 2017 BP&B includes significant additional language that links the strategic goals to NERC's various programs and resources. This is an ongoing priority and NERC will continually enhance these linkages in future budgets.
2017 Business Plan and Budget	February 2016	SM-TDUs/APPA/TAPS/LPPC	For risk-based CMEP, our one "ask" of NERC and the regions is to enhance the transparency and consistency of the risk assessment methods used to assess inherent and entity-specific risks to the BES.	The IRA and ICE guides are posted on the NERC website for transparency. Assessments are based on facts and circumstances for each entity.
2017 Business Plan and Budget	February 2016	CEA	CEA recommends that the BP&B include improved analytics, such as multi-year retrospective and prospective program trending and comparative analysis of program budgets.	NERC includes various analytical presentations in the budget document, the associated FERC filing, presentations to the Board and stakeholders, and in the year-end budget variance filing to FERC. NERC will continually improve this area with the goal of providing the most meaningful information to analyze the NERC budget.

**NORTH AMERICAN ELECTRIC RELIABILITY
CORPORATION**

2017 BUSINESS PLAN AND BUDGET FILING

ATTACHMENT 5

**CALCULATION OF ADJUSTMENTS
THE AESO 2017 NERC ASSESSMENT,
THE IESO 2017 NERC ASSESSMENT,
THE NEW BRUNSWICK 2017 NERC ASSESSMENT,
AND THE QUEBEC 2017 NERC ASSESSMENT**

Credit for NERC Compliance Costs

	AESO NEL Share		2017 Compliance FTEs			Costs Paid by	
	NERC Budget	(2015) 1.387%	Total	Credit	% Credit	AESO Credit	AESO
NERC Compliance Program Budget							
Compliance Assurance	\$ 7,858,599	\$ 108,999	15.51	14.30	92.2%	\$ 100,495	\$ 8,503
Analysis and Certification	3,646,289	50,574	7.52	6.70	89.1%	45,059	5,515
Enforcement	5,800,647	80,455	13.16	13.16	100.0%	80,455	-
Total Compliance Costs, including Fixed Assets	\$ 17,305,535	\$ 240,028	36.19	34.16		\$ 226,010	\$ 14,018
Additional Compliance Costs (Not Budgeted in Compliance)							
2017 CMEP Database Support	161,000	2,233			100.0%	2,233	-
True-up 2015 Actual						35,127	
Additional Non-Compliance Costs							
Event Analysis	5,446,206	75,539	11.28	4.51	40.0%	30,216	45,323
SAFNR	505,700	7,014			100.0%	7,014	
Total Compliance, Event Analysis and SAFNR	\$ 23,418,441	\$ 324,814	47.47	38.67		\$ 300,599	\$ 59,341
2017 Assessment							
2017 NERC Assessment	\$ 544,658						
2017 RE Assessment	990,964						
Total 2017 Assessment	\$ 1,535,622						
2016 Assessment							
2016 NERC Assessment	\$ 514,324						
2016 RE Assessment	1,103,418						
Total 2016 Assessment	\$ 1,617,742						
Change in Total Assessment	\$ (82,120)						
	-5.1%						

2017 IESO Assessment Adjustment
Credit for NERC Compliance Costs

	NERC Budget		IESO NEL Share (2015) 3.035%	2017 Compliance FTEs			Costs Paid by	
				Total	Credit	% Credit	IESO Credit	IESO
NERC Compliance Program Budget								
Compliance Assurance	\$	7,858,599	\$ 238,508	15.51	12.90	83.2%	\$ 198,373	\$ 40,136
Analysis and Certification		3,646,289	110,665	7.52	6.70	89.1%	98,598	12,067
Enforcement		5,800,647	176,050	13.16	13.16	100.0%	176,050	-
Total Compliance Costs, including Fixed Assets	\$	17,305,535	\$ 525,223	36.19	32.76		\$ 473,020	\$ 52,203
Additional Compliance Costs (Not Budgeted in Compliance)								
2017 CMEP Database Support		161,000	4,886			100.0%	4,886	-
True-up 2015 Actual							77,673	
Additional Non-Compliance Costs								
Event Analysis		5,446,206	\$ 165,292	11.28	4.51	40.0%	\$ 66,117	\$ 99,175
SAFNR		505,700	15,348			100.0%	15,348	-
Total Compliance, Event Analysis and SAFNR	\$	23,418,441	\$ 710,750	47.47	37.27		\$ 637,044	\$ 151,378
2016	\$	25,128,371	\$ 774,456	52.78	44.58		\$ 629,417	\$ 145,039
Change from 2016	\$	(1,709,930)	\$ (63,707)				\$ 7,627	\$ 6,339
2017 Assessment								
2017 NERC Assessment	\$	1,212,884						
2017 RE Assessment		2,011,235						
Total 2017 Assessment	\$	3,224,118						
2016 Assessment								
2016 NERC Assessment	\$	1,173,912						
2016 RE Assessment		2,012,733						
Total 2016 Assessment	\$	3,186,645						
Change in Total Assessment	\$	37,473						
		1.2%						

