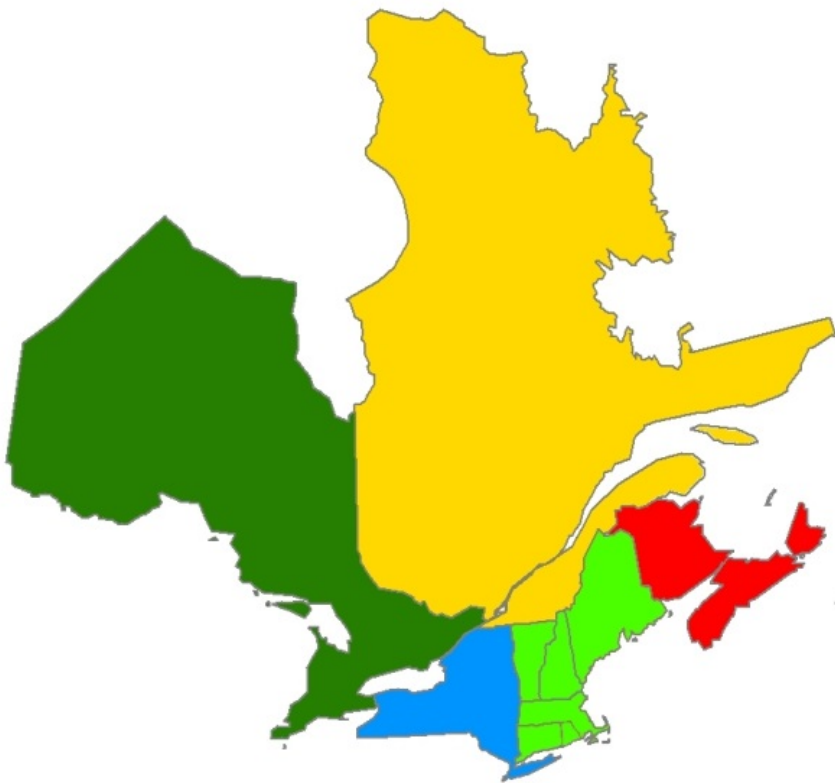




NORTHEAST POWER COORDINATING COUNCIL, INC.  
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## **Northeast Power Coordinating Council, Inc. (NPCC)**

### **2019 Business Plan and Budget**



**Approved by the  
NPCC Board of Directors  
at its June 27, 2018 Meeting and  
Resubmitted to NERC June 27, 2018**

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## Introduction

<b>Total NPCC Resources</b>				
(in whole dollars)				
	2019 Budget	U.S.	Canada	Mexico
Regional Entity Division FTEs	38.86			
Criteria Services Division FTEs	2.14			
<b>Total FTEs</b>	<b>41.00</b>			
Regional Entity Division Expenses	\$15,888,891			
Criteria Services Division Expenses	\$1,092,574			
<b>Total Expenses</b>	<b>\$16,981,465</b>			
Regional Entity Division Inc(Dec) in Fixed Assets	( <b>\$85,000</b> )			
Criteria Services Division Inc(Dec) in Fixed Assets	<b>\$16,000</b>			
<b>Total Inc(Dec) in Fixed Assets</b>	<b>(<b>\$69,000</b>)</b>			
Regional Entity Division Working Capital Requirement**	( <b>\$732,980</b> )			
Criteria Services Division Working Capital Requirement***	( <b>\$49,707</b> )			
<b>Total Working Capital Requirement</b>	<b>(<b>\$782,688</b>)</b>			
Total Regional Entity Division Funding Requirement	\$15,070,911			
Total Criteria Services Division Funding Requirement	\$1,058,866			
<b>Total Funding Requirement</b>	<b>\$16,129,777</b>			
<b>Regional Entity Division Assessments</b>	<b>\$15,003,411</b>	<b>\$9,169,256</b>	<b>\$5,834,155</b>	
<b>Regional Entity Division Assessments Percentage</b>	<b>100%</b>	<b>61%</b>	<b>39%</b>	
<b>Criteria Services Division Membership Fees</b>	<b>\$1,058,866</b>	<b>\$485,758</b>	<b>\$573,108</b>	
<b>Total NPCC Assessments &amp; Membership Fees</b>	<b>\$16,062,277</b>	<b>\$9,655,014</b>	<b>\$6,407,263</b>	
NEL	605,097,000	277,590,000	327,507,000	
NEL %	100%	46%	54%	

\*\* Refer to Table B-1 on page 56 in Section B.

