

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

First Draft

2015 Business Plan and Budget

May 16, 2014

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 Electric System (BES) in North America. NERC's area of responsibility spans the continental United States and Canada and the northern portion of Baja California, Mexico. Entities under NERC's jurisdiction are the users, owners, and operators of the bulk power system—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 (100kV 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) certified NERC as the Electric Reliability Organization (ERO) within the United States to establish and enforce reliability standards for the United States portion of the Bulk-Power System ([BESBPS](#)), pursuant to section 215 of the Federal Power Act. NERC is subject to regulatory oversight by FERC. 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 BES 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 U.S., the provinces of Ontario (in 2002) and New Brunswick (in 2004) adopted all Reliability Standards that were approved by the NERC 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 standards are mandatory and enforceable in Ontario and New Brunswick as a matter of provincial law. Manitoba has adopted legislation and standards are mandatory in Manitoba. In addition, NERC has been designated as the “electric reliability organization” under Alberta’s Transportation Regulation, and certain Reliability Standards have been approved in that jurisdiction; others are pending. NERC 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.

In Mexico, the Comisión Federal de Electricidad (CFE) has signed WECC's reliability management system agreement, which only applies to Baja California Norte.

Membership and Governance

An 11-member Board of Trustees (Board), comprised of 10 independent directors plus NERC's president and chief executive officer serving as the management trustee, governs NERC. The Board has formed several committees to facilitate its oversight of the organization in the areas of finance and audit, governance and human resources, compliance, standards oversight and technology, nominations, and most recently of enterprise-wide risk. In February 2014, the former risk management and internal controls subcommittee (RMICS) of the Finance and Audit Committee was approved as ~~its own~~ its own a separate committee of the Board known as the Enterprise-wide Risk Committee (EWRC). The EWRC provides oversight and guidance regarding corporate risk management and internal audit functions. Additionally, the Reliability Issues Steering Committee (RISC) serves as an advisory committee that reports directly to the Board and triages and provides front-end, high-level leadership and accountability for nominated issues of strategic importance to BES reliability.

Membership in NERC is open to any person or entity that has an interest in the reliability of the North American BES. Membership in NERC is voluntary and affords participants the opportunity to engage in the governance of the organization through election to the Member Representatives Committee (MRC)¹. Over six hundred entities and individuals are members of NERC.

Scope of Oversight

As the international, multi-jurisdictional ERO, NERC is authorized to:

- Propose, monitor compliance with, and enforce mandatory reliability standards for the North American ~~BPS~~bulk power system, subject to regulatory oversight and approvals of FERC in the U.S. and applicable authorities in Canada;
- Conduct near-term and long-term assessments of the reliability and future adequacy of the North American ~~BPS~~bulk power system;
- Certify bulk power system 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 the reliability of the bulk power system;
- Coordinate efforts to improve physical and cyber security for the bulk power system of North America;
- Conduct detailed analyses and investigations of system disturbances and unusual events to determine root causes, uncover lessons learned, and issue relevant findings as advisories, recommendations, and essential actions to the industry; and

¹ 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.

- Identify, based on lessons learned, the potential need for new or modified reliability standards, improved compliance –monitoring and enforcement methods, or other initiatives.

Delegated Authorities

In executing its scope, 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 Corporation (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)²). These agreements describe the authorities delegated and responsibilities assigned to the Regional Entities in the United States to address, among other things: (i) development of regional reliability standards, (ii) monitoring compliance with and enforcing mandatory reliability standards (both North American wide and regional), certification of registered entities, registration of owners, operators and users of the BES, (iii) reliability assessment and performance analysis, (iv) training and education, (v) event analysis and reliability improvement and (vi) 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.

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 Enterprise³ (the “enterprise”). In 2014, a common operating model, Improving Coordinated Operations across the ERO Enterprise, was developed to define how NERC and the Regional Entities achieve excellence in the oversight and execution of statutory functions by collaborating and working together 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.

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

² WECC has sub-delegated its Reliability Coordinator (“RC”) and Interchange Authority (“IA”) functions to Peak Reliability, which commenced operations and assumed the RC and IA functions within the WECC footprint on January 2, 2014.

³ The term ERO Enterprise refers to NERC and the eight Regional Entities, which include Florida Reliability Coordinating Council, Inc. (FRCC), Midwest Reliability Organization (MRO), Northeast Power Coordinating Council, Inc. (NPCC), ReliabilityFirst Corporation (RF), SERC Reliability Corporation (SERC), Southwest Power Pool Regional Entity (SPP), Texas Reliability Entity, Inc. (Texas RE), and Western Electricity Coordinating Council (WECC).

assessments, and program performance assessments. NERC input and review occurs before regional board approval.

Similarly, the Regional Entities have a mirrored set of responsibilities which include being responsive to the design of the operational model; providing inputs into the overall development of each ERO program area; providing training and development to meet ERO qualifications; and 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 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 which 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 2005⁴, 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 FERC regulations also specify procedures for NERC's funding in the United States. NERC's annual business plan and budget is subject to FERC approval in the United States. Once approved, assessments are allocated to load-serving entities 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 funding requirements for each Regional Entity are addressed separately in each Regional Entity's business plan and budget, 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.

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

Introduction and Executive Summary

TOTAL RESOURCES (in whole dollars)				
	2015 Budget	U.S.	Canada	Mexico
Statutory FTEs	189.48			
Non-statutory FTEs				
Total FTEs	189.48			
Statutory Expenses	\$ 56,015,451			
Non-Statutory Expenses	\$ -			
Total Expenses	\$ 56,015,451			
Statutory Inc (Dec) in Fixed Assets	\$ 1,285,494			
Non-Statutory Inc (Dec) in Fixed Assets	\$ -			
Total Inc (Dec) in Fixed Assets	\$ 1,285,494			
Statutory Working Capital Requirement	\$ (489,643)			
Non-Statutory Working Capital Requirement				
Total Working Capital Requirement	\$ (489,643)			
Proceeds from Financing Activities	\$ (439,669)			
Total Statutory Funding Requirement	\$ 56,371,633			
Total Non-Statutory Funding Requirement	\$ -			
Total Funding Requirement	\$ 56,371,633			
Statutory Funding Assessments	\$ 54,252,333			
Non-Statutory Fees				
NEL	4,476,669,439	3,949,655,760	515,406,761	11,606,918
NEL%	100.00%	88.23%	11.51%	0.26%

Strategic Goals, Objectives and Metrics

The development of the common operating model, for NERC and the Regional Entities, helped align the enterprise's business planning goals, objectives, metrics and assumptions for the 2014-2017 planning period. In February 2014, the NERC board of trustees approved an updated version of the [ERO Enterprise Strategic Plan](#) with newly aligned goals, objectives and deliverables for the 2014-2017 planning period. Prior to its approval, the plan was included as part of the February 2014 policy input request letter issued by the Chair of the NERC board of trustees to the MRC for member comment. The written comments and policy input received were posted on the NERC website and corresponding actions related to strategic planning and the business plan are being tracked on an ongoing basis as part of the business plan and budget process.

Performance Metrics

The strategic plan for 2014-2017 includes five consolidated goals, within the existing areas of standards; compliance, registration and certification; risks to reliability; and coordination and collaboration. New in 2014, NERC and the Regional Entities agreed to implement four overarching performance metrics designed to assess the overall effectiveness of the enterprise in addressing risk to the BES and improving BES reliability. These metrics concentrate on achieving reliability results, assuring standards and compliance effectiveness, and improving risk mitigation and program execution. The enterprise metrics are reviewed annually as part of the strategic planning process and prioritized based on current year activities and major initiatives.

In May 2014, the NERC Board approved the [2014 performance metrics](#). The four metrics, used in 2014 to measure the enterprise's success against the strategic goals, are not inclusive of all the objectives and deliverables identified for the entire three year planning period; therefore some of the deliverables listed in the strategic plan may not be specifically listed word-for-word in the four metrics approved for 2014. The 2015 performance metrics are expected to be finalized in the fall of 2014.

NERC publicly posts and reviews quarterly corporate performance results with its Corporate Governance and Human Resources Committee.

Stakeholder Engagement

As one of the enterprise's guiding principles, NERC and the Regional Entities sought to involve the expert knowledge and experience of stakeholders [on a collaborative basis](#) in the early [collaboration development](#) of updates to the strategic plan, in the identification of priority risk-based activities, and in the development of the 2015 business plan and budget. Stakeholder input and expertise was obtained from a number of sources, including but not limited to the RISC, other standing committees of the board of trustees and the MRC's business planning and budget input group which was specifically established in 2012 to provide and help coordinate annual input in the development of NERC's business plan and budget.

Priorities and Major Activities

The electric grid is one of the nation's most critical infrastructures and the North American BES is one of the largest, most complex, and most robust systems ever created. Several, if not all, of the other critical infrastructure sectors are dependent on electric power. As the organization charged with ensuring the reliability and security of the North American grid, [there is NERC maintains](#) continued focus on the changing risk landscape from conventional risks, such as extreme weather and equipment failures, to new and emerging risks in the security arena. Coordinated physical and cyber-attacks intended to disable elements of the power grid or deny

Demonstrating Success (2014 -2017)

- Achieve reliability results
- Assure standards and compliance effectiveness
- Improve risk mitigation
- Execute effective ERO programs

electricity to specific targets, differ from conventional risks in that they result from intentional actions by adversaries and are not simply random failures or acts of nature. These threats are not new, but have evolved and continue to demand more and more attention from industry and the ERO while they retaining focus on conventional risks. Recognizing the costs to for ratepayers/electricity users associated with these efforts requires prioritization, along with risk management, to ensure that we are focusing resources on the greatest risks to the reliability of the BES.

NERC and the Regional Entities are invested in achieving positive results for reliability, demonstrating the effectiveness of the ERO by closing gaps in Reliability Standards, designing and implementing effective risk based compliance monitoring and enforcement, and executing ERO programs and operational activities supporting transparent and reliability focused strategic goals and objectives. The following paragraphs highlight key initiatives and priorities.

Risk-Based Strategy - (ERO Enterprise Goal 4 and Metric 3)

The enterprise continues to integrate risk management principles and set priorities to address the reliability issues of greatest importance. The focus in 2015 and beyond will be to solve specific issues that present risk to reliability, improve reliability performance, minimize the use of less effective processes and avoid using already limited resources on less important issues.

In 2013, the Reliability Issues Steering Committee (RISC) presented priority recommendations⁵ to the NERC board of trustees and worked closely with NERC and Regional Entity staffs to review, analyze and identify a number of high priority reliability risk areas of strategic importance for the ERO. This collaborative risk-based prioritization is being integrated into a multi-year reliability risk management process to identify those risk-based projects the enterprise will undertake year-to-year, ensure the efficient use of resources to focus on high risk areas, maximize opportunities for industry input, and align with the ERO's strategic and business planning priorities.⁶

The following list identifies the current risk projects that were selected from this collaborative risk-based prioritization process and the areas for focus in 2014, with a number of these efforts extending into 2015. The list is not inclusive of all the activities planned to be undertaken by the ~~ERO Enterprise~~ in 2015. The complete 2015 list will be identified following a comparable compilation of risk control projects and as the RISC guidance informs the priorities and effective projects. A preliminary set of 2015 project areas is provided in the discussion of the Section A, Reliability Assessment and Performance Analysis Department's 2015 activities in Section A.

Current ERO Enterprise High Priority Risk Projects:

1. **Changing Resource Mix** - As the generation and load on the power system changes (e.g. integrated variable resources, increased dependence on natural gas, increased demand-

⁵ See http://www.nerc.com/comm/RISC/Related%20Files%20DL/RISC_Priority_Recommendations-Jul_26_2013.pdf for the complete report.

⁶ Please refer to Reliability Assessment and Performance Analysis program in Section A for additional detail regarding the overall planned risk project portfolio and associated projects within the respective program area details, as well as the consolidated resource allocations.

side management, new technologies deployed), the system is being brought into states that are significantly different than those considered when the system was designed and planned, exposing new vulnerabilities not previously considered. Fundamental operating characteristics and behaviors are no longer a certainty. Absent focused action to respond, this risk will increase.

2. **Extreme Physical Events** - While the probability of physical events (such as physical attack, geomagnetic disturbance, or severe weather) that lead to extensive damage is low, the potential consequences are high enough that risk avoidance (reducing the probability) is insufficient as a sole risk management strategy. Risk mitigation efforts (reducing the potential consequence) are also underway, but additional focus is needed to address this risk and minimize both the magnitude and duration of the consequences of an extreme physical event.
3. **Protection System Misoperations** - NERC's 2012 and 2013 State of Reliability Reports identified protection system misoperations as a significant threat to BES reliability. Additional activities are needed to ensure this risk is managed adequately.
4. **Cold Weather Preparedness** – Lack of generator preparedness for cold weather extremes may result in forced outages, de-ratings, and failures to start. Insufficient availability of intra-regional generation and limits on import transfer capability may result in insufficient generation to serve forecasted load, resulting in load shedding.
5. **Right-of-Way Clearances** - Transmission Owners and applicable Generation Owners may have established incorrect ratings based on design documents, rather than on the actual facilities built. Managing to stay within operating limits that are based on incorrect ratings may be inadequate to prevent equipment damage and/or cascading, instability, or separation.
6. **345-kV Breaker Failures** - NERC has identified a potential trend of 345 kV SF6 puffer type breakers failing. Circuit breaker failures, in conjunction with another fault, may lead to more BES facilities removed from service than required to clear the original fault. This poses a risk to the reliability of the BES.

In 2015, using the 2014 projects as a baseline for gauging resource demands, NERC plans to provide an equivalent level of support to address high risk priority projects. Section A describes the resources anticipated to support risk projects in 2015, taking into account the need to reallocate existing resources from 2014 to support the continuation and completion of project activities in 2015.⁷

⁷ In addition to the foregoing risk based activities, NERC also incorporates risk considerations into other program area activities as further described in Section A.

Physical and Cyber Security - (ERO Enterprise Goals 3 and 4)

In March 2014, FERC directed the ERO to create one or more physical grid security Reliability Standards that require registered entities to address physical security risks and vulnerabilities related to the reliable operation of the BES. NERC engaged subject matter experts throughout the Regions and among industry to assist in drafting a standard within a 90 day time period. The proposed standard requires registered entities to prioritize their most critical assets based on vulnerability and other criteria. The proposed standard final ballot closed on May 5, 2014 with 86 percent approval from the ballot body, was adopted by the Board on May 13, 2014, and was filed with the Commission for approval on May 23, 2014.

NERC has initiated a transition program to help industry understand and implement NERC's Critical Infrastructure Protection Version 5 (CIP Version 5) Reliability Standards in a timely, efficient manner. The CIP Version 5 represents a significant improvement over the current CIP Version 3 standard. CIP Version 5 adopts new cybersecurity controls and extends the scope of the systems that the CIP standards protect. The transition program will be in place through the enforcement date of the V5 standards. The goal of the transition program is to improve industry's understanding of the technical security requirements for CIP Version 5, as well as the expectations for compliance and enforcement.

The company will also continue to focus on creating cyber and physical security awareness through its annual GridSec security conference and semi-annual Grid-X national security exercise.

Reliability Assurance Initiative – (ERO Enterprise Goal 3 and Metric 4)

NERC and the Regional Entities continue to improve compliance and enforcement operations by focusing oversight and resources on improving processes as well as reducing unnecessary costs and administrative burdens on registered entities, while ensuring the continued reliable operation of the bulk power system. Implementing RAI remains a multiyear effort to promote efficiencies, eliminate undue regulatory burdens, streamline documentation and reporting requirements, improve the processing of noncompliance, and develop new tools and training materials.

The major RAI activities underway in 2014 include: (1) development of a single ERO Enterprise method for registered entity reliability risk assessments including an evaluation and testing of registered entity internal controls; (2) consolidation of the expanded scope of matters that may be processed through the Find, Fix, Track and Report (FFT) tool, and initial implementation of aggregation and discretion processes; and (3) implementation of a complete auditor manual with an approved auditor handbook and checklist. Other enforcement enhancements will continue during 2014, including tools that provide greater transparency into internal ERO processes, such as the assessment of risk from noncompliance and development of mitigation activities, and process improvements associated with coordination of compliance and enforcement activities for multi-region registered entities. Completed in 2014, the ERO Auditor Capabilities and Competencies Guide, which was completed in 2014, has been posted on the NERC website and will be a critical component of auditor staff development and training.

Several RAI activities are planned, for 2015 and beyond, based on the results and successful implementation of the 2014 RAI activities: (1) development and execution of a training program to support implementation of the ERO Auditor Capabilities and Competencies Guide; (2) development and delivery of training for the single compliance approach; (3) implementation of an ~~enterprise-wide~~ ~~enterprise-wide~~ compliance tracking tool to support RAI activities; (4) compliance activities related to the successful transition to CIP version 5; (5) design and implementation of governance, risk, and compliance management tools to support compliance oversight planning; and (6) consolidation of new enforcement processes and activities.

The 2015 RAI activities are necessary to implement the strategic risk-based reforms intended to reduce unnecessary regulatory burden on industry, increase efficiency by aligning resources associated with compliance monitoring and enforcement programs towards greater direct reliability benefit. The bulk of these activities will be resourced from NERC and Regional Entity staffs, but certain activities related to advancing the program implementation and the compliance application tool require third party contractor support.

BES Implementation – (ERO Enterprise Goal 2 and Metric 4)

In 2010, FERC directed NERC to revise the BES definition to encompass all elements and facilities necessary to plan and reliably operate the BES. The revised definition becomes effective on July 1, 2014 and the enterprise continues to guide the consistent evaluation of inclusions, exclusions, and self-notifications of BES elements. NERC and the Regional Entities will be engaged in activities supporting the implementation of the recent changes to the BES definition.

These implementation activities began in 2014 and will extend through 2015 and include (1) the BES element evaluation process and associated procedures to provide a uniform, clear way of determining assets contained within the BES; (2) review of self-determined notifications by entities; (3) review of entity submitted exceptions to the BES definition by Regions and NERC, (4) consideration of reviews and appeals of BES determinations and associated registration aspects; (5) providing guidance regarding Reliability Standard applicability; and (6) managing compliance and enforcement monitoring.

Risk-Based Registration – (ERO Enterprise Goal 2 and Metric 4)

In 2014, NERC and the Regional Entities are developing a risk-based registration (RBR) program that ensures entities are properly registered or de-registered commensurate with risk to the BES, are properly scoped, and are responsible for applicable Reliability Standards along with associated compliance obligations. NERC's registration rules and criteria are set forth in Section 500 and Appendices ~~5A and 5B~~ to the NERC Rules of Procedure. ~~This registration criteria~~ The RBR program will focus on the scope of an entity's compliance responsibilities according to the BES reliability risks it poses. ~~Namely, w~~With the maturation of the ERO along with associated industry experience, ~~these registration~~ criteria are now being revisited to adjust them with a risk-based technical foundation. These adjustments are focused on avoiding unnecessarily registering all potential entities without consideration of their materiality and risks to reliability. The goal of risk-based registration is to enhance the registration criteria so they contain threshold criteria complemented by risk-based methods. This approach will be used to exclude entities with

smaller and lower voltage assets that would have a very low likelihood of posing a risk to the reliability of the BPS, while at the same time, adjusting the scope of Reliability Standard requirements that must be followed.

The implementation of the RBR program is expected to:

- Align entity registration and compliance burden to its materiality and risk to BES reliability;
- Reduce the industry burden associated with registration, while sustaining continued BES reliability;
- Improve use of NERC, Regional Entity and registered entity resources;
- Provide feedback during standards development to enhance the applicability of currently enforceable and future standards; and
- Increase consistency in registration across the eight Regional Entities by developing a common and repeatable approach and improvinge registration and de-registration procedures.

In addition, coordination of this effort will enhance the ERO's ability to:

- Evaluate risks to reliability across the ERO Enterprise; and
- Align changes to the registry criteria with other NERC activities and the BES definition.

Transformation of Standards to a Steady State – (ERO Enterprise Goal 1 and Metric 4)

In accordance with the approved Reliability Standards Development Plan (RSDP), the transformation of the NERC standards to a “steady state” remains a high priority. Steady state was defined in the 2014-2017 RSDP as a 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. A panel of independent experts, in their 2013 review of the NERC Reliability Standards,⁸ also found that the Reliability Standards should be stable, necessary for accountability and sufficient to maintain the reliability of the BES. A steady state standard should not require further work absent a change in reliability risks, technology, practice, or other impetus.

2015 Key Business Planning Assumptions

As part of the annual business planning process, NERC and the Regional Entities formed common business assumptions that were considered when developing their respective business plans and budgets. The Regional Entities used these assumptions to evaluate their projected workload and determine resource levels required to complete necessary tasks and

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http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards_Independent_Experts_Review_Project_Report.pdf

meet the obligations of their Regional Delegation Agreement. The 2015 common business plan and budget assumptions are set forth in Exhibit A.

Application of Section 215 Criteria

In its order approving NERC's 2013 BP&B, the 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.⁹ Exhibit B summarizes the major activities NERC proposes to undertake in 2015 and the approved Section 215 criteria applicable to such activities. ~~Because this first draft of the 2015 BP&B has just been completed, the summary of the 2015 major activities for each program area, and the applicable Section 215 criteria, are incomplete. The second posting of NERC's 2015 BP&B will contain a complete version of Exhibit B~~

Overview of 2015 Budget and Funding Requirements

NERC's 2015 combined expense and fixed asset (capital) budget is approximately \$57.3M, which represents an increase of approximately \$911k (1.6%) over 2014. Total expenses are approximately \$56M, a 0.7% increase over 2014. The total fixed asset (capital) budget, before accounting for depreciation¹⁰, is approximately \$3.6M, an increase of approximately \$500k over 2014. As further discussed in this section under the heading below entitled "ES-ISAC-Potential Funding Additions", the total budget set forth above does not include approximately \$500-\$600k in additional expenses to fund NERC's participation in the Cyber Risk Information Sharing Program (CRISP) or the exercise of an option to acquire additional space in the company's Washington, D.C. office in order to physically separate ES-ISAC operations from other NERC departments. If these costs are included in NERC's budget, the overall year over year budget increase would be approximately 2.7%.

NERC's total assessments is projected to increase \$2.85M, 5.5% over 2014. The increase in assessments is due to a \$135k reduction in penalty funding, a \$1.7M reduction in the release of excess reserves and offset from capital financing, an \$80k reduction in other sources of funding, and the \$911k increase in NERC's total budget. Of the 5.5% increase in total assessments, the impact from these three factors is 0.3%, 3.4%, and 1.8%, respectively. The allocation of assessments to U.S., Canadian and Mexican entities, after taking into account the application of NERC's policies regarding the allocation of United States penalty funds,¹¹ the allocation of certain compliance and enforcement costs,¹² and using 2013 net energy for load data, will be included in the next draft. These assessment amounts are exclusive of the ES-ISAC potential funding additions discussed above.

⁹ *North American Electric Reliability Corporation, Order on Compliance*, 143 FERC ¶ 61,052 (2013)

+ *North American Electric Reliability Corporation, Order on 2014 Business Plan and Budget of the North American Electric Reliability Corporation and Ordering Compliance Filing*, 145 FERC ¶ 61,097 (2013).

¹⁰ 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 their funding requirements.](#)

¹¹ Accounting, Financial Statement and Budgetary Treatment of Penalties Imposed and Received for Violations of Reliability Standards, December 8, 2008

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				
2014 Budget & Projection, and 2015 Budget				
STATUTORY				
	<u>2014 Budget</u>	<u>2015 Budget</u>	<u>Variance 2015 Budget v 2014 Budget Over(Under)</u>	<u>% Inc 2015 over 2014</u>
Expenses				
Total Personnel Expenses	\$ 34,059,654	\$ 35,159,894	\$ 1,100,240	3.2%
Total Meeting Expenses	\$ 3,789,525	\$ 3,476,246	\$ (313,280)	-8.3%
Total Operating Expenses	\$ 17,612,133	\$ 17,234,950	\$ (377,184)	-2.1%
Other Non-Operating Expenses	\$ 144,000	\$ 144,000	\$ -	
Total Expenses	\$ 55,605,313	\$ 56,015,089	\$ 409,776	0.7%
Fixed Assets				
Depreciation	\$ (2,333,006)	\$ (2,333,006)	\$ 0	
Computer & Software CapEx	2,904,790	3,253,500	348,710	
Equipment CapEx	213,000	365,000	152,000	
Inc(Dec) in Fixed Assets	784,784	1,285,494	500,710	63.8%
TOTAL BUDGET	\$ 56,390,096	\$ 57,300,583	\$ 910,486	1.6%
FTEs	189.53	189.48	-	

NERC's 2015 budget and funding requirements reflects the resources necessary to support achievement of the goals and objectives set forth in the Strategic Plan. The 2015 ~~the~~ budget is comprised of both operating and capital (fixed asset) costs. Operating ~~costs include~~ costs include, but are not limited to: personnel costs based on projected 2014 year-end headcount, consulting costs to support specific program area needs, contracts for 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 2015 budget included:

- Personnel costs
 - No net increase in total budgeted FTEs over 2014
 - 6% FTE adjustment to account for attrition and hiring delays

- 2.5% average salary increase pool
- Incentive compensation budget of 18.4% of base salary expense
- Market increases in medical and dental benefit plan costs

Management spends considerable efforts in reviewing and reallocating personnel resources in order to ensure that appropriate resources are being dedicated to key priorities and activities. The 6% across the board FTE adjustment (reduction) for attrition and hiring delays is based on a three year average of actual to budgeted FTE data. The 2.5% average salary increase is slightly below the 3% market reference which was provided by the company's compensation consultant. The incentive compensation budget of 18.4% of total base salary represents a three year average. Incentive compensation is also tied to corporate, departmental and individual performance results. Medical and dental premium cost estimates are based on market data provided by the company's benefits consultant.

- Meeting and Travel Expense
 - Forecasted reduction based on review of 2013/2014 costs

The company has undertaken significant efforts over the past several years to reduce travel and meeting expenses. In 2013 the company implemented additional policies, systems and controls over travel expenses. The company has also worked closely with Regional Entities to share meeting space where possible which has helped reduce the meeting costs.

- Contractors and Consultants
 - Developed on a department by department basis taking into account existing contractual commitments and individual department requirements
 - Applied 3% across the board adjustment reduction in each Department's original 2015 budget— to account for potential under runs in actual contractor and consulting expense based on historic trends, as well as to help drive lower overall spending in this area.

The following table summarizes total year over year contractor and consulting costs by department, which were reduced by 3% across the board as noted above.

Consultants & Contracts	2014 BUDGET	2015 BUDGET	INC (DEC) OVER 2014
Regional Entity Assurance and Oversight	400,000	388,000	(12,000)
Total Reliability Assessments and Performance Analysis	638,085	955,450	317,365
Total Situation Awareness	1,289,108	1,077,321	(211,787)
Total Critical Infrastructure Department	190,000	426,800	236,800
Total ES-ISAC	786,450	703,335	(83,115)
Total Training, Education and Operator Certification	848,830	757,505	(91,325)
Total Policy and External Affairs	75,000	72,750	(2,250)
Total Information Technology	1,944,000	1,629,600	(314,400)
Total Human Resources	257,500	249,775	(7,725)
Total Finance and Accounting	400,000	388,000	(12,000)
TOTAL CONSULTANTS AND CONTRACTS	6,828,973	6,648,536	(180,437)

Contractor and consulting expenses are developed on a department by department basis and reflect both known and anticipated expenses based on both historic and current information. The Compliance and Registration (Regional Entity Assurance and Oversight) department budget is for consulting support for RAI implementation. Contact and consulting expense for the Reliability Assessment and Performance Analysis program area is largely for software and services supporting reliability data management and analysis. Situation Awareness costs are primarily related to licenses and services supporting SAFNR, and other reliability information and notification (e.g. alerts) systems. Critical Infrastructure ~~d~~Department expenses represent an increase over 2014 due to costs to support the bi-annual Grid-X exercise. Other CID contractor and consulting costs are primarily to support the Critical Infrastructure Protection Committee consistent with historic experience and contract support levels. ES-ISAC costs are for software and services to support current operations, including the ES-IAC portal. These costs do not include the incremental costs to participate in CRISP or the cost to exercise ~~of~~ an option to acquire additional space in the company's Washington, D.C. office in order to physically separate ES-ISAC operations from other NERC departments. These items are discussed further below. Training, Education and Operator Certification contract and consulting costs include the cost of the operator certification, training and continuing education programs, as well as training ~~to~~ of NERC personnel and training supporting compliance and enforcement (RAI) and other training initiatives. Policy and External Affairs costs are for Canadian policy analysis and communications training for NERC staff. Information Technology contract and consulting support is primarily for systems and software maintenance services. Software development costs are primarily budgeted under Fixed (Capital) Assets and are discussed further below. Human Resources contract and consulting costs are-is primarily for employee training, various surveys, compensation studies, and consulting services to support process improvements. Finance and Accounting costs are

primarily for outside auditor services in connection with the annual financial statement audit and Form 990 preparation and filing, as well as audit and consulting services to support for the Enterprise Risk Management and Internal Control audit plan and CCC audit plan.

ES-ISAC-Potential Funding Additions

As noted above, NERC's 2015 budget does not include the projected costs for NERC to participate in CRISP or to exercise an option to acquire additional space ~~it's~~ in its Washington, D.C. office in order to physically separate ES-ISAC operations from other NERC departments. As previously noted, the estimated budget impact of including these two items is \$500k-\$600k.

- **CRISP Program Participation** - The CRISP program is a public-private partnership to facilitate timely information sharing of cyber threat information and develop situation awareness tools to enhance the electricity sector's ability to identify, prioritize, and coordinate the protection of its critical infrastructure. CRISP provides near real time capability for critical infrastructure owners and operators to voluntarily share cyber threat data, analyze this data and receive machine to machine mitigation measures. Information sharing devices which are installed on participant's networks send encrypted data to a CRISP analysis center operated by the Pacific Northwest National Labs, which analyzes the data ~~it's~~ receives and sends alerts and mitigation measures back to CRISP participants through a secure network. There is significant industry interest in CRISP. NERC believes there is merit and broad stakeholder benefit to NERC's participation in CRISP through the ES-ISAC. As a participant, the ES-ISAC would have access to additional cyber threat information which it can analyze, together with other information it receives as the ES-ISAC, and share this information (without attribution and in appropriate declassified format) with ES-ISAC registered users. NERC's participation in CRISP is subject to NERC negotiating acceptable contract provisions with respect to its participation, including provisions regarding sharing information derived from CRISP with ES-ISAC registered users, as well as review of stakeholder comments and necessary corporate and regulatory budget approvals. NERC estimates its cost of participation will be \$200-\$300k.
- **Physical Separation of ES-ISAC personnel** - In February 2012 the Board of Trustees approved an [ES-ISAC Policy Statement](#) that established a separation between the ES-ISAC and NERC's compliance and enforcement program. In support of this policy and in furtherance of one of the FERC recommendations from an audit of NERC, in June 2013 NERC requested comments from stakeholders regarding the impact on NERC's compliance-related activities of the walling off of certain staff from ES-ISAC activities, as further set detailed in the ES-ISAC Policy Statement. In response to the request for comments, stakeholders generally expressed support for this policy¹³. Numerous

¹³ Entities submitting comments included SCE, EEI, the ISO/RTO Council, Duke, TECO, Entergy, PP&L, ITC Holdings, the APPA and LPPC. The full text of the comments may be found at the following link

commenters recommended even stronger separation of the ES-ISAC information sharing function from NERC's compliance and enforcement function, including but not limited to physical separation of ES-ISAC personnel from other NERC personnel, coupled with strong process management with explicit access restrictions from all NERC personnel. Commenters also recommended the adoption of standards of conduct and procedures similar to those governing separation of utility merchant and transmission functions, as well as a change in management reporting structure in which the ES-ISAC would report directly to the NERC president and chief executive officer. In consideration of this input, NERC management undertook a number of initiatives including:

- Separating the ES-ISAC from the Critical Infrastructure Department and having the ES-ISAC and chief security officer report directly to NERC's president and chief executive officer.
- Transferring Critical Infrastructure Department auditors to the department providing oversight of regional entity compliance functions. In addition to removing these auditors from the same department containing ES-ISAC personnel, this transfer provides better functional alignment among the auditors and a more efficient and effective management oversight of the compliance oversight and assurance audit function.
- Finalized and put in place a formal employee [code of conduct](#) to further memorialize the existing separation of the ES-ISAC from compliance and enforcement personnel. The code of conduct contains many of the principals incorporated in codes of conduct separating utility competitive and regulated operations.
- Management has also investigated the costs and benefits of exercising an option to acquire additional space in the company's Washington, D.C. office to physically separate the ES-ISAC from the company's other operations and restrict personnel access between operating areas and the ES-ISAC. In connection with the negotiation of the lease for the company's Washington, D.C. office, management negotiated an option ~~to~~ lease the remaining space consisting of approximately 6,200 rentable square feet on the 6th floor where the company's offices are now located. Exercise of this option would allow the company to physically separate the ES-ISAC from the company's other operations and restrict personnel access between operating areas and the ES-ISAC. The lease provides that the rent for the option space will be based on the "prevailing market". The projected annual cost of leasing the space at a lease rate equivalent to rate per square foot for the company's existing space of approximately \$50 per square foot would add approximately \$300k to the budget, assuming negotiation of a reasonable build out allowance. Estimated incremental operating costs would add an additional \$5k in annual costs to the budget.

Fixed Asset (Capital) Budget and Capital Financing

NERC's 2015 capital budget is approximately \$3.6M, which represents an increase of approximately \$500k over 2014. The table below provides a summary of the major capital budget components.

NERC 2015 CAPITAL BUDGET

Computer & Software CapEx	
ERO Application Development	1,700,000
Generation Data Software	200,000
Hardware	100,000
	\$ 2,000,000
IT Hardware and Software	
Disaster Recovery	250,000
Data Storage	325,000
Replacement servers	202,000
NERC Software licenses	350,500
Replacement laptops	126,000
	\$ 1,253,500
Equipment CapEx	
Replacement network devices	\$ 365,000
	\$ 3,618,500
Total Capital Budget	\$ 3,618,500

NERC has budgeted 1.7M¹⁴ in 2015 for services related to the planning, design and implementation of software applications supporting common NERC and Regional Entity operations. Senior management of NERC and the Regional Entities are currently in the process of refining and updating the ERO Enterprise's long term information technology architecture and data management plans and the specific applications that will be developed in 2015. The proposed \$1.7M budget represents a reduction in the forecasted 2015 enterprise application development budget presented in NERC's 2014 business plan and budget. The 2015 capital budget also includes \$200k for development of a replacement software applications for a legacy application called PC-GAR which is used by industry to access information from the Generation Analysis Data (GADS) database, as well as \$100k for hardware to support ERO applications. Further information regarding ERO Enterprise application development budget is contained in Section A, Information Technology Department. NERC's 2015 capital budget also includes funding

¹⁴ Depending on the nature of the expenditures that may or may not be capable of being capitalized. Examples would be expenses related to the development planning or to the extent a decision is made for a third party to develop, host and maintain the application. To the extent the expenditures cannot be capitalized they will be recorded as a variance in contractor and consulting expenses which are recorded under the operating expense portion of NERC's budget. However, management is committed to working with the limitations of its overall operating and capital budget with respect to enterprise software and hardware relate expenditures.

for development of a disaster recovery plan, data storage, replacement of servers and laptops, as well as software license costs.

The 2015 budget projection assumes that \$2M of the total \$3.6M capital budget will be financed as part of the capital financing program that was described and authorized as part of the 2014 business plan and budget. Further information regarding capital financing may be found in Exhibit D.

Working Capital and Operating Reserves

Management is proposing a budget of \$4.9M for working capital and operating reserves, which represents a reduction of \$809.6k from 2014. Working capital reserves, which represent funds reserved for future liabilities, are budgeted at \$3.2M, which is a reduction of \$319.9k compared to 2014. The total budget for known and unforeseen contingencies has been reduced to \$1M, which represents a \$1M reduction compared to the 2014 budget. This reduction in the amount of operating reserves is primarily designed to mitigate the increase in NERC's 2015 assessments due to the one time application of \$1.2M of 2013 funding to reduce 2014 assessments. Should access to additional reserves become necessary during 2015 management has the ability to draw on its existing \$4M line of credit, seek necessary corporate and regulatory authorizations to access working capital reserves, or propose and seek expedited approval of a budget amendment. Additionally, the operating reserve budget for the System Operator Certification Program is \$643k, reflecting the planned use of \$415k of program reserves to support budgeted costs in excess of funding. Further funding. Further information regarding working capital and operating reserves may be found in Exhibits D and E.