**2017 New Brunswick Assessment Adjustment
Credit for NERC Compliance Costs**

	<u>NERC Budget</u>	NB NEL Share (2015) 0.315%	<u>2017 Compliance FTEs</u>			<u>NB Credit</u>	<u>Costs Paid by</u>	
			<u>Total</u>	<u>Credit</u>	<u>% Credit</u>		<u>NB</u>	
NERC Compliance Program Budget								
Compliance Assurance	\$ 7,858,599	\$ 24,716	15.51	12.90	83.2%	\$ 20,557	\$ 4,159	
Analysis and Certification	3,646,289	11,468	7.52	6.70	89.1%	10,217	1,250	
Enforcement	5,800,647	18,244	13.16	13.16	100.0%	18,244	-	
Total Compliance Costs, including Fixed Assets	\$ 17,305,535	\$ 54,428	36.19	32.76		\$ 49,018	\$ 5,410	

Additional Compliance Costs (Not Budgeted in Compliance)

2017 CMEP Database Support	161,000	506			100.0%	506	-	
True-up 2015 Actual						8,163		

Additional Non-Compliance Costs

Event Analysis	\$ 5,446,206	17,129	11.28	4.51	40.0%	\$ 6,852	\$ 10,277	
SAFNR	505,700	1,590			100.0%	1,590		
Total Compliance, Event Analysis and SAFNR	\$ 23,418,441	\$ 73,653	47.47	37.27		\$ 66,129	\$ 15,687	

2017 Assessment

2017 NERC Assessment	\$ 125,585							
2017 RE Assessment	290,905							
Total 2017 Assessment	\$ 416,490							

2016 Assessment

2016 NERC Assessment	\$ 117,079							
2016 RE Assessment	296,844							
Total 2016 Assessment	\$ 413,923							

Change in Total Assessment

	\$ 2,567							
		0.6%						

**2017 Quebec Assessment Adjustment
Credit for NERC Compliance Costs**

	NERC Budget	Quebec NEL	2017 Compliance FTEs			Quebec	Costs Paid by	Payment Allocation	
		Share (2015)	Total	Credit	% Credit	Credit	Quebec	Regie	Hydro Quebec
NERC Compliance Program Budget									
Compliance Assurance	\$ 7,858,599	\$ 321,383	15.51	5.58	36.0%	\$ 115,698	\$ 205,685		\$ 205,685
Analysis and Certification	3,646,289	149,117	7.52	6.70	89.1%	132,857	16,260	\$ 16,260	
Enforcement	5,800,647	237,221	13.16	13.16	100.0%	237,221	-		
Total Compliance Costs, including Fixed Assets	\$ 17,305,535	\$ 707,722	36.19	25.44		\$ 485,777	\$ 221,945	\$ 16,260	\$ 205,685
Additional Compliance Costs (Not Budgeted in Compliance)									
2017 CMEP Database Support	161,000	6,584			100.0%	6,584			
True-up 2015 Actual						87,429			
Additional Non-Compliance Costs									
Event Analysis	\$ 5,446,206	222,726	11.28	4.51	40.0%	\$ 89,091	\$ 133,636		\$ 133,636
SAFNR	505,700	20,681			100.0%	20,681			
Total Compliance, Event Analysis and SAFNR	\$ 23,418,441	\$ 957,713	47.47	29.96		\$ 689,561	\$ 355,581	\$ 16,260	\$ 339,321
2017 Assessment									
2017 NERC Assessment	\$ 1,803,289							\$ 16,260	\$ 1,787,029
2017 RE Assessment	2,820,434							1,027,171	1,793,263
Total 2017 Assessment	\$ 4,623,723							\$ 1,043,431	\$ 3,580,292
2016 Assessment									
2016 NERC Assessment	\$ 1,765,517							\$ 261,103	\$ 1,504,414
2016 RE Assessment	2,835,085							1,132,825	1,702,260
Total 2016 Assessment	\$ 4,600,602							\$ 1,393,928	\$ 3,206,674
Change in Total Assessment	\$ 23,121							\$ (350,497)	\$ 373,618
	0.5%							-25.1%	11.7%