\*\*\* Refer to the Reserve Analysis on page 73 in Section C.

## 2019 Overview of Total NPCC Resource Requirements

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

NPCC proposes to increase its total budget and assessments by 4.6% comprising a Regional Entity increase of 4.6% and a Criteria Services division increase of 4.0%. The proposed 2019 funding requirements will be satisfied by a Regional Entity division assessment of \$15,003,411 and Criteria Services division fees of \$1,058,866, for a total of \$16,062,277. The total NPCC assessments and fees represent an increase of 4.6% compared to the 2018 total assessments and fees of \$15,360,927. NPCC believes that the Region remains an effective provider of Regional Entity and Criteria Services division functions. NPCC's corporate culture centers on consistent delivery of excellent results at a cost that is considerate of the longstanding tradition in the Northeast of affordable and reliable electricity.

## Organizational Overview

Northeast Power Coordinating Council, Inc. (NPCC) is a 501(c)(6) not-for-profit corporation in the state of New York responsible for promoting and improving the reliability of the international, interconnected bulk power systems in Northeastern North America through (i) the development of Regional Reliability Standards and compliance assessment and enforcement of continent-wide and Regional Reliability Standards, coordination of system planning, design and operations, and assessment of reliability (collectively, Regional Entity activities), and (ii) the establishment of Regionally-specific criteria, and monitoring and enforcement of compliance

with such criteria (collectively, Criteria Services activities). NPCC provides the functions and services for Northeastern North America of a cross-border Regional Entity through a Regional Entity division, as well as Regionally-specific Criteria Services for Northeastern North America through a Criteria Services division. NPCC's website is [www.npcc.org](http://www.npcc.org).

The NPCC Region covers nearly 1.2 million square miles and is populated by more than 56 million people. NPCC U.S. includes the six New England states and the state of New York. NPCC Canada includes the provinces of Ontario, Québec and the Maritime provinces of New Brunswick and Nova Scotia. In total, from a net energy for load perspective, NPCC is approximately 46% U.S. and 54% Canadian. With regard to Canada, approximately 70% of Canadian net energy for load is within the NPCC Region.

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

It is imperative that NPCC maintain its ability to carry out delegated authorities and responsibilities. NPCC has a 2019 targeted staffing level of 41 power industry professionals and support personnel. Details of the 2019 business plans and budget for each program area are included in Section A for the Regional Entity division. The 2019 Regional Entity division schedules are shown in Section B. Section C details the 2019 Criteria Services division business plan and budget.

## Membership and Governance

NPCC monitors approximately 213 registered entities and some 448 functions in the Region for compliance with mandatory Reliability Standards. NPCC currently has approximately 80 members. There are two categories of membership, General and Full. The two categories distinguish between Regional Entity delegated services that are provided in support of the U.S. FERC and Canadian provincial MOUs or Agreements with regulatory and/or governmental authorities, and Criteria Services which FERC references as U.S. non-delegated activities.

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

Full Membership is available to Members which are already General Members and participate in electricity markets in the Northeast. Independent system operators (ISOs), Regional transmission organizations (RTOs), Transcos and other organizations or entities that perform the Balancing Authority function operating in Northeastern North America are expected to be Full Members of NPCC. The New York State Reliability Council and any other sub-regional reliability councils which may be formed are also expected to be Full Members. Full Members are subject to compliance with Regionally-specific more stringent reliability criteria for their generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area and which are identified utilizing a reliability impact-

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based methodology, in addition to Reliability Standards, and receive additional services from the Criteria Services division of NPCC, which is not funded through the ERO.

Under the Criteria Services division, NPCC will seek out and evaluate for membership, entities involved in emerging technologies to assure that those entities that have an impact on Bulk Electric System reliability are included in appropriate NPCC activities.