Senior management will be working with the senior management of the Regional Entities, the NERC Finance and Audit Committee and the Board to develop additional long term working capital and operating reserve policy guidance with the goal of mitigating large year to year swings in assessments. As always, NERC will also seek input from stakeholders in the development of this guidance and any associated policies.

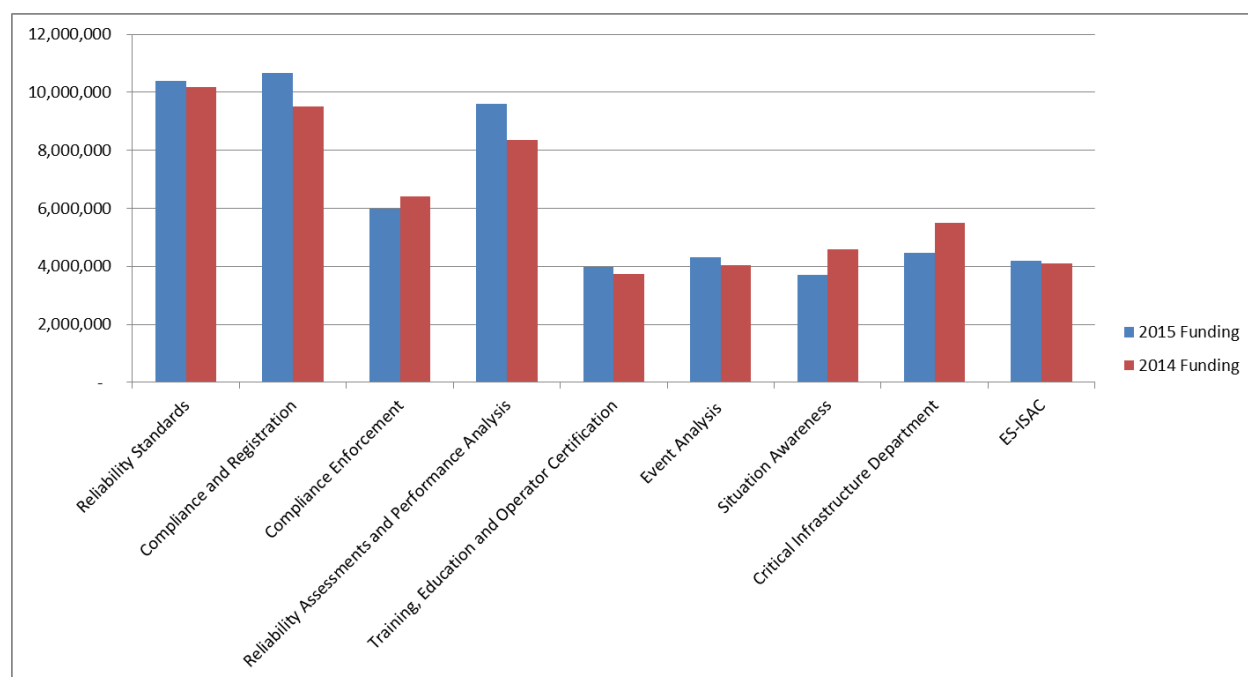
Department Budget and FTE Comparisons

The following table sets forth a 2014–2015 total budget (operating expenses plus fixed assets minus depreciation) comparison by department, followed by a bar chart comparison of funding by department. As further detailed in Section B, total indirect expenses and fixed asset costs allocated to the statutory departments and included in the total 2014 and 2015 budgets reflected below are approximately 8.9% higher in 2015 due to the (i) reallocation of personnel to support NERC and stakeholder committees and (ii) transfer of the budget for development of ERO software applications to the Information Technology department since these applications benefit multiple departments and should be allocated across multiple departments similar to other IT expenditures. ~~[[?? I thought the IT project costs were transferred from the direct program budgets to the IT department budgets a couple of years ago – in other words, item (ii) is not a reason for an increase]]~~ The increase in Compliance, Certification and Registration department costs is primarily due to the transfer of the CIP auditors to this department as part of the internal reorganization described above. The increase in the Reliability Assessment and Performance

Analysis department budget is due to reallocation of resources to that department to further support risk assessment activities. The increase in the Training, Education and Operator Certification and Event Analysis budgets is generally due to an increase in the indirect expense and fixed asset allocations, as explained above. The increase in the Training, Education and Operator Certification budget was partially offset by lower contractor and consulting expenses. The reduction in the Situation Awareness department budget is due to reductions in contractor and consulting expense and capitalized software costs. The reduction in the Critical Infrastructure department budget is primarily due to the transfer of personnel to the Compliance and Registration Department and the transfer of a position to the ES-ISAC. The ES-ISAC budget is approximately the same as 2014, but does not include the additional projected costs of CRISP participation discussed above.

Total Budget	Budget	Budget	Change	
	2014	2015	2015 Budget v 2014 Budget	% Change
Reliability Standards	10,167,369	10,395,411	228,042	2.2%
Compliance and Registration	9,496,446	10,672,527	1,176,081	12.4%
Compliance Enforcement	6,395,091	5,990,476	(404,615)	-6.3%
Reliability Assessments and Performance Analysis	8,350,598	9,594,778	1,244,179	14.9%
Training, Education and Operator Certification	3,737,472	3,988,544	251,071	6.7%
Reliability Risk Management				
Event Analysis	4,048,371	4,308,005	259,634	6.4%
Situation Awareness	4,583,264	3,701,182	(882,083)	-19.2%
Critical Infrastructure Department*	5,507,708	4,451,621	(1,056,087)	-19.2%
ES-ISAC*	4,103,777	4,198,402	94,625	2.3%
Total Budget	56,390,096	57,300,945	910,849	1.6%

*The 2014 budget allocation between the Critical Infrastructure Department and ES-ISAC is slightly different than the allocation presented in the 2014 Business Plan and Budget due to a correction in the allocation of costs between the two departments.



The following chart presents a year-over-year comparison of FTEs by department and reflects 2014 personnel additions and interdepartmental transfers, attrition assumptions, and proposed 2015 personnel additions. It is followed by a statement of activities comparing the 2014 budget and the proposed 2015 budget.

The increase in FTEs in the General and Administrative area is due to a reallocation of personnel supporting the Members' Representatives' Committee and Regional Entity Management Group activities. The addition of FTEs in the Information Technology area reflects the addition of a Chief Information Officer and project management support to further information technology strategy development and execution. The increase in the Finance and Accounting area reflects the addition of staff in 2014 to support the Risk Management and Internal Controls function, as well as the addition of an accounting position to further strengthen segregation of duties, cross training and back-up functions.

Total FTE's by Program Area	Budget 2014	Budget 2015	Change from 2014 Budget
STATUTORY			
Operational Programs			
Reliability Standards	25.9	24.4	(1.5)
Compliance and Registration	23.0	23.4	0.4
Compliance Enforcement	18.2	15.0	(3.2)
Reliability Assessments and Performance Analysis	19.0	19.7	0.7
Training, Education and Operator Certification	8.2	8.0	(0.2)
Event Analysis	9.6	9.4	(0.2)
Situation Awareness	6.2	6.1	(0.1)
Critical Infrastructure Department	12.5	8.4	(4.0)
ES-ISAC	7.7	7.5	(0.2)
Total FTEs Operational Programs	130.4	121.9	(8.5)
Administrative Programs			
General & Administrative	10.6	13.1	2.6
Legal and Regulatory	15.2	15.0	(0.1)
Information Technology	18.1	19.7	1.6
Human Resources	2.9	2.8	(0.1)
Finance and Accounting	12.5	16.9	4.4
Total FTEs Administrative Programs	59.1	67.5	8.4
Total FTEs	189.5	189.5	(0.0)

The NERC 2015 organizational chart can be found in Appendix 1.

Statement of Activities and Fixed Assets Expenditures					
2014 Budget & Projection, and 2015 Budget					
STATUTORY					
	2014 Budget	2014 Projection	Variance 2014 Projection v 2014 Budget Over(Under)	2015 Budget	Variance 2015 Budget v 2014 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 51,401,382	\$ 51,401,382	\$ (0)	\$ 54,252,333	\$ 2,850,950
Penalty Sanctions	290,000	290,000	-	155,000	(135,000)
Total NERC Funding	\$ 51,691,382	\$ 51,691,382	\$ (0)	\$ 54,407,333	\$ 2,715,950
Membership Dues	-	-	-	-	-
Testing Fees	1,620,000	1,620,000	-	1,670,000	50,000
Services & Software	50,000	50,000	-	50,000	-
Workshops	354,000	354,000	-	241,300	(112,700)
Interest	20,000	20,000	-	3,000	(17,000)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 53,735,382	\$ 53,735,382	\$ (0)	\$ 56,371,633	\$ 2,636,250
Expenses					
Personnel Expenses					
Salaries	\$ 26,218,572	\$ 26,018,122	\$ (200,450)	\$ 26,938,478	\$ 719,906
Payroll Taxes	1,570,954	1,707,968	137,014	1,686,548	115,594
Benefits	3,385,917	3,200,898	(185,019)	3,603,757	217,840
Retirement Costs	2,884,211	2,715,590	(168,621)	2,931,573	47,362
Total Personnel Expenses	\$ 34,059,654	\$ 33,642,578	\$ (417,076)	\$ 35,160,356	\$ 1,100,702
Meeting Expenses					
Meetings	\$ 1,052,150	\$ 1,050,980	\$ (1,170)	\$ 995,000	\$ (57,150)
Travel	2,419,525	2,221,330	(198,195)	2,173,395	(246,130)
Conference Calls	317,851	279,684	(38,166)	307,751	(10,100)
Total Meeting Expenses	\$ 3,789,525	\$ 3,551,994	\$ (237,531)	\$ 3,476,146	\$ (313,380)
Operating Expenses					
Consultants & Contracts	\$ 6,828,973	\$ 6,851,046	\$ 22,073	\$ 6,648,536	\$ (180,437)
Office Rent	2,617,300	2,617,299	(1)	2,617,300	-
Office Costs	3,506,074	3,267,628	(238,446)	3,278,328	(227,746)
Professional Services	2,290,280	2,290,280	-	2,321,280	31,000
Miscellaneous	36,500	33,000	(3,500)	36,500	-
Depreciation	2,333,006	2,137,193	(195,813)	2,333,006	-
Total Operating Expenses	\$ 17,612,133	\$ 17,196,446	\$ (415,687)	\$ 17,234,950	\$ (377,183)
Total Direct Expenses	\$ 55,461,313	\$ 54,391,019	\$ (1,070,294)	\$ 55,871,451	\$ 410,139
Indirect Expenses	\$ 0	\$ -	\$ (0)	\$ -	\$ (0)
Other Non-Operating Expenses	\$ 144,000	\$ 79,367	\$ (64,633)	\$ 144,000	\$ -
Total Expenses (B)	\$ 55,605,313	\$ 54,470,386	\$ (1,134,927)	\$ 56,015,451	\$ 410,139
Change in Assets	\$ (1,869,930)	\$ (735,004)	\$ 1,134,926	\$ 356,182	\$ 2,226,112
Fixed Assets					
Depreciation	\$ (2,333,006)	\$ (2,137,193)	195,813	\$ (2,333,006)	\$ -
Computer & Software CapEx	2,904,790	2,904,790	-	3,253,500	348,710
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	213,000	213,000	-	365,000	152,000
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ -	\$ 0	\$ 0	\$ -	\$ -
Inc(Dec) in Fixed Assets (C)	784,784	980,597	195,813	1,285,494	500,710
TOTAL BUDGET (=B + C)	\$ 56,390,096	\$ 55,450,983	\$ (939,114)	\$ 57,300,945	\$ 910,849
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)¹	\$ (2,654,714)	\$ (1,715,601)	\$ 939,113	\$ (929,312)	\$ 1,725,402
FTEs	189.5	186.8	(2.8)	189.5	(0.0)

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 115 for a complete analysis of the Working Capital and Operating Reserve balance.

Projections for 2016–2017

Management is in the process of developing operating and fixed asset (capital) budget projections for 2016 and 2017 and will include those projections in the next draft of its business plan and budget, together with a list of the significant assumptions considered in preparing these projections.

Section A — 2015 Business Plan and Budget Program Area and Department Detail

Reliability Standards

Reliability Standards Program (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	25.92	24.40	(1.52)
Direct Expenses	\$ 5,150,854	\$ 4,894,892	\$ (255,962)
Indirect Expenses	\$ 4,872,999	\$ 5,126,604	\$ 253,605
Other Non-Operating Expenses	\$ -	\$ -	\$ -
Inc(Dec) in Fixed Assets	\$ 143,517	\$ 373,915	\$ 230,399
TOTAL BUDGET	\$ 10,167,369	\$ 10,395,411	\$ 228,041

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 NERC's standards department include:

- Delivering high-quality, continent-wide reliability standards:** NERC standards 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 or modifications of 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 are 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 and subgroups, as well as informal development, standards drafting, interpretation, and other project teams for the development of NERC 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 products created by the standard drafting teams. The department also supports the filing

of standards with regulatory authorities and provides support in connection with regulatory proceedings.

The standards program also provides a mechanism for the eight Regional Entities to process regional standards when unique regional reliability gaps are detected. 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 to the applicable regulatory authorities in the United States and Canada for adoption.

Stakeholder Engagement and Cost Effective Analysis 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, stakeholders continue to pilot methods to address the cost effectiveness of proposed standards.

The two-phased Cost Effective Analysis Process (CEAP) attempts to ensure that the standards development process produces standards that cost-effectively address reliability gaps. The first phase of the CEAP is implemented during the Standards Authorization Request (SAR) stage to determine the cost impact of a proposed standard and whether it will meet or exceed an adequate level of reliability. The second phase is completed later in the standard development process to determine cost effectiveness of the proposed approach and offer the industry an opportunity to identify more cost efficient solutions. A CEAP team, comprised of NERC Standards Committee and Standards Committee Process Subcommittee members, along with industry and NERC staff, continue to participate in the CEAP to promote information sharing and consensus and alleviate concerns regarding cost and effectiveness.

Key Standards Efforts Underway in 2014

Emerging Issues

In 2014, the Standards department continues to address “emerging issues” projects that ~~have~~ either ~~been~~ (1) have been identified through the RRMP; (2) ~~that~~ respond to FERC orders and directives; or (3) ~~that~~ are being addressed in an ongoing project. Two projects have been identified as key reliability issues through the RISC and the RRMP: (1) the Misoperations Reliability Standard,¹⁵ and, (2) the Real Time Reliability Monitoring and Analysis Standard,¹⁶ which is being included in the TOP/IRO Revision standard development project and will provide specific requirements for real-time reliability monitoring and analysis capabilities. A number of FERC-responsive projects that were initiated in 2014 are anticipated to be completed by year-end. Among these are directives associated with CIP Version 5, Physical Security, the TOP/IRO Revisions, and the Geomagnetic Disturbance Mitigation Stage 2 Reliability Standards.

FERC Directives

¹⁵ See http://www.nerc.com/pa/Stand/Pages/Project2010-05_Protection_System_Misoperations.aspx

¹⁶ See <http://www.nerc.com/pa/Stand/Pages/Project-2009-02-Real-time-Reliability-Monitoring-and-Analysis-Capabilities.aspx>

NERC also continues to address other projects as necessary to respond to FERC directives. The number of outstanding FERC directives have been reduced to 122 as of March 1, 2014, which includes 18 directives that must be addressed by another NERC department or one of the NERC technical committees. Of the 104 directives that are standards-related, 35 were issued by FERC in 2013 or 2014, leaving 69 pre-December 2012 FERC directives to be resolved. The 2014-2017 Reliability Standards Development Plan (RSDP) provided a plan for 90% of the directives issued prior to 2013 to be completed in 2014. In total, 70% of all directives issued to date are on track to be completed in 2014, leaving approximately 30 directives to be resolved in 2015 and beyond. The 2015-2018 RSDP, which is being developed in the first half of 2014, will outline projects that address these remaining directives.

Cross-Departmental and Collaborative Projects

The Standards department is also addressing several other projects that involve multiple internal NERC departments and Regional Entities:

- **Risk Based Registration:** The Risk-Based Registration project (see *Compliance Monitoring and Enforcement and Organization Registration and Certification* section for additional detail) involves the examination of registration criteria to ensure the right entities are subject to the right set of applicable Reliability Standards, using a consistent and common approach to risk assessment and registration across the ERO Enterprise. This project involves multiple departments within NERC, the Regional Entities and stakeholders. The project team is targeting approval of the program design and implementation plan for the November 2014 NERC Board [meeting](#).
- **Concurrent development of Reliability Standards Audit Worksheets (RSAWs) with standards:** This project was initiated to ensure that compliance monitoring was consistent with the intent of standard. While the RSAW is merely a tool to assist auditors, ~~this project~~ [has provided](#) a useful vehicle to communicate the intent of standards projects to compliance and enforcement staffs, and also provide transparency for compliance monitoring to industry stakeholders.
- **Cross-departmental technical analysis and verification of solutions:** The Standards department is working with the Reliability Assessment and Performance Analysis [department](#), Events Analysis department personnel, [the](#) RISC and the technical committees to conduct the technical analysis needed as a foundation for standards projects.
- **Verification of Risk Evaluation with the RISC prior to initiating projects:** In 2014, the Standards department is taking all newly identified reliability risks to the RISC for verification prior to initiating a [standards](#) project. As an example, the Standards department requested that RISC examine three of the Independent Expert Review Panels' (IERPs') High Priority Gaps prior to considering solutions. The RISC is conducting its evaluation in conjunction with the Operating Committee.

Steady State Transformation

In 2014, the transformation of the NERC Reliability Standards to a “steady state” continues, pursuant to the 2014-2017 RSDP. Steady state was defined in the 2014-2017 RSDP as a 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. The IERP, in their 2013 review of the NERC Reliability Standards,¹⁷ also found that the Reliability Standards should be stable, necessary for accountability and sufficient to maintain BES reliability. A steady state standard should not require further work absent a change in reliability risks, technology, practice, or other impetus.

As part of the steady state transformation, two early initiatives continue to be implemented in 2014 and beyond to ensure standards address reliability risks and to eliminate standards or requirements that do not significantly benefit reliability; these include:

- **Paragraph 81 Initiative:** On March 15, 2012, the Commission issued an order on NERC’s Find, Fix, Track and Report (FFT) program. In the order, NERC was invited to make a proposal to the Commission identifying specific standards or requirements that need to be revised or retired because of the lack of any meaningful benefit to BES reliability. FERC approved NERC’s proposed Phase 1 requirements in FERC Order 788, and NERC is evaluating additional candidates that were submitted by industry for Phase 2.
- **Results-Based Standards Initiative:** Ensuring that standards are focused on required actions or results (the “what”) and not necessarily on the methods by which to accomplish those actions or results (the “how”). NERC continues to evaluate, on a requirement by requirement basis, the appropriate level for the required actions or results.

These two initiatives, plus the requirements that were recommended for retirement by the Independent Experts, are being considered by the subject matter experts within each standards development project as part of the transformation to steady state. It is expected that these initiatives will ensure that standards have the necessary combination of risk-, performance-, and capability-based requirements to ensure BES reliability.

2015 Goals and Deliverables

In 2015, the major activities undertaken by NERC’s Standards department will seek to ensure that the Reliability Standards Development Plan is effectively executed while, at the same time, the Reliability Standards developed will appropriately mitigate risks to reliability. The Department resources will be focused ~~in on~~ supporting ~~of~~ the Strategic Plan, including but not limited to support of the ~~Reliability Risk Management Process (RRMP)~~, resolving FERC directives, and transforming the NERC Reliability Standards to steady state.

1. **Supporting RRMP** ~~will focus~~**will focus** on the selection of projects undertaken. Resources will ~~be~~ expended on issues determined to be a reliability risk through the RRMP (see *Reliability Assessment and Performance Analysis* section for additional detail). The

¹⁷

http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards_Independent_Experts_Review_Project_Report.pdf

department will apply broader project management skills to implement a variety of solutions to a reliability concern. ~~One~~An effective solution to an identified reliability risk may be a Reliability Standard, ~~or~~but it may ~~also~~ be a Guideline, ~~I~~nformation ~~R~~rrequest, ~~T~~raining, NERC Alert(s), ~~T~~echnical ~~C~~onference, ~~R~~esearch, ~~S~~tandards, or a combination of these or other tools .

2. **Addressing FERC directives and responding 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 the directive is no longer needed.
3. **Transforming NERC's standards to steady state.** The department will complete the majority of its foundational transformation work by addressing possible outstanding Paragraph 81 Phase 2 requirements candidates and IERP recommendations for retirement.
4. **Improving the quality and content of standards** to determine the specific criteria for determining whether a Reliability Standard is of sufficient content and quality to be deemed steady state. Beginning in 2015 and beyond, each standard family that is not considered steady state will receive a periodic review to determine modifications necessary for the standard to meet the steady state criteria.
5. **Facilitating smooth transition to new standards** such as CIP Version 5 and Physical Security. This includes working with the Compliance Monitoring and Enforcement ~~Programs~~, Registration and Reliability Assessment and Performance Analysis Programs to develop guidelines, webinars and other activities to support auditor and industry training for the new standards.

The 2015-2018 RSDP is being developed during the first half of 2014 in conjunction with the Standards Committee, RISC and the RRMP. It will outline the continued work plan for the transformation of NERC Reliability Standards, the ~~s~~standards department's support ~~of~~ Reliability Risk Management, and resolution of FERC directives.

Resource Requirements

Personnel

As in prior years, industry engagement is vital to successful standards development. In 2015, industry subject matter expert engagement requirements will remain steady as the remaining projects from 2014 are finalized in 2015. The transformation of NERC standards to steady state will require additional industry engagement throughout 2015.

The NERC Standards department continues to focus resources on the production of standards, rather than solely on the monitoring and execution of the standards process. For 2015, there are no additional personnel resources planned to be added to the Standards department. Additionally, the departmental travel expense are expected to below 2014 levels, given the

number of standards initiatives expected to be in process~~underway~~, and cost savings resulting from holding more meetings at ~~the~~ NERC's Atlanta and Washington, D.C. offices.

Contractors and Consultants

No contractor and consulting support is budgeted in 2015, which is consistent with the 2014 budget.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital					
2014 Budget & Projection, and 2015 Budget					
RELIABILITY STANDARDS					
	2014	2014	Variance	2015	Variance
	Budget	Projection	2014 Projection v 2014 Budget Over(Under)	Budget	2015 Budget v 2014 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 10,000,443	\$ 10,000,443	\$ 0	\$ 10,259,064	\$ 258,621
Penalty Sanctions	58,951	58,951		31,747	(27,204)
Total NERC Funding	\$ 10,059,394	\$ 10,059,394	\$ 0	\$ 10,290,811	\$ 231,417
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	104,000	104,000	-	104,000	-
Interest	3,976	4,011	35	600	(3,375)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 10,167,369	\$ 10,167,404	\$ 35	\$ 10,395,411	\$ 228,042
Expenses					
Personnel Expenses					
Salaries	\$ 3,308,688	\$ 3,123,462	\$ (185,226)	\$ 3,117,343	\$ (191,345)
Payroll Taxes	210,130	214,197	4,067	209,800	(330)
Benefits	454,850	411,640	(43,210)	455,085	235
Retirement Costs	377,588	342,230	(35,358)	350,185	(27,403)
Total Personnel Expenses	\$ 4,351,256	\$ 4,091,529	\$ (259,727)	\$ 4,132,413	\$ (218,843)
Meeting Expenses					
Meetings	\$ 185,000	\$ 185,000	\$ -	\$ 194,056	\$ 9,056
Travel	400,000	369,000	(31,000)	373,911	(26,089)
Conference Calls	123,748	123,748	0	117,736	(6,012)
Total Meeting Expenses	\$ 708,748	\$ 677,748	\$ (31,000)	\$ 685,703	\$ (23,045)
Operating Expenses					
Consultants & Contracts	\$ -	\$ -	\$ -	\$ -	\$ -
Office Rent	-	-	-	-	-
Office Costs	90,350	67,245	(23,105)	76,276	(14,074)
Professional Services	-	-	-	-	-
Miscellaneous	500	1,000	500	500	-
Depreciation	-	353,023	353,023	-	-
Total Operating Expenses	\$ 90,850	\$ 421,268	\$ 330,418	\$ 76,776	\$ (14,074)
Total Direct Expenses	\$ 5,150,854	\$ 5,190,545	\$ 39,692	\$ 4,894,892	\$ (255,962)
Indirect Expenses	\$ 4,872,999	\$ 4,914,043	\$ 41,044	\$ 5,126,604	\$ 253,605
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 10,023,853	\$ 10,104,588	\$ 80,736	\$ 10,021,496	\$ (2,357)
Change in Assets	\$ 143,517	\$ 62,816	\$ (80,701)	\$ 373,915	\$ 230,399
Fixed Assets					
Depreciation	\$ -	\$ (353,023)	\$ (353,023)	\$ -	\$ -
Computer & Software CapEx	-	215,000	215,000	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 143,517	160,141	16,624	373,915	230,399
Inc(Dec) in Fixed Assets (C)	143,517	22,118	(121,399)	373,915	230,399
TOTAL BUDGET (=B + C)	\$ 10,167,369	\$ 10,126,706	\$ (40,663)	\$ 10,395,411	\$ 228,042
FTEs	25.92	24.41	(1.51)	24.40	(1.52)

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – Salaries and retirement expenses are projected to be lower in 2015 due to the transfer of one position to another department in 2014 and an increase in the across the board FTE adjustment to account for attrition and hiring delays from 4% in 2014 to 6% in 2015. The reduction in payroll taxes is not as significant as the reduction in salaries due to a higher maximum salary subject to FICA taxes. Employee Benefits are projected to be higher due to the projected market increase in health and dental plan costs.
- **Meetings, Travel and Conferencing Expenses** – The increase in meeting expenses and decreases in conferencing and travel expenses are based upon prior year actual results, the anticipated level of Reliability Standards development activity in 2015 and continued focus on cost reduction, including holding meetings in NERC's offices where possible.
- **Office Costs** – The decrease is due to the reduction in FTEs and lower telecommunications costs as a result of having fewer telecommuters.
- **Indirect costs and allocation of fixed assets** – The increase is due to higher administrative services expenses allocated to the direct programs, as previously explained on page 22.

Compliance Monitoring and Enforcement and Organization Registration and Certification Program Area

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 standards. This program area is broken down into three operational groups: (1) Regional Entity Assurance and Oversight (2) Compliance Analysis, Certification and Registration and (3) Compliance Enforcement. The program area is currently broken down into two departments for financial reporting purposes, with the Regional Entity Assurance and Oversight group combined with the Compliance Analysis, Certification and Registration group into one department and the Compliance Enforcement department as the second department. This allows for a year over year budget comparison. In the next draft of NERC's business plan and budget, the Regional Entity Assurance and Oversight group and Compliance Analysis, Certifications and Registration group will be separated into two departments for financial reporting purposes.

Regional Entity Assurance and Oversight and Compliance Analysis, Certification and Registration

Regional Entity Assurance and Oversight & Compliance Analysis, Certification and Registration (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	23.04	23.44	0.40
Direct Expenses	\$ 5,037,321	\$ 5,388,422	\$ 351,102
Indirect Expenses	\$ 4,331,554	\$ 4,924,901	\$ 593,347
Other Non-Operating Expenses	\$ -	\$ -	\$ -
Inc(Dec) in Fixed Assets	\$ 127,570	\$ 359,204	\$ 231,634
TOTAL BUDGET	\$ 9,496,446	\$ 10,672,527	\$ 1,176,082

Regional Entity Assurance and Oversight

Background and Scope

NERC's Regional Entity Assurance and Oversight group (formerly the Compliance Operations department) works collaboratively with the eight Regional Entities to ensure consistent and effective implementation of the Compliance Monitoring and Enforcement Program (CMEP) ~~for use~~ across the entire ERO Enterprise. The CMEP identifies the monitoring processes for use by the Regional Entities, including compliance audits, self-certification, spot checking, investigations, self-reporting, periodic data submittals, and complaints. NERC and the Regional Entities ensure consistent and fair implementation of the CMEP, coalesce around best practices and implement data management procedures that address data reporting requirements, data integrity, data retention, data security, and data confidentiality.

The Regional Entity Assurance and Oversight group's responsibilities include but are not limited to the following major activities and functions:

- Consistent implementation of the risk-based compliance monitoring program for reliability improvements, including developing and maintaining the necessary compliance-related processes, procedures, IT platforms, tools and templates;
- Oversight of the Regional Entities' delegated compliance functions, including: (i) Consistent and uniform CMEP planning, implementation, and reporting; (ii) Compliance operations and coordination; and (iii) Auditor training;
- CIP V5 activities related to: transition, training, and compliance design ERO education programs that support industry compliance and the integration of risk assessment and internal controls;
- Development of minimum baseline monitoring requirements;
- Development and maintenance of Reliability Standard Audit Worksheets (RSAWs);
- Support for Regional Entity and industry committees, working groups, and task forces, such as the Compliance and Certification Committee (CCC); and
- Supporting standards development and education.

Stakeholder Engagement and Benefit

The Regional Entity Assurance and Oversight group is committed to ensuring that all registered entities understand their compliance obligations and how compliance will be assessed. Compliance department staff will continue its work in reducing the variety of compliance documents currently produced and revising the RSAW tool to be more effective.

This group provides compliance information, statistics, and perspectives to standard drafting teams to foster the development of standards that provide an increased reliability benefit and clarify compliance risks. It will continue its collaboration with industry and Standards department staff early in the standards development process by providing draft RSAW guidance, including information on how compliance with draft standards will be determined, as well as input regarding the auditability and enforceability of the draft standards. This will better ensure that an RSAW serves as a tool in the auditing process and is not used or viewed as a tool to expand or modify standards requirements. After the Board approves a reliability standard and before the standard's effective date, NERC will conduct compliance trials to provide auditors and industry clear expectations of compliance.

NERC continues to promote the development, by registered entities, of effective compliance programs and internal controls. As discussed in connection with the RAI, ~~greater consideration of internal controls, in~~ the Regional Oversight Assurance and Oversight group is committed to a proactive and forward-looking method of supporting reliability ~~assurance by taking into account greater consideration of internal controls.~~ A common risk-based methodology, for evaluating an entity's risk to the BES, and relevant internal controls, will support a consistent, risk-based approach to how compliance monitoring activities may be scoped.

As RAI focus group activities conclude in 2014, there will be additional opportunities to engage industry readiness and maximize stakeholder engagement during the implementation and deployment of various components of RAI into 2015 and beyond.

Key Efforts Underway in 2014

Reliability Assurance Initiative

Consistent with the goals and objectives set forth in the Strategic Plan, NERC continues to implement the Reliability Assurance Initiative as part of its stated objectives of ensuring BES reliability, improving the efficiency and effectiveness of NERC and Regional Entity compliance and enforcement operations, and reducing unnecessary burdens to registered entities by focusing compliance oversight and enforcement resources on significant risks to reliability. Implementing the RAI program is a multiyear effort that involves compliance and enforcement process changes, development of new tools and training materials, and a variety of related efforts. These initiatives are specifically aimed at moving the ERO toward a culture of reliability through improved compliance monitoring and enforcement mechanisms. Moreover, these initiatives will also eliminate known problems with the current “zero-tolerance” processes that place unnecessary administrative burdens on registered entities and consume ~~far~~ too many NERC and Regional Entity resources.

The major activities of the Regional Entity Oversight and Compliance group’s activities for 2014 include: (1) development of a single ERO methodology for registered entity reliability risk assessments and evaluation and testing of registered entity internal controls; and (2) implementation of a complete auditor manual with the approved auditor handbook and checklist. Other enhancements are also expected to continue to be implemented during 2014, including process improvements associated with coordination of compliance and enforcement activities for multi-region registered entities (MRRE).

Regional Entity Oversight and Compliance

The implementation of processes and procedures associated with the RAI will necessitate changes to the way NERC performs oversight of the Regional Entities. While the primary purpose of the RAI is to focus compliance monitoring activities on risk, an extremely important aspect of the design is to create a common ERO enterprise approach. The common approach includes a single implementation plan, the use of a common checklist and handbook, a defined common approach to compliance monitoring, and an agreed d set of standards outlining the expectatonsexpectations for a compliance auditor’s role expectations. This convergence to a single design will also drive the adoption of common tools and systems. NERC is designing oversight and compliance activities to train compliance personnel [??] on each aspect of the RAI, support the deployment of processes, and perform compliance activities that assure adoption and execution for each aspect of the RAI.

Critical Infrastructure Protection (CIP) Compliance and Transition

Consistent implementation of the risk-based CIP compliance monitoring program, including registration and certification, is necessary for reliability improvements. NERC and the Regional

Entities continue to manage the smooth transition of compliance activities from Version 3 to Version 5 of the CIP Standard through providing training, webinars and other forms of outreach. The ERO education programs support industry compliance and the integration of risk assessment and internal controls.

2015 Goals and Deliverables

The Regional Entity Oversight and Compliance Group has several goals and objectives in support of the ERO Strategic Plan. Resources will be focused on building upon the framework and improvements implemented as a result of the ongoing RAI activities in 2014. Specific 2015 objectives for this group include:

1. Developing a training program to support implementation of the common audit procedures and the ERO Auditor Capabilities and Competencies Guide.
2. Replacing/enhancing the existing compliance, reporting, analysis tracking system (CRATS) and other compliance tools to support RAI activities.
3. Making effective internal controls models and information available to industry.
4. Initiating compliance phase-in learning periods for new standards.
5. Transitioning to a single ERO approach to compliance monitoring and common audit planning, implementing RAI techniques and principles consistently.
6. Consolidating to a common set of RSAWs, or successors, for all standards.
7. Enhancing the design of regional compliance audits to evaluate regional staffing, deployment of tools, and testing of compliance activities;
8. Increasing the frequency of audits to validate the implementation of RAI program designs; and
9. Creating technically sound training to support compliance methodologies and testing approaches for Reliability Standards.

These 2015 activities are necessary to assure that RAI developed policies, processes, and procedures are implemented both uniformly and consistently across the regions. A number of RAI-related activities support the implementation of the strategic risk-based reforms intended to reduce regulatory burden on industry, increase efficiency, and provide greater direct reliability benefit by properly aligning resources associated with compliance monitoring programs. The increased oversight will assure industry benefits are achieved, validate methodologies, and identify continued process improvements. The bulk of these activities will be resourced from NERC and Regional Entity staffs, but certain activities related to advancing the program implementation and the compliance application tool will be supported through the use of outside consultants.

Resource Requirements

Personnel

No ~~additional~~ personnel additions are proposed to be added in 2015 above current staffing levels. The .4 FTE increase is the result of a 2014 reallocation of personnel from other departments. Management will continue to evaluate resources needs ~~allocation~~ as appropriate to ensure sufficient resources are available to support key departmental initiatives.

Contractors and Consultants

Funds have been budgeted for outside consultants to assist in the development of RAI documentation. The budgeted amount ~~and~~ is generally consistent with the 2014 budget. In addition, the Information Technology budget includes funding for the maintenance, evaluation and development of enterprise tools supporting compliance assessment, registration, certification and enforcement activities.

Compliance Analysis, Registration and Certification Group

Background and Scope

The Compliance Analysis, Registration and Certification 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 department strives to ensure that: (1) ~~€~~Compliance Analysis, Registration and €Certification informs standards development and compliance monitoring; (2) all entities impacting the BES are registered, ~~flexibly~~ commensurate [what does this mean?] with risk; (3) all RCs, TOPs, and BAs ~~key reliability entities~~ are certified: ~~RCs, TOPs, BAs~~; (4) industry maintains effective internal control programs for reliability assurance risk; and (5) program gaps are assessed in all reportable events and addressed if appropriate. Specific activities of the department include:

- **Registration** - Identifies and registers BES users, owners and operators who are responsible for compliance with the FERC approved Reliability Standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable Reliability Standards.
- **Certification** – the process by which NERC evaluates and certifies the competency of entities performing certain key reliability functions, specifically the RC, BA and TOP functions. Entities performing T these three functions must be certified as having the necessary personnel, knowledge, facilities, programs and other qualifications to carry out these important responsibilities, including ~~The entities must also~~ demonstrating their ability to meet the Requirements/sub-Requirements of all of the Reliability Standards

applicable to these reliability function(s) for which they are being certified ~~for which it is applying thereby demonstrating the ability to become certified and then operational.~~

- **Compliance Investigations** - compliance Investigations are formal non-public, confidential matters. These non-public, confidential investigations seek to identify possible violations of NERC Reliability Standards in response to complaints, BES disturbances, or other similar triggers. NERC also participate as observers on investigations and inquiries conducted by the U.S. Federal Energy Regulatory Commission.
- **Complaints** – is the process by which NERC addresses formal complaints which allege the violation of Reliability Standards.
- **Technical assurance** — Develop quarterly gap and risk assessment reports and recommended responses ~~recommendations~~. Conduct inquiries and spot checks based on quarterly gap analysis.
- **Oversight** of regional registration, certification, investigation and complaint programs.