**NORTH AMERICAN ELECTRIC RELIABILITY
CORPORATION**

2017 BUSINESS PLAN AND BUDGET FILING

ATTACHMENT 6

**METRICS COMPARING
REGIONAL ENTITY OPERATIONS
BASED ON
THE 2017 BUDGETS**

2017 Metrics for Budget Submissions

Budget Metrics		FRCC	MRO	NPCC⁵	RF	SERC	SPP RE	Texas RE	WECC
1	Number of registered entities	47	94	212	227	192	115	197	353
2	Number of registered functions	171	314	426	481	503	310	364	888
3	Total NEL (GWh)	234,606	283,136	635,349	892,167	1,025,560	225,657	348,275	869,883
4	NEL (GWh) per registered entity	4,992	3,012	2,997	3,930	5,341	1,962	1,768	2,464
5	Total ERO Funding ¹	\$ 6,258,896	\$ 10,660,595	\$ 14,255,060	\$ 20,219,881	\$ 15,901,023	\$ 9,462,303	\$ 9,645,256	\$ 26,341,500
6	ERO Funding per registered entity	\$ 133,168	\$ 113,411	\$ 67,241	\$ 89,074	\$ 82,818	\$ 82,281	\$ 48,961	\$ 74,622
7	ERO Funding per registered function	\$ 36,602	\$ 33,951	\$ 33,463	\$ 42,037	\$ 31,612	\$ 30,524	\$ 26,498	\$ 29,664
8	Total Budget ²	\$ 7,177,854	\$ 11,226,670	\$ 15,147,054	\$ 19,908,939	\$ 17,482,403	\$ 10,865,511	\$ 12,167,256	\$ 26,796,928
9	Total Budget per registered entity	\$ 152,720	\$ 119,433	\$ 71,448	\$ 87,705	\$ 91,054	\$ 94,483	\$ 61,763	\$ 75,912
10	Total Budget per registered function	\$ 41,976	\$ 35,754	\$ 35,556	\$ 41,391	\$ 34,756	\$ 35,050	\$ 33,427	\$ 30,177
11	Total Statutory FTE ³	29.99	43.00	36.86	72.30	75.00	33.25	60.00	140.00
12	Registered entity per Statutory FTE	1.567	2.186	5.751	3.140	2.560	3.459	3.283	2.521
13	Registered function per Statutory FTE	5.702	7.302	11.557	6.653	6.707	9.323	6.067	6.343
14	Total Compliance Budget ⁴	\$ 5,335,423	\$ 7,313,627	\$ 8,726,049	\$ 15,421,797	\$ 11,816,885	\$ 8,126,399	\$ 9,171,887	\$ 13,963,714
15	Compliance budget per registered entity	\$ 113,520	\$ 77,805	\$ 41,161	\$ 67,937	\$ 61,546	\$ 70,664	\$ 46,558	\$ 39,557
16	Compliance budget per registered function	\$ 31,201	\$ 23,292	\$ 20,484	\$ 32,062	\$ 23,493	\$ 26,214	\$ 25,197	\$ 15,725
17	Total Compliance FTE ³	19.59	21.11	17.00	44.75	34.31	21.75	36.25	55.00
18	Registered entity per Compliance FTE	2.4	4.5	12.5	5.1	5.6	5.3	5.4	6.4
19	Registered function per Compliance FTE	8.7	14.9	25.1	10.7	14.7	14.3	10.0	16.1