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

Sector 1) Transmission Owners

Sector 2) Reliability Coordinators

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

Sector 4) Generator Owners

Sector 5) Marketers, Brokers and Aggregators

Sector 6) Regulators

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

Sector 8) Independent

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

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

Industry technical experts from within the membership provide valuable input to the Board through various working groups and task forces as well as the committees. The *Amended and Restated Bylaws* establish NPCC's independence from users, owners and operators of the bulk power system through the enhanced governance structure while providing fair stakeholder representation in the election of the Board of Directors and officers. The members, from each of the seven stakeholder voting sectors, vote to elect directors in their respective sector. The *Amended and Restated Bylaws* establish criteria for board service for both stakeholder and independent directors. Independent Directors are drawn from diverse backgrounds and possess a broad range of industry expertise, perspectives, experiences, skill sets and knowledge to contribute to the effective functioning of a hybrid board structure.

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

## International Foundation

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

a) U.S. Foundation

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

b) Ontario

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

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

The IESO is subject to compliance monitoring and enforcement by NPCC. The IESO is also subject to compliance monitoring and enforcement of the Ontario market rules by the IESO's Market Assessment and Compliance Division (MACD) that operates at arm's length from the IESO's business units. The MOU notes that where MACD, NERC, and NPCC engage in investigations pursuant to their respective mandates regarding compliance, MACD can request to

take the lead. Moreover, of the three, MACD is the only entity that can assess financial penalties for any Ontario market participant's or the IESO's non-compliance with Ontario market rules, which includes non-compliance with NERC standards and NPCC criteria.

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

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

c) Québec

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

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

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

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

NPCC also conducts reliability assurance activities within Québec, including but not limited to events analysis, Reliability Assessment and Performance Analysis and compliance investigations, consistent with the *NPCC Amended and Restated Bylaws*.

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d) New Brunswick

On October 1, 2013, the Electricity Act (NB) and implementing regulations (together, “NB Electricity Act”) amended how Reliability Standards are approved, monitored, and enforced in the province of New Brunswick. The NB Electricity Act designates NPCC as a compliance body and NERC as a standards body within the meaning of the NB Electricity Act. The New Brunswick Energy and Utilities Board (NBEUB) is an independent, quasi-judicial board that is responsible for regulating New Brunswick’s electricity sector under the NB Electricity Act. The NBEUB has the responsibility to adopt and enforce reliability standards in New Brunswick.

As contemplated in the NB Electricity Act, NPCC and the NBEUB entered into a Service Contract dated August 10, 2016, whereby NPCC provides CMEP and other services for the NBEUB. Additionally, the NBEUB, NPCC, and NERC entered into a Memorandum of Understanding on August 10, 2016, which describes the roles and responsibilities of the three entities and facilitates data sharing. These two documents, along with the NB Electricity Act are the governing documents with respect to conducting CMEP and other reliability related activities in New Brunswick.

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

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

e) Nova Scotia

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



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standards and criteria are mandatory in Nova Scotia and NSPI will be subject to the NERC compliance monitoring and enforcement program, as implemented by NPCC.

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

## **2019 Key Goals and Key Deliverables**

NERC and the Regional Entities collaborated in the development of a common operating model with complementary roles and responsibilities, an ERO Enterprise Long-term Strategy and an ERO Enterprise Operating Plan. Links to these documents, which incorporated risks identified by the Reliability Issues Steering Committee, are included in the NERC 2019 Business Plan and Budget and may be referenced by the users of this document. NPCC activities that support ERO Enterprise Goals are detailed in each of the following program area sections.

## **Regional Entity Division Functional Scope**

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

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

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

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

## **2019 Overview of Regional Entity Division Cost Impacts**

The proposed Regional Entity division assessment of \$15,003,411, to support the Regional Entity division budget of \$15,803,891, is an increase of 4.6% compared to the 2018 assessment of \$14,341,787.