Stakeholder Engagement and Benefit

In 2014, NERC established a Risk Based Registration Advisory Group (RBRAG) to provide input and advice for the Risk Based Registration (RBR) design and implementation plan. The RBRAG is comprised of representatives from NERC staff, Regional Entity staff and Federal Energy Regulatory Commission (FERC or Commission) staff, along with United States and Canadian industry representatives. A white paper was developed with input from the RBRAG, industry responses to a survey, and assessment of information about the current Registration program attributes. The white paper was released for public comment in connection with ~~as part of the~~ NERC management's request for MRC's policy input in April 2014. Further updates regarding the Registration program redesign and implementation plan will be periodically posted on NERC's website discussed at NERC committee and ~~h~~Board meetings.

Reliability Benefits

NERC has launched RBR to ensure the right entities are subject to the right set of applicable Reliability Standards, using a consistent and common approach to risk assessment and registration across the ERO Enterprise. The goal of this effort is to develop registration criteria, including thresholds, which identifies users, owners and operators that have a material impact on the reliability, preserving an adequate level of reliability and avoid causing or exacerbating instability, uncontrolled separation, or cascading failures. All reliability stakeholders will benefit from RBR. An adequate level of reliability of the BES will be assured by having the right entities comply with the right set of Reliability Standard requirements. Registered entities will be given proper signals and incentives to focus on operational, planning, physical security, cybersecurity, and business decisions in the best interest of reliability, rather than to focus on managing compliance risks. They will have certainty as to compliance obligations with tailored Reliability Standard requirements, as appropriate.

NERC and Regional Entities will have increased awareness of individual and aggregate entity risks to the reliability of the BES. They will have the ability to devote time and resources to registration and ~~associated~~ compliance monitoring and enforcement activities commensurate with the risks posed. Applicable governmental entities also will have increased awareness of entities subject to their respective jurisdictions and their role in ensuring reliability of the BES. All other stakeholders, including end-use customers, will be third party beneficiaries of benefits from implementation of RBR.

Key Efforts Underway in 2014

In 2014, the Compliance Analysis, Certification and Registration group will continue the development of the new RBR design and registration criteria, which includes Board approval of a full implementation plan by yearend and an expected rollout in 2015. ~~NERC has launched RBR to ensure the right entities are subject to the right set of applicable Reliability Standards, using a consistent and common approach to risk assessment and registration across the ERO Enterprise. The goal of this effort is to develop registration criteria, including thresholds, which identifies users, owners and operators that have a material impact on the reliability, preserving an adequate level of reliability and avoid causing or exacerbating instability, uncontrolled separation, or cascading failures.~~

The ultimate end-state vision considers the risk to reliability and ensures that the right entities are subject to the right set of applicable Reliability Standards, using a consistent and common approach to risk assessment and registration across the ERO Enterprise. Achieving the end-state vision is expected to occur in two phases. The first stage will focus on the development, refinement and implementation of the RBR program design. The second stage will address any remaining non-design issues or considerations that may require longer lead times. The overall benefits of the RBR program include:

- Aligned entity registration and compliance burden to their risks and contributions to reliability, thereby reducing industry burden associated with registration and ensuring no gaps or duplication of compliance responsibilities, while sustaining continued reliability.
- Improved use of NERC, Regional Entity, and registered entity resources.
- Improved feedback to Reliability Standards development so applicability can be tailored for currently enforced and future standards.
- Increased consistency in registration with the eight Regional Entities by developing a common and repeatable approach as part of the design of the RBR program.

2015 Goals and Deliverables

In 2015, the Compliance Analysis, Registration and Certification group resources will be focused on building upon the implementation of the RBR activities in 2014. Specific 2015 objectives for the department include:

1. Deploying a sustainable RBR design that incorporates evaluation of the reliability risks and benefits provided by an entity to ensure reliability, identifying a corresponding properly scoped set of Reliability Standard requirements.
2. Developing an implementation plan with business practices and IT requirements that addresses unintended industry burden, while preserving an adequate level of reliability.
3. Aligning changes to the registration criteria with other NERC activities.
4. Assessing the current certification program for opportunities to mature the program.
5. ~~Incorporating~~Addressing effects to registration from the enhanced BES Definition.
6. Providing support to the continued development of RSAWs; aid in the BES definition exception submittal process; aid in the review of registration appeals and ~~in enforcement mitigation~~aid in the review of registration appeals and review of mitigating activities; and assist with training modules for investigations, certifications and registrations.
7. Providing analysis in support projects addressing top reliability risks.

Resource Requirements

Personnel

No additional personnel are being proposed in 2015 above current staffing levels. The .4 FTE increase is the result of a 2014 reallocation of personnel from other departments.

Contractor Expenses

To the extent required, operating reserves will be used to fund expert costs to support investigations.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital					
2014 Budget & Projection, and 2015 Budget					
REGIONAL ENTITY ASSURANCE and OVERSIGHT & COMPLIANCE ANALYSIS, CERTIFICATION and REGISTRATION					
	2014	2014	Variance	2015	Variance
	Budget	Projection	2014 Projection	Budget	2015 Budget
			v 2014 Budget		v 2014 Budget
			Over(Under)		Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 9,400,511	\$ 9,400,511	\$ 0	\$ 10,641,452	\$ 1,240,942
Penalty Sanctions	52,401	\$ 52,401		30,498	(21,903)
Total NERC Funding	\$ 9,452,912	\$ 9,452,912	\$ 0	\$ 10,671,950	\$ 1,219,039
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	40,000	40,000	-	-	(40,000)
Interest	3,534	3,841	307	577	(2,957)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 9,496,446	\$ 9,496,753	\$ 307	\$ 10,672,527	\$ 1,176,081
Expenses					
Personnel Expenses					
Salaries	\$ 3,192,809	\$ 3,367,387	\$ 174,578	\$ 3,456,807	\$ 263,998
Payroll Taxes	202,068	225,238	23,170	227,351	25,283
Benefits	404,311	393,845	(10,466)	437,582	33,271
Retirement Costs	364,901	370,608	5,707	388,579	23,678
Total Personnel Expenses	\$ 4,164,089	\$ 4,357,078	\$ 192,989	\$ 4,510,319	\$ 346,230
Meeting Expenses					
Meetings	\$ 70,000	\$ 76,400	\$ 6,400	\$ 79,523	\$ 9,523
Travel	312,657	332,000	19,343	336,419	23,761
Conference Calls	16,574	8,100	(8,474)	12,276	(4,298)
Total Meeting Expenses	\$ 399,232	\$ 416,500	\$ 17,268	\$ 428,218	\$ 28,986
Operating Expenses					
Consultants & Contracts	\$ 400,000	\$ 480,240	\$ 80,240	\$ 388,000	\$ (12,000)
Office Rent	-	-	-	-	-
Office Costs	73,500	57,296	(16,204)	61,385	(12,115)
Professional Services	-	-	-	-	-
Miscellaneous	500	-	(500)	500	-
Depreciation	-	4,668	4,668	-	-
Total Operating Expenses	\$ 474,000	\$ 542,204	\$ 68,204	\$ 449,885	\$ (24,115)
Total Direct Expenses	\$ 5,037,321	\$ 5,315,782	\$ 278,461	\$ 5,388,422	\$ 351,101
Indirect Expenses	\$ 4,331,554	\$ 4,706,691	\$ 375,136	\$ 4,924,901	\$ 593,347
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 9,368,875	\$ 10,022,473	\$ 653,598	\$ 10,313,323	\$ 944,448
Change in Assets	\$ 127,570	\$ (525,720)	\$ (653,290)	\$ 359,204	\$ 231,634
Fixed Assets					
Depreciation	-	(4,668)	(4,668)	-	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	0
Equipment CapEx	-	-	-	-	0
Leasehold Improvements	-	-	-	-	0
Allocation of Fixed Assets	\$ 127,570	\$ 153,384	25,813	359,204	231,634
Inc(Dec) in Fixed Assets (C)	\$ 127,570	\$ 148,715	\$ 21,145	\$ 359,204	\$ 231,634
TOTAL BUDGET (=B + C)	\$ 9,496,446	\$ 10,171,188	\$ 674,743	\$ 10,672,527	\$ 1,176,081
FTEs	23.04	23.38	0.34	23.44	0.40

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- Funding – Workshop fees have not been budgeted in 2015 because auditor workshops are being held at NERC or Regional offices rather than hotels at a much lower cost and fees are not being charged.
- **Personnel** – The increase in personnel expense is primarily due to the transfer of personnel from the Critical Infrastructure department, offset by an increase in the across the board FTE adjustment to account for attrition and hiring delays from 4% in 2014 to 6% in 2015. Payroll tax expenses are increasing at a slightly higher percentage than the other expense categories due to a higher maximum salary subject to FICA taxes.
- **Meetings, Travel and Conferencing Expenses** – The increase in travel is due to the transfer of personnel who incur more travel than other staff as part of the responsibilities of the position. The increase in meetings expense and decrease in conferencing expenses are based upon prior year actual and projected 2014 results.
- **Office Costs** – The decrease is due to lower telecommunications expenses on a per FTE basis based upon actual prior year results.
- Indirect Expenses and Allocation of Fixed Assets - Indirect expenses and allocation of fixed assets is higher due to higher administrative services expenses (to be allocated to the direct function programs) as previously explained on page 22.

Compliance Enforcement Department

Compliance Enforcement (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	18.24	15.01	(3.23)
Direct Expenses	\$ 2,864,951	\$ 2,606,756	\$ (258,194)
Indirect Expenses	\$ 3,429,147	\$ 3,153,702	\$ (275,446)
Other Non-Operating Expenses	\$ -	\$ -	\$ -
Inc(Dec) in Fixed Assets	\$ 100,993	\$ 230,019	\$ 129,026
TOTAL BUDGET	\$ 6,395,091	\$ 5,990,476	\$ (404,614)

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 Compliance Monitoring and Enforcement Program. Focus is also given to ensuring enterprise-wide resources are dedicated to the matters that have the greatest impact on reliability.

NERC's Compliance Enforcement department performs its responsibilities through:

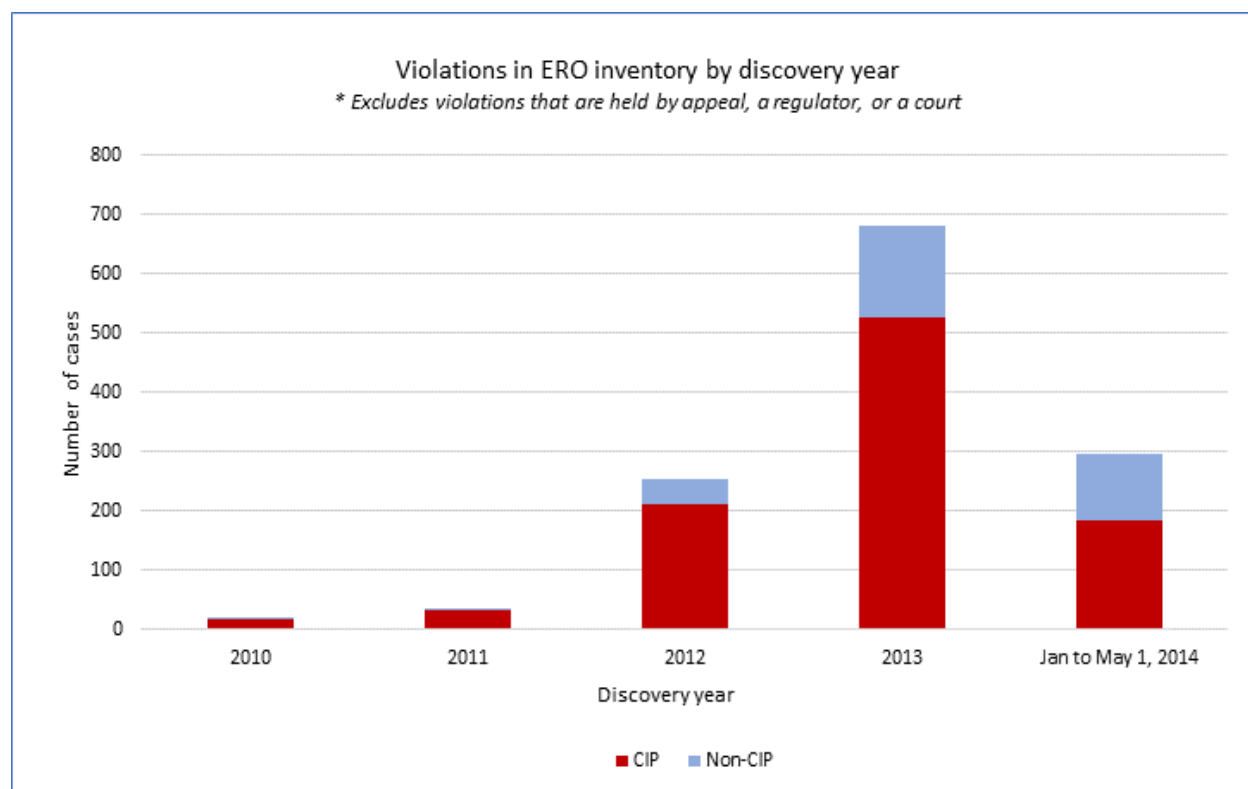
- Monitoring Regional Entities' enforcement processes and providing oversight over the outcome of such processes, to ensure due process, to identify best practices and process efficiency opportunities, and to promote consistency among Regional Entities' business practices;
- Collecting and analyzing compliance enforcement data and trends to assist with the identification of emerging risks and to help inform the development of enforcement policy and processes;
- Filing notices of penalty and other submittals associated with noncompliance discovered through Regional Entity compliance, enforcement, and monitoring activities;
- Processing and filing notices of penalty and other submittals associated with violations discovered through NERC-led investigations and audits; and
- Collaborating with other NERC departments including Standards and Regional Oversight Compliance.

Stakeholder Engagement and Benefit

Over the past few years, NERC and the Regional Entities made substantial progress in reducing the number of instances of noncompliance remaining to be evaluated and processed. With this progress, NERC and the Regional Entities held registered entities accountable for violations that created risk to the reliability of the BES, while further ensuring that enforcement actions are timely and transparent. At the same time, NERC is also seeking to further promote a culture of reliability excellence by examining registered entities' internal compliance programs and considering them as mitigating factors in penalty determination.

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, in 2012 and 2013, NERC established corporate 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. For example, in 2012, NERC and the Regional Entities ~~worked to reduce~~ the number of open violations dating from before 2011 (excluding on violations that are held by appeal, a regulator or a court, referred to as "on-hold" violations) by 80%. In 2013, NERC and the Regional Entities built on the successes of 2012. By January 1, 2014, NERC and the Regional Entities reduced the number of pre-2012 violations (excluding "on hold" violations) by 93%. Only 65 violations discovered before 2012 remained to be processed as of January 1, 2014, representing less than one percent of the total number of violations submitted from 2007-2011 and less than five percent of the violations ~~available~~ to be processed as of January 1, 2014.



FFT Enhancements

NERC and the Regional Entities have worked together to implement the latest round of FFT improvements approved by the Commission and reduce the amount of time required to process issues through the FFT program. As a result of these improvements, FFT treatment is now available for a limited pool of Possible Violations posing a moderate risk to the reliability of the BES (in addition to those posing a minimal risk). In addition, certain unmitigated Possible Violations may be processed through the FFT program, so long as mitigation is completed within 90 days from the date the FFT is posted.

To streamline processing of FFTs, Regional Entities now submit their FFTs for public posting on NERC's website at the end of each month. This replaces the prior requirement that NERC submit monthly informational filings to the Commission. NERC maintains its enforcement oversight by reviewing a representative sample of FFTs during the 60-day window following the monthly posting as well as through an annual spot check. NERC's spot checks of FFT items ensure that issues selected for FFT treatment are appropriate for the program, that the issues are explained sufficiently in the posted documents, that the FFT program is implemented consistently across the regions, and that information about FFT issues is presented consistently across regions.

Self-Report and Other Enforcement Improvements

As part of the RAI, NERC and Regional Entity enforcement staff also have worked closely with stakeholders to identify potential improvements to self-report and other enforcement processes as part of RAI. A number of improvements were designed and implemented in 2013 and 2014. In 2013, NERC and the Regional Entities began two pilot programs (the Aggregation of Minimal Risk Issues and Enforcement Discretion pilot programs) to develop and test the real-world application of risk-based enforcement concepts. Under the Aggregation of Minimal Risk Issues pilot program, NERC and certain Regional Entities are testing the ability of selected Registered Entities to self-assess, identify, and mitigate minimal risk noncompliance proactively. This pilot is focused on allowing Registered Entities with demonstrated effective management practices to self-identify and assess instances of noncompliance to aggregate minimal risk issues which would otherwise be individually self-reported. The first six-month cycle of this pilot ended in March 2014. In reviewing the results of the first cycle, NERC and the Regional Entities decided to continue the program for the next six to nine months, and include additional registered entities during the second cycle to obtain more data on the impact of the program on registered entities.

Under the Enforcement Discretion pilot program, certain Regional Entities are reviewing minimal risk issues identified by certain Registered Entities (in some cases, through the Aggregation of Minimal Risk Issues pilot program) to determine whether those issues warrant Enforcement Discretion treatment. If an issue is tracked for Enforcement Discretion treatment, NERC and FERC will be notified and the record will be available for review, but no notice of Possible Violation will be issued to the Registered Entity. The scope of the program will be increased to encompass additional registered entities to allow the ERO Enterprise to collect additional data for the next six to nine months.

The timing of these activities is intended to allow collect the additional data to inform a filing to FERC reporting on the RAI program.

Key Enforcement Efforts Underway in 2014

In 2014, NERC and the Regional Entities continues to work together to reduce (and eventually eliminate) the number of violations in inventory that are older than 24 months. These efforts will ensure that Regional Entities are prioritizing and resolving older violations appropriately. Combined with efforts to decrease processing times through the use of alternative enforcement mechanisms and enforcement process refinements, the Regional Entities will reduce overall processing times and provide finality on compliance items sooner more quickly to Registered Entities.

Promotion of Self-Identification of Noncompliance and Prompt Mitigation

Although dedicated primarily to the evaluation and enforcement of discovered violations, Regional Entity enforcement programs play an important role in improving the reliability of the BES. By deploying proper incentives to encourage the self-discovery and timely self-reporting of violations, NERC and the Regional Entities have encouraged Registered Entities to take proactive steps to identify their noncompliance. In 2013, internally-discovered violations comprised the majority of violations submitted to the Regional Entities. ~~The~~This rate of internally-discovered violations ~~is was~~ slightly higher than in 2012, when 72% of violations were discovered through internal means.~~↓~~ In 2014, NERC and the Regional Entities will continue to encourage high rates of self-identification of noncompliance by registered entities.

In 2014, NERC will also continue to focus on and closely track the completion of mitigating activities ~~and track this closely~~. NERC monitors all items with ongoing mitigating activities regardless of where the violations are in the enforcement process and expects mitigating activities to be completed in a timely manner.

RAI Activities and Related Process Improvements

As of January 1, 2014, each of the Regional Entities implemented a triage process. Within the first 60 days ~~of~~after the discovery of a noncompliance, Regional Entities will review ~~the~~instances ~~of~~ noncompliance and make an initial determination as to whether ~~the~~an issue will proceed through enforcement or whether additional information is necessary for an initial determination. During the Enforcement Discretion pilot, only a limited set of minimal risk issues from a select group of Registered Entities will be eligible for discretion treatment. Minimal risk issues that do not qualify for discretion treatment may be tracked for FFT treatment or may be tracked for further review and analysis. By moving the initial determination to earlier in the enforcement process timeline, the triage process will promote the efficient processing of all issues, but particularly of FFTs. Ultimately, discretion will be available for minimal risk issues from all Registered Entities.

NERC and the Regional Entities developed two draft documents to enhance communication between Registered Entities and the Regional Entities and to facilitate the shift toward a risk-based enforcement approach. The first document, the ERO Enterprise Self-Report User Guide, provides Registered Entities with additional insight into the information NERC and the Regional

Entities need to provide efficient and timely resolution of instances of potential noncompliance. The second document, the ERO Enterprise Mitigation Plan Guide, provides guidance on the information that should be considered when developing a Mitigation Plan and the elements and analysis that should be included.

Both the ERO Enterprise Self-Report User Guide and the ERO Enterprise Mitigation Plan Guide were posted for public comment in January 2014. NERC has reviewed comments and revised the documents. The newest version of each document will be posted to the RAI page on the NERC web site.¹⁸

The ultimate goal of the RAI is to shift the compliance and enforcement approach from one where all instances of noncompliance are evaluated as Possible Violations, to an approach that focuses on strengthening management practices and reserving the enforcement process for those instances of noncompliance that have been found to pose a greater risk to reliability. The enforcement initiatives described above, in conjunction with RAI compliance initiatives encouraging the development of strong management practices, will advance NERC's progress toward this goal in 2014. In addition, the process and communication improvements developed under the RAI will improve overall processing times.

2015 Goals and Deliverables

Throughout 2015, NERC's Enforcement department will seek to accomplish several goals and objectives, as part of the strategic focus of the ERO Enterprise, and identify processing efficiencies to guide enhancements in enforcement activities and on issues that reduce reliability risk. Specific 2015 objectives for the Compliance Enforcement department include:

1. Consolidate new processes, as discussed above.
2. Ensure timely processing of violations, particularly those that pose greater risk and can provide lessons learned to industry.
3. Ensure early dissemination of violation information to registered entities to enable them to learn from prior events and violations and take preventative actions to eliminate similar risks.

The Compliance Enforcement department also will continue to work with the Regional Entities to significantly reduce ~~this their prior caseloads~~ by closing the by closing prior possible violations ~~and providing information on prior violations to registered entities in 2015.~~

Resource Requirements

Personnel

No additional Enforcement personnel are being proposed in 2015; budgeted staffing is being reduced by 3.23 FTEs from the 2014 budget.

¹⁸ <http://www.nerc.com/pa/comp/Pages/Reliability-Assurance-Initiative.aspx>.

Contractor Expenses

The Information Technology budget includes funding for the maintenance, evaluation and development of enterprise tools supporting compliance assessment, registration, certification and enforcement activities.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital					
2014 Budget & Projection, and 2015 Budget					
COMPLIANCE ENFORCEMENT					
	2014	2014	Variance		Variance
	Budget	Projection	2014 Projection	2015	2015 Budget
			v 2014 Budget	Budget	v 2014 Budget
			Over(Under)		Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 6,350,810	\$ 6,350,810	\$ 0	\$ 5,970,578	\$ (380,232)
Penalty Sanctions	41,484	\$ 41,484		19,530	(21,954)
Total NERC Funding	\$ 6,392,293	\$ 6,392,294	\$ 0	\$ 5,990,107	\$ (402,186)
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	2,798	2,432	(366)	369	(2,428)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 6,395,091	\$ 6,394,726	\$ (366)	\$ 5,990,476	\$ (404,615)
Expenses					
Personnel Expenses					
Salaries	\$ 2,043,427	\$ 1,810,210	\$ (233,217)	\$ 1,874,857	\$ (168,570)
Payroll Taxes	132,855	126,233	(6,622)	120,395	(12,460)
Benefits	320,080	249,573	(70,507)	280,052	(40,028)
Retirement Costs	234,210	185,927	(48,283)	210,530	(23,680)
Total Personnel Expenses	\$ 2,730,572	\$ 2,371,943	\$ (358,629)	\$ 2,485,835	\$ (244,737)
Meeting Expenses					
Meetings	\$ 2,500	\$ 1,580	\$ (920)	\$ 6,000	\$ 3,500
Travel	85,298	68,000	(17,298)	68,905	(16,393)
Conference Calls	5,081	2,130	(2,951)	4,016	(1,065)
Total Meeting Expenses	\$ 92,879	\$ 71,710	\$ (21,168)	\$ 78,921	\$ (13,958)
Operating Expenses					
Consultants & Contracts	\$ -	\$ -	\$ -	\$ -	\$ -
Office Rent	-	-	-	-	-
Office Costs	41,000	27,205	(13,795)	41,500	500
Professional Services	-	-	-	-	-
Miscellaneous	500	-	(500)	500	-
Depreciation	-	2,846	2,846	-	-
Total Operating Expenses	\$ 41,500	\$ 30,051	\$ (11,449)	\$ 42,000	\$ 500
Total Direct Expenses	\$ 2,864,951	\$ 2,473,704	\$ (391,246)	\$ 2,606,756	\$ (258,195)
Indirect Expenses	\$ 3,429,147	\$ 2,979,428	\$ (449,719)	\$ 3,153,702	\$ (275,446)
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 6,294,098	\$ 5,453,132	\$ (840,966)	\$ 5,760,457	\$ (533,641)
Change in Assets	\$ 100,993	\$ 941,593	\$ 840,600	\$ 230,019	\$ 129,026
Fixed Assets					
Depreciation	-	(2,846)	(2,846)	-	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	0
Equipment CapEx	-	-	-	-	0
Leasehold Improvements	-	-	-	-	0
Allocation of Fixed Assets	\$ 100,993	\$ 97,095	(3,898)	230,019	129,026
Inc(Dec) in Fixed Assets (C)	\$ 100,993	\$ 94,249	\$ (6,744)	\$ 230,019	\$ 129,026
TOTAL BUDGET (=B + C)	\$ 6,395,091	\$ 5,547,381	\$ (847,710)	\$ 5,990,476	\$ (404,615)
FTEs	18.24	14.80	(3.44)	15.01	(3.23)

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – The reduction in personnel expenses is due to the transfer of (3) positions to other departments in 2014.
- **Meetings, Travel and Conferencing Expenses** – The decrease in travel is due to the transfer of positions to other departments and based upon ~~prior year~~2013 actual costs. The reduction in travel is partially offset by an increase in meeting expenses also based upon ~~2013~~~~prior year~~ actual costs.
- **Indirect Expenses** – The decrease in indirect expenses is due to a reduction in FTEs ~~and~~ in proportion to total FTEs in the statutory programs.

Reliability Assessment and Performance Analysis

Reliability Assessments and Performance Analysis (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	18.99	19.70	0.71
Direct Expenses	\$ 4,903,304	\$ 5,381,785	\$ 478,481
Indirect Expenses	\$ 3,570,148	\$ 4,139,102	\$ 568,954
Other Non-Operating Expenses	\$ -	\$ -	\$ -
Inc(Dec) in Fixed Assets	\$ (122,854)	\$ 73,891	\$ 196,745
TOTAL BUDGET	\$ 8,350,598	\$ 9,594,778	\$ 1,244,178

Background and Scope

The Reliability Assessment and Performance Analysis (RAPA) department carries out the ERO's statutory responsibility to conduct assessments of the reliability and adequacy of the BES to provide insight and guidance about reliability risks and performance improvements. The department also identifies reliability performance issues and areas of concern (including equipment performance and reliability issues) for consideration in the development of new mandatory reliability standards, the modification of existing standards as part of the Reliability Standards Development Program, or other initiatives that enhance overall reliability. The department develops effective approaches for achieving reliability, develops a solid technical framework and understanding of the reliability risks facing the industry, and utilizes those insights to communicate guidance and information to entities across North America to enhance reliability. The department does this through its own engineering and analysis efforts, as well as through marshaling stakeholder resources with subject matter expertise. The Reliability Assessment and Performance Analysis department is responsible for the:

- Independent assessments and reports on the overall reliability, adequacy, and associated reliability risks that could impact the upcoming summer and winter seasons and the long-term (e.g. 10-year) planning horizon.
- Performance analysis and recommendations of historical reliability and associated trends, relying on data integrity and consistent methodology, leading to credible recommendations/guidance.
- Reliability assessment and bulk system evaluation model development for analyzing steady-state and dynamic conditions.
- Assurance that electrical elements necessary for the reliable operation of the bulk power system are appropriately identified as Bulk Electric System Elements.

- Reliability risk program management for improving key risk areas using analyses of reliability gaps, risks, controls, and management efforts.
- Determination of the reliability risk program priorities to align with strategic plan and business plan/budget for appropriate level of resources, timing, completion and execution.
- Providing 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

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 bulk power system 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~~

The RAPA department 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 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 industry entities. 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 RAPA Efforts Underway in 2014

In 2014, RAPA continues to focus its efforts in the following key areas:

Reliability Risk Analysis

A comprehensive understanding of complex interdependencies and their wide-ranging impacts affecting the reliability of the BES requires deliberate and methodical risk analysis and control strategies. A robust approach that effectively identifies emerging reliability risks and seeks to address them is essential for ensuring NERC's effectiveness and enhancing the reliability of the BES.

The key trends, findings, and recommendations from Reliability Risk 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 not only provides an industry reference for historical

BES reliability, but it also offers analytical insights across the enterprise that lead toward industry action and enable the discovery and prioritization of specific actionable risk control steps. These analyses and results are summarized in the annual *State of Reliability Report*, which provides guidance and recommendations that will lead to enhanced bulk system reliability.

NERC has identified specific areas of reliability risk in 2015. The set of programs and associated projects described in the following pages represents focus on risk priority projects where NERC, in alignment with the industry, [the](#) RISC, and governments, can make a difference in improving or maintaining reliability. This represents an important aspect demonstrating the linkage between NERC's activities and its mission of ensuring the reliability of the North American Bulk Electric System.

Reliability risk management efforts involve identifying key reliability risk areas, setting priorities for addressing these areas, then determining appropriate efforts from among the suite of tools available to address such risks, and compiling these into an overall portfolio of prioritized risk projects. Industry, NERC, RISC, and others [undertook significant efforts](#) to assemble from published assessments, event and performance analyses into a prioritized set of appropriate reliability risk projects. These analyses led to recommendations developed based on technical committee discussions; industry perspectives at the Reliability Leadership Summit; and ongoing technical committee assessment, event analysis, and Reliability Assessment and Reliability Risk Analysis work products, such as the Long Term Reliability Assessment, the State of Reliability Report, and various special reports and seasonal assessments. These prioritized risk project recommendations have been incorporated for 2014 into eight project areas focused on managing the top priority reliability risks. Each program contains one or more projects identified to produce specific deliverables. By structuring these projects and programs within the larger context of priority reliability risks, resources can be effectively and efficiently allocated across the ERO enterprise and program areas.

These top priority reliability risk programs have been identified for 2014 efforts in this business plan, recognizing that during the balance of the year further refinement and identification of a comparable list of priority efforts will emerge representing the 2015 priority risk projects. For budget assumption purposes, NERC has planned that a comparable level of effort would be allocated within NERC program areas for these projects. Finally, this is not intended to be an exhaustive list of all the reliability centered activities undertaken by NERC. Ongoing obligations regarding standards development, compliance and enforcement, reliability assessments, and performance analysis are expected to continue, as are the numerous activities to respond to regulatory directives and increase efficiency and effectiveness of the ERO.

Reliability Risk Management Process (RRMP)

The process used to develop this set of programs is an interim approach as NERC transitions to a broader planning effort titled the Reliability Risk Management Process (RRMP). NERC staff worked with the RISC to develop this process to ensure the consideration of reliability risk and the development of associated reliability risk management projects are reflected in ERO business planning activities. Under the RRMP, the RISC will collect information to identify and prioritize broad areas of reliability risk. These areas then undergo a deeper analysis to identify specific

reliability risks, associated measurements, and the most critical risks within those broad areas that should be considered for further risk management activity. Following this analysis, strategies for managing these reliability risks are developed. Such strategies may include the use of Guidelines, Information Requests, Training, NERC Alerts, Technical Conferences, Research, Standards, and other tools. Strategies will be weighed for overall effectiveness and efficiency, and a plan will be developed that addresses each identified reliability risk with a set of approaches commensurate in scope to the level of risk being managed. Ultimately, these efforts are reflected in key-ERO activities and the overall ERO planning process.

Listed below are the eight programs focused on managing the top priority reliability risks as identified by the RISC. Each program has associated projects that are supported by various NERC departments. The supporting department is listed after each project. Further information about each project may be found in the [supporting department's section of this document Business Plan and Budget](#).

~~Listed below are the eight programs focused on managing the top priority reliability risks as identified by the RISC. Each program has associated projects that are supported by various NERC departments. The supporting department is listed after each project.~~

Program: Changing Resource Mix

Associated Reliability Risk Areas: Long Term Planning and System Analysis, Resource and Transmission Adequacy, Integration of New Technologies and Operations

Energy currently produced by large rotating machines is being replaced with energy produced by variable resources, demand response programs, and other new types of resources, which exhibit different characteristics with respect to some of the less obvious fundamental components of reliable operation (e.g., inertia, frequency response, maneuverability). At the same time, continuing improvements in energy efficiency and other changes in load composition impact characteristics and behavior of load, reactive power needs, and how the system operates and behaves during disturbances (e.g. fault-induced delayed voltage recovery). Finally, the ongoing shift in fuel from coal to natural gas brings challenges such as critical dependence on the just-in-time fuel supply chain of the natural gas infrastructure. All of these changes move the system toward different behaviors, operating characteristics, and levels of reliability risk.

- Project: Essential Reliability Services Special Assessment Phase II - RAPA
- Project: Development of Standardized Models - RAPA
- Project: Support for IEEE 1574 - RAPA
- Project: Load Composition Modeling Analysis - RAPA
- Project: Gas Coordination Guidelines – Reliability Risk Management (RRM) and RAPA

Program: Resource Planning

Associated Reliability Risk Areas: Resource and Transmission Adequacy

Environmental regulations, low natural gas prices, load forecasting uncertainty, and economic factors all contribute to an increased rate of plant retirements and a lack of construction. While demand response and energy efficiency may offset some of these losses, performance of those technologies can be uncertain, and each brings unique challenges. Long-term outages of multiple units to employ environmental retrofits also may have impacts. This all contributes to a lack of certainty regarding resource adequacy in North America over the next several years. Forecasts show potential deficiencies in reserve margins as early as 2014 and 2015 in the ERCOT and Midcontinent ISOs.

- Project: Environmental Regulations Special Assessment - RAPA

Program: Protection System Reliability

Associated Reliability Risk Areas: Protection Systems

Protection Systems serve a vital role in defense against system disturbance events. However, cases exist where design of a protection system design may be insufficient - where a fault accompanied by a failure of any single Protection System component could result in ~~an~~ outage significant outage event on the BES. One example is the June 24, 2004 western outage event, which resulted in the loss of approximately 5,000 MW of generation and the potential for collapse of the Western Interconnection. NERC identified five events between 2004 and 2010 where a single point of failure on a protection system caused, in whole or in part, an event on the Bulk-Power System.

- Project: Protection System Reliability Analysis - RAPA

Program: Uncoordinated Protection Systems

Associated Reliability Risk Areas: Protection Systems

Protection systems that trip unnecessarily can contribute significantly to the size of an event. When protection systems are not coordinated properly, the order of execution can result in either incorrect elements being removed from service or more elements being removed than necessary. This can also occur with special protection systems, remedial action schemes, and under-frequency and under-voltage load shedding schemes. Such coordination errors occurred in the September 8, 2011 Southwest event ~~(see Recommendation 19)~~ and the August 14, 2003 Northeast blackout event. ~~(see Recommendation 21).~~

- Project: Guidelines for Coordination of Protection Systems and Other Devices – RAPA

Program: Extreme Physical Events

Associated Reliability Risk Areas: Coordinated Attack on Multiple Facilities, Geomagnetic Disturbance, Extreme Weather/Acts of Nature, Localized Physical Attack, Electromagnetic Pulse

Coordinated sabotage attacks, severe weather events, and geomagnetic disturbances are physical events that, at the extreme, can cause extensive equipment damage. Because of the long time involved in manufacturing and replacing some BES assets, an extreme physical event that causes extensive damage to equipment would result in degraded reliability for an extended period of time. While events of this magnitude have a low probability of occurrence, the potential consequences of such an event are high enough that additional focus is needed to properly address this risk and minimize the consequences of an extreme physical event to acceptable levels.

- Project: Promoting Resiliency - RRM
- Project: Emergency Transformer Replacement - RAPA

Program: Availability of Real-Time Tools and Monitoring

Associated Reliability Risk Areas: Monitoring and Situational Awareness

Inadequate situational awareness has the potential for significant negative reliability consequences, and is often a precursor to an event or a contributing cause to an event. Experience has shown that not having the right tools and data available can play a critical role in reduced situational awareness, contributing to events such as those seen [in the September 8, 2011 Southwest event \(see Recommendation 12\)](#) and [the August 14, 2003 Northeast blackout event \(see Recommendation 22\)](#). NERC has analyzed data and identified that outages of tools and monitoring systems are fairly common occurrences, with approximately an 89% chance of a tool or monitoring system outage occurring within a given month. Each time one of these outages occurs, it creates a potential lack of situational awareness, resulting in a latent risk that could combine with other risks to produce a large event. In addition to outages, simply not having the correct tools or data provided to operators is also a key concern.