¹ ERO Funding is a sum of Assessments and Penalty Sanctions

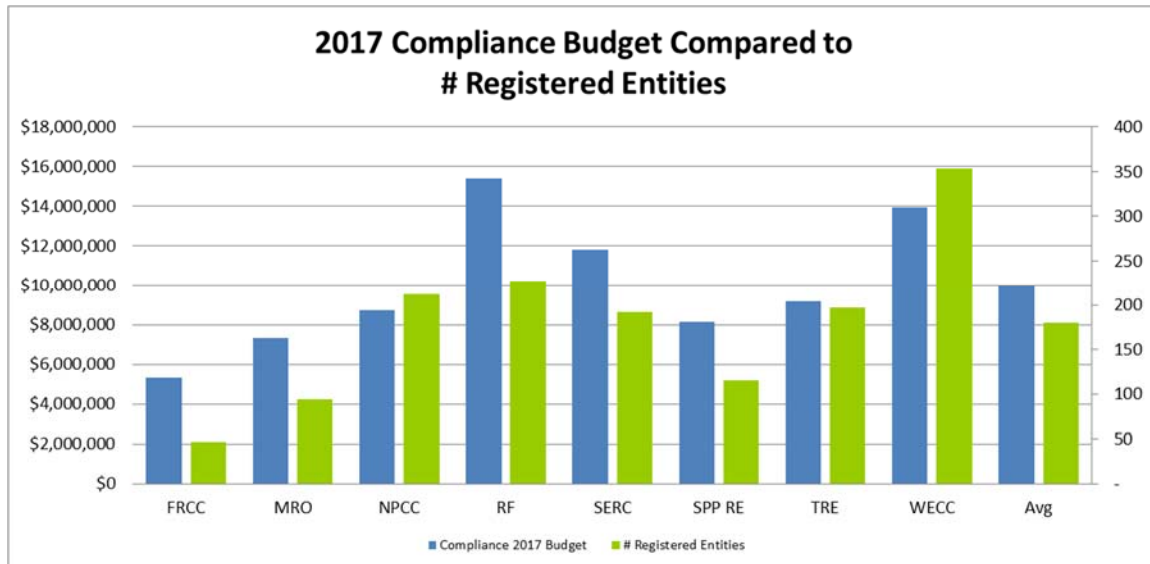
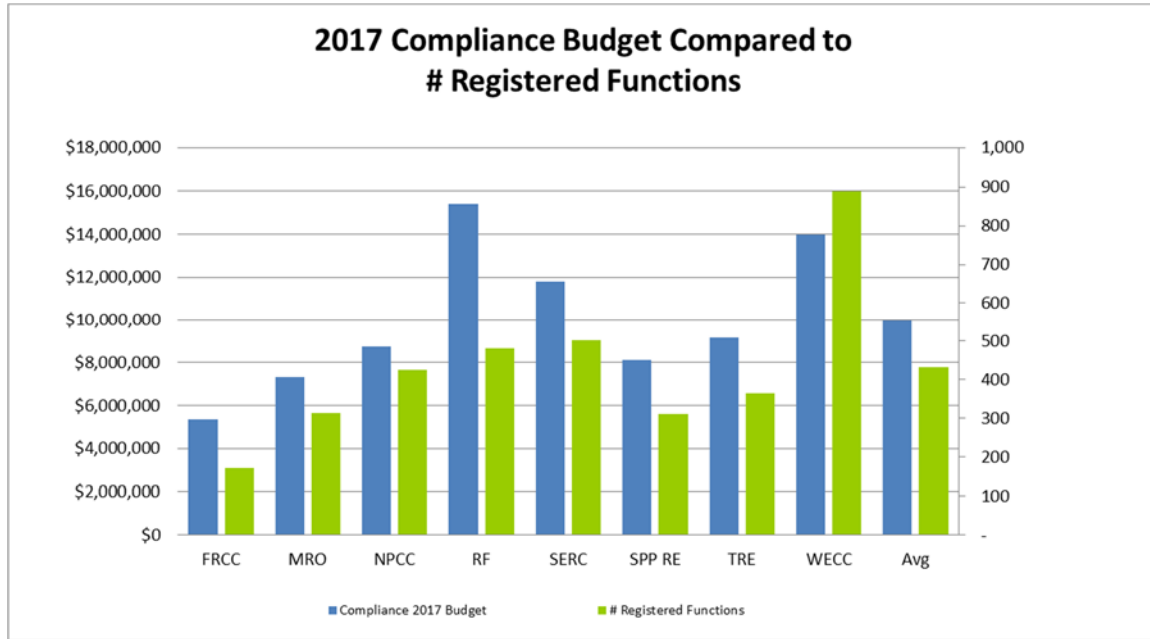
² Total Budget is a sum of Total Expenses and Capital Expenditures

³ Each FTE that works 2,080 hours per year is counted as one FTE. An FTE working less than the 2,080 hours per year is counted as a fractional FTE.

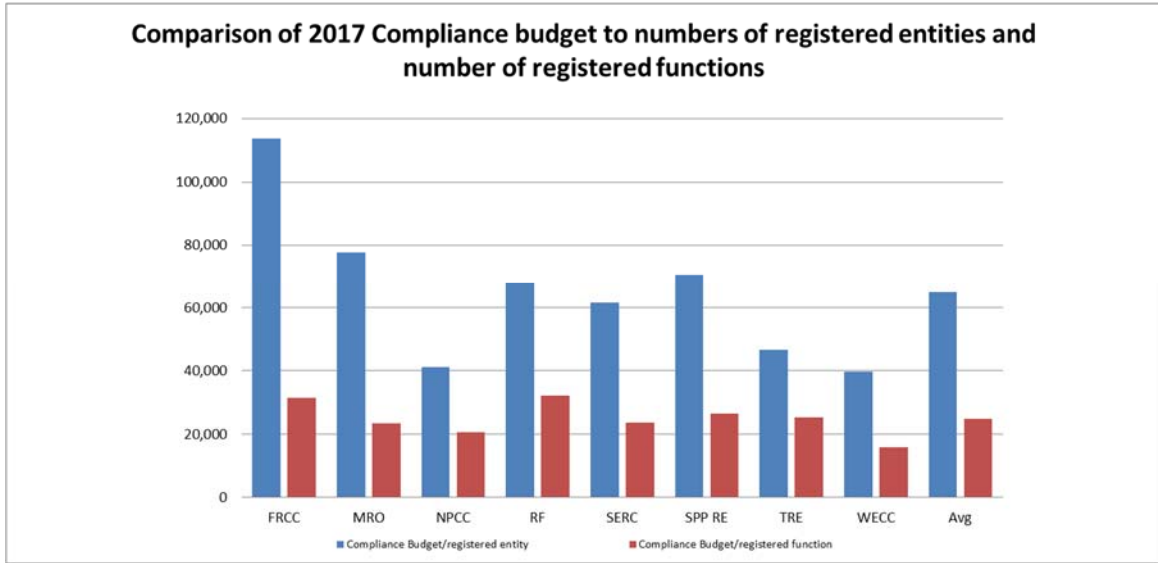
⁴ Total Compliance Budget is a sum of Direct Expenses, Indirect Expenses and Capital Expenditures

⁵ Due to the specifics of the compliance program included in the individual provincial MOUs for cross-border regional entities, some of these metrics are not directly comparable.