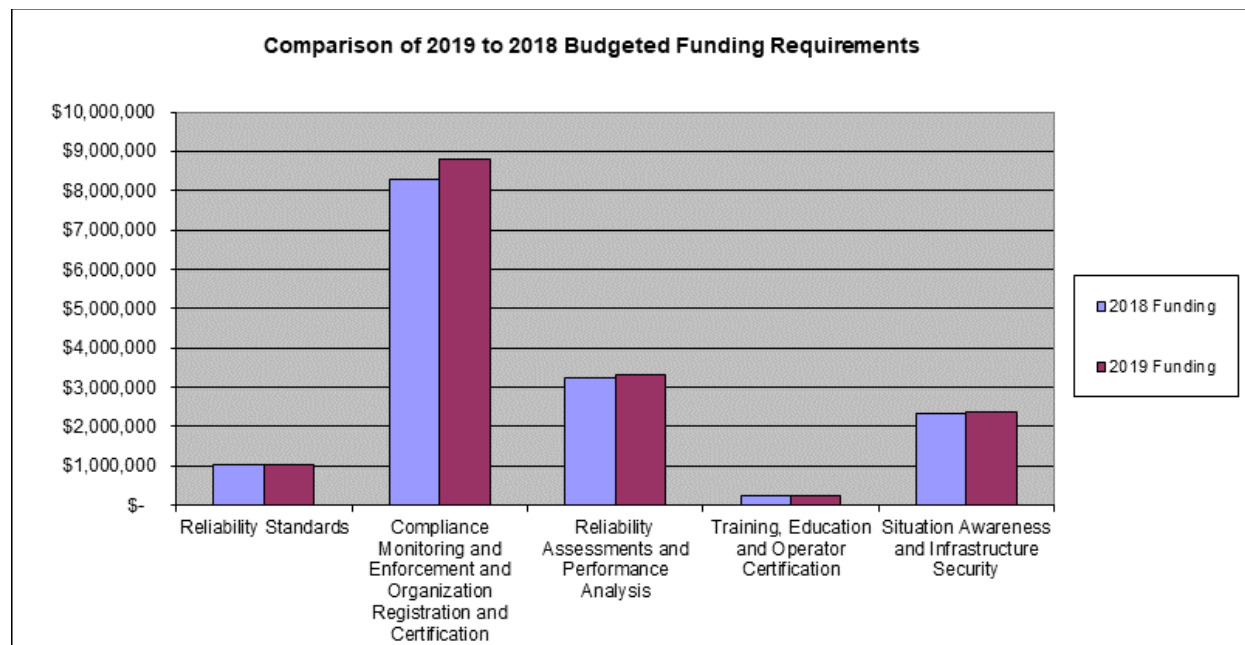
## **2018 Projections**

Current year projections are taken into consideration in development of the budget. Expenses are currently projected to be on budget in all areas or slightly under budget. 2018 Projections reflect expectations based on the first quarter variance report. It is anticipated that projections could change throughout 2018 and would be reflected in each subsequent quarter's variance report.

### Summary by Program

Program	Budget 2018	Projection 2018	Budget 2019	Variance	
				2019 Budget v 2018 Budget	Variance %
Reliability Standards	\$ 1,010,246	\$ 1,010,246	\$ 1,035,390	\$ 25,144	2.5%
Compliance Monitoring and Enforcement and Organization Registration and Certification	\$ 8,293,748	\$ 8,110,648	\$ 8,816,687	\$ 522,939	6.3%
Reliability Assessments and Performance Analysis	\$ 3,240,721	\$ 3,390,721	\$ 3,332,686	\$ 91,966	2.8%
Training, Education and Operator Certification	\$ 249,051	\$ 249,051	\$ 252,443	\$ 3,392	1.4%
Situation Awareness and Infrastructure Security	\$ 2,313,202	\$ 2,313,202	\$ 2,366,685	\$ 53,483	2.3%
<b>Total</b>	<b>\$ 15,106,967</b>	<b>\$ 15,073,867</b>	<b>\$ 15,803,891</b>	<b>\$ 696,924</b>	<b>4.6%</b>