- Project: Latent Risk Awareness of Real-time Tools - RRM
- Project: Real Time Reliability Monitoring and Analysis Standards - Standards
- Project: Tool Failure Guidelines - RRM

Program: Protection System Misoperations

Associated Reliability Risk Areas: Protection Systems

Protection System Misoperations represent a double threat. Unnecessary trips can result in making a bad event worse, and even start cascading failures as each successive trip can cause another protection system to trip. However, failures to trip and slow trips can result in damaged equipment, which may result in degraded reliability for an extended period of time. Key Finding 4 from NERC's 2012 State of Reliability Report concluded [that](#) protection system misoperations are a significant contributor to disturbance events and automatic transmission outage severity.

- Project: Protection System Guidelines - RAPA
- Project: Protection System Education - RRM

Program: Right-of-Way Clearances

Associated Reliability Risk Areas: Transmission Right of Way, Equipment Maintenance and Management

Reports from various entities have indicated that in a number of cases, actual conductor-to-ground clearances seen in the field have been inconsistent with those assumed during the design of the facility. Examples of inaccurate historical information that leads to these inconsistencies includes, but is not limited to, misplaced structures or supports, inadequate tower height, and ground profile inaccuracies. While an entity may address this concern by changing the facility ratings, modifying the transmission line configuration, or changing the topography, such cases must be identified before they can be addressed. Failure to address these misalignments could lead to incorrect ratings that are ~~be~~ inadequate to prevent equipment damage and/or cascading, instability, or separation.

- Project: Right of Way Site Visit Evaluations – Compliance Analysis, Registration and Certification

Overall, it is anticipated that the resources expected to be deployed to address these reliability risk projects would be similar between ~~2014~~2015 and the comparable level of effort devoted to these efforts in ~~2014~~2015. Accordingly, each of the respective program areas provides a depiction of the efforts and resource allocation needed to support these projects, and those anticipated to be identified for 2015. As the RISC and ERO continue to refine the efforts to establish a multi-year perspective addressing the key reliability initiatives, the specific projects and goals for 2015, and potentially into 2016 and 2017, will be more clearly defined. At the same time, for business plan and budgeting purposes, it is expected that the level of effort allocated to these projects in 2014 would remain generally consistent with the levels expected in subsequent years.

Reliability Assessment

Reliability assessments serve to evaluate the expected reliability behavior of the ~~BPS~~bulk system through extensive deterministic and probabilistic analyses to identify potential reliability conditions that could compromise ~~the~~ overall reliability. These reviews include both evaluations at the edge of the planning horizon, as well as assessments of the anticipated performance during upcoming summer or winter seasons. These analyses consider planned and anticipated changes within the generation resources, transmission infrastructure, and load behavior to formulate recommendations and related guidance, often by examining special scenarios and unique situations within the North American ~~BPS~~power system. These analyses provide a technical platform for important policy discussions on challenges facing the interconnected North American BES, as well as focused recommendations that improve the overall reliability or lessen reliability risks.

Each year, NERC is responsible for independently assessing and reporting on the overall reliability, adequacy, and associated risks that could impact the upcoming summer and winter

seasons and the long-term, 10-year period. As emerging risks and potential impacts to reliability are identified, RAPA conducts special reliability assessments and identifies recommendations and guidance actions that may be warranted to lessen identified risks or enhance reliability overall. RAPA's assessments are founded on solid engineering through collaborative and consensus-based approach.

By identifying and quantifying emerging reliability issues, NERC is able to provide risk-informed recommendations and support a learning environment for industry to pursue improved reliability performance. These recommendations, along with the associated technical analysis, provide the basis for actionable enhancements to resource and transmission planning methods, planning and operating guidelines, and NERC Reliability Standards.

Key assessments include:

- Long-Term Reliability Assessment
- Summer and Winter Reliability Assessments
- Special and Scenario Reliability Assessments

Additionally, RAPA coordinates forecast reliability data between planning areas, the eight Regional Entities, and governmental organizations through the Electricity Supply and Demand Database.

Reliability Initiatives and System Analysis

A deep understanding of the technical performance behavior of the North American grid provides a sound technical foundation for identifying those crucial aspects of grid performance that are important to sustaining overall reliability. This understanding is achieved through a comprehensive evaluation and testing of BES behavior through forensic analysis of system disturbances and analytic simulations. Methodically comparing actual system behavior to the results of analytical power-flow and dynamics simulations provides the essential confidence and credibility to guide recommendations and insights that enhance system performance and reliability. These insights establish the framework and foundation for predictive results that lead to effective operating strategies and recommendations that serve to maintain reliability.

Based on NERC and industry priorities, and to meet business-planning goals, several issues and initiatives will not be pursued in 2015. Probabilistic analysis of reserve margins for NERC's Long-Term Reliability Assessment will be completed every two years rather than annually (none in 2013 or 2015); the smart grid follow-on work plan will be addressed sometime after 2014 should this be "2015"?; and wind generator availability information (GADS) will be re-programmed to the 2015–2016 timeframe. In 2015, RAPA will refine the composition of NERC's annual *State of Reliability Report* 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.

Further, RAPA will continue to work closely with other organizations, including, but not limited to, the Electric Power Research Institute (EPRI), Institute of Electrical and Electronic Engineers

(IEEE), the North American Transmission Forum (NATF), the North American Generation Forum (NAGF), and Canadian Electricity Association (CEA). RAPA collaborates with these groups on a number of fronts, including geomagnetic disturbance (GMD), vegetation management, TADS, GADS, and variable generation integration. RAPA will continue working with the Interstate Natural Gas Association of America (INGAA) and the Natural Gas Supply Associations (NGSA) regarding studies pertaining to the interdependency of gas and electric systems.

Bulk Electric System (BES) Definition Implementation

During 2014, the RAPA department has been closely involved in the development of a revised definition of the BES. RAPA has also been working closely with the Regional Entities to develop a software application to manage the implementation of the revised BES definition and exception process, by which a registered entity submits self-determined notifications or requests for exception of certain assets and systems from the BES. The associated business processes and guidance supporting the implementation are important elements aligned with the development of the BES tool. The BES tool and its functionality for Regions, registered entities, and NERC has been structured to conform to provisions of the Order 773 and 773-A directives and requirements.

The effective date for the implementation of the revised BES definition is June 1~~July 1~~, 2014, and it is expected that during the balance of 2014 and through 2015, ~~that~~ reviews, evaluations, and confirmations of proposed changes to BES elements by registered entities will take place. This will involve both NERC and Region resources to manage effective implementation. The potential exists that outside experts will be needed to conduct technical reviews of BES exception requests.

2015 Goals and Deliverables

In 2015, the RAPA department will seek to accomplish several specific goals and objectives as part of the strategic focus of the ERO Enterprise:

1. Issue reliability assessment reports, guidelines, recommendations, and alerts as needed
 - a. One 10-year Long-Term Reliability Assessment
 - b. Two seasonal assessments: Summer and Winter
 - c. Reliability assessment report on geomagnetic disturbance (GMD) BES effects and vulnerability assessment
 - d. One additional special focused assessment addressing key aspects of reliability issues, such as:
 - Essential Reliability Services white paper and framework assessment
 - Variable generation penetration reliability impacts
 - Planning assumptions related to major one-in-a-hundred-year storms
 - Reliability risks associated with a diverse and changing resource mix
 - e. One annual State of Reliability Report
 - f. Oversight of Generating, Transmission, and Demand Response Availability Data Systems (GADS, TADS, and DADS), along with reliability metrics, misoperations, and the Spare Equipment Database

- g. Strengthen data collection and validation processes by designing, creating, testing, and implementing data checking systems for reliability assessment, system analysis, and risk analysis
- h. Provide periodic updates on trends and measures of BES reliability
2. Develop a risk registry and a systematic prioritization process consistent with the [Reliability Issues Steering Committee \(RISC\)](#) framework and support BES risk profile measurement and assessment of standards
3. Execute integrated risk control strategies and plans across the organization to address the highest priority existing or emerging risks to BES reliability, and explicitly measure the results
4. Support NERC Reliability Standard development and response to FERC directives by providing technical and system analysis expertise.
5. Support the technical foundation development for reliability standards to address deficiencies or needs revealed by reliability assessments and performance analysis.
6. Provide support and leadership to the Planning Committee, and Standing Committees' subcommittees, working groups, and task forces serving the Standing Committees.
7. Develop a structured approach to evaluate and improve system models, model validation, system analysis, and assessments.
8. Assist in the development of approaches to registration and maintenance of the actively monitored list based on reliability trends, risks, and historical information to ensure that the compliance focus remains on the most critical entities and associated reliability standards.
9. Conduct major event investigations, analysis, and reporting of major findings and recommendations that will improve reliability.
10. Build and sustain an enterprise reliability assessment and performance analysis team that encompasses risk-informed approaches and structured methodology to identify and address reliability risks.
11. Implement effective oversight and tracking of various technical aspects of reliability, including frequency response performance, application of TPL footnote b adoption, and root cause applications to assessment and analyses.

Projects Addressing the Top Priority Reliability Risks as Identified by the RISC

The following projects have been preliminarily identified as indicative of those that will emerge as the top priority reliability risk projects to be considered in 2015 and represent the eight projects which the RISC identified as being important to managing the top priority reliability risks. The associated projects are supported by one or more NERC departments, as ~~the~~ indicated [in the list below](#). As the RISC and ERO continue to refine the efforts to establish a multi-year perspective addressing the key reliability initiatives, the specific projects and goals for 2015, and potentially into 2016 and 2017, will be more clearly defined taking into consideration resource availability.

Project: Essential Reliability Services Special Assessment Phase II

The Reliability Assessments team will deliver the second part of their Special Assessment on Essential Reliability Services. The scope of this project consists of scenario analyses of different levels of Essential Reliability Services - RAPA-RRM

Project: Development of Standardized Models

The Reliability Initiatives and System Analysis team will continue developing a standardized set of power flow and dynamic modeling components to support the industry need for more accurate models - RAPA

Project: Support for IEEE 1574

The Reliability Initiatives and System Analysis team will continue its work with the standards setting groups at the IEEE to develop rules that establish frequency and voltage disturbance ~~ride-through~~ride-through obligations for distributed energy resources - RAPA

Project: Load Composition Modeling Analysis

The Reliability Initiatives and System Analysis team will work with stakeholders at the Planning Committee to develop a guideline for performing analysis of loads to determine system needs for various essential reliability services - RAPA

Project: Gas Coordination Guidelines

The Reliability Assessments team, in cooperation with the Event Analysis team, will collaborate with stakeholders to develop a guideline that establishes protocols for operations and emergency coordination with gas suppliers and transporters - RAPA

Project: Environmental Regulations Special Assessment

The Reliability Assessments team will deliver a Special Assessment on the potential impact to reliability of the ~~BPS~~bulk power system of emerging and proposed environmental regulations. This will include updates to the previous report on the Reliability Impacts of Climate Change Initiatives (RICCI), as well as focus on new and existing source CO2 requirements - RAPA

Project: Protection System Reliability Analysis

The Reliability Initiatives and System Analysis team will continue analysis of single point of failure data reported in response to Order No. 754 to determine whether an industry response is necessary. The results of that analysis will be presented to the RISC for their advice on possible ERO responses - RAPA-RRM

Project: Guidelines for Coordination of Protection Systems and Other Devices

The Reliability Initiatives and System Analysis team will work with stakeholders to develop a best practices document. Included in the scope will be coordinating the design and operation of transmission system protection, generator protection and control, special protection systems, and Under-frequency and Under-voltage Load Shedding programs. Additionally, modeling necessary for assessing coordination through planning and operating assessments of system performance will be considered - RAPA

Project: Emergency Transformer Replacement

The Reliability Assessments and the Performance Analysis teams will work with industry to encourage participation in ~~coordination~~coordination support programs, such as the Spare Equipment Database and the Spare Transformer Equipment Program. Reliability

Assessments and Performance Analysis will also work to share information regarding the Recovery Transformer Program - RAPA

Project: Protection System Guidelines

The Reliability Initiatives and System Analysis team will develop good industry practices and guidelines to aid in the proper application of relay elements, minimizing setting errors, maintaining microprocessor-based relay firmware, and the application of power line carrier communication aided protection - RAPA-RRM

The overall impact of resource allocations on the NERC budget reflected in the individual project program areas is reflected in the summary overview below.

Resource Requirements

Personnel

No additional personnel are proposed to be added to this department in 2015 above current staffing levels. The .4 FTE increase is the result of a 2014 reallocation of personnel from other departments.

Contractor Expenses

The total contractor and consultant expenses for the department are projected at \$955.5k, representing an approximate \$317.4k increase over the 2014 budget. The 2015 contractor and consulting resources are described below and are grouped into four categories:

1. Research and Initiative Implementation, Tracking, and Reporting
 - a. Reliability Effects of GMD
 - b. Vegetation Management Research
2. Special and Long-Term Assessments and State of Reliability Analysis
 - a. Scenario assessment consultants
2. Licensing and Support of Existing Databases
3. Software Application Development- development of a replacement for the software application for industry access to GADS data is included in the Information Technology Capital budget, as are costs related to the development of enterprise software applications such as the Reliability Assessment Database applications.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital					
2014 Budget & Projection, and 2015 Budget					
RELIABILITY ASSESSMENTS and PERFORMANCE ANALYSIS					
	2014	2014	Variance	2015	Variance
	Budget	Projection	2014 Projection	Budget	2015 Budget
			v 2014 Budget		v 2014 Budget
			Over(Under)		Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 8,214,496	\$ 8,214,496	\$ 0	\$ 9,501,161	\$ 1,286,665
Penalty Sanctions	43,190	43,190		25,632	(17,558)
Total NERC Funding	\$ 8,257,686	\$ 8,257,686	\$ 0	\$ 9,526,793	\$ 1,269,107
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	50,000	50,000	-	50,000	-
Workshops	40,000	40,000	-	17,500	(22,500)
Interest	2,913	3,219	306	485	(2,428)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 8,350,598	\$ 8,350,905	\$ 306	\$ 9,594,778	\$ 1,244,179
Expenses					
Personnel Expenses					
Salaries	\$ 2,604,058	\$ 2,797,935	\$ 193,877	\$ 2,742,582	\$ 138,524
Payroll Taxes	159,156	189,549	30,393	177,439	18,283
Benefits	333,241	330,373	(2,868)	367,569	34,328
Retirement Costs	294,179	291,307	(2,872)	306,999	12,820
Total Personnel Expenses	\$ 3,390,634	\$ 3,609,164	\$ 218,530	\$ 3,594,588	\$ 203,954
Meeting Expenses					
Meetings	\$ 90,000	\$ 90,000	\$ -	\$ 118,418	\$ 28,418
Travel	385,000	300,000	(85,000)	303,993	(81,007)
Conference Calls	31,950	31,950	-	28,450	(3,500)
Total Meeting Expenses	\$ 506,950	\$ 421,950	\$ (85,000)	\$ 450,861	\$ (56,089)
Operating Expenses					
Consultants & Contracts	\$ 638,085	\$ 692,652	\$ 54,567	\$ 955,450	\$ 317,365
Office Rent	-	-	-	-	-
Office Costs	139,135	131,579	(7,556)	152,386	13,251
Professional Services	-	-	-	-	-
Miscellaneous	500	500	-	500	-
Depreciation	228,000	298,743	70,743	228,000	-
Total Operating Expenses	\$ 1,005,720	\$ 1,123,474	\$ 117,754	\$ 1,336,336	\$ 330,616
Total Direct Expenses	\$ 4,903,304	\$ 5,154,588	\$ 251,284	\$ 5,381,785	\$ 478,481
Indirect Expenses	\$ 3,570,148	\$ 3,943,716	\$ 373,567	\$ 4,139,102	\$ 568,954
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 8,473,452	\$ 9,098,304	\$ 624,852	\$ 9,520,887	\$ 1,047,434
Change in Assets	\$ (122,854)	\$ (747,400)	\$ (624,546)	\$ 73,891	\$ 196,745
Fixed Assets					
Depreciation	(228,000)	(298,743)	(70,743)	(228,000)	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 105,146	\$ 128,520	\$ 23,374	301,891	\$ 196,745
Inc(Dec) in Fixed Assets (C)	\$ (122,854)	\$ (170,224)	\$ (47,370)	\$ 73,891	\$ 196,745
TOTAL BUDGET (=B + C)	\$ 8,350,598	\$ 8,928,081	\$ 577,482	\$ 9,594,778	\$ 1,244,179
FTEs	18.99	19.59	0.60	19.70	0.71

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – The increase in personnel expense is primarily due to the transfer of (1) FTE from another department in 2014, partially offset by increase in the across the board FTE adjustment to account for attrition and hiring delays from 4% in 2014 to 6% in 2015. Payroll tax expenses are increasing at a slightly higher percentage than the other expense categories due to a higher maximum salary subject to FICA taxes. Benefits expenses are also increasing at a slightly higher rate due to market increases in health and medical plans costs.
- **Meetings, Travel and Conferencing Expenses** – The decrease in travel expense is based upon ~~prior year~~2013 actual and projected 2014 costs. The increase in meetings expense is primarily due to additional meetings related to RISC.
- **Consultants and Contracts** – The increase is for (i) contracts related to vegetation research (FAC-003), ~~and~~(ii) additional software application development and support requirements, and (iii) maintenance for pcGAR.
- **Indirect Expenses and Allocation of Fixed Assets** - Indirect expenses and allocation of fixed assets is higher due to higher administrative services expenses to be allocated to the direct programs, as previously explained on page 22.

Reliability Risk Management

NERC’s Reliability Risk Management (RRM) group carries out the ERO’s statutory responsibility to perform assessments (including real-time or near-real-time 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 possible need to develop new or modified reliability standards. RRM has two departments: (1) Situation Awareness department and (2) Event Analysis department. These two departments are responsible for four 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; and (4) support of the NERC Operating Committee.

The functions and resources of this group are directly focused on proactive awareness of BES conditions and all events over a threshold of a 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 and strategic direction to utilize risk based concepts in planning and executing its responsibilities.

Situation Awareness Department

Situation Awareness (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	6.24	6.10	(0.14)
Direct Expenses	\$ 2,891,092	\$ 2,487,549	\$ (403,543)
Indirect Expenses	\$ 1,173,129	\$ 1,281,651	\$ 108,522
Other Non-Operating Expenses	\$ -	\$ -	\$ -
Inc(Dec) in Fixed Assets	519,043	(68,019)	(587,061)
TOTAL BUDGET	\$ 4,583,264	\$ 3,701,182	\$ (882,083)

Background and Scope

The ERO enhances bulk power system situation awareness by having Reliability Coordinators provide near-real-time operating information for their respective footprints to FERC, NERC and the Regional Entities in order to “measure the health” of the Interconnections and to monitor parameters which might warn of a developing crisis. The ERO monitors present conditions on the [BPS Bulk Power System](#) and provides leadership coordination, technical expertise, and assistance to the industry in responding to events as necessary.

The Situation Awareness department is specifically responsible for the following major activities and functions:

- Ensuring that the ERO is aware of all BES events above a threshold of impact.
- Ensuring the sharing of information to facilitate wide area situational awareness.
- Facilitating the exchange of information among industry, Regional Entities, and government.
- Keeping the industry informed of emerging reliability threats and risks to the BES, including any expected actions.
- Enhancing the tracking of notification of expected actions in response to emerging actions to promote greater industry accountability.
- Issuing timely updates regarding progress toward resolving issues identified in Recommendations and Essential Actions.

Stakeholder Engagement and Benefit

The Situation Awareness department works with registered entities to monitor present conditions on the high-voltage transmission lines, associated substations, and large generators using various software tools and applications. NERC communicates and coordinates with Regional Entities and registered entities to notify them of various types of disturbances (hurricanes, tornados, earthquakes, solar flares from the sun, etc.) that could negatively impact the BES. NERC relies on Regional Entity staff to facilitate communications between NERC and registered entities. Additionally, when significant BES disturbances occur, NERC facilitates the coordination of communication between registered entities and applicable governmental authorities.

Key Situational Awareness Efforts Underway in 2014

Several reliability-related situational awareness and monitoring tools will undergo enhancement, replacement, streamlining or adjustment in sponsorship by the end of 2014. Similar to the successful transition of the Interchange Distribution Calculator (IDC) to industry sponsorship, the North American Synchrophasor Initiative will no longer be sponsored, funded or managed by NERC by the end of 2014.

The Situation Awareness department is focused on the following in 2014: (1) operation and maintenance of the Situation Awareness for NERC, FERC and Regions, Version 2 (SAFNrv2) software application used for monitoring; (2) replacement of the current secure alert tool with a streamlined alert process that will utilize email notification to industry directing entity representatives to the NERC alerts page for public alerts and to the ES-ISAC portal for confidential non-public alerts; and (3) transfer of NERCnet (Frame Relay Contract) – Interconnection Security Network (ISN) to the Eastern Interconnection Data Sharing Network consortium.

2015 Goals and Deliverables

In 2015, the Situational Awareness department will seek to accomplish several specific goals and objectives as part of the strategic focus of the ERO Enterprise:

1. Ensure that the ERO is aware of all BES events above a threshold of impact.
2. Ensure 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 U.S. and Canadian government.
4. Keep the 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. Enhance tracking of notification of expected actions in response to emerging actions to promote greater industry accountability.
7. Issue timely updates regarding progress toward resolving issues identified in Recommendations and Essential Actions.

The following reliability-related tools are utilized 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 potentially resulting in critical inadequacies, such as major tie error, inaccurate load forecast, 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 FNet¹⁹ and Frequency Monitoring and

¹⁹ ~~FNet~~ – Operated by the ~~Power Information Technology Laboratory~~ Power Information Technology Laboratory at the ~~University of Tennessee~~ University of Tennessee. FNET is a low-cost, quickly deployable GPS-synchronized wide-area frequency measurement network. High dynamic accuracy Frequency Disturbance

Analysis tools, this tool allows immediate differentiation of the cause of a frequency deviation—a generator trip or a scheduling error.

Other Monitoring Tools

~~The company will be procuring several additional tools to provide greater granularity than current tools to maintain situational awareness.~~

Automated Reliability Reports

This tool produces daily and monthly summaries of historical load generation resource adequacy and control performance for the three interconnections. This tool is used to monitor frequency response and perform trending analysis. This tool relies on data supplied to the Resource Adequacy Tool.

Area Interchange Error Monitoring Tool

This is an automatic data collection tool for post-analysis of frequency excursions. It is used in major system disturbances as part of the frequency response analysis.

Other Monitoring Tools

~~The company may ~~additional~~ procure additional tools to provide greater granularity than current tools to maintain situation awareness.~~

Resource Requirements

Personnel

No additional personnel are projected for the Situation Awareness department in 2015.

Contractor Expenses

The overall funding of approximately \$1.1M for contractors and consultants (which includes the cost of the tools set forth above) to support the Situation Awareness department in 2015 is approximately \$211.8k below 2014 budget levels. The detailed 2015 contractor and consulting budget for the Situation Awareness department is set forth in Exhibit C, together with a comparison to 2014 budgeted amounts.

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~~Virginia Tech.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital							
2014 Budget & Projection, and 2015 Budget							
SITUATION AWARENESS							
	2014	2014	Variance	2015	Variance	2015 Budget	Variance to
	Budget	Projection	2014 Projection	Budget	2015 Budget	Draft 1	Prior Draft
			v 2014 Budget		v 2014 Budget		Over(Under)
			Over(Under)		Over(Under)		Over(Under)
Funding							
ERO Funding							
NERC Assessments	\$ 4,493,115	4,493,115	\$ (0)	\$ 3,693,095	\$ (800,021)	\$ 3,620,595	\$ 72,500
Penalty Sanctions	14,192	14,192	0	7,937	(6,255)	7,937	-
Total NERC Funding	\$ 4,507,307	\$ 4,507,307	\$ (0)	\$ 3,701,032	\$ (806,276)	\$ 3,628,532	\$ 72,500
Membership Dues	-	-	-	-	-	-	-
Testing Fees	-	-	-	-	-	-	-
Services & Software	-	-	-	-	-	-	-
Workshops	75,000	75,000	-	-	(75,000)	72,500	(2,500)
Interest	957	1,019	62	150	(807)	150	-
Miscellaneous	-	-	-	-	-	-	-
Total Funding (A)	\$ 4,583,264	\$ 4,583,326	\$ 61	\$ 3,701,182	\$ (882,083)	\$ 3,701,182	\$ -
Expenses							
Personnel Expenses							
Salaries	\$ 915,216	\$ 876,337	\$ (38,879)	\$ 882,455	\$ (32,761)	\$ 882,455	-
Payroll Taxes	60,207	61,242	1,035	59,488	(719)	59,488	-
Benefits	109,501	104,541	(4,960)	115,795	6,294	115,795	-
Retirement Costs	104,293	90,913	(13,380)	98,872	(5,421)	98,872	-
Total Personnel Expenses	\$ 1,189,217	\$ 1,133,033	\$ (56,184)	\$ 1,156,611	\$ (32,606)	\$ 1,156,611	-
Meeting Expenses							
Meetings	\$ 171,000	\$ 96,000	\$ (75,000)	\$ 5,000	\$ (166,000)	\$ 5,000	-
Travel	28,020	42,420	14,400	42,985	14,965	42,985	-
Conference Calls	4,000	1,484	(2,516)	2,610	(1,390)	2,610	-
Total Meeting Expenses	\$ 203,020	\$ 139,904	\$ (63,116)	\$ 50,595	\$ (152,425)	\$ 50,595	-
Operating Expenses							
Consultants & Contracts	\$ 1,289,108	\$ 1,277,583	\$ (11,525)	\$ 1,077,321	\$ (211,787)	\$ 1,077,321	-
Office Rent	-	-	-	-	-	-	-
Office Costs	47,750	40,271	(7,479)	41,025	(6,725)	41,025	-
Professional Services	-	-	-	-	-	-	-
Miscellaneous	500	-	(500)	500	-	500	-
Depreciation	161,498	718	(160,779)	161,498	-	161,498	-
Total Operating Expenses	\$ 1,498,856	\$ 1,318,573	\$ (180,283)	\$ 1,280,343	\$ (218,512)	\$ 1,280,343	-
Total Direct Expenses	\$ 2,891,092	\$ 2,591,509	\$ (299,583)	\$ 2,487,549	\$ (403,543)	\$ 2,487,549	-
Indirect Expenses	\$ 1,173,129	\$ 1,248,139	\$ 75,009	\$ 1,281,651	\$ 108,522	\$ 1,281,651	-
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Total Expenses (B)	\$ 4,064,222	\$ 3,839,648	\$ (224,573)	\$ 3,769,200	\$ (295,021)	\$ 3,769,200	\$ -
Change in Assets	\$ 519,043	\$ 743,677	\$ 224,635	\$ (68,019)	\$ (587,061)	\$ (68,019)	-
Fixed Assets							
Depreciation	(161,498)	(718)	160,779	(161,498)	-	(161,498)	-
Computer & Software CapEx	645,990	645,990	-	-	(645,990)	-	-
Furniture & Fixtures CapEx	-	-	-	-	-	-	-
Equipment CapEx	-	-	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-	-	-
Allocation of Fixed Assets	\$ 34,550	\$ 40,675	6,125	93,479	58,929	93,479	-
Inc(Dec) in Fixed Assets (C)	\$ 519,043	\$ 685,947	\$ 166,904	\$ (68,019)	\$ (587,061)	\$ (68,019)	\$ -
TOTAL BUDGET (=B + C)	\$ 4,583,264	\$ 4,525,595	\$ (57,670)	\$ 3,701,182	\$ (882,083)	\$ 3,701,182	\$ -
FTEs	6.24	6.20	(0.04)	6.10	(0.14)	6.10	-

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- [Funding](#) – The decrease is due to the transfer of the synchrophasor technology to the private sector. 2014 budget for workshop fees was for the potential continued sponsorship of the North American Synchrophasor Initiative (NASPI) workshops during the transition.
- Personnel** – The reduction in salaries, payroll taxes and retirement costs is due to an increase in the across the board FTE adjustment to account for attrition and hiring delays from 4% in 2014 to 6% in 2015. [The reduction in payroll taxes is smaller due to a higher](#)

maximum salary subject to FICA taxes. The increase in benefits is due to budgeted market increases in medical and dental plan costs.

- **Meetings, Travel and Conferencing Expenses** – The increase in ~~Travel Expense~~ is are due to a more fully staffed department reflects budgeted staffing levels. [note: with the “attrition” adjustment, the budget never shows a department as “fully staffed”] and expanded participation in cross-departmental efforts with RAPA and Standards. The decrease in meetings is due to allocation of the quarterly standing committee meetings to other departments and to transfer of costs associated with the Grid Security Conference to the CID Program.
- **Consultants and Contracts** – The decrease is due to a reduction in costs related to SAFNR, ~~and~~ NERCnet, Automated Reliability Reports, AIE Monitoring and the Secure Alerting System, net of \$236.7k of new costs for other tool additions Genscape’s Power IQ and Power and Transmission RT services.
- **Office Costs** – The slight decrease is due to lower telecommunications costs on a per FTE basis.
- **Indirect Expenses and ~~Allocation of Fixed Assets~~** - Indirect expenses and allocation of fixed assets is higher due to higher administrative services expenses to be allocated to the direct programs as previously explained on page 22. Total ~~Fixed~~ Assets is lower due to the transfer of application software development funding to Information Technology and Fixed Assets.

Event Analysis Department

Event Analysis (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	9.60	9.38	(0.22)
Direct Expenses	\$ 2,384,069	\$ 2,387,128	\$ 3,060
Indirect Expenses	\$ 1,804,814	\$ 1,970,801	\$ 165,987
Other Non-Operating Expenses	\$ -	\$ -	\$ -
Inc(Dec) in Fixed Assets	\$ (140,512)	\$ (49,924)	\$ 90,589
TOTAL BUDGET	\$ 4,048,371	\$ 4,308,005	\$ 259,634

Background and Scope

The Event Analysis department performs 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 possible need to develop remediation strategies, action plans or data to inform the revision of Reliability Standards or the consideration of new Reliability Standards. The department undertakes appropriate levels of analysis to determine the causes of the events, promptly assure tracking of corrective actions to prevent recurrence, and provide lessons learned to the industry. Event analysis resources ensure that reporting and analysis are consistent to allow wide area assessment of trends and risks; all reportable events are analyzed for sequence of events, root cause, risk to reliability, and mitigation; and the industry is well informed of system events, emerging trends, risk analysis, lessons learned, and expected actions.

The Event Analysis department also includes budgeted resources for the investigation team, which are currently managed in the Compliance Analysis and Certification department. These specific resources are responsible for reviewing formal complaints and conducting non-public compliance investigations, as well as assisting in the review of registered entity compliance assessments to verify that compliance gaps are assessed in all reportable events. The event investigation group supports NERC's statutory responsibility of developing reliability standards and assessing the reliability and adequacy of the BES, as well as monitoring and enforcing compliance with mandatory Reliability Standards.

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 those risks, precursors, and mitigation methods. Resources also support compliance and standards training initiatives, as well as trending and analysis to identify emerging reliability risks to the BES. These efforts are conducted in collaboration with industry human performance projects, including the Western Electricity Coordinating Council's (WECC's) Human Performance Working Group, NERC Operating Committee's Event Analysis

Subcommittee, Institute of Nuclear Power Operations (INPO) and the Electric Power Research Institute.

Stakeholder Engagement and Benefit

The Event Analysis department coordinates event analyses to support the effective and efficient use of collective resources, consistency in analysis, and timely delivery of event analysis reports.²⁰ The ERO disseminates to the electric industry lessons learned and other useful information obtained or resulting from event analysis. The event analysis team has conducted in-depth analysis of over 135 events per year. In 2013 the team also conducted calls, facilitated by the Regional Entities with over 70 registered entities to discuss in detail and finalize root and contributing causes for the categorized events analyzed. Major analysis to date includes assessment of [Energy Management System \(EMS\)](#) outages and the publication of an updated advisory with recommendations and actions to be taken upon loss of EMS and the identification-[Identification](#) of specific equipment failures and the associated remediation.

Collaboration with the Trade Associations and Forums

The activities of the North American Transmission Forum (NATF), North American Generator Forum (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 BP&Bs that might otherwise be required in the absence of these forums.

In 2013, NERC entered into a memorandum of understanding (MOU) with the NATF to help ensure that the common objectives of each organization are achieved in the most efficient and effective manner. There is mutual agreement, with no commitment of funds, to coordinate sharing of selected information, engage in the development and maintenance of mutual reliability initiatives, and provide periodic reports to pertinent audiences. A similar agreement is under development with the NAGF in 2014.

Joint reliability initiative projects between the NATF and NERC that are expected to continue into 2015 include; protection systems misoperations reduction, physical security, various activities related to reliability assurance initiatives, improvement of modeling practices, and complementary efforts on addressing the [GMDgeomagnetic disturbance](#) challenges.

2015 Goals and Deliverables

In 2015, the Event Analysis department will seek to accomplish several specific goals and objectives as part of the strategic focus of the ERO Enterprise:

1. Work with the Regional Entities to obtain and review information from registered entities regarding qualifying events and disturbances in order 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.

²⁰ The core process for Event Analysis is outlined in the board-approved process: Electric Reliability Organization Event Analysis Process- Version 2 (July 2013).

2. Ensure that all reportable events (approximately 135 annually) are analyzed for sequence of events, root cause, risk to reliability, and mitigation.
3. Refine risk-based methodologies to support more effective and efficient identification of reliability risks, including the use of more sophisticated cause codes for analysis.
4. Ensure consistency in reporting and analysis to support wide area assessments of significant reliability trends and risks.

~~5.~~

~~6.~~5. Conduct training (webinars, workshops and conference support) to inform industry and ERO of Lesson Learned, Root Cause Analysis, Cause Coding, Human Performance, and Cold Weather preparedness and recommendations.

~~7.~~6. Develop reliability recommendations and alerts as needed.

~~8.~~7. Track industry accountability for critical reliability recommendations.

~~9.~~8. Ensure that industry is well informed of system events, emerging trends, risk analysis, lessons learned, and expected actions .

~~10.~~9. Conduct major event analysis and reporting of major findings and recommendations that will improve reliability.

~~11.~~10. Advance the quality and usefulness of reliability assessments and event analysis data.

The Event Analysis department will also support several of the top priority reliability risk projects, during 2015-2016, as identified and described under the Reliability Assessment and Performance Analysis department section of this business plan and budget.

Resource Requirements

Personnel

No additional personnel are planned to be added to the Event Analysis department in 2015.

Contractor Expenses

No additional consulting and contractor support is budgeted in 2015.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital					
2014 Budget & Projection, and 2015 Budget					
EVENT ANALYSIS					
	2014	2014	Variance		Variance
	Budget	Projection	2014 Projection	2015	2015 Budget
			v 2014 Budget	Budget	v 2014 Budget
			Over(Under)		Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ 3,975,065	\$ 3,975,065	\$ 0	\$ 4,248,270	\$ 273,205
Penalty Sanctions	21,834	\$ 21,834		12,204	(9,629)
Total NERC Funding	\$ 3,996,898	\$ 3,996,899	\$ 0	\$ 4,260,474	\$ 263,576
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	50,000	50,000	-	47,300	(2,700)
Interest	1,473	1,558	85	231	(1,242)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 4,048,371	\$ 4,048,457	\$ 85	\$ 4,308,005	\$ 259,634
Expenses					
Personnel Expenses					
Salaries	\$ 1,470,290	\$ 1,467,273	\$ (3,017)	\$ 1,482,398	\$ 12,108
Payroll Taxes	91,480	95,499	4,019	95,771	4,291
Benefits	168,463	159,837	(8,626)	179,081	10,618
Retirement Costs	167,286	161,201	(6,085)	166,665	(621)
Total Personnel Expenses	\$ 1,897,519	\$ 1,883,810	\$ (13,709)	\$ 1,923,915	\$ 26,396
Meeting Expenses					
Meetings	\$ 67,000	\$ 142,000	\$ 75,000	\$ 74,728	\$ 7,728
Travel	155,000	150,000	(5,000)	151,996	(3,004)
Conference Calls	31,864	15,000	(16,864)	12,585	(19,279)
Total Meeting Expenses	\$ 253,864	\$ 307,000	\$ 53,136	\$ 239,309	\$ (14,555)
Operating Expenses					
Consultants & Contracts	\$ -	\$ -	\$ -	\$ -	\$ -
Office Rent	-	-	-	-	-
Office Costs	38,519	27,354	(11,165)	29,736	(8,783)
Professional Services	-	-	-	-	-
Miscellaneous	500	-	(500)	500	-
Depreciation	193,667	704	(192,962)	193,667	-
Total Operating Expenses	\$ 232,686	\$ 28,058	\$ (204,628)	\$ 223,903	\$ (8,783)
Total Direct Expenses	\$ 2,384,069	\$ 2,218,868	\$ (165,201)	\$ 2,387,128	\$ 3,059
Indirect Expenses	\$ 1,804,814	\$ 1,908,444	\$ 103,630	\$ 1,970,801	\$ 165,987
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 4,188,883	\$ 4,127,312	\$ (61,571)	\$ 4,357,928	\$ 169,045
Change in Assets	\$ (140,512)	\$ (78,856)	\$ 61,656	\$ (49,924)	\$ 90,589
Fixed Assets					
Depreciation	(193,667)	(704)	192,962	(193,667)	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 53,154	\$ 62,193	9,039	143,743	90,589
Inc(Dec) in Fixed Assets (C)	\$ (140,512)	\$ 61,489	\$ 202,001	\$ (49,924)	\$ 90,589
TOTAL BUDGET (=B + C)	\$ 4,048,371	\$ 4,188,801	\$ 140,430	\$ 4,308,005	\$ 259,634
FTEs	9.60	9.48	(0.12)	9.38	(0.22)

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – Salaries and retirement expenses are projected to remain the same in 2015. The slight variances are the result of an increase in the across the board FTE adjustment to account for attrition and hiring delays from 4% in 2014 to 6% in 2015. The percentage increase in payroll taxes is slightly higher than the percentage change in salaries due to a higher maximum salary subject to FICA taxes. Benefits are projected to be higher due to a projected market increase in health and dental plan costs.
- **Meetings, Travel and Conferencing Expenses** – A slight increase in meeting, conferencing and travel expenses is due to greater participation in RAPA and Standards activities. RRM supports various activities with technical experts and subject matter experts.
- **Office Costs** – The decrease is due to lower telecommunications costs on a per FTE basis.
- **Indirect Expenses and Allocation of Fixed Assets** - Indirect expenses and allocation of fixed assets is higher due to higher administrative services expenses to be allocated to the direct programs, as previously explained on page 22.