	FRCC	MRO	NPCC	RF	SERC	SPP RE	TRE	WECC	Avg
Compliance 2017 Budget	5,335,423	7,313,627	8,726,049	15,421,797	11,816,885	8,126,399	9,171,887	13,963,714	9,984,473
# Registered Entities	47	94	212	227	192	115	197	353	180
# Registered Functions	171	314	426	481	503	310	364	888	432

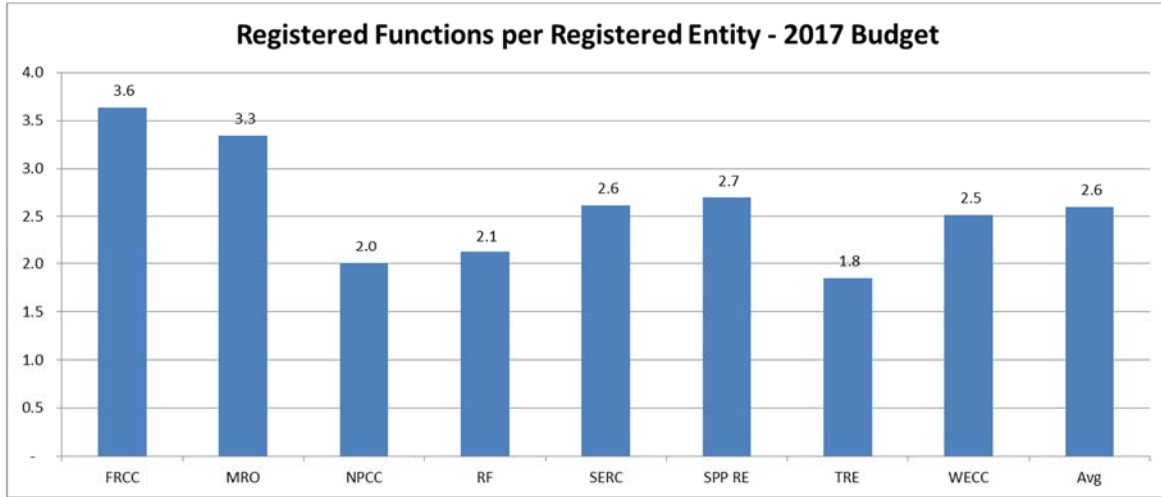


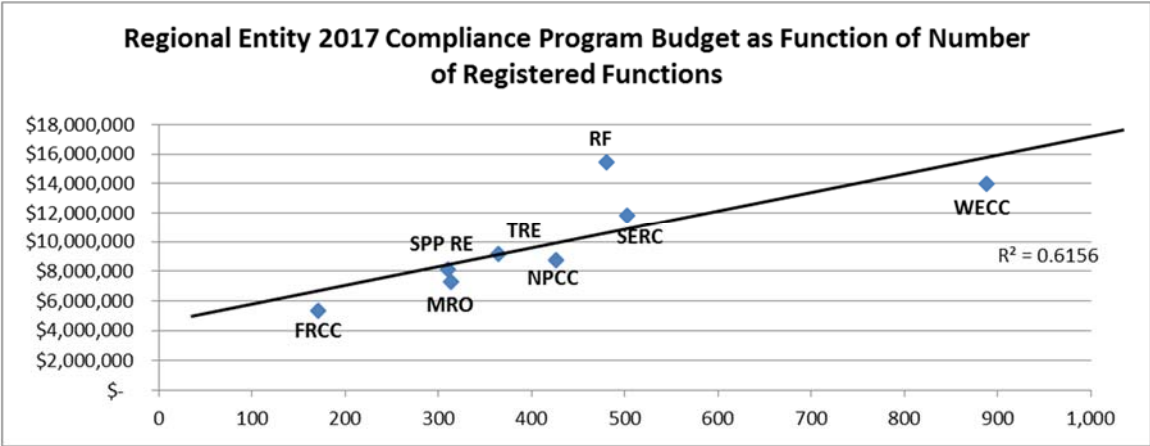
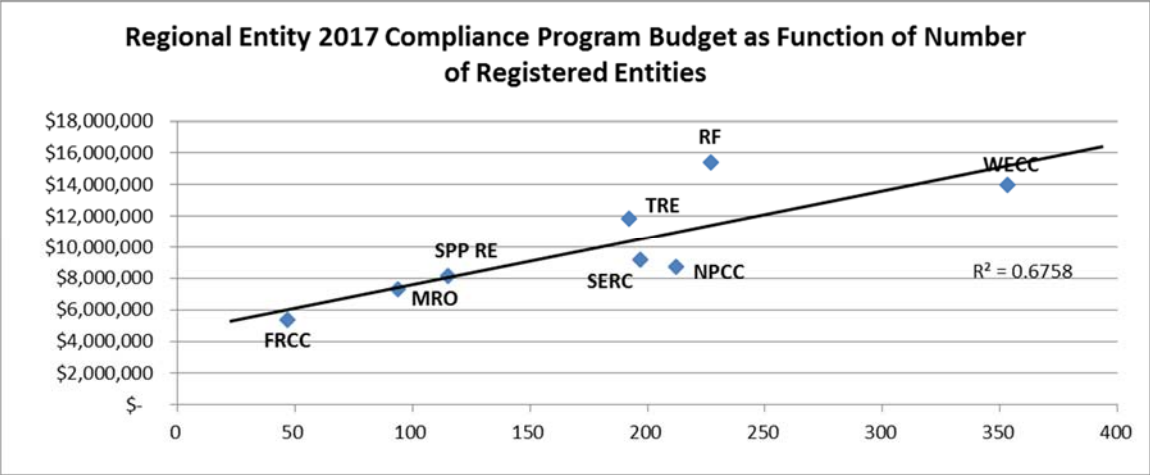
	FRCC	MRO	NPCC	RF	SERC	SPP RE	TRE	WECC	Avg
Compliance Budget/registered entity	113,520	77,805	41,161	67,937	61,546	70,664	46,558	39,557	64,843
Compliance Budget/registered function	31,201	23,292	20,484	32,062	23,493	26,214	25,197	15,725	24,709