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



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

## Personnel Analysis

Total FTEs by Program Area	Budget 2018	Projection 2018	Direct FTEs 2019 Budget	Shared FTEs <sup>1</sup> 2019 Budget	Total FTEs 2019 Budget	Change from 2018 Budget
<b>REGIONAL ENTITY DIVISION</b>						
<b>Operational Programs</b>						
Reliability Standards	1.93	1.93	1.00	0.93	1.93	0.00
Compliance Monitoring and Enforcement and Organization Registration and Certification	16.00	16.50	17.00	0.00	17.00	1.00
Training, Education, and Operator Certification	0.10	0.10	0.10	0.00	0.10	0.00
Reliability Assessment and Performance Analysis	5.83	5.33	4.90	0.93	5.83	0.00
Situation Awareness and Infrastructure Security	5.00	5.00	5.00	0.00	5.00	0.00
<b>Total FTEs Operational Programs</b>	<b>28.86</b>	<b>28.86</b>	<b>28.00</b>	<b>1.86</b>	<b>29.86</b>	<b>1.00</b>
<b>Administrative Programs</b>						
Technical Committees and Member Forums	0.50	0.50	0.50	0.00	0.50	0.00
General and Administrative	2.50	2.50	2.50	0.00	2.50	0.00
Information Technology	2.00	2.00	2.00	0.00	2.00	0.00
Legal and Regulatory	1.00	1.00	1.00	0.00	1.00	0.00
Human Resources	1.00	1.00	1.00	0.00	1.00	0.00
Accounting and Finance	1.00	1.00	2.00	0.00	2.00	1.00
<b>Total FTEs Administrative Programs</b>	<b>8.00</b>	<b>8.00</b>	<b>9.00</b>	<b>0.00</b>	<b>9.00</b>	<b>1.00</b>
<b>Total FTEs</b>	<b>36.86</b>	<b>36.86</b>	<b>37.00</b>	<b>1.86</b>	<b>38.86</b>	<b>2.00</b>

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

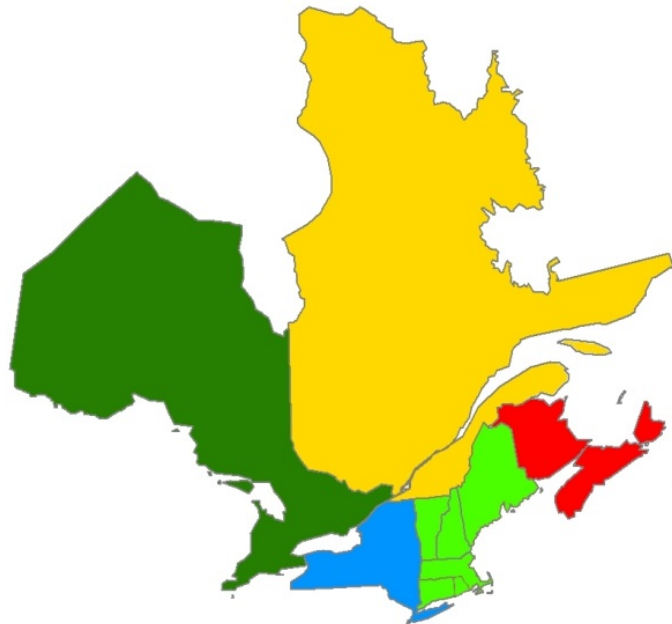
## 2018 Budget and Projection and 2019 Budget Comparisons