Critical Infrastructure

Critical Infrastructure Department (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	12.48	8.44	(4.04)
Direct Expenses	\$ 3,092,349	\$ 2,548,983	\$ (543,366)
Indirect Expenses	\$ 2,346,259	\$ 1,773,301	\$ (572,958)
Other Non-Operating Expenses	\$ -	\$ -	\$ -
Inc(Dec) in Fixed Assets	\$ 69,101	\$ 129,338	\$ 60,237
TOTAL BUDGET	\$ 5,507,709	\$ 4,451,621	\$ (1,056,088)

Background and Scope

NERC's Critical Infrastructure department (CID) supports efforts to develop and administer critical infrastructure standards, conducts security outreach visits, provides training and exercise opportunities, and coordinates between industry and governmental entities on critical infrastructure protection (CIP) matters. The department accomplishes these activities through active CIP Standards Drafting Team participation, and programs such as the Security Reliability Program (SRP)²¹, the annual Grid Security Conference (GridSecCon), and the biennial Grid Security Exercise (GridEx). The department also leverages public-private partnerships to examine CIP policy issues, and provides staff-level support to NERC's Critical Infrastructure Protection Committee (CIPC), an industry-led committee comprised of industry experts in the areas of cybersecurity, physical security, and operational security.

Stakeholder Engagement and Benefit

The ~~CID~~Critical Infrastructure department focuses its efforts on building partnerships and providing outreach to registered entities on emerging issues and best practices; in turn, the department relies on industry participation to strengthen, validate, and execute its programs. The CID also coordinates with stakeholders to develop policy positions and determine the best strategies for program implementation. The department's continued coordination with government, across sectors and through various other public-private partnerships, also helps to keep stakeholders informed of policy activities on a national level and provides various opportunities for stakeholder comment and expertise. Through CIPC, industry experts also work together to discuss common concerns and develop policy recommendations to address those concerns.

²¹ Security ~~Readiness~~liability Program, formerly known as Sufficiency Review Program was renamed to ~~reflect~~reflect the program's focus.

Key Critical Infrastructure Efforts Underway in 2014

CIP Standards Support

The Critical Infrastructure department continues to support the activities involved with Responsible Entities' transition from CIP Standard Version 3 to Version 5²². Additionally, the department supports the Standards Department by providing subject matter expertise to draft a physical security standard, and address FERC [Order No. 791](#) directives.

Security Reliability Program (SRP)

The SRP is a continuation of the Sufficiency Review Program from previous years. The program has been modified to focus on transitioning from CIP Version 3 implementation to CIP Version 5 implementation, and includes discussion of issues raised during the CIP Transition Study conducted in 2013-2014. The program continues to provide timely and actionable advice to entities and their security and compliance programs in support of the CIP standards.

GridEx III

In 2014, the department is following up on 2013's GridEx II distributed play and executive tabletop lessons learned and using them to plan for the 2015 GridEx III. This biennial security exercise, focuses on analyzing industry's response to a physical security and cybersecurity scenario. The distributed play exercise and executive tabletop activities aim to: (1) ~~E~~exercise the current readiness of the electricity industry to respond to a security incident, incorporating lessons learned; (2) ~~R~~review existing command, control, and communication plans and tools for NERC and its stakeholders; (3) ~~I~~identify potential improvements in cybersecurity and physical security plans, programs, and responder skills; and (4) ~~E~~explore senior leadership policy decisions and triggers in response to a coordinated cyber and physical event of national significance with long-term grid reliability issues.

GridSecCon 2014

GridSecCon 2014 will ~~be mark the fourth year of~~ NERC's fourth annual conference focused on physical security and cybersecurity issues facing the Electricity Sub-sector. NERC holds the annual conference to: (1) build on NERC's mission to ensure the reliability of the North American BES through education and training; (2) deliver expert analysis on emerging physical security and cyber-security threats and vulnerabilities; (3) discuss potential solutions to emerging industrial control system security issues; (4) provide a strategic focus on related public-private partnerships; and (5) provide information regarding ES-ISAC activities and participant benefits.

²² In 2013, FERC approved CIP Version 5 (CIP-002-5 through CIP-011-1), which now categorizes cyber assets as Low, Medium, or High Impact assets, ~~providing requiring that~~ all BES cyber assets ~~with be provided~~ a level of protection based on the impact the cyber assets have on the grid.

Policy and Coordination

The department has been addressing policy issues from the 2013 Executive Order and Presidential Policy Directive, and continues to monitor and contribute to these activities throughout 2014 and into 2015. In addition, the department continues to support the Policy and External Affairs department in tracking and analyzing legislation and Congressional hearings, developing testimony, and other policy-related activities. The ~~CID Critical Infrastructure department~~ also continues to coordinate and collaborate with NERC's government and private sector partners through both formal and informal structures.

CIPC

The CIPC fosters information sharing, provides industry leadership, and acts as a forum to exchange ideas pertaining to CIP security. In addition to analyzing reliability issues, the CIPC holds security briefings and workshops throughout the year to educate industry about items such as physical security assessments and penetration testing. CIPC conducts its work by establishing task forces or working groups to address critical and timely security issues. Some existing working groups include the following: (1) Bulk Electric System Security Metrics Working Group; (2) Physical Response Guideline V3.0 Update Task Force; (3) Cyber Attack Tree Task Force; (4) Grid Exercise Working Group (GEWG) which is instrumental in planning the scenario for NERC's GridEx series, as well as following up on lessons learned from the exercises; (5) Compliance Enforcement and Input Working Group; (6) Security Training Working Group; and (7) Physical Security Working Group.

These CIPC task forces and working groups continue their efforts to examine emerging security topics.

2015 Goals and Deliverables

In 2015, the Critical Infrastructure department will seek to accomplish several specific goals and objectives as part of the strategic focus of the ERO Enterprise:

1. Hold the annual GridSecCon, which focuses on physical security and cybersecurity issues facing the Electricity Sub-sector, and builds on NERC's mission to ensure the reliability of the North American BES through education and training.
2. Conduct the GridEx III, which focuses on analyzing industry's response to a physical security and cybersecurity scenario and gathering lessons learned.
3. Coordinate with government departments and agencies on critical infrastructure policy issues.
4. Support NERC External Affairs and CEO in ~~testimony~~ preparations for public presentations, and follow-on actions.
5. Support CIP standards development and implementation through outreach presentations, webinars, and other training opportunities.
6. Work through CIPC to address emerging risk issues and support risk projects in 2015, as needed.

Resource Requirements

Personnel

No additional personnel have been budgeted in this department compared to current 2014 staffing levels, and budgeted staffing is reduced from 12.48 FTEs in the 2014 budget to 8.44 FTEs in the 2015 budget.

Contractor Expenses

The 2015 budget includes funds for contractor support for ~~Grid X~~GridExIII, and CIPC support which is in line with the 2014 budget prior expenditures and reflects the fact that GridX was not conducted or budgeted in 2014.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital							
2014 Budget & Projection, and 2015 Budget							
CRITICAL INFRASTRUCTURE DEPARTMENT							
	2014	2014	Variance	2015	Variance	2015 Budget	Variance to
	Budget	Projection	v 2014 Budget	Budget	v 2014 Budget	Draft 1	Prior Draft
			Over(Under)		Over(Under)		Over(Under)
Funding							
ERO Funding							
NERC Assessments	\$ 5,432,411	5,428,058	\$ (4,353)	\$ 4,367,932	\$ (1,064,479)	\$ 4,440,432	\$ (72,500)
Penalty Sanctions	28,383	28,383	-	10,981	(17,402)	10,981	-
Total NERC Funding	\$ 5,460,794	\$ 5,456,441	\$ (4,353)	\$ 4,378,913	\$ (1,081,881)	\$ 4,451,413	\$ (72,500)
Membership Dues	-	-	-	-	-	-	-
Testing Fees	-	-	-	-	-	-	-
Services & Software	-	-	-	-	-	-	-
Workshops	45,000	45,000	-	72,500	27,500	-	72,500
Interest	1,914	-	(1,914)	208	(1,706)	208	-
Miscellaneous	-	-	-	-	-	-	-
Total Funding (A)	\$ 5,507,708	\$ 5,501,441	\$ (6,267)	\$ 4,451,621	\$ (1,056,087)	\$ 4,451,621	\$ -
Expenses							
Personnel Expenses							
Salaries	\$ 1,883,806	\$ 1,424,912	\$ (458,894)	\$ 1,340,521	\$ (543,285)	\$ 1,340,521	-
Payroll Taxes	113,362	86,651	(26,711)	82,398	(30,964)	82,398	-
Benefits	219,000	144,455	(74,545)	157,529	(61,471)	157,529	-
Retirement Costs	214,632	152,837	(61,795)	150,778	(63,854)	150,778	-
Total Personnel Expenses	\$ 2,430,800	\$ 1,808,855	\$ (621,945)	\$ 1,731,226	\$ (699,574)	\$ 1,731,226	-
Meeting Expenses							
Meetings	\$ 145,000	\$ 145,000	\$ -	\$ 133,134	\$ (11,866)	\$ 133,134	-
Travel	240,000	204,000	(36,000)	206,715	(33,285)	206,715	-
Conference Calls	32,574	16,698	(15,876)	30,449	(2,125)	30,449	-
Total Meeting Expenses	\$ 417,574	\$ 365,698	\$ (51,876)	\$ 370,298	\$ (47,276)	\$ 370,298	-
Operating Expenses							
Consultants & Contracts	\$ 190,000	\$ 190,000	\$ -	\$ 426,800	\$ 236,800	\$ 426,800	-
Office Rent	-	-	-	-	-	-	-
Office Costs	53,475	57,245	3,770	20,158	(33,317)	20,158	-
Professional Services	-	-	-	-	-	-	-
Miscellaneous	500	-	(500)	500	-	500	-
Depreciation	-	16,377	16,377	-	-	-	-
Total Operating Expenses	\$ 243,975	\$ 263,621	\$ 19,646	\$ 447,458	\$ 203,483	\$ 447,458	\$ -
Total Direct Expenses	\$ 3,092,349	\$ 2,438,174	\$ (654,175)	\$ 2,548,983	\$ (543,366)	\$ 2,548,983	\$ -
Indirect Expenses	\$ 2,346,259	\$ 1,725,250	\$ (621,009)	\$ 1,773,301	\$ (572,958)	\$ 1,773,301	\$ -
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 5,438,608	\$ 4,163,424	\$ (1,275,184)	\$ 4,322,283	\$ (1,116,325)	\$ 4,322,283	\$ -
Change in Assets	\$ 69,100	\$ 1,338,017	\$ 1,268,917	\$ 129,338	\$ 60,238	\$ 129,338	\$ -
Fixed Assets							
Depreciation	-	(16,377)	(16,377)	-	-	-	-
Computer & Software CapEx	-	-	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-	-	-
Equipment CapEx	-	-	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-	-	-
Allocation of Fixed Assets	\$ 69,101	\$ 56,223	(12,878)	129,338	60,237	\$ 129,338	-
Inc(Dec) in Fixed Assets (C)	\$ 69,101	\$ 39,846	\$ (29,255)	\$ 129,338	\$ 60,237	\$ 129,338	\$ -
TOTAL BUDGET (=B + C)	\$ 5,507,709	\$ 4,203,270	\$ (1,304,439)	\$ 4,451,621	\$ (1,056,088)	\$ 4,451,621	\$ -
FTEs	12.48	8.57	(3.91)	8.44	(4.04)	8.44	-

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Funding** – The increase in workshop fees is based upon 2013 actual results for the Grid Security Conference.
- **Personnel** – The reduction in personnel expenses is primarily related to the transfer of (4) positions to other departments in 2014 and also due to an increase in the across the board FTE adjustment to account for attrition and hiring delays from 4% in 2014 to 6% in 2015.
- **Meetings, Travel and Conferencing Expenses** – The reduction in travel expenses is due to the transfer of FTEs to other departments in 2014. The reductions in meetings and conferencing expenses is based upon ~~prior year~~2013 actual and projected 2014 costs.
- **Consultants and Contracts** – The increase is related to costs for the GridEx, which is held every other year.
- **Office Costs** – The decrease is due to lower telecommunications expense resulting from having fewer FTEs in the department and a lower cost per FTE.
- **Indirect Expenses** – The decrease in indirect expenses is due to a reduction in FTEs and in proportion to total FTEs in the statutory programs.

Electricity Sector Information Sharing and Analysis Center (ES-ISAC)

ES-ISAC (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	7.72	7.50	(0.22)
Direct Expenses	\$ 2,609,660	\$ 2,507,668	\$ (101,992)
Indirect Expenses	\$ 1,451,372	\$ 1,575,800	\$ 124,429
Other Non-Operating Expenses	\$ -	\$ -	\$ -
Inc(Dec) in Fixed Assets	\$ 42,937	\$ 114,933	\$ 71,996
TOTAL BUDGET	\$ 4,103,969	\$ 4,198,402	\$ 94,433

Background and Scope

The ES-ISAC was formed in 1998 when the U.S. Secretary of Energy requested that NERC serve as the ISAC²³ for the electricity sub-sector.²⁴ ES-ISAC's primary function is the rapid and secure sharing of information with the electric industry and governmental entities regarding real and potential security threats to the electricity sector, as well as methods and tools to avoid or mitigate the potential impact from these threats. ES-ISAC facilitates sector coordination, mitigation development and mitigation delivery for physical security, cyber security and all hazards events and is aligned to support ESCC intent under the National Infrastructure Protection Plan (NIPP).

In general, the ES-ISAC supports two functions, information sharing and analytics, which are vitally important to all other critical infrastructures and key resource sectors that have active ISACs. The ES-ISAC is a founding member of the National Council of ISACs and participates in daily coordination with its members to ensure effective collaboration and communication. This close coordination is essential to addressing critical infrastructure protection and resilience within each sector, as well as the important interdependencies that exist among sectors.

The ES-ISAC develops alerts and notifications for distribution to registered entities. The ES-ISAC also utilizes its secure, private information-sharing portal to receive voluntary reports from industry members. This portal is designed with the unique ability to receive unattributed reports in order to increase information reporting.

²³ 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.

²⁴ 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 ES-ISAC.

The ES-ISAC also maintains a seat on the operations floor of the National Cybersecurity and Communications Integration Center (NCCIC) within the Department of Homeland Security (DHS). This operations center is the hub for real-time, classified threat and vulnerability work, and the ES-ISAC serves a central private sector role in this operation. The NCCIC operations floor is where ES-ISAC personnel holding the appropriate security clearances analyze the threat and vulnerability component provided by the intelligence community and make initial determinations of potential BES impacts. The ES-ISAC maintains other information-sharing relationships throughout the U.S. and Canadian governments, including DOE, Canadian Secret Intelligence Service, and the U.S. Department of Defense. The ES-ISAC also coordinates information sharing with similar agencies in Australia, New Zealand, and the United Kingdom.

Stakeholder Engagement and Benefit

The ES-ISAC directly benefits stakeholders through the following activities:

- Serving as a central coordination hub for electricity sector cyber risk and security information sharing, provision of mitigation advice, sector coordination support and authoritative reference material.
- Sharing information derived (declassified format) from classified threat and security vulnerability briefings that is otherwise not generally available.
- Information shared through the ES-ISAC enhances participant security assessments and capabilities.

Key ES-ISAC Efforts Underway in 2014

In 2014, and into 2015, focus will remain on continued execution of capability maturation steps already underway, and process enhancement to ES-ISAC operations. For ES-ISAC, applied resources consist primarily of personnel and contractors who gather, analyze, and provide information regarding cyber threats to industry through a secure communications portal and the costs to operate and maintain that portal. Current capability maturation efforts include a portal update which will continue through 2015. Additionally, assessment support services and self-service assessment tool creation and refinement are planned for 2015. Having access to information regarding threats (including threats faced by other sectors, such as the financial and communications industries) and the ability to analyze the potential impact of these threats on the electric sector and rapidly share this information with industry enables the ES-ISAC to improve the security of the electricity sector.

Maintaining Separation from Compliance and Enforcement

In February 2012 the Board of Trustees approved an [ES-ISAC Policy Statement](#) that established a separation between the ES-ISAC and NERC's compliance and enforcement program. In support of this policy and in furtherance of one of the FERC recommendations from an audit of NERC, in June 2013 NERC requested comments from stakeholders regarding the impact on NERC's compliance-related activities of the walling off of certain staff from ES-ISAC activities, as further ~~set~~ detailed in the ES-ISAC Policy Statement. In response to the request for comments,

stakeholders generally expressed support for this policy.²⁵ Numerous eCommenters recommended even stronger separation of the ES-ISAC information sharing function from NERC's compliance and enforcement function, including but not limited to physical separation of ES-ISAC personnel from other NERC personnel, coupled with strong process management with explicit access restrictions from all NERC personnel. Commenters also recommended the adoption of standards of conduct and procedures similar to those governing separation of utility merchant and transmission functions, as well as a change in management reporting structure in which the ES-ISAC would report directly to the NERC president and chief executive officer. In consideration of this input, NERC management undertook a number of initiatives including:

- Separating the ES-ISAC from the Critical Infrastructure Department and having the ES-ISAC and the NERC chief security officer report directly to NERC's president and chief executive officer.
- Transferring Critical Infrastructure Department CID auditors to the Compliance department Regional Entity Assurance and Oversight Group providing oversight of regional entity compliance functions. In addition to removing these auditors from the same department containing ES-ISAC personnel, this transfer provides better functional alignment among the auditors and a more efficient and effective management oversight of the compliance oversight and audit assurance-audit function.
- Finalized and put in place a formal Employee Code of Conduct to further memorialize the existing separation of the ES-ISAC from eCompliance Monitoring and eEnforcement personnel. The eCode of eConduct contains many of the principals incorporated in codes of conduct separating utility competitive and regulated operations.

Management has also investigated the costs and benefits of exercising an option to acquire additional space in the company's Washington, D.C. office to physically separate the ES-ISAC from the company's other operations and restrict personnel access between operating areas and the ES-ISAC. In connection with the negotiation of the lease for the company's Washington, D.C. office, management negotiated an option ~~to~~ lease the remaining space consisting of approximately 6,200 rentable square feet on the 6th floor where the company's offices are now located. Exercise of this option would allow the company to physically separate the ES-ISAC from the company's other operations and restrict personnel access between operating areas and the ES-ISAC. The lease provides that the rent for the option space will be based on the "prevailing market". The projected annual cost of leasing the space at a lease rate equivalent to rate per square foot for ~~the~~ NERC's existing space of approximately \$50 per square foot would add approximately \$300k to the budget, assuming negotiation of a reasonable build out allowance. Estimated incremental operating costs would add an additional \$5k in annual costs to the budget.

²⁵ Entities submitting comments included SCE, EEI, the ISO/RTO Council, Duke, TECO, Entergy, PP&L, ITC Holdings, the APPA and LPPC. The full text of the comments may be found at the following link <http://www.nerc.com/gov/bot/FINANCE/2014%20Business%20Plan%20and%20Budget2nd%20Draft/ES-ISAC%20Comments%20Received%20as%20of%2008-02-13.pdf>

2015 Goals and Deliverables

To keep pace with the growth and risk of cyber-attacks and the associated need for information sharing with other sectors and industry in order to mitigate potential significant BES reliability risk, NERC's 2015 budget provides stable resource investment levels devoted to supporting ES-ISAC. This resource support is primarily directed to three areas:

1. Improve the usability and functionality of the information-sharing portal
2. Prepare a cyber risk preparedness toolkit to allow industry to conduct self-assessments of cyber risk preparedness
3. Increase analytical capabilities, portal monitoring, and information sharing. Costs in 2015 associated with improving the portal and information-sharing capabilities consists primarily of software licensing fees. The cyber risk preparedness toolkit will reduce NERC's projected ongoing costs for conducting individual cyber risk preparedness assessments for industry. Plans for 2015, plans include the early steps towards transitioning to an industry self-assessment model with declining ES-ISAC level of effort.

CRISP Program Participation

The Cyber Risk Information Sharing Program (CRISP) is a public-private partnership to facilitate timely information sharing of cyber threat information and develop situation awareness tools to enhance the electricity sector's ability to identify, prioritize, and coordinate the protection of its critical infrastructure. CRISP provides near real time capability for critical infrastructure owners and operators to voluntarily share cyber threat data, analyze this data and receive machine to machine mitigation measures. Information sharing devices which are installed on participant's networks send encrypted data to a CRISP analysis center operated by the Pacific Northwest National Labs, which analyzes the data it receives and sends alerts and mitigation measures back to CRISP participants through a secure network. There is significant industry interest in CRISP. However, the contract and associated costs are still under negotiation. NERC believes there is merit and broad stakeholder benefit to NERC's participation in CRISP through the ES-ISAC. As a participant, the ES-ISAC would have access to additional cyber threat information which it can analyze, together with other information it receives as the ES-ISAC, and share this information (non an appropriate declassified basis) with ES-ISAC registered users. NERC's participation in CRISP is subject to NERC negotiating acceptable contract provisions with respect to participation, including provisions regarding sharing of information derived from CRISP with ES-ISAC registered users, as well as a review of stakeholder comments and necessary corporate and regulatory authorizations. NERC estimates its cost of participation will be \$200-\$300k. This amount has not been included in the proposed 2015 budget.

Resource Requirements

Personnel

No additional FTEs have been budgeted in this department for 2015.

Contractor Expenses

The 2015 contractor and consulting budget for ES-ISAC is approximately \$703k, which represents a decrease of approximately \$83k ~~underfrom~~ the 2014 budget. ~~This~~The amount budgeted for 2015 includes funding for existing and added tools and technology but does not include the cost of CRISP participation, as noted above and as further discussed in the Introduction and Executive Summary section of this business plan and budget. ~~The line by line budget detail is set forth in Exhibit C.~~A discussion of the specific nature and need for these resources falls in under three major categories: Program Level Support, Software and Services, and Events and Outreach. Exhibit C sets forth the budget for each of these categories of expense.

Program Level Support

Portal Enhancement

The ES-ISAC communication portal capabilities include: publishing alerts and other informational products, exchanging threat indicator information, and providing self-service access to user security awareness services. Development of ~~the~~a new portal platform, initiated in 2014 as part of a long term improvement strategy, continues. Important new enhancements and improved capabilities are presently in use and development. These include facilitation of direct data exchange with other ISAC's and government partners. The portal's improved capabilities support ES-ISAC Aanalysts in their information analysis functions and directly tie the ES-ISAC Aanalysts with their counterparts in other sectors and national laboratories.

Cyber Risk Preparedness Assessments (CRPA)

The CRPA is a program that assesses the cybersecurity capabilities of registered entities through facilitated tabletop exercises. Conducting these assessments allows the ES-ISAC to gain a better understanding of industry capabilities, identify key sector level areas for improvement, and share best practices across the industry. Through the CRPA, participants gain an improved understanding of their cybersecurity programs and capabilities. The CRPA allows them to identify areas for improvement and enhance their abilities to respond to and recover from cyber events. The CRPA also educates participants through defined deliverables and best practices. The CRPA incorporates many Electricity Subsector Cybersecurity Capability Maturity Model practices, which allows the participating organization to assess its cybersecurity program and use the CRPA to validate its assessment. The ES-ISAC is continuing to develop, and will deploy, a CRPA "kit" for entities to use to develop and run their own CRPAs. This kit will allow more sector members to leverage the CRPA methodology, which will have a more significant impact on overall sector preparedness. ES-ISAC staff will host training and education sessions on the kit to accelerate adoption of the methodology across the sector and move the program toward self-sustainment within the industry. To accommodate CRPA engagements, complete kit development, and initiate kit deployment for use by industry partners, the contractor and consulting budget to support these activities has begun to decrease. The decrease reflects early cost efficiencies resulting from transition to an industry self-assessment model.

Cyber Awareness Monitoring

A new class of cyber intelligence tools that collects and analyzes information and then alerts the user about selected threats is emerging in the marketplace. This collection and analysis goes

beyond the individual organization's network perimeter and gives organizations like the ES-ISAC visibility across the entire industrial sector. Key global internet infrastructure data sources are combined with advanced visual analysis tools that provide ES-ISAC staff with enhanced analytic capabilities. The ES-ISAC currently licenses cyber awareness and continuous monitoring tools and services, including third party services, which provide real-time internet communications visibility and analytics. During 2012 and 2013, the ES-ISAC worked with a vendor to develop a specific software visualization application that allows ES-ISAC staff to monitor malware and threats, as well as the general health of BES entities. ES-ISAC staff can then alert individual entities to problems. In 2014, the ES-ISAC portal will begin to provide individual asset owners a customized view of their asset networks. This view will provide the asset owner with insight into the organization's general network hygiene and highlight any significant network activity of concern.

Software and Services

Software Integration Support Services

The ES-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. The 2015 budget for software integration support services is approximately \$63k, a slight decrease from the 2014 budget. A portion of these costs are budgeted under Office Costs as software maintenance expenses.

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. The analyst workbench will also offer stand-alone functionality for assessing and understanding cyber events. This workbench will include a threat database for historical correlation and various tools for network and host-based analysis of malicious software.

Secure Bidirectional Communications

Certain emergent security situations may require the ES-ISAC to quickly transmit secure information from the ES-ISAC to DHS's NCCIC, DOE and its National Laboratories, and among different registered entities. DOE recently developed the Contested Operational Network for Reporting and Defense (CONRAD) system for its own internal communications, which is now available for the ES-ISAC's use. The CONRAD system is an "out-of-band" network that ES-ISAC cyber analysts will use to communicate with their peers. The CONRAD system implements a specific network architecture that is separate from all regular site enterprise networks like Voice over Internet Protocol, normal email, web-based applications, and standard telephony. The CONRAD deployment is a fee-based service per network interface device; each location that participates in CONRAD requires a network interface device. NERC has budget for 1 device in 2015. If other devices are added they will need to be funded from reserves.

Events and Outreach

Aurora Webinars and Technical Support

In late 2006, a significant supply chain vulnerability was discovered in digital protective control devices that protect generators and motors in use throughout the BES. This vulnerability, named the Aurora Vulnerability, demonstrated a remote exploit that led to the destruction of a small generator as a proof of concept attack in early 2007. In June of 2007, NERC released a Level 1 Industry Advisory that specified actions that entities could take to help prevent exploitation. In October 2010, NERC released a second Aurora Alert, this time a Level 2 Recommendation to Industry. This second release also triggered a substantial increase in NERC's effort to close this vulnerability gap, and it required entities to report every six months until they closed the alert actions. Prior to each required reporting period, the ES-ISAC holds three webinars to provide BES entities who are still working on their Aurora mitigations an opportunity to interact with the original authors and researchers who discovered the Aurora vulnerability. The ES-ISAC anticipates supporting limited webinar activity for this purpose until at least 2017.

Intelligence Reporting Services

ES-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 ES-ISAC budget includes the costs of a contract for intelligence services from a specialized security information service provider that focuses closely on the electricity sub-sector and has a working relationship with DOE's Idaho National Laboratory. These reporting services include weekly, quarterly, and annual news in the industrial controls systems and security space, along with expert guidance, opinion, and sourced material. This service gives ES-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 alerts and esisac.com security postings.

ES-ISAC Members Conference

The ES-ISAC, through an annual member conference, will continue to offer workshops and other industry training and collaboration opportunities. Specific conference sessions developed and delivered by the ES-ISAC will focus on sustaining and enhancing industry physical and cyber threat collaboration capabilities, including core program offerings such as CRPA. The member conference venue provides an excellent opportunity to ensure industry and ES-ISAC alignment to continue effectively addressing an ever evolving threat environment.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital					
2014 Budget & Projection, and 2015 Budget					
ES-ISAC					
	2014	2014	Variance	2015	Variance
Funding	Budget	Projection	2014 Projection	Budget	2015 Budget
			v 2014 Budget		v 2014 Budget
			Over(Under)		Over(Under)
ERO Funding					
NERC Assessments	\$ 4,085,033	4,089,386	\$ 4,353	\$ 4,188,459	\$ 103,426
Penalty Sanctions	17,558	17,558	(1)	9,758	(7,800)
Total NERC Funding	\$ 4,102,591	\$ 4,106,944	\$ 4,353	\$ 4,198,217	\$ 95,626
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	1,184	-	(1,184)	185	(999)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 4,103,775	\$ 4,106,944	\$ 3,169	\$ 4,198,402	\$ 94,627
Expenses					
Personnel Expenses					
Salaries	\$ 1,336,679	\$ 1,219,041	\$ (117,638)	\$ 1,283,589	\$ (53,090)
Payroll Taxes	77,887	76,348	(1,539)	80,165	2,278
Benefits	135,474	122,445	(13,029)	140,026	4,552
Retirement Costs	151,967	126,295	(25,672)	143,125	(8,842)
Total Personnel Expenses	\$ 1,702,007	\$ 1,544,129	\$ (157,878)	\$ 1,646,906	\$ (55,101)
Meeting Expenses					
Meetings	-	\$ -	\$ -	\$ 5,000	\$ 5,000
Travel	88,428	88,428	-	89,605	1,177
Conference Calls	-	12,406	12,406	10,409	10,409
Total Meeting Expenses	\$ 88,428	\$ 100,834	\$ 12,406	\$ 105,014	\$ 16,586
Operating Expenses					
Consultants & Contracts	\$ 786,450	\$ 753,750	\$ (32,700)	\$ 703,335	\$ (83,115)
Office Rent	-	-	-	-	-
Office Costs	32,775	23,241	(9,534)	51,914	19,139
Professional Services	-	-	-	-	-
Miscellaneous	-	-	-	500	500
Depreciation	-	-	-	-	-
Total Operating Expenses	\$ 819,225	\$ 776,991	\$ (42,234)	\$ 755,749	\$ (63,476)
Total Direct Expenses	\$ 2,609,660	\$ 2,421,953	\$ (187,707)	\$ 2,507,668	\$ (101,992)
Indirect Expenses	\$ 1,451,372	\$ 1,461,530	\$ 10,159	\$ 1,575,800	\$ 124,429
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 4,061,032	\$ 3,883,483	\$ (177,548)	\$ 4,083,469	\$ 22,437
Change in Assets	\$ 42,937	\$ 223,460	\$ 180,717	\$ 114,933	\$ 72,190
Fixed Assets					
Depreciation	-	-	-	-	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 42,937	\$ 47,629	4,692	114,933	71,996
Inc(Dec) in Fixed Assets (C)	\$ 42,937	\$ 47,629	\$ 4,692	\$ 114,933	\$ 71,996
TOTAL BUDGET (=B + C)	\$ 4,103,969	\$ 3,931,112	\$ (172,856)	\$ 4,198,402	\$ 94,433
FTEs	7.72	7.26	(0.46)	7.50	(0.22)

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – The reduction in salaries and retirement costs is due to an increase in the across the board FTE adjustment to account for attrition and hiring delays from 4% in 2014 to 6% in 2015. The increase in payroll taxes is due to a higher maximum salary subject to FICA taxes. The increase in benefits is due to budgeted market increases in medical and dental plan costs.
- **Meetings, Travel and Conferencing Expenses** – Meeting and conferencing expenses were not allocated to ES-ISAC in the 2014 budget, but were collectively budgeted in the Critical Infrastructure department. Travel expense is projected to be slightly higher compared to the 2014 budget.
- **Consultants and Contracts** – Expenses in this category decline in 2015, as set forth in Exhibit C.
- **Office Costs** – The increase is due to software maintenance agreements that was budgeted in the Critical Infrastructure department in 2014, but has been properly budgeted as a cost of the ES-ISAC in 2015.
- **Indirect Expenses and Allocation of Fixed Assets** - Indirect expenses and allocation of fixed assets is higher due to higher administrative services expenses to be allocated to the direct programs as previously explained on page 22.

Training, Education, and Operator Certification

Training, Education and Operator Certification (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	8.16	7.97	(0.19)
Direct Expenses	\$ 2,158,199	\$ 2,191,858	\$ 33,659
Indirect Expenses	\$ 1,534,092	\$ 1,674,550	\$ 140,458
Other Non-Operating Expenses	\$ -	\$ -	\$ -
Inc(Dec) in Fixed Assets	\$ 45,181	\$ 122,135	\$ 76,954
TOTAL BUDGET	\$ 3,737,472	\$ 3,988,544	\$ 251,071

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, including compliance auditors, relating to their job responsibilities. 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 the 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 statutory ERO 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 in these areas. The responsibility for training in some key areas is shared among multiple departments at NERC. Guidance for these areas is expressed in the NERC Rules of Procedure and/or other governing documentation pertaining to the operation of NERC as the ERO.

The Training and Education Program also supports NERC's System Operator Certification and Continuing Education (SOCCED) programs, which ensure that personnel operating the BES have the skills, training, and qualifications needed to operate the system reliably. NERC maintains the credentials required to work in system control centers across North America for over 6,000 system operators. 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 to appropriately operate the BES during normal and emergency operations. Certification exams are created by the Personnel Certification Governance Committee, an industry group of operations experts, trainers, and supervisors. Under the PCGC oversight, the Examination Working Group periodically updates and publishes new exams. 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. Sections 500 and 902 of the NERC Rules of Procedure address the Training and Education Program's activities in these areas.

Key Training, Education and Operator Certification Efforts Underway in 2014

The ERO provides training for industry and ERO personnel to support their understanding of the key program areas. These include but are not limited to:

1. Auditor Training
2. Standards and Compliance Training
3. Registration and Certification (for Registered Entities)
4. Continuing education for system operators and other industry personnel as appropriate and related to reliability functions
5. Event Analysis, Cause Analysis and Lessons Learned

2015 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 various reliability standards, including standards compliance and emerging cyber-related issues potentially affecting 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 RAI, FFT, 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 information technology systems to better deliver and share common training products and information with Regional and registered entities. Other training will focus on knowledge and skills 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 process, issues, and alternatives,
- Human performance fundamentals, and
- Systematic approach to 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 of the key areas 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.

Resource Requirements

Personnel

The Training, Education and Operator Certification department is not proposing the addition of staff in 2015.

Contractor Expenses

The total proposed consulting and contractor expenses of approximately \$757,505 in 2015 is approximately \$91k below the 2014 budget.

Further detail in support of the proposed 2015 contractor and consulting budget to support Training, Education, and Operator Certification is set forth in Exhibit C, which includes a comparison to 2014 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 SOCCED database.
- Improvements to the SOCCED database described above.
- 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.²⁶
- 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.
- Vendor supported BES technical training for select ERO staff, including auditors, technical and support staff.
- Auditor training by recognized auditing specialists for NERC and Regional Entity staff to promote continued development of compliance staff.

²⁶ 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.

- Web-based training development for ERO staff and industry, including standards applications, risk assessment training, industry human performance fundamentals, and BES events lessons learned.
- Learning management system to support web-based training for ERO staff.