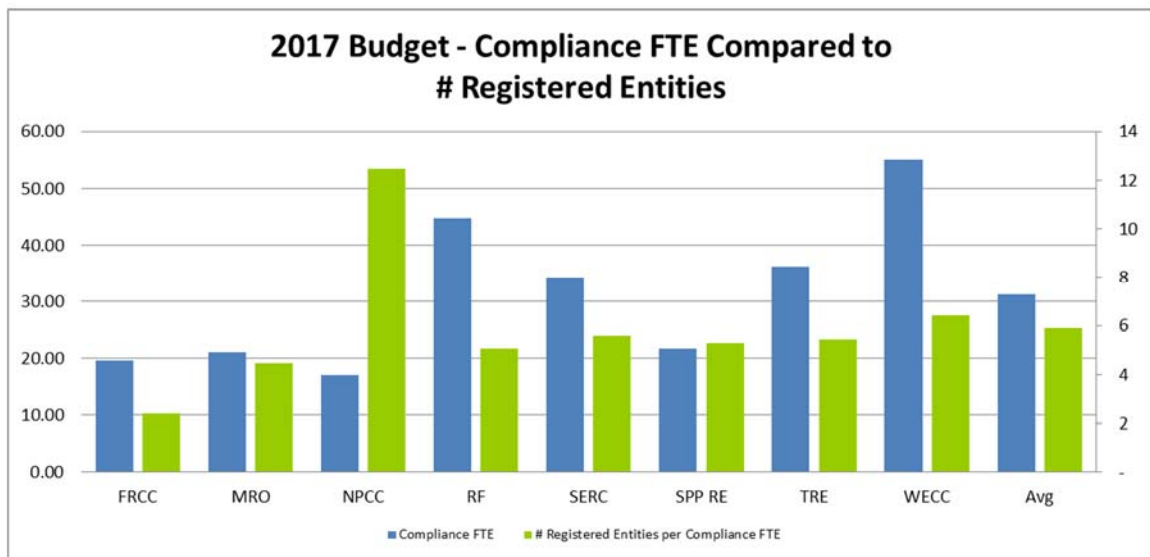
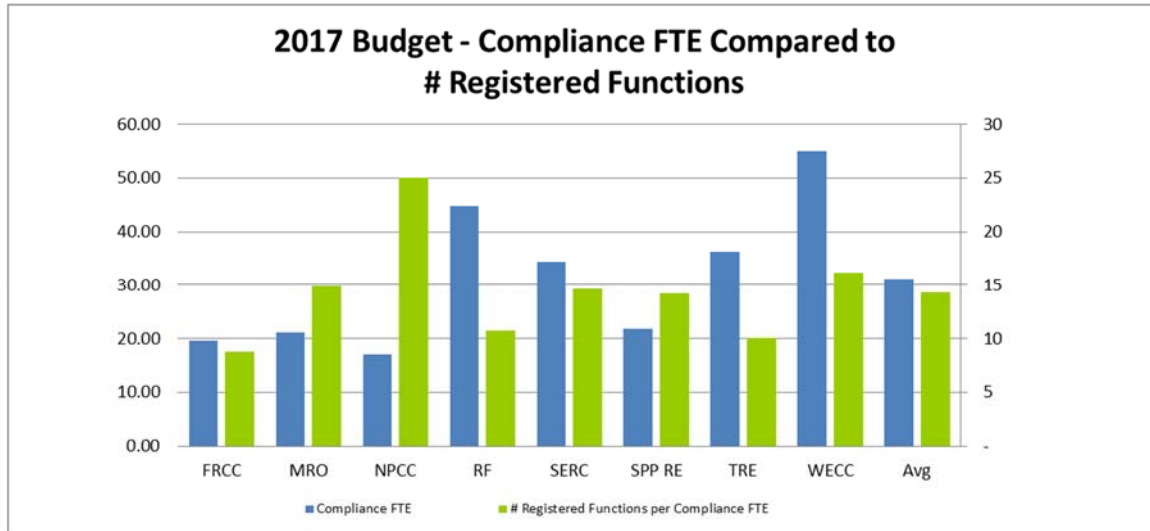
Registered Functions per Registered Entity
2017 Budget

FRCC	MRO	NPCC	RF	SERC	SPP RE	TRE	WECC	Avg
3.6	3.3	2.0	2.1	2.6	2.7	1.8	2.5	2.6

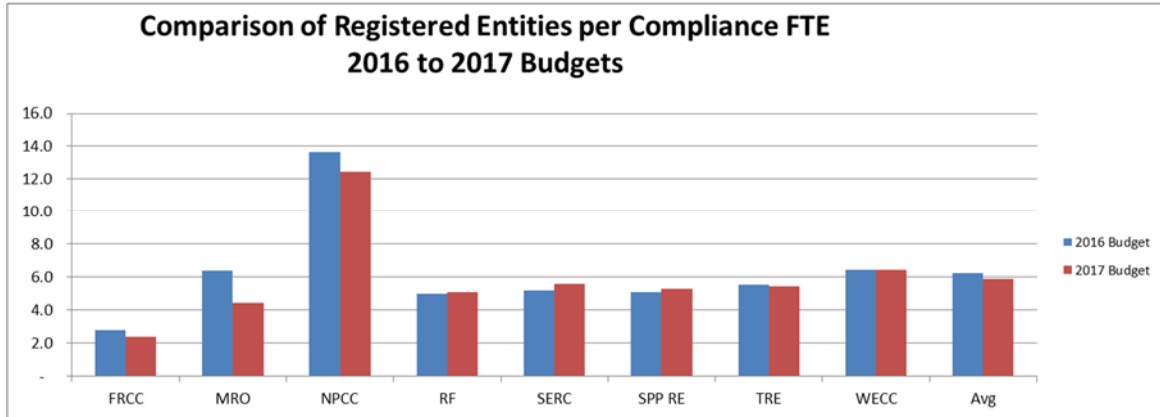




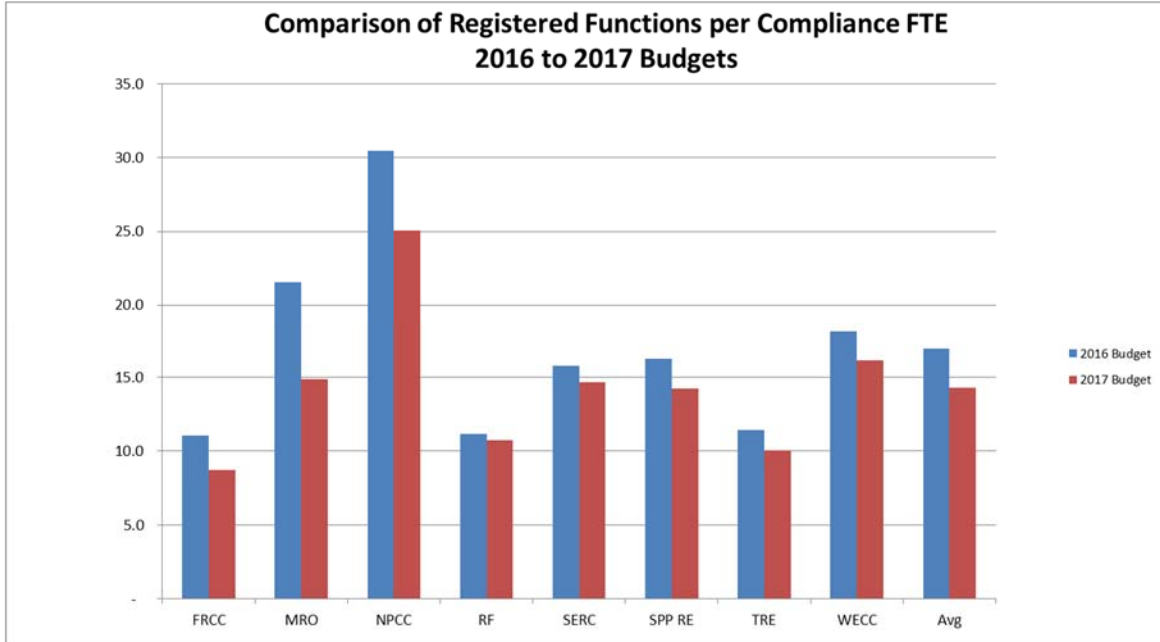
	FRCC	MRO	NPCC	RF	SERC	SPP RE	TRE	WECC	Avg
Compliance FTE	19.59	21.11	17.00	44.75	34.31	21.75	36.25	55.00	31.22
# Registered Entities per Compliance FTE	2.4	4.5	12.5	5.1	5.6	5.3	5.4	6.4	5.9
# Registered Functions per Compliance FTE	8.7	14.9	25.1	10.7	14.7	14.3	10.0	16.1	14.3