**Statement of Activities, Fixed Assets Expenditures and Change in Working Capital
2014 Budget & Projection, and 2015 Budget**

TRAINING, EDUCATION and OPERATOR CERTIFICATION

Funding	2014 Budget	2014 Projection	Variance		
			2014 Projection v 2014 Budget Over(Under)	2015 Budget	Variance 2015 Budget v 2014 Budget Over(Under)
ERO Funding					
NERC Assessments	\$ 1,665,959	\$ 1,665,959	\$ (0)	\$ 1,896,608	\$ 230,649
Penalty Sanctions	12,008	12,008	\$ -	6,714	(5,295)
Total NERC Funding	\$ 1,677,968	\$ 1,677,967	\$ (0)	\$ 1,903,322	\$ 225,354
Membership Dues	-	-	-	-	-
Testing Fees	1,620,000	1,620,000	-	1,670,000	50,000
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	1,252	1,321	69	196	(1,056)
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ 3,299,220	\$ 3,299,288	\$ 69	\$ 3,573,518	\$ 274,299
Expenses					
Personnel Expenses					
Salaries	\$ 806,116	\$ 880,235	\$ 74,119	\$ 903,106	\$ 96,990
Payroll Taxes	56,919	69,354	12,435	62,622	5,703
Benefits	143,194	135,629	(7,565)	150,802	7,608
Retirement Costs	91,840	100,058	8,218	101,440	9,600
Total Personnel Expenses	\$ 1,098,069	\$ 1,185,276	\$ 87,207	\$ 1,217,970	\$ 119,901
Meeting Expenses					
Meetings	\$ 36,000	\$ 36,000	\$ -	\$ 59,931	\$ 23,931
Travel	51,000	29,000	(22,000)	29,386	(21,614)
Conference Calls	25,500	25,500	-	33,388	7,888
Total Meeting Expenses	\$ 112,500	\$ 90,500	\$ (22,000)	\$ 122,705	\$ 10,205
Operating Expenses					
Consultants & Contracts	\$ 848,830	\$ 787,330	\$ (61,500)	\$ 757,505	\$ (91,325)
Office Rent	-	-	-	-	-
Office Costs	98,300	94,442	(3,858)	93,178	(5,122)
Professional Services	-	-	-	-	-
Miscellaneous	500	-	(500)	500	-
Depreciation	-	1,919	1,919	-	-
Total Operating Expenses	\$ 947,630	\$ 883,691	\$ (63,939)	\$ 851,183	\$ (96,447)
Total Direct Expenses	\$ 2,158,199	\$ 2,159,467	\$ 1,268	\$ 2,191,858	\$ 33,659
Indirect Expenses	\$ 1,534,092	\$ 1,618,554	\$ 84,462	\$ 1,674,550	\$ 140,458
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ 3,692,291	\$ 3,778,021	\$ 85,729	\$ 3,866,408	\$ 174,117
Change in Assets	\$ (393,072)	\$ (478,733)	\$ (85,661)	\$ (292,890)	\$ 100,182
Fixed Assets					
Depreciation	-	(3,838)	(1,919)	-	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 45,181	\$ 52,746	7,565	122,135	\$ 76,954
Inc(Dec) in Fixed Assets (C)	\$ 45,181	\$ 48,908	\$ 5,646	\$ 122,135	\$ 76,954
TOTAL BUDGET (=B + C)	\$ 3,737,472	\$ 3,826,929	\$ 91,375	\$ 3,988,544	\$ 251,071
FTEs	8.16	8.04	(0.12)	7.97	(0.19)

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – In addition to the budgeted increase in salaries ~~expense~~, the increase in salaries is due to changes in job responsibilities for some positions, resulting in higher expense per FTE, partially offset by the change an increase in the across the board FTE adjustment to account for attrition and hiring delays from 4% in 2014 to 6% in 2015. The higher salary expense per FTE also resulted in higher retirement expenses. The increase in payroll taxes is due to a higher maximum salary subject to FICA taxes. The increase in benefits is due to budgeted market increases in medical and dental plan costs.
- **Meetings, Travel and Conferencing Expenses** –The increase in meeting expenses are primarily related to the PCGC and are offset by testing and certification fees. The increase in conferencing, offset by the reduction in travel expenses, are based upon ~~prior year~~ 2013 actual and 2014 projected costs.
- **Consultants and Contracts** – The decrease is primarily due to lower costs for system operator testing and exam development costs.
- **Indirect Expenses and Allocation of Fixed Assets** - Indirect expenses and allocation of fixed assets is higher due to higher administrative services expenses to be allocated to the direct programs, as previously explained on page 22.

Administrative Services

Administrative Services (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	59.14	67.54	8.40
Total Direct Expenses	\$ 24,513,515	\$ 25,620,412	\$ 1,106,897
Inc(Dec) in Fixed Assets	\$ 721,958	\$ 1,868,658	\$ 1,146,700
Total Allocation to Statutory Programs as Indirect Expenses	\$ 25,235,473	\$ 27,489,069	\$ 2,253,597

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 and governmental affairs, 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 is described further 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 2015 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 and public relations staff; and costs related to the Board. No additional personnel are budgeted for 2015 beyond current staffing. The increase in FTEs in the General and Administrative area is due to a reallocation occurring in 2014 of personnel in 2014 supporting the Members Representatives Committee and Regional eEntity Management gGroup activities.

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

Section A – 2015 Business Plan and Budget Program Area and Department Detail

Board of Trustee Expenses	Budget 2014	Projection 2014	Budget 2015	2015 v 2014 Budget	Variance %
Meetings and Travel Expenses					
Quarterly Board Meetings	\$ 234,000		\$ 244,000	\$ 10,000	
Trustee Travel	155,000		150,000	(5,000)	
Total Board of Trustees Meetings and Travel Expenses	389,000	-	394,000	5,000	
Professional Services					
Independent Trustee Fees	1,000,000	1,000,000	1,085,000	85,000	
Trustee Search Fees	70,000	70,000	-	(70,000)	
Total Board of Trustee Professional Services Expenses	1,070,000	1,070,000	1,085,000	15,000	
Total Board of Trustee Expenses	\$ 1,459,000	\$ 1,070,000	\$ 1,479,000	\$ 20,000	1.37%

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital					
2014 Budget & Projection, and 2015 Budget					
GENERAL and ADMINISTRATIVE					
	2014 Budget	2014 Projection	Variance 2014 Projection v 2014 Budget Over(Under)	2015 Budget	Variance 2015 Budget v 2014 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ (2,216,461)	\$ (2,216,461)	\$ -	\$ (514,287)	\$ 1,702,174
Penalty Sanctions	-	-	-	-	-
Total NERC Funding	\$ (2,216,461)	\$ (2,216,461)	\$ -	\$ (514,287)	\$ 1,702,174
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ (2,216,461)	\$ (2,216,461)	\$ -	\$ (514,287)	\$ 1,702,174
Expenses					
Personnel Expenses					
Salaries	\$ 2,031,740	\$ 1,985,697	\$ (46,043)	\$ 2,187,205	\$ 155,465
Payroll Taxes	89,250	114,858	25,608	115,084	25,834
Benefits	245,309	267,319	22,010	305,046	59,737
Retirement Costs	158,550	154,522	(4,028)	178,525	19,975
Total Personnel Expenses	\$ 2,524,849	\$ 2,522,396	\$ (2,453)	\$ 2,785,861	\$ 261,012
Meeting Expenses					
Meetings	\$ 268,000	\$ 268,000	\$ -	\$ 301,178	\$ 33,178
Travel	421,482	416,482	(5,000)	344,525	(76,957)
Conference Calls	24,206	23,069	(1,137)	28,831	4,625
Total Meeting Expenses	\$ 713,688	\$ 707,551	\$ (6,137)	\$ 674,534	\$ (39,154)
Operating Expenses					
Consultants & Contracts	\$ 75,000	\$ 75,000	\$ -	\$ 72,750	\$ (2,250)
Office Rent	2,617,300	2,617,299	(1)	2,617,300	-
Office Costs	502,000	437,861	(64,139)	444,262	(57,738)
Professional Services	1,170,000	1,200,000	30,000	1,185,000	15,000
Miscellaneous	5,500	5,500	-	5,500	-
Depreciation	419,399	423,229	3,830	419,399	-
Total Operating Expenses	\$ 4,789,199	\$ 4,758,889	\$ (30,310)	\$ 4,744,211	\$ (44,988)
Total Direct Expenses	\$ 8,027,736	\$ 7,988,836	\$ (38,900)	\$ 8,204,606	\$ 176,870
Indirect Expenses	\$ (8,171,736)	\$ (8,068,204)	\$ 103,532	\$ (8,348,606)	\$ (176,870)
Other Non-Operating Expenses	\$ 144,000	\$ 79,367	\$ (64,633)	\$ 144,000	\$ -
Total Expenses (B)	\$ -	\$ -	\$ (0)	\$ -	\$ 0
Change in Assets	\$ (2,216,461)	\$ (2,216,461)	\$ 0	\$ (514,287)	\$ 1,702,174
Fixed Assets					
Depreciation	(419,399)	(423,229)	(3,830)	(419,399)	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ 419,399	\$ 423,229	3,830	419,399	-
Inq(Dec) in Fixed Assets (C)	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL BUDGET (=B + C)	\$ -	\$ -	\$ (0)	\$ -	\$ 0
FTEs	10.56	12.77	2.21	13.13	2.57

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – Personnel expenses are projected to increase in 2015 due primarily to FTEs reallocated to this department in 2014. The percentage increase in payroll taxes is higher than salaries and retirement expenses due to an increase in the maximum salary subject to FICA taxes. Benefits are projected to increase at a higher rate than other personnel expenses due to the higher cost per employee of employee benefits plans.
- **Travel and Conferencing Expenses** – The decrease in travel expense and the increase in meeting and conferencing expenses for 2015 are based upon ~~2013~~prior year actual costs.
- **Consultants and Contracts** – The decrease in 2015 is due to the reduction in the projected cost of outside consulting to support communications.
- **Office Costs** – The decrease is primarily due to lower copying and use tax expenses based upon ~~prior year~~2013 actual costs.
- **Professional Services** – The increase is due to an increase in Trustee compensation offset by the reduction in Trustee search fees.

Legal and Regulatory

Legal and Regulatory (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	15.15	15.01	(0.14)
Total Direct Expenses	\$ 4,298,813	\$ 4,410,839	\$ 112,026
Inc(Dec) in Fixed Assets	\$ -	\$ -	\$ -
Working Capital Requirement	\$ -	\$ -	\$ -

Background and Scope

The Legal and Regulatory department's workload is derived from the following key NERC program areas: Compliance Analysis, Registration and Certification, Reliability Risk Management, Reliability Assessment and 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 Legal and Regulatory department is extensively involved with the preparation of the Five-Year ERO Performance Assessment which will be filed with FERC on July, 21, 2014. The department also addresses legal and regulatory matters that arise in connection with the delegation agreements with the Regional Entities, including proposed amendments to those agreements which are expected at the end of 2015. The legal and regulatory needs of the ERO are both demanding and increasingly more complex.

Resource Requirements

No additional personnel are budgeted in 2015 for this department.

Outside law firms and consultants supporting this area are budgeted and tracked as Professional Services. The Professional Services budget for 2015 is equal to the 2014 budget.

**Statement of Activities, Fixed Assets Expenditures and Change in Working Capital
2014 Budget & Projection, and 2015 Budget**

LEGAL and REGULATORY

	2014 Budget	2014 Projection	Variance 2014 Projection v 2014 Budget Over(Under)	2015 Budget	Variance 2015 Budget v 2014 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ -	\$ -	\$ -	\$ -	\$ -
Penalty Sanctions	\$ -	\$ -	\$ -	\$ -	\$ -
Total NERC Funding	\$ -	\$ -	\$ -	\$ -	\$ -
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ -	\$ -	\$ -	\$ -	\$ -
Expenses					
Personnel Expenses					
Salaries	\$ 2,637,399	\$ 2,706,221	\$ 68,822	\$ 2,702,083	\$ 64,684
Payroll Taxes	136,718	148,999	12,281	150,724	14,006
Benefits	265,856	257,316	(8,540)	280,052	14,196
Retirement Costs	296,887	303,861	6,974	304,005	7,118
Total Personnel Expenses	\$ 3,336,860	\$ 3,416,397	\$ 79,537	\$ 3,436,863	\$ 100,003
Meeting Expenses					
Meetings	\$ 5,000	\$ 5,000	\$ -	\$ 9,937	\$ 4,937
Travel	120,000	120,000	-	121,597	1,597
Conference Calls	12,953	5,000	(7,953)	10,790	(2,163)
Total Meeting Expenses	\$ 137,953	\$ 130,000	\$ (7,953)	\$ 142,324	\$ 4,371
Operating Expenses					
Consultants & Contracts	\$ -	\$ -	\$ -	\$ -	\$ -
Office Rent	-	-	-	-	-
Office Costs	63,500	59,949	(3,551)	71,152	7,652
Professional Services	760,000	790,000	30,000	760,000	-
Miscellaneous	500	-	(500)	500	-
Depreciation	-	4,458	4,458	-	-
Total Operating Expenses	\$ 824,000	\$ 854,407	\$ 30,407	\$ 831,652	\$ 7,652
Total Direct Expenses	\$ 4,298,813	\$ 4,400,804	\$ 101,991	\$ 4,410,839	\$ 112,026
Indirect Expenses	\$ (4,298,813)	\$ (4,400,804)	\$ (101,991)	\$ (4,410,839)	\$ (112,026)
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ -	\$ -	\$ -	\$ -	\$ (0)
Change in Assets	\$ -	\$ -	\$ -	\$ -	\$ 0
Fixed Assets					
Depreciation	-	(4,458)	(4,458)	-	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ -	\$ 4,458	-	-	-
Inc(Dec) in Fixed Assets (C)	\$ -	\$ -	\$ (4,458)	\$ -	\$ -
TOTAL BUDGET (=B + C)	\$ -	\$ -	\$ (4,458)	\$ -	\$ (0)
FTEs	15.15	15.26	0.11	15.01	(0.14)

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – The increases in salaries and retirement expenses reflect the general increases included in the 2015 budget. The percentage increase in payroll taxes is higher than salaries and retirement expenses due to an increase in the maximum salary subject to FICA taxes. Benefits are projected to increase at a higher rate than other personnel expenses due to the higher cost per employee of employee benefits plans due to budgeted market increases in medical and dental plan costs.
- **Meetings, Travel and Conferencing Expenses** – The slight increase is based upon ~~prior~~ year 2013 actual costs.
- **Office Costs** – The increase is due to projected higher subscription costs for legal research tools.

Information Technology

Information Technology (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	18.07	19.70	1.63
Total Direct Expenses	\$ 8,320,845	\$ 8,441,750	\$ 120,905
Inc(Dec) in Fixed Assets	\$ 1,141,357	\$ 2,288,057	\$ 1,146,700
Working Capital Requirement	\$ -	\$ -	\$ -

Background and Scope

NERC's information technology (IT) department budget includes those resources necessary to support NERC internal technology operations, along with those required to support the ERO Enterprise applications.

The 2015 business plan and budget is separated into two sections denoting NERC internal IT operations required to ensure normal business activities and those designed to support ERO Enterprise applications.

NERC Internal IT Operations

Internal IT operations will continue ~~the theme of to~~ replacing outdated, legacy business applications. Replacement of legacy applications is a multi-year initiative to replace several legacy registration applications, over one hundred legacy databases, along with a multitude of other internal and industry facing applications.

Internal IT operations will continue to build upon the multi-year theme of prior business plan and budget years with a focus on replacement of legacy applications and hardware, further refinement and strengthening of the core IT infrastructure, along with continued security enhancements.

NERC's IT staffing strategy will continue to leverage external contractors to augment core IT staff. External contractors are used for numerous infrastructure maintenance and development tasks and the various NERC applications. In addition, all major application development is performed with the assistance of external firms.

Resource Requirements

Personnel

The increase in FTEs is due to the transfer of open positions from other departments in 2014.

Contract and Consulting Resources to Support Internal Operations

The following text provides a description of contractor and consulting support for the two primary categories of IT contract and consulting expenses. The 2015 budgeted amounts are also set forth in Exhibit C, with a comparison to 2014 budgeted amounts.

Security — Consulting service to provide ongoing intrusion detection and vulnerability testing of the NERC public website, NERC network, applications, and systems is an essential requirement of on-going operations. In addition, during 2014 an outside consultant was retained to conduct an IT Risk Assessment and made a number of recommendations. Consulting support will be engaged to assist in the implementation of these recommendations.

Application Enhancements, Consulting and Help Desk Support — Includes cost to maintain and support existing software applications including maintenance, enhancements and replacement of legacy applications. These applications include the Standards Balloting application, the Reliability Coordinator Information System, Central Repository of Curtailment Events application, ERO Membership application, NERC My Account application, User Management Profile application, and the Compliance Reporting and Tracking System.²⁷ This budget item also includes costs to make modifications to Enterprise software applications supporting NERC and Regional Entity operations, such as the BES application which was developed to assist in the management of BES exception applications, as well as third party help desk support for these applications.

2015 IT Operating Expenses

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

²⁷ The Standards Balloting application supports adoption and approval of standards; the Reliability Coordinator Information System application ~~is to support~~ Reliability Coordinator communications and supports NERC's situation awareness operations ; the NERC My Account application is used for registration and use of NERC applications such as Standards Balloting and other applications accessed through [NERC's website](#) ; the User Management Profile applications is NERC's internal application for managing user profiles, such as committee and working group memberships ;and the Compliance Reporting Analysis and Tracking application is used to collect and report [submittals and information on](#) compliance, registration, technical feasibility exceptions and standards violations.

Office Costs	Budget 2014	Budget 2015	Variance
Telephone	\$ 225,000	\$ 225,000	\$ -
Telephone - Answering Service		3,000	3,000
Internet	275,000	375,000	100,000
Computer Supplies and Maintenance			
Computers	4,500	9,000	4,500
Computer Supplies	95,400	100,100	4,700
Maintenance & Service Agreements	1,539,370	1,333,320	(206,050)
Software	140,500	88,000	(52,500)
Network Supplies	-	-	
Express Shipping	-	10,000	10,000
Total Office Costs	\$ 2,279,770	\$ 2,143,420	\$ (136,350)

Telephone Expenses

Office telephone costs are items associated with cellular phone, mobile laptop cellular air card, bonded T1 Voice over Internet Protocol (VoIP) data circuits, and conference calling expenses.

NERC-issued cell phones are provided to employees to ensure access and productivity before, during, and after business hours, and cost is minimized by leveraging pooled minutes. Individual NERC employees are provided with a basic pooled cell phone plan of 450 minutes, including a basic level subscription for texting and data. This plan is designed to ensure persons who travel frequently have additional cell phone minutes by taking advantage of limited usage by employees who travel less frequently. In addition, employees are encouraged to connect via wireless whenever possible to reduce cellular charges for data usage. The basic texting plan is provided for those instances when calling or email is not optimal. Cellular calling costs are included in the telephone expense item.

Mobile laptop cellular air cards are provided to ensure connectivity while traveling or in locations where wireless connectivity is unavailable. Wireless or cellular connectivity to the NERC network is enabled using virtual private network technology to ensure maximum security, logging, and encryption. In addition, IT support persons are required to be available for support 24x7x365, which-That in almost all instances requires them to have access to systems and network via secure internet connectivity. Included in the line item "telephone" are those monthly costs associated with internet access for systems, application, network, and security to enable IT resources to provide support and conduct emergency and non-emergency patching of systems, routers, firewalls, etc., as required to ensure the stability of the NERC technology environment.

Conference calling is conducted via an external service provider in order to minimize internal hardware, IT support, and internal conference lines capable of providing access to an external audience. Information Technology conference calling, webinars, recorded events, etc., are included in the telephone cost line item. During 2014, IT implemented Microsoft Lync to enhance productivity by leveraging Interactive Messaging, Desktop Sharing and will also work to reduce conference calling fees by implementing a solution for internal conference calling.

Bonded T1 circuits provide access for VoIP service for NERC desk phones in lieu of having a very expensive, support-intensive in-house phone switch (e.g., Private Branch Exchange) that requires senior-level telecommunication resources to support and manage.

Internet Expense

Internet expense is comprised of data circuits, Plain old Telephone Service (POTS), and redundant capability in the event of primary service provider failure.

Computers

Computers are items that do not meet the criteria to be considered a capital expense, such as desktop computers or iPads. Desktop computers enable conference webinars, internet access, training room functionality, etc., for those instances when a presenter does not have a computer device available to conduct presentations. In addition, on a case-by-case basis and as justified by extensive travel or consistent out of office meetings, NERC will provide an iPad with cellular data access for persons who require functionality but are unable to use a laptop for computing needs.

Computer Supplies

Computer supplies are expense items required for infrastructure support to include computer monitors, mice, keyboard, cell phones, cables, encrypted hard drives, encrypted thumb drives, encryption keys, uninterruptible power supplies (UPS), privacy screens, phone headsets, docking stations, computer memory, and any other computer supplies or components required to support the technology infrastructure.

Maintenance and Service Agreements

Maintenance and Service Agreements comprise those items required to support internal and external access to routers, switches, firewalls, intrusion protection, 100-fileservers, audiovisual, storage area network, 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 over one hundred terabytes of data, conference calling, and network and security monitoring consume a large portion of the maintenance and service agreements budget.

Software

Tools such as SharePoint Designer, Microsoft Visio, and Crystal Reports Developer are included under this line item. The tools are primarily used for NERC infrastructure purposes to develop SharePoint workflow, to create development process flows, and for reporting.

Express Shipping

Express shipping is for shipping of IT computers and computer supplies. [This expense item was not separately budgeted in 2014.](#)

2015 IT Fixed Asset (Capital) Expenses

The following table presents a summary of NERC’s 2015 fixed asset (capital) budget.

Fixed Assets	Budget 2014	Budget 2015	Variance
Computer & Software CapEx	\$ 2,258,800	\$ 3,253,500	\$ 994,700
Equipment CapEx	\$ 213,000	\$ 365,000	\$ 152,000
	<u>\$ 2,471,800</u>	<u>\$ 3,618,500</u>	<u>\$ 1,146,700</u>

As in prior years, the goal of the 2015 – 2017 planning period is to provide access, visibility, and analysis of data from many different sources across the ERO and will require significant investment in hardware, software, and associated tools ~~and~~. The overarching theme is to securely gather, analyze and maintain ~~of~~ data across the ERO enterprise to support ERO operations. Adding capability to centralize and mine data, in addition to foundational elements such as disaster recovery and application development, set the stage for vastly improved reporting, business intelligence and capability for collaboration, and sharing of information vital to the ERO’s mission.

In addition to the investments described above to support efficiency and consistency across the enterprise, the 2015 budget also includes the cost of software, servers, laptops, and other hardware to support daily operations.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital					
2014 Budget & Projection, and 2015 Budget					
INFORMATION TECHNOLOGY					
	2014	2014	Variance	2015	Variance
	Budget	Projection	2014 Projection	Budget	2015 Budget
			v 2014 Budget		v 2014 Budget
			Over(Under)		Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ -	\$ -	\$ -	\$ -	\$ -
Penalty Sanctions	\$ -	\$ -	\$ -	\$ -	\$ -
Total NERC Funding	\$ -	\$ -	\$ -	\$ -	\$ -
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ -	\$ -	\$ -	\$ -	\$ -
Expenses					
Personnel Expenses					
Salaries	\$ 2,013,859	\$ 2,144,425	\$ 130,566	\$ 2,476,965	\$ 463,106
Payroll Taxes	136,366	159,644	23,278	164,345	27,979
Benefits	317,097	308,934	(8,163)	367,569	50,472
Retirement Costs	229,767	211,098	(18,669)	277,777	48,010
Total Personnel Expenses	\$ 2,697,089	\$ 2,824,101	\$ 127,012	\$ 3,286,655	\$ 589,566
Meeting Expenses					
Meetings	\$ 5,000	\$ 2,500	\$ (2,500)	\$ 3,169	\$ (1,831)
Travel	59,243	42,000	(17,243)	42,559	(16,684)
Conference Calls	4,800	10,000	5,200	5,404	604
Total Meeting Expenses	\$ 69,043	\$ 54,500	\$ (14,543)	\$ 51,132	\$ (17,911)
Operating Expenses					
Consultants & Contracts	\$ 1,944,000	\$ 1,932,491	\$ (11,509)	\$ 1,629,600	\$ (314,400)
Office Rent	-	-	-	-	-
Office Costs	2,279,770	2,195,758	(84,012)	2,143,420	(136,350)
Professional Services	-	-	-	-	-
Miscellaneous	500	-	(500)	500	-
Depreciation	1,330,443	1,020,573	(309,871)	1,330,443	-
Total Operating Expenses	\$ 5,554,713	\$ 5,148,822	\$ (405,892)	\$ 5,103,963	\$ (450,750)
Total Direct Expenses	\$ 8,320,845	\$ 8,027,423	\$ (293,422)	\$ 8,441,750	\$ 120,905
Indirect Expenses	(8,320,845)	(8,027,423)	293,422	(8,441,750)	(120,905)
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ -	\$ -	\$ -	\$ -	\$ (0)
Change in Assets	\$ -	\$ -	\$ -	\$ -	\$ 0
Fixed Assets					
Depreciation	(1,330,443)	(1,020,573)	309,871	(1,330,443)	-
Computer & Software CapEx	2,258,800	2,043,800	(215,000)	3,253,500	994,700
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	213,000	213,000	-	365,000	152,000
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ (1,141,357)	\$ (1,236,227)	(94,871)	\$ (2,288,057)	\$ (1,146,700)
Inc(Dec) in Fixed Assets (C)	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL BUDGET (=B + C)	\$ -	\$ -	\$ -	\$ -	\$ (0)
FTEs	18.07	18.32	0.25	19.70	1.63

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – Personnel expenses are projected to increase in 2015 due primarily to FTEs reallocated to this department in 2014.
- **Meetings, Travel and Conferencing Expenses** – The projected reductions are based upon ~~prior year~~2013 actual costs.
- **Consultants and Contracts** – The reduction is primarily due to lower budgeted costs for applications enhancements, consulting and help desk support.
- **Office Costs** – The decrease is primarily related to software and hardware annual maintenance agreements and data center hosting expense.

Human Resources

Human Resources (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	2.88	2.81	(0.07)
Total Direct Expenses	\$ 1,104,974	\$ 1,113,741	\$ 8,767
Inc(Dec) in Fixed Assets	\$ -	\$ -	\$ -
Working Capital Requirement	\$ -	\$ -	\$ -

Background and Scope

Human Resources (HR) manages all of NERC's human resources functions, including new hires, benefits, and employee functions. This area also oversees NERC's employee performance appraisal and incentive structure process. Management has implemented a robust, objective, and auditable performance management system to track corporate, departmental, and individual performance against pre-established goals, objectives, and measures. Each year NERC continues to refine and improve this system. In 2012 NERC implemented a new time accounting system to facilitate tracking of time by functional activities or, where appropriate, specific projects.

Executive Training and Development

As the risk-based methodology to improve reliability is further developed and deployed, NERC will use experienced consultants to provide strategic guidance and training for the executive team to frame problems according to highest potential risk factors and prioritize them to solve big issues. The executive leadership team may also receive additional training and development initiatives geared toward promoting collaboration and consensus building to improve knowledge sharing and team performance.

Staff Development

Management believes that access to knowledge is a key differentiator for NERC and that it ensures retention and high performance. Therefore, NERC will invest in learning opportunities for staff 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 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-house and external training that provides essential knowledge and skills development that will lead to improved staff performance.

Compensation Consulting

HR will continue to rely on market data to drive its attraction, engagement, and retention model. Periodically, HR will have a compensation consultant examine the current market data to ensure 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. To protect NERC's substantial investment in human capital, HR will also engage consultants to consider compensation models and practices prevalent within the market that have been successful in attracting, engaging, and retaining talent. Similarly, HR may retain compensation subject matter experts to perform periodic assessments of the BOT compensation model to ensure alignment with market practices. NERC's compensation policy and analysis of market data will be based on total remuneration, taking into account base and incentive compensation, as well as the value of benefits.

Surveys

HR will retain a vendor to conduct periodic 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/experience bases 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

Paramount to an effective and efficient HR department is the use of electronic and automated products and services. HR will continue to operate, maintain, and investigate investment in additional electronic platforms for HR support services.

Resource Requirements

Personnel

No additional personnel budgeted for this department in 2015.

Contractor Expenses

Contractor and consultant expenses are slightly below 2014 budgeted amounts and are set forth in additional detail in Exhibit C.

Miscellaneous Expenses

Miscellaneous expenses include Community Responsibility and Employee Engagement, Year-end Holiday Catering, and a portion of the budget for Employee Rewards and Recognition.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital					
2014 Budget & Projection, and 2015 Budget					
HUMAN RESOURCES					
	2014 Budget	2014 Projection	Variance 2014 Projection v 2014 Budget Over(Under)	2015 Budget	Variance 2015 Budget v 2014 Budget Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ -	\$ -	\$ -	\$ -	\$ -
Penalty Sanctions	\$ -	\$ -	\$ -	\$ -	\$ -
Total NERC Funding	\$ -	\$ -	\$ -	\$ -	\$ -
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ -	\$ -	\$ -	\$ -	\$ -
Expenses					
Personnel Expenses					
Salaries	\$ 595,009	\$ 562,520	\$ (32,489)	\$ 606,214	\$ 11,205
Payroll Taxes	23,428	26,423	2,995	24,508	1,080
Benefits	50,539	49,064	(1,475)	52,510	1,971
Retirement Costs	42,721	43,844	1,123	42,908	187
Total Personnel Expenses	\$ 711,697	\$ 681,851	\$ (29,846)	\$ 726,141	\$ 14,444
Meeting Expenses					
Meetings	\$ 2,000	\$ 1,000	\$ (1,000)	\$ 2,000	\$ -
Travel	10,897	15,000	4,103	15,200	4,303
Conference Calls	600	600	-	1,247	647
Total Meeting Expenses	\$ 13,497	\$ 16,600	\$ 3,103	\$ 18,447	\$ 4,950
Operating Expenses					
Consultants & Contracts	\$ 257,500	\$ 262,000	\$ 4,500	\$ 249,775	\$ (7,725)
Office Rent	-	-	-	-	-
Office Costs	16,500	15,353	(1,147)	14,099	(2,401)
Professional Services	80,280	75,280	(5,000)	80,280	-
Miscellaneous	25,500	25,500	-	25,000	(500)
Depreciation	-	7,733	7,733	-	-
Total Operating Expenses	\$ 379,780	\$ 385,866	\$ 6,086	\$ 369,154	\$ (10,626)
Total Direct Expenses	\$ 1,104,974	\$ 1,084,317	\$ (20,657)	\$ 1,113,741	\$ 8,767
Indirect Expenses	\$ (1,104,974)	\$ (1,084,317)	\$ 20,657	\$ (1,113,741)	\$ (8,767)
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ -	\$ -	\$ 0	\$ -	\$ 0
Change in Assets	\$ -	\$ -	\$ (0)	\$ -	\$ (0)
Fixed Assets					
Depreciation	-	(7,733)	(7,733)	-	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ -	\$ 7,733	\$ 7,733	-	-
Inc(Dec) in Fixed Assets (C)	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL BUDGET (=B + C)	\$ -	\$ -	\$ 0	\$ -	\$ 0
FTEs	2.88	2.91	0.03	2.81	(0.07)

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – Salaries expense includes a total corporate budget for employment agency fees and temporary office services. The budget for these expenses ~~was~~ remained sed the same in 2015 as was budgeted in 2014.
- **Travel** – The increase is based upon 2013 actual and projected 2014 costs.
- **Consultants and Contracts** – The decrease is primarily due to a reduction in consultant and contract support for executive and staff training and development.
- **Office Costs** – The decrease is primarily related to a reduction in the cost of telecommunications on a per FTE basis.

•

Finance and Accounting

Accounting and Finance (in whole dollars)			
	2014 Budget	2015 Budget	Increase (Decrease)
Total FTEs	12.48	16.89	4.41
Total Direct Expenses	\$ 2,617,147	\$ 3,305,475	\$ 688,328
Inc(Dec) in Fixed Assets	\$ -	\$ -	\$ -
Working Capital Requirement	\$ -	\$ -	\$ -

Background and Scope

NERC's Finance and Accounting department manages all finance and accounting functions, including employee payroll, 401(k) and 457(b) 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, meeting, 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

Several FTEs have been reallocated to this department during 2014. One additional FTE will be added to this department in 2015 to strengthen segregation of duties, cross training and back-up functions.

Contractor Expenses

Approximately \$388k is budgeted for outside contractor and consulting support, representing a slight decrease compared to the 2014 budget. These costs are primarily for outside professional support for auditors to support various risk management and internal control initiatives, as well as to provide finance and accounting support.

Statement of Activities, Fixed Assets Expenditures and Change in Working Capital					
2014 Budget & Projection, and 2015 Budget					
FINANCE and ACCOUNTING					
	2014	2014	Variance	2015	Variance
	Budget	Projection	2014 Projection	Budget	2015 Budget
			v 2014 Budget		v 2014 Budget
			Over(Under)		Over(Under)
Funding					
ERO Funding					
NERC Assessments	\$ -	\$ -	\$ -	\$ -	\$ -
Penalty Sanctions	\$ -	-	-	-	-
Total NERC Funding	\$ -	\$ -	\$ -	\$ -	\$ -
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding (A)	\$ -	\$ -	\$ -	\$ -	\$ -
Expenses					
Personnel Expenses					
Salaries	\$ 1,379,476	\$ 1,652,467	\$ 272,991	\$ 1,882,351	\$ 502,875
Payroll Taxes	81,128	113,733	32,605	116,457	35,329
Benefits	219,002	265,927	46,925	315,059	96,057
Retirement Costs	155,391	180,889	25,498	211,185	55,794
Total Personnel Expenses	\$ 1,834,997	\$ 2,213,016	\$ 378,019	\$ 2,525,053	\$ 690,056
Meeting Expenses					
Meetings	\$ 5,650	\$ 2,500	\$ (3,150)	\$ 2,926	\$ (2,724)
Travel	62,500	45,000	(17,500)	45,599	(16,901)
Conference Calls	4,000	4,000	-	9,560	5,560
Total Meeting Expenses	\$ 72,150	\$ 51,500	\$ (20,650)	\$ 58,085	\$ (14,065)
Operating Expenses					
Consultants & Contracts	\$ 400,000	\$ 400,000	\$ -	\$ 388,000	\$ (12,000)
Office Rent	-	-	-	-	-
Office Costs	29,500	32,830	3,330	37,838	8,338
Professional Services	280,000	225,000	(55,000)	296,000	16,000
Miscellaneous	500	500	-	500	-
Depreciation	-	2,201	2,201	-	-
Total Operating Expenses	\$ 710,000	\$ 660,531	\$ (49,469)	\$ 722,338	\$ 12,338
Total Direct Expenses	\$ 2,617,147	\$ 2,925,047	\$ 307,900	\$ 3,305,475	\$ 688,328
Indirect Expenses	\$ (2,617,147)	\$ (2,925,047)	\$ (307,900)	\$ (3,305,475)	\$ (688,328)
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenses (B)	\$ -	\$ -	\$ (1)	\$ -	\$ (1)
Change in Assets	\$ -	\$ -	\$ 1	\$ -	\$ 1
Fixed Assets					
Depreciation	-	(2,201)	(2,201)	-	-
Computer & Software CapEx	-	-	-	-	-
Furniture & Fixtures CapEx	-	-	-	-	-
Equipment CapEx	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-
Allocation of Fixed Assets	\$ -	\$ 2,201	\$ 2,201	-	-
Inc(Dec) in Fixed Assets (C)	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL BUDGET (=B + C)	\$ -	\$ -	\$ (1)	\$ -	\$ (1)
FTEs	12.48	15.77	3.29	16.89	4.41

Summary of Variances by Category – 2015 Budget Compared to the 2014 Budget

- **Personnel** – Personnel expenses are projected to increase in 2015 due primarily to FTEs reallocated to this department in 2014. The percentage increase in payroll taxes is higher than salaries and retirement expenses due to an increase in the maximum salary subject to FICA taxes. Benefits are projected to increase at a higher rate than other personnel expenses due to the higher cost per employee of employee benefits plans due to budgeted market increases in medical and dental plan costs.
- **Office Costs** – The increase is due to an increase in the number for FTEs in the department.
- **Professional Services** – The increase is due to implementation of new systems to improve efficiency and controls in processing expenses.