	FRCC	MRO	NPCC	RF	SERC	SPP RE	TRE	WECC	Avg
2016 Budget	2.8	6.4	13.6	5.0	5.2	5.1	5.5	6.4	6.2
2017 Budget	2.4	4.5	12.5	5.1	5.6	5.3	5.4	6.4	5.9



	FRCC	MRO	NPCC	RF	SERC	SPP RE	TRE	WECC	Avg
2016 Budget	11.0	21.5	30.4	11.1	15.8	16.3	11.4	18.1	17.0
2017 Budget	8.7	14.9	25.1	10.7	14.7	14.3	10.0	16.1	14.3



**NORTH AMERICAN ELECTRIC RELIABILITY
CORPORATION**

2017 BUSINESS PLAN AND BUDGET FILING

ATTACHMENT 7

METRICS ON NERC AND REGIONAL ENTITY

ADMINISTRATIVE (INDIRECT) COSTS

BASED ON

THE 2016 AND 2017 BUDGETS

**Analysis of Indirect (Administrative Services) Costs
2017 Budget versus 2016 Budget**

2016 BUDGET						2017 BUDGET				
Total Statutory Budget	Total Statutory Direct Budget	Total Statutory Indirect Budget	% Statutory Indirect Budget to Total Statutory	Ratio of Statutory Direct Budget to Indirect Budget		Total Statutory Budget	Total Statutory Direct Budget	Total Statutory Indirect Budget	% Statutory Indirect Budget to Total Statutory	Ratio of Statutory Direct Budget to Indirect Budget
\$ 67,186,665	\$ 36,744,230	\$ 30,442,435	45.3%	1.21	NERC	\$ 69,602,175	\$ 38,187,340	\$ 31,414,835	45.1%	1.22
7,261,527	6,388,331	873,196	12.0%	7.32	FRCC	7,177,854	6,311,736	866,118	12.1%	7.29
11,354,641	6,825,231	4,529,410	39.9%	1.51	MRO	11,226,668	6,786,617	4,440,051	39.5%	1.53
15,072,998	9,620,222	5,452,776	36.2%	1.76	NPCC	15,147,054	9,700,335	5,446,719	36.0%	1.78
19,367,210	13,835,158	5,532,052	28.6%	2.50	RF	19,908,939	14,170,620	5,738,319	28.8%	2.47
16,350,325	9,163,091	7,187,234	44.0%	1.27	SERC	17,482,403	9,305,229	8,177,174	46.8%	1.14
10,095,819	5,464,121	4,631,698	45.9%	1.18	SPP RE	10,865,511	5,799,846	5,065,665	46.6%	1.14
11,782,215	7,557,810	4,224,405	35.9%	1.79	Texas RE	12,167,256	7,491,452	4,675,804	38.4%	1.60
28,083,548	17,761,805	10,321,743	36.8%	1.72	WECC	26,796,927	17,029,829	9,767,098	36.4%	1.74
			36.0%	2.25	AVERAGE				36.6%	2.21

2016 BUDGETED FTEs						2017 BUDGETED FTEs				
Total Statutory FTEs	Total Statutory Direct FTEs	Total Statutory Indirect FTEs	Indirect FTE as % of Total FTE	# Direct to Indirect Statutory FTEs		Total Statutory FTEs	Total Statutory Direct FTEs	Total Statutory Indirect FTEs	Indirect FTE as % of Total FTE	# Direct to Indirect Statutory FTEs
192.48	121.25	71.23	37.0%	1.70	NERC	189.88	120.56	69.33	36.5%	1.74
30.59	26.12	4.47	14.6%	5.84	FRCC	29.99	25.80	4.19	14.0%	6.16
43.00	32.51	10.49	24.4%	3.10	MRO	42.94	31.27	11.67	27.2%	2.68
36.86	27.86	9.00	24.4%	3.10	NPCC	36.86	28.86	8.00	21.7%	3.61
72.20	57.60	14.60	20.2%	3.95	RF	72.30	57.60	14.70	20.3%	3.92
78.12	51.13	26.99	34.5%	1.89	SERC	75.00	49.70	25.30	33.7%	1.96
32.25	27.75	4.50	14.0%	6.17	SPP RE	33.25	28.75	4.50	13.5%	6.39
60.00	46.25	13.75	22.9%	3.36	Texas RE	60.00	46.25	13.75	22.9%	3.36
140.50	94.10	46.40	33.0%	2.03	WECC	140.00	97.00	43.00	30.7%	2.26
			25.0%	3.46	AVERAGE				24.5%	3.56