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
Working Capital and Operating Reserves Analysis

Working Capital and Operating Reserve Analysis					
Statutory					
	Total Reserves	Working Capital ¹	Known Contingencies	Unknown Contingencies	Operator Certification
Beginning Balance					
Balance as of 12/31/13 - per audit	6,264,672	3,817,478	1,000,000	(69,672)	1,516,866
Less: Adjustment for future liabilities	(3,817,478)	(3,817,478)			
Available Working Capital and Operating Reserves	2,447,194	-	1,000,000	(69,672)	1,516,866
Generation or (Use) from 2014 Operations					
From 2014 operations ²	(1,715,601)			(1,256,509)	(459,092)
Proceeds from financing activities (non-current portion only)	1,787,326			1,787,326	
Other adjustments to reserves	(386,528)			(386,528)	
Projected Working Capital and Operating Reserves - 12/31/14	2,132,391	-	1,000,000	74,617	1,057,774
Required Working Capital and Operating Reserves - 12/31/14³					
Required Working Capital and Operating Reserves - 12/31/14³	1,642,749		1,000,000	-	642,749
Adjustment to achieve required reserve balance	(489,643)		-	(74,617)	(415,025)
	-		-		
Increase(decrease) in funding requirement to adjust reserve balance	(489,643)	-	-	(74,617)	(415,025)
2015 NERC Assessment					
2015 Expenses and Capital Expenditures	57,300,945			55,815,850	1,485,095
Less: Penalty Sanctions received 7/1/13 - 6/30/14	(155,000)			(155,000)	
Less: Other Funding Sources	(1,964,300)			(894,231)	(1,070,069)
Adjustment to achieve desired reserve balance	(489,643)	-	-	(74,617)	(415,025)
Less: Proceeds from financing activities (non-current only)	(1,333,333)			(1,333,333)	
Plus: debt service	893,664			893,664	
2015 NERC Assessment	54,252,333	-	-	54,252,333	-

¹As further explained in the discussion of the Working Capital Reserve amount in Exhibit E, funds classified as Working Capital offset future, non-current liabilities and are restricted from use for current operations. The calculation of Working Capital and Operating Reserve balances per 2013 audited financials and as projected for 2014 and 2015 is included with the Statements of Financial Position on page 130.

²The use of Unknown Contingency reserves includes the \$1,222,471 budgeted reduction in reserves in 2014.

³On August 14, 2014, the NERC Board of Trustees approved the Working Capital and Operating Reserve Balance at 12/31/14.

Table B-2

Penalties

Penalty Sanctions

Penalty monies received prior to June 30, 2014 are to be used to offset assessments in the 2015 Budget, as documented in *NERC Policy – Accounting, Financial Statement and Budgetary Treatment of Penalties Imposed and Received for Violations of Reliability Standard*, as well as Section 1107 of the Rules of Procedure. Penalty monies received from July 1, 2014 through June 30, 2015 will be used to offset assessments in the 2016 budget.

All penalties received prior to June 30, 2014 are detailed below, including the amount and date received.

Allocation Method

Penalty sanctions received have been allocated to the following statutory programs to reduce assessments: Reliability Standards, Compliance Operations and Organization Registration and Certification, Compliance Enforcement, Reliability Assessments and Performance Analysis, Training and Education, Situational Awareness, Events Analysis and Investigations, and the Critical Infrastructure Department. 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.

Penalty Sanctions Received On or Prior to June 30, 2014		
	Date Received	Amount Received
	7/15/2013	\$ 25,000
	11/7/2013	120,000
	11/8/2013	5,000
	12/2/2013	5,000
Total Penalties Received		<u>\$ 155,000</u>

Table B-3

Outside Funding

Outside Funding Breakdown By Program (Excluding Penalty Sanction)	Budget 2014	Projection 2014	Budget 2015	Variance 2015 Budget v 2014 Budget
Reliability Standards				
Workshops	\$ 104,000	\$ 104,000	\$ 104,000	\$ -
Interest Allocation	3,976	4,011	600	(3,375)
Total	\$ 107,976	\$ 108,011	\$ 104,600	\$ (3,375)
Compliance Operations, Investigations and Enforcement				
Workshops	\$ 40,000	\$ 40,000	\$ -	\$ (40,000)
Interest Allocation	6,332	6,273	946	(5,386)
Total	\$ 46,332	\$ 46,273	\$ 946	\$ (45,386)
Reliability Assessments and Performance Analysis				
pc_GAR Software	\$ 50,000	\$ 50,000	\$ 50,000	\$ -
Workshops	40,000	40,000	17,500	(22,500)
Interest Allocation	2,913	3,219	485	(2,428)
Total	\$ 92,913	\$ 93,219	\$ 67,985	\$ (24,928)
Training and Education				
Testing Fees and Certificate Renewals	\$ 1,035,000	\$ 1,020,000	\$ 1,070,000	\$ 35,000
CEH Fees	600,000	600,000	600,000	-
Interest Allocation	1,252	1,321	196	(1,056)
Total	\$ 1,621,252	\$ 1,621,321	\$ 1,670,196	\$ 33,944
Event Analysis				
Workshops	\$ 50,000	\$ 50,000	\$ 47,300	\$ (2,700)
Interest Allocation	1,473	1,558	231	(1,242)
Total	\$ 51,473	\$ 51,558	\$ 47,531	\$ (3,942)
Situation Awareness				
Workshops	\$ 75,000	\$ 75,000	\$ -	\$ (75,000)
Interest Allocation	957	1,019	150	(807)
Total	\$ 75,957	\$ 76,019	\$ 150	\$ (75,807)
Critical Infrastructure Department				
Workshops	\$ 45,000	\$ 45,000	\$ 72,500	\$ 27,500
Interest Allocation	3,098	1,408	208	(2,891)
Total	\$ 48,098	\$ 46,408	\$ 72,708	\$ 24,609
ES-ISAC				
Interest Allocation		1,193	185	185
Total		\$ 1,193	\$ 185	\$ 185
Total Outside Funding	\$ 2,044,000	\$ 2,044,000	\$ 1,964,300	\$ (94,885)

Explanation of Significant Variances – 2015 Budget Compared to the 2014 Budget

- [Compliance Operations, Investigations and Enforcement – Workshop fees are not budgeted in 2015 because the workshops are being held in NERC or Regional offices at significantly lower cost than hotels.](#)
- [Reliability Assessments and Performance Analysis](#) – Historically, NERC charged nominal license fees to help defray a portion of the costs of operating, maintaining, and administering pc-GAR, a complex legacy software application used to provide industry with access to certain generator and transmission data. In response to its 2013 business plan and budget (in which NERC indicated it would discontinue the licensing of this software and data availability and therefore excluded any projection of licensing fees in its 2013 budget), NERC received additional feedback from industry expressing a strong desire for continuing to provide access. Upon further [review](#) and consideration, NERC management felt that it was important to retain control of the licensing in order to ensure the protection of confidential information and that the assessment activities performed by RAPA would also benefit from the continued industry utilization of pc-GAR. As previously described under the RAPA section of this business plan and budget, NERC expects to commence development of a replacement software application for pc-GAR in Q4 2013 and funding is included in the Fixed Asset portion of the 2015 business plan and budget for this activity. Any fees for licensing of the pc-GAR software in 2015 will be used to offset development costs of the replacement application, as well operation and maintenance costs for the existing and replacement applications.

The reduction in workshop fees is due to the decision to not charge attendance fees at one of two meetings.

- [Training and Education](#) – The increase is related to a higher number of tests being administered in 2015.
- [Situation Awareness](#) – Reduced number of workshops due to the transition of the NASPI support to the private sector.
- [Critical Infrastructure Protection](#) – Workshop fees associated with the Grid Security Conference are budgeted to be ~~equal to 2014~~ [higher than 2014 based upon 2013 actual results.](#)

Table B-4
Personnel

Personnel Expenses	Budget 2014	Projection 2014	Budget 2015	Variance 2015 Budget v 2014 Budget	Variance %
Total Salaries	\$ 26,218,572	\$ 26,018,122	\$ 26,938,478	\$ 719,906	2.7%
Total Payroll Taxes	1,570,954	1,707,968	1,686,548	115,594	7.4%
Total Benefits	3,385,917	3,200,898	3,603,757	217,840	6.4%
Total Retirement	2,884,211	2,715,590	2,931,573	47,362	1.6%
Total Personnel Costs	<u>\$ 34,059,654</u>	<u>\$ 33,642,578</u>	<u>\$ 35,160,356</u>	<u>\$ 1,100,702</u>	<u>3.2%</u>
FTEs	189.53	176.59	189.50	(0.03)	0.0%
Cost per FTE					
Salaries	\$ 138,335	\$ 147,336	\$ 142,156	3,821	2.8%
Payroll Taxes	8,289	9,672	8,900	611	7.4%
Benefits	17,865	18,126	19,017	1,152	6.5%
Retirement	15,218	15,378	15,470	252	1.7%
Total Cost per FTE	\$ 179,706	\$ 190,512	\$ 185,543	\$ 5,837	3.2%

Explanation of Significant Variances – 2015 Budget Compared to the 2014 Budget

The increase in salaries, payroll taxes and retirement expenses is due to the budgeted salary increases, the addition of more senior staff in 2014, and the need to pay higher market based compensation than previously budgeted to attract and retain employees. The average cost per FTE is also affected by an increase in the across the board FTE adjustment to account for attrition and hiring delays from 4% in 2014 to 6% in 2015., which reduced the total number of FTEs budgeted in all departments. In addition to the increase in the number of FTEs on staff, benefits are budgeted to increase 12% in 2015 over 2014. Payroll taxes are increasing at a higher percentage due to an increase in the maximum salary subject to FICA taxes.

Table B-5*NOTE: This table has been replaced by Exhibit C***Table B-6**
Rent

Rent	Budget 2014	Projection 2014	Budget 2015	Variance 2015 Budget v 2014 Budget	Variance %
Office Rent	\$ 2,617,300	\$ 2,617,299	\$ 2,617,300	\$ -	0.00%
Total Office Rent	\$ 2,617,300	\$ 2,617,299	\$ 2,617,300	\$ -	0.00%

The 2015 budget is equal to 2014 because rent expense is recorded on a straight-line basis.

Table B-7
Office Costs

Office Costs	Budget 2014	Projection 2014	Budget 2015	Variance 2015 Budget v 2014 Budget	Variance %
Telephone	\$ 628,000	\$ 506,731	\$ 555,318	\$ (72,682)	-11.57%
Telephone Answering Srv			3,000	3,000	
Internet	310,000	411,473	403,357	93,357	30.12%
Office Supplies	199,300	197,729	189,600	(9,700)	-4.87%
Computer Supplies and Maintenance				-	
Computers	4,500	4,500	9,000	4,500	100.00%
Computer Supplies	95,400	96,325	100,100	4,700	4.93%
Maintenance & Service Agreements	1,676,029	1,656,589	1,449,979	(226,050)	-13.49%
Software	141,500	193,180	140,680	(820)	-0.58%
Network Supplies		4,450		-	
Publications & Subscriptions	32,995	43,995	40,495	7,500	22.73%
Dues	41,750	52,550	53,000	11,250	26.95%
Postage	19,600	11,872	12,300	(7,300)	-37.24%
Express Shipping	34,000	29,954	38,500	4,500	13.24%
Copying	115,000	63,720	65,000	(50,000)	-43.48%
Reports	8,000	3,000	3,000	(5,000)	-62.50%
Stationary/Forms	10,000	5,000	5,000	(5,000)	-50.00%
Equipment Repair/Service Contracts	70,000	100,000	100,000	30,000	42.86%
Bank Charges	20,000	43,000	20,000	-	0.00%
Taxes	15,000	15,000	5,000	(10,000)	-66.67%
Merchant Card Fees	85,000	87,866	85,000	-	0.00%
Total Office Costs	\$ 3,506,074	\$ 3,526,933	\$ 3,278,328	\$ (227,746)	-6.50%

Explanation of Significant Variances – 2015 Budget Compared to the 2014 Budget

The decrease in Office Costs is primarily due lower maintenance and service agreements costs resulting from the decision to purchase the necessary hardware and software to back-up NERC data and eliminate the monthly service to provide this capability. [The increases in Internet and Equipment Repair/Service Contracts are based upon 2014 projected costs.](#)

Table B-8
Professional Services

Professional Services	Budget 2014	Projection 2014	Budget 2015	Variance 2015 Budget v 2014 Budget	Variance %
Independent Trustee Fees	\$ 1,000,000	\$ 1,000,000	\$ 1,085,000	\$ 85,000	8.50%
Trustee Search Fee	70,000	70,000	-	(70,000)	-100.00%
Outside Legal	740,000	740,000	740,000	-	0.00%
Lobbying Fees	50,000	50,000	50,000	-	0.00%
Accounting & Auditing Fees	150,000	150,000	150,000	-	0.00%
Insurance Commercial	100,000	100,000	100,000	-	0.00%
Outside Services	180,280	180,280	196,280	16,000	8.88%
Total Services	\$ 2,290,280	\$ 2,290,280	\$ 2,321,280	\$ 31,000	1.35%

The Professional Services budget includes a previously approved increase in trustee fees, offset by the reduction in trustee search fees which will not be required in 2015.²⁸ The projected increase in outside services costs is primarily due to higher costs associated with accounting systems implemented at the beginning of 2014.

Table B-9
Miscellaneous

Miscellaneous Expenses	Budget 2014	Projection 2014	Budget 2015	Variance 2015 Budget v 2014 Budget	Variance %
Miscellaneous Expense	\$ 6,500	\$ 3,000	\$ 6,500	\$ -	0.00%
Employee Rewards and Recognition	\$ 10,000	\$ 10,000	10,000	-	0.00%
Community Resp & Employee Engagement	10,000	10,000	10,000	-	0.00%
Year-end Holiday Catering	10,000	10,000	10,000	-	0.00%
Total Miscellaneous Expenses	\$ 36,500	\$ 33,000	\$ 36,500	\$ -	0.00%

The 2015 Miscellaneous Expense budget is \$36,500, which is equal to the 2014 budget. This budget is intended to cover the cost of (1) token gifts to retiring employees, condolence flowers in the event of a death in the family member of an employee, and similar types of miscellaneous expenses (\$6.5k); (2) funds to support Community Responsibility and Employee Engagement Committee activities (\$10k); (3) departmental and company team-building activities and employee rewards and recognition expenses that are not otherwise included in personnel expense (\$10k); and (4) year-end employee holiday meal expenses (\$10k).

²⁸ For further information regarding the increase in Trustee fees may be found in the background materials to Agenda Item 2 on the August 14, 2013 Corporate Governance and Human Resources Committee agenda.

Table B-10
Other Non-Operating Expenses

Other Non-Operating Expenses	Budget 2014	Projection 2014	Budget 2015	Variance 2015 Budget v 2014 Budget	Variance %
Gain/Loss from Sale of Assets				\$ -	
Property Tax Expense	\$ 50,000	50,000	\$ 50,000	-	
Office Relocation	-		-	-	
Interest	94,000	29,367	94,000	-	
Total Other Non-Operating Expenses	\$ 144,000	\$ 79,367	\$ 144,000	\$ -	0.00%

The budgeted interest expense is detailed in the Capital Financing, Exhibit D.

Section C — Non-Statutory Activity

NERC has no non-statutory activities.

Section D – Supplemental Financial Statements

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION STATEMENT OF FINANCIAL POSITION

	12/31/2013 per Audit	12/31/2014 Projection	12/31/2015 Projection
ASSETS			
Cash	26,182,060	25,938,224	26,034,534
Trade Accounts receivable, net of allowance for uncollectible accounts of \$0 and \$62,573 in 2013 and 2012	3,353,895	3,353,895	3,353,895
Other Receivables	-	-	-
Prepaid expenses and other current assets	869,876	869,876	869,876
Security deposit	99,136	99,136	99,136
Cash value of insurance policies	-	-	-
Plan Assets (457b)	320,660	320,660	320,660
Property and equipment	5,645,116	6,625,714	7,911,208
Total Assets	36,470,743	37,207,504	38,589,309
LIABILITIES AND NET ASSETS			
Liabilities			
Current Portion			
Accounts payable and accrued expenses (incl, vacation accrual)	2,917,304	2,917,304	2,917,304
Accrued Incentive Comp	4,025,979	3,968,813	4,151,419
Deferred rent-current	182,421	250,276	319,931
Deferred compensation-current	20,386	-	-
Capital lease obligations - current	47,108	(0)	(0)
Accrued retirement liabilities	1,788,624	1,563,008	1,704,965
Deferred income	5,287,044	5,287,044	5,287,044
Regional assessments	9,427,293	9,427,293	9,427,293
Capital Project Financing - Current Portion	-	893,664	1,560,331
Total Current Portion	23,696,159	24,307,402	25,368,286
Long-Term Portion			
Deferred compensation ¹	597,514	597,514	597,514
Deferred rent - non-current	3,817,478	3,567,202	3,247,271
Capital lease obligations - non-current	-	-	-
Capital Project Financing - non-current	-	1,400,798	1,840,467
Total Non-Current Portion	4,414,992	5,565,514	5,685,252
Total Liabilities	28,111,151	29,872,916	31,053,539
Net Assets - unrestricted	7,914,592	7,179,588	7,535,770
Net Assets - restricted	445,000	155,000	-
Total Liabilities and Net Assets	36,470,743	37,207,504	38,589,309
¹ Includes 457b liability, life insurance for former executive, and retiree medical			
Working Capital	6,264,672	5,699,593	4,890,019
Less: Restriction for future liabilities	(3,817,478)	(3,567,202)	(3,247,271)
Available Working Capital	2,447,194	2,132,391	1,642,748
Known and Unknown	930,328	1,074,616	1,000,000
PCGC	1,516,866	1,057,774	642,748

Section D – Supplemental Financial Statements

Statement of Activities, Fixed Asset Expenditures and Change in Working Capital by Program 2014 Budget	Statutory Activities															
	Statutory Total	Reliability Standards	Compliance and Registration	Compliance Enforcement	Reliability Assessment and Performance Analysis	Operator Certification	Training and Continuing Education	Event Analysis	Situation Awareness	Critical Infrastructure Department	ES-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	54,252,333	10,259,064	10,641,452	5,970,578	9,501,161		1,896,608	4,248,270	3,693,095	4,367,932	4,188,459	(514,287)	-	-	-	-
Penalty Sanctions	155,000	31,747	30,498	19,530	25,632		6,714	12,204	7,937	10,981	9,758					
Total NERC Funding	54,407,333	10,290,811	10,671,950	5,990,107	9,526,793		1,903,322	4,260,474	3,701,032	4,378,913	4,198,217	(514,287)	-	-	-	-
Membership Dues	-															
Testing Fees	1,670,000					1,070,000	600,000									
Services & Software	50,000				50,000											
Workshops	241,300	104,000			17,500			47,300	-	72,500						
Interest	3,000	600	577	369	485	69	127	231	150	208	185					
Miscellaneous	-															
Total Funding (A)	56,371,633	10,395,411	10,672,527	5,990,476	9,594,778	1,070,069	2,503,449	4,308,005	3,701,182	4,451,621	4,198,402	(514,287)	-	-	-	-
Expenses																
Personnel Expenses																
Salaries	26,938,478	3,117,343	3,456,807	1,874,857	2,742,582	261,314	641,792	1,482,398	882,455	1,340,521	1,283,589	2,187,205	2,702,083	2,476,965	606,214	1,882,351
Payroll Taxes	1,686,548	209,800	227,351	120,395	177,439	18,120	44,503	95,771	59,488	82,398	80,165	115,084	150,724	164,345	24,508	116,457
Benefits	3,603,757	455,085	437,582	280,052	367,569	52,510	98,292	179,081	115,795	157,529	140,026	305,046	280,052	367,569	52,510	315,059
Retirement Costs	2,931,573	350,185	388,579	210,530	306,999	29,407	72,033	166,665	98,872	150,778	143,125	178,525	304,005	277,777	42,908	211,185
Total Personnel Expenses	35,160,356	4,132,413	4,510,319	2,485,835	3,594,588	361,351	856,619	1,923,915	1,156,611	1,731,226	1,646,906	2,785,861	3,436,863	3,286,655	726,141	2,525,053
Meeting Expenses																
Meetings	995,000	194,056	79,523	6,000	118,418	45,000	14,931	74,728	5,000	133,134	5,000	301,178	9,937	3,169	2,000	2,926
Travel	2,173,395	373,911	336,419	68,905	303,993	7,093	22,293	151,996	42,985	206,715	89,605	344,525	121,597	42,559	15,200	45,599
Conference Calls	307,751	117,736	12,276	4,016	28,450	2,328	31,060	12,585	2,610	30,449	10,409	28,831	10,790	5,404	1,247	9,560
Total Meeting Expenses	3,476,146	685,703	428,218	78,921	450,861	54,421	68,284	239,309	50,595	370,298	105,014	674,534	142,324	51,132	18,447	58,085
Operating Expenses																
Consultants & Contracts	6,648,536		388,000		955,450	392,950	364,555		1,077,321	426,800	703,335	72,750		1,629,600	249,775	388,000
Office Rent	2,617,300											2,617,300				
Office Costs	3,278,328	76,276	61,385	41,500	152,386	42,911	50,267	29,736	41,025	20,158	51,914	444,262	71,152	2,143,420	14,099	37,838
Professional Services	2,321,280											1,185,000	760,000	80,280	296,000	
Miscellaneous	36,500	500	500	500	500	500	500	500	500	500	500	5,500	500	500	25,000	500
Depreciation	2,333,006				228,000			193,667	161,498			419,399		1,330,443		
Total Operating Expenses	17,234,950	76,776	449,885	42,000	1,336,336	435,861	415,322	223,903	1,280,343	447,458	755,749	4,744,211	831,652	5,103,963	369,154	722,338
Total Direct Expenses	55,871,451	4,894,892	5,388,422	2,606,756	5,381,785	851,633	1,340,224	2,387,128	2,487,549	2,548,983	2,507,668	8,204,606	4,410,839	8,441,750	1,113,741	3,305,475
Indirect Expenses	-	5,126,604	4,924,901	3,153,702	4,139,102	590,400	1,084,151	1,970,801	1,281,651	1,773,301	1,575,800	(8,348,606)	(4,410,839)	(8,441,750)	(1,113,741)	(3,305,475)
Other Non-Operating Expenses	144,000	-	-	-	-	-	-	-	-	-	-	144,000				
Total Expenses (B)	56,015,451	10,021,496	10,313,323	5,760,457	9,520,887	1,442,033	2,424,375	4,357,928	3,769,200	4,322,283	4,083,469	-	-	-	-	-
Change in Assets	356,182	373,915	359,204	230,019	73,891	(371,964)	79,074	(49,924)	(68,019)	129,338	114,933	(514,287)	-	-	-	-
Fixed Assets																
Depreciation	(2,333,006)	-	-	-	(228,000)	-	-	(193,667)	(161,498)	-	-	(419,399)	-	(1,330,443)	-	-
Computer & Software CapEx	3,253,500													3,253,500		
Furniture & Fixtures CapEx	-															
Equipment CapEx	365,000													365,000		
Leasehold Improvements	-															
Allocation of Fixed Assets	-	373,915	359,204	230,019	301,891	43,062	79,074	143,743	93,479	129,338	114,933	419,399	-	(2,288,057)	-	-
Inc(Dec) in Fixed Assets (C)	1,285,494	373,915	359,204	230,019	73,891	43,062	79,074	(49,924)	(68,019)	129,338	114,933	-	-	-	-	-
TOTAL BUDGET (=B + C)	57,300,945	10,395,411	10,672,527	5,990,476	9,594,778	1,485,095	2,503,449	4,308,005	3,701,182	4,451,621	4,198,402	-	-	-	-	-
TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)	(929,312)	-	-	(0)	0	(415,025)	0	-	-	(0)	0	(514,287)	-	-	-	-
FTEs	189.48	24.40	23.44	15.01	19.70	2.81	5.16	9.38	6.10	8.44	7.50	13.13	15.01	19.70	2.81	16.89

Exhibit A – Common Assumptions

Shared Business Plan and Budget Assumptions - NERC and the Regional Entities 2014-2017 Planning Period (2015 Budget Cycle)

Throughout 2013 and early 2014, NERC and the eight Regional Entities worked to develop a common operating model with defined roles and responsibilities²⁹ that align with business planning goals, objectives, metrics and assumptions for the Electric Reliability Organization (ERO) Enterprise for the 2014-2017 planning period (and specifically for the 2015 budget cycle). ~~Recently a~~At its February 2014 meeting, the NERC Board of Trustees approved an updated version of the [ERO Enterprise Strategic Plan](#) with newly aligned goals, objectives and deliverables for the 2014-2017 planning period. The ERO Enterprise's annual strategic planning and performance monitoring processes will remain transparent with results reported out on a quarterly basis to NERC's corporate governance and human resources committee and ~~h~~Board in support of the ERO corporate oversight function.

As part of the updated strategic plan, NERC and the Regional Entities consolidated five goals within the existing focus areas of standards; compliance, registration and certification; risks to reliability; and coordination and collaboration and identified a number of associated objectives and deliverables expected of the ERO Enterprise. New in 2014, NERC and the Regional Entities added 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. These metrics concentrate on measuring progress in achieving reliability results, assuring standards and compliance effectiveness, improving risk mitigation, and program execution. The following set of common assumptions have been developed to guide ERO Enterprise resource projections³⁰ for the 2014-2017 business planning and budget (BP&B) period (and specifically for the 2015 budget cycle) 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 and will be approved in open session by NERC's Finance and Audit Committee as part of the annual BP&B processes. This is in addition to the process that the Regional Entities use to obtain their board and stakeholder review of their business plans and budgets. NERC's review of the Regional Entity business plans and budgets will be primarily focused on ensuring alignment of activities with the Strategic Plan and that resources are adequate to support performance of delegated functions and key initiatives. A [2015 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.

²⁹ ~~Footnote Reference~~See: [Operational Oversight Model Whitepaper](#)

³⁰ 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 Business Plan and Budget as appropriate.

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.

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 bulk power system established by applicable governmental authorities in the United States, Canada and portions of Mexico, as well as the authorizations contained in the FERC's order approving NERC as the ERO. Because the Regional Delegation Agreements (RDAs) expire on January 1, 2016, NERC and the Regional Entities will work collaboratively to identify any necessary revisions to the RDAs as renewal efforts begin in 2014.

NERC will provide oversight of the Regional Entities' performance of their delegated functions to ensure that delegated responsibilities are adequately performed. NERC expects that the Regional Entities will continue to have the primary responsibility for day-to-day operations and interactions with registered entities. NERC and the Regional Entities will also continue to work collaboratively to refine and revise procedures to eliminate duplication, increase operational efficiencies, enhance ERO-wide consistency, and achieve measureable reliability outcomes, consistent with their respective roles and responsibilities.

Stakeholder Participation

NERC and the Regional Entities develop their business plans, budgets and resource requirements based upon the assumption of continued stakeholder participation in support of key program areas initiatives, 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

Factors external to the ERO Enterprise have the potential to influence project prioritization, resource needs and allocation. These factors include, but are not limited to the following:

- FERC, or other governmental authority orders, directives, audits, and performance assessments
- The implementation and deployment of the Bulk Electric System (BES) definition as well as the volume and complexity of exception, self-determined notifications and registration requests
- The rate and severity of entity violations
- The rate and severity of system events requiring formal investigations beyond historic volumes and their causal factors

- New technologies and changing resource or demand composition which require additional reliability studies and reliability risk analysis
- Changes in applicable laws and regulations, including environmental laws and others
- Priority risk initiatives identified by the Reliability Issues Steering Committee (RISC), committees of the Board, and through other stakeholder input
- The pace at which Reliability Standards are revised to achieve sustainable high-quality and content scores³¹
- The ability of stakeholders to support the pace and scope of the various initiatives 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 limit the need to add incremental resources to the NERC and Regional Entity BP&Bs that might otherwise be required in the absence of these forums. In 2013, NERC entered into a memorandum of understanding with the NATF to help ensure that the common objectives of each organization are achieved in the most efficient and effective manner. There is mutual agreement, with no commitment of funds, to coordinate information sharing, engage in the development and maintenance of mutual reliability initiatives, and provide periodic reports to pertinent audiences. A similar agreement is under development with the NAGF in 2014.

Increased collaboration between the NATF and NERC is expected to continue into 2015 so that NATF members can more fully support NERC efforts on projects such as: protection systems misoperations reduction, physical security, various activities related to reliability assurance initiatives, improvement of modeling practices, and complementary efforts on addressing the geomagnetic disturbance challenges.

Key Assumptions by Program Area³²

Reliability Standards Program

1. There will be continued focus on improving quality and content of Reliability Standards. This will require the allocation of resources from several internal NERC departments and support from across the enterprise.

³¹ The approach for determining whether a Reliability Standard has met a sustainable high-quality and content score will be developed by NERC Staff and the Standards Committee, and reviewed with stakeholders. Any needed changes to the Standard Processes Manual (SPM) required to implement this approach will be addressed prior to the pace being established.

³² These statements, which are generally organized by program area, are intended to help generally guide resource allocation decision-making in the development of the 2015 BP&Bs.

- a. The implementation of a cost effectiveness assessment of proposed standards and the involvement in various other reform activities will likely require resource support from other program areas. Resource requirements and impacts are not fully known at this time.
2. The focus on improving the quality and content of standards will likely increase the demand on NERC, the Regional Entities and stakeholders to review and comment on proposed revisions to standards, support regulatory filings and support successful implementation of new standards as they become effective.
3. The number of projects contained in the Reliability Standards Development Plan will likely increase, depending upon the number of standards that require reviews and modifications to improve the quality and content.
 - a. However, the scope of these projects is expected to narrow as regulatory obligations in the form of directives and five-year reviews, Paragraph 81, and IERP recommendations are progressively addressed.
4. NERC and the Regional Entities must plan to develop or modify the Reliability Standards Audit Worksheets (RSAWs) required to support the Reliability Standards Development Plan. Sufficient resources must be allocated to do so in accordance with the new RSAW development process, which aims to produce RSAWs (or modifications to RSAWs) by the time a Standard is balloted.
5. The number of interpretation and guidance requests is expected to remain low, based on the transformation to a steady state and the implementation of RAI.
6. Activity associated with Regional Standards development is expected to remain low.

Compliance Monitoring and Enforcement, and Organization Registration and Certification Programs

Compliance and Enforcement

1. The implementation of the Reliability Assurance Initiative (RAI) and expansion of the Find-Fix-Track process will require the allocation of dedicated resources from both NERC and the Regional Entities to complete the design and to begin developing the processes necessary to implement RAI for both compliance and enforcement.
 - a. Regional Entities should anticipate at least the same level of participation in RAI as in 2013 and possibly slightly more if the transition to certain RAI elements is able to begin earlier in 2015.
2. NERC and the Regional Entities are expected to utilize consistent audit practices and focus on higher reliability risks to increase efficiency and mitigate overall compliance costs for registered entities.

3. The *Compliance Auditor Capabilities and Competency Guide* is expected to be adopted in 2015. The Regional Entities will need to assess their existing resources, including potentially adjusting skill sets to meet these requirements. This may require additional resources or a reallocation of resources to attain and maintain these competencies as noted below.
4. NERC and the Regional Entities must plan to support the training requirements necessary to meet the criteria set forth by the *ERO Auditor Manual and Handbook* and the *Compliance Auditor Capabilities and Competency Guide*. Regional Entities will be expected to demonstrate the following:
 - a. RSAWs, bulletins, compliance analysis reports (CARs), training documents and other related compliance guidance are provided to compliance personnel and other staff, as necessary.
 - b. Compliance Auditor job descriptions are reviewed and properly reflect the guidance provided in the *Compliance Auditor Capabilities and Competency Guide*.
 - c. A gap analysis has been performed to specifically identify both individual training needs and organizational compliance resource needs to assure properly staffed engagements capable of performing work associated with identified engagement scope (e.g. appropriate individual and team knowledge, education and collective skills).
 - d. A process is in place for personnel to acknowledge their commitment to Professional Standards, Ethical Principles, and Rules of Conduct.
 - e. An assessment process is in place to evaluate audit team competencies and capability needs.
 - f. A training program is in place that addresses initial and continuing training for capability and competency development. Regional entities will continue to budget to meet the strategic objective of acquire, engage, and retain highly qualified talent suited to the mission.
5. The implementation will continue for Technical Feasibility Exception (TFE) processing per the revised Appendix 4D, NERC Rules of Procedure, which is expected to drive a less onerous process for TFE reporting and reviewing.
6. An assessment project will be completed in 2014 to evaluate systems used for compliance, registration, analysis and tracking which will result in changes to or the replacement of existing systems. NERC and the Regional Entities should maintain current multi-year contractor and consultant services to support the continued maintenance and administration activities associated with existing systems used for the purposes of compliance, registration, analysis and tracking.

7. Risk-based monitoring activities are expected to increase.
8. The use of spot checks and self-certifications is expected to increase as risk-based monitoring is implemented, but should have little effect on overall resource requirements.
9. Non-CIP violations are expected to continue to decrease as most registered entities have been audited and the standards and RSAWs have matured.
10. CIP compliance personnel will need to support the conversion from V3 to V5 and provide support to entities undergoing a CIP audit until stability in the standards is reached.
 - a. NERC will lead the CIP v5 training development, coordination and facilitation for the ERO CIP Auditors and Industry Outreach. ERO CIP Auditors will support these initiatives in collaboration with NERC, as needed, to ensure appropriate knowledge and guidance are developed, understood and administered.
 - b. Regional Entities must plan to support the ongoing CIP V5 transition plans and should anticipate an expansion in the number of registered entities that require guidance during 2015.
 - c. Additional training requirements will be necessary to support the transition and will affect the annual training commitments.
 - d. An impact study is being performed to determine staffing impacts associated with the transition from V3 to V5.

Organization Registration and Certification

1. A risk-based registration assessment project will occur in 2014 with the expectation that an implementation plan and possibly early deployments of revisions to the registration process will take place in 2015.
2. The implementation of the BES definition may place additional resource demands in the registration area.
 - a. These demands cannot be fully assessed at this time. If a high number of BES exceptions is requested, the potential for a backlog situation in the first two or three years of implementation is possible.

Reliability Assessment and Performance Analysis Program (RAPA)

1. The implementation of the BES exception process will require the re-allocation of resources from several NERC and Regional Entity departments.
 - a. Resources are expected to manage the process execution, technical validation of the definition and exception requests, self-determined notification submittals and requests for registration and certification reviews.

- b. The resource impacts are not fully known at this time, but are expected to be driven by the number and complexity of exception requests, self-determined notification submittals and registration requests received.
2. Invested and dedicated RAPA resources will also be required from throughout the enterprise to jointly:
 - a. Develop and implement improved enterprise-based data collection and analysis systems and capabilities.
 - b. Support the integration of RAPA information systems for modeling and data requirements and achieve timelines for delivering high quality reports (e.g., Long-Term Reliability Assessment and State of Reliability Report).
 - c. Develop, verify and validate quality reliability assessment and analyses model and data quality characteristics.
 - d. Address impacts of new technologies, changing resource or demand resource composition, and environmental related regulations or legislation.
 - e. Support the compilation of long-term sustainable Eastern interconnection models.
 - f. Provide technical resources and expertise to perform analyses as needed for standards development, compliance and enforcement activities.
 - g. Support quality analysis and overall assessment of the geomagnetic disturbance (GMD) vulnerability, planning guides and planning standards.
3. The implementation of the Reliability Risk Management projects, identified in the ERO Performance Metric #3, will require varied resource commitments during the planning period (2014-2017) to ensure measurable improvements in reliability outcomes.
 - a. The extent of the actual resource commitment cannot be determined at this time.
4. Contractor and consultant services may be necessary to maintain continued support and technical expertise associated with activities listed in the above assumptions and with supporting various research efforts such as Vegetation Management, GMD, etc.
 - a. To the extent that significant events occur, contractor services may be required to support wide-area system analyses and root cause evaluations.

Training, Education, and Operator Certification Program

1. NERC will continue to budget and incur the cost of a unified learning management system (LMS) for the regional audit staff and work with the Regional Entities to consolidate training resources and promote better coordination, planning, delivery and management

of training efforts across the enterprise without adversely impacting region-specific training requirements.

2. The time pressures associated with implementing auditor training and increasing competencies are expected to drive the allocation of training resources throughout the enterprise.
 - a. NERC will continue development of training modules with the assistance of qualified auditors from the Regional Entities.
3. Additional resources will be required, and increases to NERC and Regional Entity training budgets are expected to support certain training initiatives of the RAI.
 - a. Regional Entities are also expected to allocate resources to meet the training requirements for the compliance and enforcement staff that are associated with the implementation of the RAI.
4. The Regional Entities are expected to help determine training needs, including flexibility in approach between Regional Entities, and anticipate areas of support for standards, compliance monitoring and enforcement and information technology (IT) for their staffs and stakeholders.
5. The Operating Personnel Certification program is expected to remain at a steady state with no additional resources required from the Regional Entities.
6. Contractor and consultant services may be necessary to maintain the continued support and technical expertise associated with some enterprise training activities.

Situation Awareness and Event Analysis Program

1. NERC will continue to budget and manage Event Analysis, with Situational Awareness, separate from the Compliance and Enforcement functions.
2. NERC will continue to budget and incur costs to operate and maintain the software applications and systems known as Situational Awareness for NERC, FERC and Regions (SAFNR).
 - a. Additional resource investments may be required to enhance the capabilities of SAFNR throughout the planning period, but with no increased cost to the Regional Entities.
3. As the depth of focused analysis improves, any identification of possible gaps in standards and compliance monitoring could potentially influence those program areas.
4. Regional Entities will continue to budget for Event Analysis and Situational Awareness, as in the past. Some Regional Entities will continue to allocate resources as part of the activities accounted for under their RAPA program.

Critical Infrastructure Department (CID)

1. NERC will continue to fund and conduct the Grid Security Exercise (GridEx) program, with no increased cost to the Regional Entities. Planning activities will occur during even-numbered years and execution of the exercise will take place in odd-numbered years.
2. 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.
3. NERC will continue to provide support for CIP compliance and security awareness. NERC will continue the practice of using available regional subject matter experts in providing this support.

ES-ISAC

1. NERC will continue to fund, operate and maintain the Electricity Sector Information Sharing and Analysis Center (ES-ISAC), with no increased cost to the Regional Entities.

Information Technology and Project Management Office (PMO)

1. NERC and the Regional Entities will collaboratively work to refine existing strategies, governance and procurement practices applicable to the development, operation and maintenance of enterprise architecture, software and data systems supporting both NERC and Regional Entity operations.
2. NERC's business plan and budget will include ongoing funding support for the development, operation and maintenance of NERC and Regional Entity 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 business plan and budget. Regional Entities should include appropriate funding for applications and supporting systems designed to satisfy Regional business needs, that are not within the mutually agreed upon scope of the ERO Enterprise applications which are funded by NERC.
3. Regional Entities may be required to allocate or augment business teams to help develop application business requirements and to test business functionality within the enterprise applications.
4. Ongoing investments will be required to develop, implement and maintain enhancements to the NERC and Regional Entity websites required to improve access to information. NERC and the Regional Entities will separately fund any enhancements to their own websites.
5. NERC anticipates that NERC's management of NERCnet will be transferred to the Eastern Interconnect Data Sharing Network (EIDSN) during 2014. Entities currently using NERCnet

may see an increase or decrease in their costs going forward depending upon EISDN costs and billing arrangements. Users should consult with the EISDN for further information.

6. NERC may consider transitioning other tools to third party ownership, operation and maintenance. NERC has not made a determination regarding which, if any, tools are likely to be transitioned or the timing of such transition. Any such transition will be accomplished in a collaborative manner with affected users, including advance notice and efforts to mitigate financial and operational impacts.

ERO Enterprise-wide Risk Management

1. A common ERO Enterprise risk management framework will be developed and implemented 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 initiative.
2. NERC's Director of Risk Management and Internal Controls will be responsible for the overall development of this framework, under the oversight of NERC's Enterprise Wide Risk Management Committee.
3. The development and implementation of this framework will require Regional Entity cooperation and support. Notwithstanding the foregoing, any decision to add risk management and internal control resources at the Regional Entity level is reserved for Regional Entity decision-making processes.

Exhibit B – Application of NERC Section 215 Criteria

DISCUSSION OF HOW THE NERC MAJOR ACTIVITIES IN THE 2015 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 2015 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 2015 Major Activities

The major activities of the Reliability Standards Program are described at pages 27-31 of the 2015 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, 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)

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.

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 quality review for Regional Entity Standards development processes, presents proposed Regional standards to the NERC Board, and develops and supports regulatory filings for approval of regional standards. The Reliability Standards Program supports the Cost Effective Analysis Process to ensure that the standards development process produces standards that cost-effectively address reliability gaps.

The Reliability Standards Program is involved in and supports cross-departmental and collaborative projects, including the Risk Based Registration project; the concurrent development of RSAWs with the associated reliability standards; conducting, in conjunction with other departments, technical analysis needed as a foundation for standards projects; and submitting newly identified reliability risks to the Reliability Issues Steering Committee (RISC) for verification prior to initiation of a standards project.

For 2015, the major activities of the Reliability Standards Program will seek to ensure that the Reliability Standards Development Plan is effectively executed and that the Reliability Standards developed will appropriately mitigate risks to reliability. The major activities will include: (1) supporting the Reliability Risk Management Process, including focusing on the selection of standards projects undertaken; (2) addressing FERC directives and responding to FERC orders through standards development projects as necessary; (3) transforming NERC's standards to steady state, including addressing possible outstanding Paragraph 81 Phase 2 requirements candidates for retirement and Independent Expert Review Panel candidates for retirement; (4) improving the quality and content of standards to determine the specific criteria for determining whether a Reliability Standard is of sufficient content and quality to be deemed steady state; and (5) facilitating smooth transitions to new standards such as CIP Version 5 and the Physical Security standard, including by working with other departments to develop guidelines, webinars and other activities to support auditor and industry training on the new standards.

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

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.

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 2015 Major Activities

The major activities of the Compliance Monitoring and Enforcement and Organization Registration and Certification Program Area are described at pages 35-42 and 45-49 of the 2015

Business Plan and Budget. This Program Area is comprised of three operational groups: (1) Regional Entity Assurance and Oversight, (2) Compliance Analysis, Certification and Registration, and (3) Compliance Enforcement.

The Regional Entity Assurance and Oversight group works collaboratively with the Regional Entities to ensure consistent and effective implementation of 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 consistent and fair implementation of the CMEP and of the risk-based compliance monitoring program for reliability improvements, including developing and maintaining the necessary compliance-related processes, procedures, IT platforms, tools and templates; (2) oversight of the Regional Entities' delegated compliance functions, including consistent and uniform CMEP planning, implementation, and reporting, compliance operations and coordination, and auditor training; (3) CIP Version 5 activities related to transition, training, and compliance design ERO education programs that support industry compliance and the integration of risk assessment and internal controls; (4) development of minimum baseline monitoring requirements; (5) development and maintenance of RSAWs; (6) support for Regional Entity and industry committees, working groups, and task forces, such as the Compliance and Certification Committee; and (7) supporting standards development and education. Regional Entity Assurance and Oversight provides information, statistics and perspectives to Standard Drafting Teams and collaborates in the development of drafts RSAWs during the standard development process. This program also supports and promotes the development by registered entities of effective compliance programs and internal controls.

The Regional Entity Assurance and Oversight group participates in and supports the implementation of the Reliability Assurance Initiative (RAI), including through development of a single ERO methodology for registered entity risk assessments and evaluation and testing of registered entity internal controls; implementation of an auditor manual with an approved auditor handbook and checklist; and process improvements associated with coordination of compliance and enforcement activities for multi-region registered entities.

The ongoing and new major activities of the Regional Entity Assurance and Oversight group for 2015 include: developing a training program to support implementation of the common audit procedures and the ERO Auditor Capabilities and Competencies Guide; replacing/enhancing NERC's existing Compliance, Reporting, Analysis Tracking System (CRATS) and other compliance tools to support RAI activities; making effective internal controls models and information available to industry; initiating compliance phase-in learning periods for new standards; transitioning to a single ERO approach to compliance monitoring and common audit planning, and implementing RAI techniques and principles consistently; consolidating to a common set of RSAWs, or successors, for all standards; enhancing the design of regional compliance audits to evaluate regional staffing, deployment of tools, and testing of compliance activities; increasing the frequency of audits to validate the implementation of RAI program

designs; and creating technically sound training to support compliance methodologies and testing approaches for Reliability Standards.

The Compliance Analysis, Registration and Certification Group is responsible for a range of requirements and activities embodied in Section 500 and Appendices 5A and 5B of the NERC ROP, including ensuring all entities impacting the BES are registered; ensuring Reliability Coordinators (RC), Balancing Authorities (BA) and Transmission Operators (TOP) are certified; supporting standards development and compliance monitoring; ensuring that industry maintains effective internal controls programs for reliability assurance risk; and ensuring that program gaps are assessed in all reportable events and addressed if appropriate. Major activities of this group include (1) registration of BES users, owners, and operators; (2) certification of RC, BA and TOP; (3) compliance investigations to identify possible violations of Reliability Standards; (4) processing complaints alleging violations of Reliability Standards; (5) technical assurance, including developing quarterly gap and risk assessment reports and recommended responses, and conducting inquiries and spot checks based on quarterly gap analysis; and (6) oversight of Regional Entity registration, certification, investigation and complaint programs.

The Compliance Analysis, Registration and Certification Group is principally involved in the design and implementation of the Risk Based Registration initiative, including the related registration criteria to identify users, owners, and operators of the BES that have a material impact on reliability and to ensure that the right entities are subject to the right set of applicable Reliability Standards, based on a consistent and common approach to risk assessment and registration across the ERO Enterprise.

The ongoing and new major activities of the Compliance Analysis, Registration and Certification Group for 2015 include: deploying a sustainable Risk Based Registration design that incorporates evaluation of the reliability risks and benefits provided by an entity to ensure reliability; identifying a corresponding properly scoped set of Reliability Standard requirements; developing an implementation plan with business practices and IT requirements that addresses unintended industry burden, while preserving an adequate level of reliability; aligning changes to the registration criteria with other NERC activities; assessing the current certification program for opportunities to mature the program; incorporating effects to registration from the enhanced BES Definition; providing support to the continued development of RSAWs; aiding in the BES definition exception submittal process; aiding in the review of registration appeals and enforcement mitigation; assisting with training modules for investigations, certifications and registrations; and providing analysis in support of projects addressing top reliability risks.

The Compliance Enforcement department is responsible for overseeing enforcement processes, the application of penalties or sanctions, and activities to mitigate and prevent recurrence of noncompliances with Reliability Standards. The Department works collaboratively with the Regional Entities to ensure consistent and effective implementation of the CMEP. 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 noncompliances discovered through Regional Entity compliance, monitoring and enforcement activities; processes and files NOPs and other submittals discovered through NERC-led investigations and audits; and collaborates with other NERC departments, including Reliability Standards and Regional Entity Oversight and Assurance.

The Compliance Enforcement department is actively involved in working with the Regional Entities to reduce the number of violations in inventory, particularly those older than 24 months; ongoing identification and implementation of enforcement process improvements, including FFT and self-reporting; promoting self-identification, prompt mitigation of noncompliances, and timely completion of mitigating activities (including through development of the ERO Enterprise Self-Report User Guide and the ERO Enterprise Mitigation Plan Guide); and other RAI activities.

New and ongoing major activities of this department in 2015 will include continuing to identify processing efficiencies and enhancements to enforcement activities; consolidating new enforcement processes, including enhancements to the FFT program, self-reporting, and RAI activities and related process improvements; ensuring timely processing of violations, particularly those that pose greater risk and can provide lessons learned to industry; and ensuring early dissemination of violation information to registered entities to enable them to learn from prior events and violations and take preventative actions to eliminate similar risks.

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 Performance Analysis Program 2015 Major Activities

The major activities of the Reliability Assessment and Performance Analysis (“RAPA”) Program are described at pages 52-63 of the 2015 Business Plan and Budget. The RAPA 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 and performance improvements. The Program also identifies reliability performance issues and areas of concern (including equipment performance and reliability issues) for consideration in the development and modification of Reliability Standards or other initiatives to enhance reliability. The principal activity areas of the RAPA program include: independent assessments and reports on the overall reliability, adequacy, and associated reliability risks that could impact the upcoming summer and winter seasons and the long-term (e.g. 10-year) planning horizon; performance analysis and recommendations of historical reliability and associated trends, relying on data integrity and consistent methodology, leading to credible recommendations/guidance; reliability assessment and bulk system evaluation model development for analyzing steady-state and dynamic conditions; assurance that electrical elements necessary for the reliable operation of the BPS are appropriately identified as BES Elements; reliability risk program management for improving key risk areas using analyses of reliability gaps, risks, controls, and management efforts; determination of reliability risk program priorities to align with the strategic plan and business plan and budget for appropriate level of resources, timing, completion and execution; and providing leadership and consistent technically sound guidance and recommendations that position industry and policy-makers to enhance reliability through effective outreach and communications.

The RAPA Program is engaged in reliability risk analysis and identification of top reliability risks; and in supporting and implementing the Reliability Risk Management Process to identify, measure, prioritize, develop strategies for managing, and disseminating information on, areas of reliability risk. Current programs focused on managing the top priority reliability risks address changing resource mix, resource planning, protection system reliability, uncoordinated protection systems, extreme physical events, availability of real-time tools and monitoring, protection system misoperations, and right-of-way clearances. The RAPA Program works on a number of these programs in collaboration with other NERC departments. The RAPA Program also conducts analyses to understand the technical performance of the BES in order to guide recommendations and insights that enhance system performance and reliability. Additionally, the RAPA Program continues to be heavily involved in the development and implementation of the revised BES definition and the BES Exception procedure (Appendix 5C of the NERC ROP), both of which became effective in mid-2014 and involve reviews, evaluations and confirmations of proposed changes to BES elements by registered entities.

The ongoing and new major activities of the RAPA Program for 2015 include: issuing reliability reports, guidelines, recommendations and alerts as needed; preparing the long-term and seasonal reliability assessments; conducting special assessments addressing key reliability issues, including a report on Geomagnetic Disturbance BES effects and vulnerability assessment; preparing an annual State of Reliability Report; providing oversight of the Generating Availability System, Transmission Data Availability System and Demand Response Availability System, along with the Spare Equipment Database; strengthening data collection and validation processes by designing, creating, testing and implementing data systems and management for reliability assessment and risk analysis; providing periodic updates on trends and measures of BES reliability; developing a risk registry and a systematic prioritization process with the RISC; executing integrated risk control strategies and plans across the organization to address the highest priority existing or emerging risks to BES reliability, and explicitly measure the results; supporting NERC Reliability Standard development and responses to FERC directives by providing technical and system analysis expertise; supporting the technical foundation development for Reliability Standards to address deficiencies or needs revealed by reliability assessments and performance analysis; providing support and leadership to the NERC Planning Committee, and to subcommittees, working groups and tasks forces of NERC standing committees; developing a structured approach to evaluate and improve system models, model validation, system analysis, and assessments; assisting in the development of approaches to registration and maintenance of the actively monitored standards list based on reliability trends, risks, and historical information to ensure that the compliance focus remains on the most critical entities and associated reliability standards; conducting major event investigations, analysis, and reporting of major findings and recommendations that will improve reliability; building and sustaining an enterprise reliability assessment and performance analysis team that encompasses risk-informed approaches and structured methodology to identify and address reliability risks; and implementing effective oversight and tracking of various technical aspects of reliability, including frequency response performance, application of the TPL footnote b adoption, and root cause applications to assessment and analyses.

The RAPA Programs top reliability risk projects for 2015 are expected to include the following: Essential Reliability Services Special Assessment Phase II (scenario analyses of different levels of Essential Reliability Services; development of standardized power flow models and dynamic modeling components; support for IEEE 1574 relating to rules that establish frequency and voltage disturbance ride-through obligations for distributed energy resources; load composition modeling analysis; development of guidelines for operations and emergency coordination with gas suppliers and transporters; special assessment of potential impacts to BPS reliability of emerging and proposed environmental regulations; analysis of single point of failure data reported in response to FERC Order No. 754; development of a best practices document for coordination of protection systems and other devices including under-frequency and under-voltage load-shedding devices, and associated modeling for assessing coordination; development and promotion of coordinated industry support programs such as the Spare Equipment Database Program, Spare Transformer Equipment Program, and Recovery Transformer Program; and development of good industry practices and guidelines to aid in proper application of protection systems.

The major activities of the RAPA 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?

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 809-811.)

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. Reliability Risk Management (Situation Awareness and Event Analysis) 2015 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 66-69 and 72-74 of the 2015 Business Plan and Budget. The RRM group carries out the ERO's responsibility to perform assessments (including real-time and near-real-time assessments) of the reliability and adequacy of the BES. The four primary functions of the RRM group are BES awareness, event analysis and determination of root and contributing causes, assessment of human performance challenges that affect BES reliability and identification of improvement opportunities, and support of the NERC Operating Committee. These activities are carried out to identify potential issues of concern relating to system, equipment, entity, and human performance that may indicate a possible need to develop new or modified Reliability Standards.

The Situation Awareness department works with registered entities to monitor present conditions on the BES using various software tools and applications; communicates and coordinates with Regional Entities and registered entities to notify them of disturbances that could negatively impact the BES; and, in the event of significant BES disturbances, facilitates the coordination of communications between registered entities and applicable governmental authorities. The Situation Awareness department is involved in the operation and maintenance of the Situation Awareness for NERC, FERC, and Regions software application and the secure alert tool. The Situation Awareness department uses the following reliability-related tools to support its activities: Resource Adequacy (ACE Frequency) Tool, Inadvertent Interchange, Frequency Modeling and Analysis Tool, Intelligent Alarms Tool, Automated Reliability Reports, and Area Interchange Modeling Tool.

The ongoing and new major activities of the Situational Awareness department for 2015 include: ensuring that the ERO is aware of all BES events above a threshold of impact; ensuring 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 government; keeping the industry informed of emerging reliability threats and risks to the BES, including any expected actions; enhancing tracking of notification of expected actions in

response to emerging actions to promote greater industry accountability; and issuing timely updates regarding progress toward resolving issues identified in Recommendations and Essential Actions.

The Event Analysis department performs assessments of the reliability and adequacy of the BES including 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 assures that the industry is well-informed of system events, emerging trends, risk analysis, lessons learned, and expected actions. Event Analysis also supports the development of Reliability Standards and monitoring and enforcing compliance with Reliability Standards. 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.

The ongoing and new major activities for 2015 for the Event Analysis department include: (1) working with Regional Entities to obtain and review information from registered entities regarding 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) refining risk-based methodologies to support more effective and efficient identification of reliability risks, including use of more sophisticated cause codes for analysis; (4) ensuring consistency in reporting and analysis to support wide area assessments of significant reliability trends and risks; (5) conducting the annual NERC Human Performance Conference and the NERC Monitoring and Situation Awareness Conference; (6) conducting training (webinars, workshops and conference support) to inform industry and ERO of Lesson Learned, Root Cause Analysis, Cause Coding, Human Performance, and Cold Weather preparedness and recommendations; (7) developing reliability recommendations and alerts as needed; (8) tracking industry accountability for critical reliability recommendations; (9) ensuring that industry is well informed of system events, emerging trends, risk analysis, lessons learned, and expected actions; (10) conducting major event analysis and reporting of major findings and recommendations that will improve reliability; and (11) advancing the quality and usefulness of reliability assessments and event analysis data. The Event Analysis department will also support several top priority reliability risk projects being led by the RAPA 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?

VI. Critical Infrastructure Department 2015 Major Activities

The major activities of the Critical Infrastructure Department (CID) are described at pages 78-80 of the 2015 Business Plan and Budget. The major activities of the CID include supporting the development and administration of the Critical Infrastructure Protection (CIP) standards, conducting security outreach visits, providing training and exercise opportunities on CIP topics, and coordinating between industry and governmental entities on CIP matters. The CID conducts the Security Reliability Program (formerly known as the Sufficiency Review Program), which provides timely and actionable advice to registered entities in support of CIP standards and is currently focused on the transition from the CIP Version 3 standards to the CIP Version 5 standards. The CID also conducts the periodic Grid Security Exercises and Grid Security Conferences. Further, the CID supports the activities of the NERC Critical Infrastructure Protection Committee (CIPC) and its task forces and working groups.

Ongoing and new major activities of the CID for 2015 include: holding the annual Grid Security Conference, which focuses on physical and cybersecurity issues facing the Electricity Sub-sector, and builds on NERC's mission to ensure the reliability of the North American BES through education and training; conducting the biennial Grid Security Exercise (GridEx III), which focuses on analyzing industry's response to a physical security and cybersecurity scenario and gathering lessons learned; coordinating with government departments and agencies on critical infrastructure policy issues; supporting NERC External Affairs and CEO in preparation for public presentations and follow-on actions; supporting CIP standards development and implementation through outreach presentations, webinars and other training opportunities; and supporting the activities of the CIPC and its subgroups, including working through the CIPC to address emerging risk issues and support risk projects in 2015 as needed.

The major activities of the CID 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?

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.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?

VII. Electricity Sector Information Sharing and Analysis Center 2015 Major Activities

The major activities of the Electricity Sector Information Sharing and Analysis Center (ES-ISAC) are described at pages 83-89 of the 2015 Business Plan and Budget. The primary function of ES-ISAC is the rapid and secure sharing of information with the electric industry and governmental entities regarding real and potential security threats to the electricity sector and methods and tools to avoid or mitigate the potential impact from these threats. ES-ISAC facilitates sector coordination, mitigation development and mitigation delivery for physical security, cyber security and all hazards events. ES-ISAC develops alerts and notifications for distribution to registered entities and uses its secure portal to receive reports from industry members. ES-ISAC maintains a seat on the operations floor of the National Cybersecurity and Communications Integration Center within the Department of Homeland Security. ES-ISAC also conducts Cyber Risk Preparedness Assessments (CRPA) for registered entities.

The ongoing and new major activities of the ES-ISAC for 2015 include: improving the usability and functionality of the information-sharing portal; preparing a CRPA toolkit to allow industry to conduct self-assessments of cyber risk preparedness, and conducting training and education sessions on the toolkit; and increasing analytical capabilities (including cyber awareness monitoring), portal monitoring, and information sharing. In carrying out its activities, the ES-ISAC use various software integration support services, the analyst workbench toolset, the

Contested Operational Network for Reporting and Defense system for secure bi-directional communications, and certain intelligence reporting services. Additionally, the ES-ISAC will conduct periodic webinars relating to reporting in response to the NERC Aurora Alerts. Finally, through an annual member conference, the ES-ISAC will continue to offer workshops and other industry training and collaboration capabilities such as the CRPA.

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

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.)

VIII. Training, Education, and Operator Certification Program 2015 Major Activities

The major activities of the Training, Education, and Operator Certification Program are described at pages 92-94 of the 2015 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, including compliance auditors, relating to their job responsibilities; as well as training for industry participants on the reliability standards development process, the requirements of reliability standards, and the compliance monitoring and enforcement process. Training is also provided on registration and certification and on event analysis, cause analysis and lessons learned. 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 and Continuing Education ("SOCCED") Programs, 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 major activities of the Training, Education, and Operator Certification Program for 2015 include providing training and education for ERO personnel and industry in the following areas: auditor training; standards and compliance training; registration and certification (for

registered entities); continuing education for system operators and other industry personnel as appropriate and related to reliability functions; and event analysis, cause analysis and lessons learned. Training offered in 2015 will focus on standards compliance and emerging cyber-related issues potentially affecting BES reliability; consistent audit and investigation techniques and standards compliance reviews, including the RAI, FFT, and other improvements in compliance and enforcement practices; other auditor skills; development and implementation of clear and technically sound Reliability Standards; lessons learned and trends from events, trending and common cause analyses; effective compliance cultures to address reliability risks; effective root, apparent and common cause analytical methods; improvements to registered entity self-reporting and self-certification; entity registration processes, issues and alternatives; human performance fundamentals; and systematic approaches to training.

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 2015 Major Activities

NERC's Administrative Services Departments are Technical Committees and Member Forums (for which no activities are budgeted for 2015), 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 98, 102, 105-109, 112-113, and 116 of the 2015 Business Plan and Budget. General and Administrative includes the administration and general management of the organization, the Chief Executive Officer, Board of Trustees fees and expenses, communications and public relations, and office rent. Legal and Regulatory provides legal support to the organization, including to the Board, executive management, and the Reliability Standards, Compliance Analysis, Registration, and Certification, Reliability Risk Management, and RAPA Programs, as well as general corporate legal support. IT supports NERC's computing, Internet, database and electronic data storage and maintenance, and telecommunications 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. Human Resources manages all of NERC's human resources functions, including new hires, benefits, employee functions, and the employee performance appraisal and incentive structure processes. Finance and Accounting manages all finance and accounting functions of NERC, including payroll, 401(k) and 457(b) 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 this major activity (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?

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?

**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 System³⁷ 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

³⁷ 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.

- 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 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?³⁸
- 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.

³⁸ 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.

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?
- 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

Consultants & Contracts	2014 BUDGET	2015 BUDGET	INC (DEC) OVER 2014
Reliability Assurance Initiative	400,000	388,000	(12,000)
Compliance Database - (Maintenance beginning 2016)			
Regional Entity Assurance and Oversight	400,000	388,000	(12,000)
<hr/>			
Reliability affects of GMD	250,000	242,500	(7,500)
Vegetation Research (FAC 3)		242,500	242,500
Metrics - Centralized data collection-Change Orders	50,000	97,000	47,000
RADS Assessment Database -(Maintenance beginning 2016)			-
Scenario Consultant	70,000	72,750	2,750
Database Consulting Support	50,000	48,500	(1,500)
Monthly Maintenance	218,085	227,950	9,865
Maintenance - pcGAR		24,250	24,250
Total Reliability Assessments and Performance Analysis	638,085	955,450	317,365
Automated Reliability Reports	100,000		(100,000)
Resource Adequacy (ACE Frequency) Tool	80,000	77,600	(2,400)
Inadvertent Interchange (Srv. Agreement)	35,000	33,950	(1,050)
AIE Monitoring (Srv. Agreement)	35,000		(35,000)
Frequency Monitoring and Analysis Tool (FMA)	45,000	43,650	(1,350)
Intelligent Alarms/DARA (Srv. Agreement)	55,000	53,350	(1,650)
NERC Access to IDC	27,816	26,982	(834)
Other tool additions		236,680	236,680
Secure Alerting System	79,373		(79,373)
SAFNR - Phase II	531,825	459,609	(72,216)
Frame Relay-RC's NERCnet Access	300,094	145,500	(154,594)
Total Situation Awareness	1,289,108	1,077,321	(211,787)
CIPC Support	190,000	184,300	(5,700)
GridEx Support		242,500	242,500
Total Critical Infrastructure Department	190,000	426,800	236,800
Program-Level Capabilities	602,700	499,500	(103,200)
Portal Enhancement	250,000	238,500	(11,500)
Cyber Risk Preparedness Assessment	200,000	133,000	(67,000)
Cyber Awareness Monitoring	152,700	128,000	(24,700)
Software & Services	111,750	113,285	1,535
Software Integration Support Services	61,750	62,900	1,150
Analyst Workbench	30,000	30,985	985
Secure bi-directional communications	20,000	19,400	(600)
Events & Outreach	72,000	90,550	18,550
Aurora Webinars and Technical Support	30,000	14,550	(15,450)
Intelligence Reporting Services	42,000	36,000	(6,000)
ES-ISAC Members Conference	-	40,000	40,000
Total ES-ISAC	786,450	703,335	(83,115)

Exhibit C — Contractor and Consulting Costs

Consultants & Contracts	2014 BUDGET	2015 BUDGET	INC (DEC) OVER 2014
System Operator Testing Expenses 2011 1,025 @ \$70)	100,000	57,618	(42,382)
System Operator Examination Development	100,000	66,176	(33,824)
Examination Analysis (750 exams@\$17 per exam)	14,000	17,460	3,460
Database			
Database Development	35,000	33,950	(1,050)
Database Maintenance	24,000	23,746	(254)
SOCCEC Database Improvement Project (funded from Working Capital generated from fees in excess of expenses)	200,000	194,000	(6,000)
Total System Operator Certification	473,000	392,950	(80,050)
Continuing Education Program			
Individual Learning Activity Reviewers	120,000	116,400	(3,600)
Database Development	20,000	24,250	4,250
Database Maintenance	12,330	14,550	2,220
Web-based course hosting (Learning Management System)	26,500	38,800	12,300
Web-based course development			-
standards applications for industry, CEA staff	43,750	34,144	(9,606)
risk assessment training for CEA staff, industry	20,000	19,497	(503)
human performance fundamentals for staff, industry	43,750	29,585	(14,165)
BPS events lessons learned for industry	12,500	14,550	2,050
CEH Provider training		4,879	4,879
Training Services-NERC and Regional Entities			
Regional Entity and NERC Auditor training	47,000	38,800	(8,200)
NERC Staff Technical Training	30,000	29,100	(900)
Total Continuing Education, Training & Education	375,830	364,555	(11,275)
Total Training, Education and Operator Certification	848,830	757,505	(91,325)
	75,000	72,750	(2,250)
Total General & Administrative	75,000	72,750	(2,250)
Security	350,000	339,500	(10,500)
Applications Enhancements, Consulting and Help Desk Support	1,594,000	1,290,100	(303,900)
Total Information Technology	1,944,000	1,629,600	(314,400)
Executive Training and Development	90,000	87,300	(2,700)
Staff Training and Development	65,000	63,050	(1,950)
Compensation Consulting	30,000	29,100	(900)
Employee, industry and Board Surveys, succession planning	45,000	43,650	(1,350)
HR Process Improvements	27,500	26,675	(825)
HR Consulting Services		48,500	48,500
Total Human Resources	257,500	249,775	(7,725)
Internal Controls and Outside Auditor Consulting Support	300,000	291,000	(9,000)
Audit procedures, practices, tools and reports consulting support	50,000	48,500	(1,500)
Finance and Accounting Support	50,000	48,500	(1,500)
Total Finance and Accounting	400,000	388,000	(12,000)
TOTAL CONSULTANTS AND CONTRACTS	6,828,973	6,648,536	(180,437)

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.³⁹ 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. The company recorded new capital investments of approximately \$1.65M in 2013 related to the development of software applications and IT hardware⁴⁰, a portion of which was financed with the proceeds from this initial draw. This first tranche of capital financing will be amortized over 3 years commencing January 31, 2014 and can be prepaid without penalty. A balance of \$1.416M is available for draw during the remainder of 2014, which is also consistent with its approved budget.

During 2013, NERC and the Regional Entities developed a common software application to process BES exception requests, and commenced the development of an application to facilitate the management, analysis and dissemination of information regarding events affecting BPS reliability (the "Events Information Data System" or "EIDS"). As further detailed in the May 2014 presentations to the NERC Finance and Audit Committee and Standards Oversight and Technology Committee, the company encountered difficulties in the development of EIDS and put the project temporarily on hold pending a review of the overall ERO Enterprise's enterprise IT architecture and enterprise application development strategy.

As further described in NERC's 2014 business plan and budget, as part of the ERO Enterprise IT strategy NERC and the Regional Entities are in the planning phases of several additional enterprise software applications including an application (the "RADS" application) to replace the legacy reliability assessment database, which currently requires hundreds of NERC and Regional Entity man-hours to process millions of data elements to populate up to 27 individual spreadsheets that are manually processed in connection with preparation of the summer and winter seasonal assessments. The replacement RADS application will allow regional staffs to input data into forms that would automatically populate a central database for almost immediate creation of the data required for seasonal assessments, reducing manual workload and potential for error. The resulting efficiency gains will be used to redirect resources in support key reliability improvement initiatives. As contemplated in NERC's 2014 business plan and budget, the

³⁹ 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.

⁴⁰ 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 presented to the NERC Finance and Audit Committee.

company also engaged a consultant to help evaluate current software tools utilized to support compliance and registration systems currently utilized by NERC and the Regional Entities, including the merits of development a replacement enterprise application.

As further discussed in the Introduction and Executive Summary and set forth in the table below, NERC has a 2015 proposed capital budget of approximately \$3.6M, \$2M of which it is proposing to finance.

NERC 2015 CAPITAL BUDGET

Computer & Software CapEx	
ERO Application Development	1,700,000
Generation Data Software	200,000
Hardware	100,000
	<u>\$ 2,000,000</u>
IT Hardware and Software	
Disaster Recovery	250,000
Data Storage	325,000
Replacement servers	202,000
NERC Software licenses	350,500
Replacement laptops	126,000
Total Computer & Software CapEx	<u>\$ 1,253,500</u>
Equipment CapEx	
Replacement network devices	<u>\$ 365,000</u>
Total Capital Budget	<u><u>\$ 3,618,500</u></u>

The table below sets forth the projected principal and interest repayment schedule for the amounts financed to date and the additional planned \$2M in capital financing. This projection assumes an average interest rate of 3.5% ~~interest rate~~ over the term of the financing. **[Note-The company will be updating this interest rate assumption in draft 2 of its business plan and budget based on consultation with its lender, including consideration of current interest rate expense.]** 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 the company operating reserves, the expenditures of which are subject to the terms of the company's Working Capital and Operating Reserve Policy.

	Tranche A	Tranche B	Tranche C
(000's)	2014	2014	2015
Enterprise Applications	1265	1416	1700
Generation Data Software		0	200
Hardware			100
Total Needs	1265	1416	2000
3.50%			
	2013	2014	2015
Debt Balance Tranche A	0	1265	843
Amortization of Tranche A		387	422
Interest	0	44	30
Total Annual Payment	0	431	451
Debt Balance Tranche B	0	1416	1416
Amortization of Tranche B		0	472
Interest	0	50	50
Total Annual Payment	0	50	522
Debt Balance Tranche C	0	0	2000
Amortization of Tranche C		0	0
Interest	0	0	15
Total Annual Payment	0	0	15
Debt Balance Tranche D	0	0	0
Amortization of Tranche D		0	0
Interest	0	0	0
Total Annual Payment	0	0	0
Funded Debt Balance	0	2681	4259
Amortization of Debt	0	387	894
Interest Due	0	94	94
TOTAL ANNUAL PAYMENTS	0	480	988

Exhibit E - Working Capital and Operating Reserve Amounts

Management is proposing a budget of \$4.9M for working capital and operating reserves, which represents a reduction of \$809.6k from 2014. Working capital reserves, which represent funds reserved for future liabilities, are budgeted at \$3.2M, which is a reduction of \$319.9k compared to 2014 and represents the amortization of the liability. The total budget for known and unforeseen contingencies has been reduced to \$1M, which represents a \$1M reduction compared to the 2014 budget. This reduction in the amount of operating reserves is primarily designed to mitigate the increase in NERC's 2015 assessments due to the one time application of \$1.2M of 2013 funding to reduce 2014 assessments. Should access to additional reserves become necessary during 2015 management has the ability to draw on its existing \$4M line of credit, seek necessary corporate and regulatory authorizations to access working capital reserves, or propose and seek expedited approval of a budget amendment.

Working Capital – \$3.25M

Based on its 2014 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 2014 to meet monthly cash flow needs. 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 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.

Per its credit agreement, NERC must maintain a ratio of working capital and operating reserves to debt service that is greater than or equal to 1.2 to 1.0, and a ratio of liquidity to debt service that is greater than or equal to 1.5 to 1.0. Based upon NERC's 2014 projection and 2015 budget, these ratios are projected to be 3.1 to 1.0 and 10.6 to 1.0 at the end of 2015.

NERC has also posted letters of credit totaling approximately \$101,236 in lieu of cash security deposits in connection with its offices leases. In the event these lines of credit are drawn upon, NERC is required to reimburse the draws in full. Management does not recommend at this time that working capital be maintained as security for this reimbursement obligation, as cash flows are projected to be sufficient in 2014–2015 to support timely payment of office rent without the letters of credit being drawn on.

NERC has collected funding to offset future liabilities under lease agreements for the Atlanta and Washington, DC offices. The projected \$3.2M⁴¹ yearend balance of these funds is being held as a segregated working capital reserve to offset these future liabilities. Pursuant to the company's Working Capital and Operating Reserve Policy these funds may also be made available to satisfy

⁴¹ Refer to the Statement of Financial Position on page 131, Deferred rent – non-current

debt service reserve and liquidity requirements as set forth therein and may be accessed for other purposes only upon receipt of necessary corporate and regulatory authorizations⁴².

Operating Reserves – \$1.64M Total (Known Contingency Category (\$1.M) + Unforeseen Contingency Category (\$0) + Personnel Certification and Operating Training Excess Revenues (\$643k))

(1) Known Contingencies where timing and amount uncertain — \$1M

Technical support to assist BES exception processing; disaster recovery planning; evaluation and updates to IT network architecture; additional costs to replace legacy software applications; upgrades to audio visual systems; enterprise IT planning and design services.

(2) Unforeseen Contingencies — The company has not proposed a specific amount to be funded for unforeseen contingencies. Should reserves be needed for unforeseen contingencies, the company will either transfer funds from the Known Contingency Reserve or seek necessary authorizations as described above to fund such contingencies.

(3) System Operator Certification Program — 643\$ k - The projected 12/31/14 reserve balance of the System Operator Certification Program is \$1,057,774, \$415.025 of which is projected to be used to fund budgeted costs that are in excess of projected funding.

Total Working Capital + Operating Reserves – \$4.9M

⁴² To the extent the company seeks to utilize such funds for any other purpose, prior approval of the Finance and Audit Committee is required. In addition, in the event the amount requested to be utilized for such other purpose is \$500,000 or more, prior approval of the Board of Trustees and filing with the Federal Energy Regulatory Commission is also be required.