Statement of Activities and Capital Expenditures 2018 Budget & Projection, and 2019 Budget						
REGIONAL ENTITY DIVISION						
				Variance <sup>(2)</sup> 2018 Projection v 2018 Budget Over(Under)		Variance 2019 Budget v 2018 Budget Over(Under)
	2018 Budget	2018 Projection			2019 Budget	
<b>Funding</b>						
<b>ERO Funding</b>						
ERO Assessments	\$ 14,341,787	\$ 14,341,787	\$ -		\$ 15,003,411	\$ 661,624
Penalty Sanctions <sup>(1)</sup>	75,000	75,000	-		-	(75,000)
<b>Total ERO Funding</b>	<b>\$ 14,416,787</b>	<b>\$ 14,416,787</b>	<b>\$ -</b>		<b>\$ 15,003,411</b>	<b>\$ 586,624</b>
Membership Dues	-	-	-		-	-
Testing Fees	-	-	-		-	-
Services & Software	-	-	-		-	-
Workshops	64,000	64,000	-		67,500	3,500
Interest	-	-	-		-	-
Miscellaneous	-	-	-		-	-
<b>Total Funding (A)</b>	<b>\$ 14,480,787</b>	<b>\$ 14,480,787</b>	<b>\$ -</b>		<b>\$ 15,070,911</b>	<b>\$ 590,124</b>
<b>Expenses</b>						
<b>Personnel Expenses</b>						
Salaries	\$ 7,107,599	\$ 6,937,599	\$ (170,000)		\$ 7,332,280	\$ 224,681
Payroll Taxes	411,440	406,440	(5,000)		449,994	38,553
Benefits	1,476,378	1,472,378	(4,000)		1,613,078	136,700
Retirement Costs	825,353	792,353	(33,000)		853,511	28,157
<b>Total Personnel Expenses</b>	<b>\$ 9,820,770</b>	<b>\$ 9,608,770</b>	<b>\$ (212,000)</b>		<b>\$ 10,248,862</b>	<b>\$ 428,092</b>
<b>Meeting Expenses</b>						
Meetings	\$ 353,050	\$ 353,050	\$ -		\$ 370,750	\$ 17,700
Travel	834,500	834,500	-		845,900	11,400
Conference Calls	37,000	37,000	-		36,000	(1,000)
<b>Total Meeting Expenses</b>	<b>\$ 1,224,550</b>	<b>\$ 1,224,550</b>	<b>\$ -</b>		<b>\$ 1,252,650</b>	<b>\$ 28,100</b>
<b>Operating Expenses</b>						
Consultants & Contracts	\$ 1,877,640	\$ 2,027,640	\$ 150,000		\$ 2,022,150	\$ 144,510
Office Rent	810,700	810,700	-		820,700	10,000
Office Costs	664,760	664,760	-		676,347	11,587
Professional Services	960,000	960,000	-		978,000	18,000
Computer & Equipment Leases	-	-	-		-	-
Miscellaneous	50,000	50,000	-		51,000	1,000
Depreciation	269,000	269,000	-		255,000	(14,000)
<b>Total Operating Expenses</b>	<b>\$ 4,632,100</b>	<b>\$ 4,782,100</b>	<b>\$ 150,000</b>		<b>\$ 4,803,197</b>	<b>\$ 171,097</b>
<b>Total Direct Expenses</b>	<b>\$ 15,677,420</b>	<b>\$ 15,615,420</b>	<b>\$ (62,000)</b>		<b>\$ 16,304,709</b>	<b>\$ 627,289</b>
<b>Indirect Expenses</b>	<b>\$ (416,453)</b>	<b>\$ (416,453)</b>	<b>\$ -</b>		<b>\$ (415,818)</b>	<b>\$ 635</b>
<b>Other Non-Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ -</b>	<b>\$ -</b>
<b>Total Expenses (B)</b>	<b>\$ 15,260,967</b>	<b>\$ 15,198,967</b>	<b>\$ (62,000)</b>		<b>\$ 15,888,891</b>	<b>\$ 627,924</b>
<b>Change in Assets</b>	<b>\$ (780,180)</b>	<b>\$ (718,180)</b>	<b>\$ 62,000</b>		<b>\$ (817,980)</b>	<b>\$ (37,800)</b>
<b>Fixed Assets</b>						
Depreciation	\$ (269,000)	\$ (269,000)	\$ -		\$ (255,000)	\$ 14,000
Computer & Software CapEx	115,000	115,000	-		170,000	55,000
Furniture & Fixtures CapEx	-	-	-		-	-
Equipment CapEx	-	-	-		-	-
Leasehold Improvements	-	-	-		-	-
Allocation of Fixed Assets	0	0	-		-	-
<b>Inc(Dec) in Fixed Assets (C)</b>	<b>(154,000)</b>	<b>(154,000)</b>	<b>-</b>		<b>(85,000)</b>	<b>69,000</b>
<b>TOTAL BUDGET (=B+C)</b>	<b>\$ 15,106,967</b>	<b>\$ 15,044,967</b>	<b>\$ (62,000)</b>		<b>\$ 15,803,891</b>	<b>\$ 696,924</b>
<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>\$ (626,180)</b>	<b>\$ (564,180)</b>	<b>\$ 62,000</b>		<b>\$ (732,980)</b>	<b>\$ (106,800)</b>
<sup>(1)</sup> \$0 of penalty sanctions collected to date and prior to June 30, 2018.						
<sup>(2)</sup> 2018 Projections reflect expectations based on the 1st quarter statement of activities. It is anticipated that projections could change throughout 2018 and would be reflected in each subsequent quarter's statement of activities.						

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## Section A – Regional Entity Division 2019 Business Plan and Budget

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## Section A — 2019 Regional Entity Division Business Plan and Budget

### Reliability Standards Program

<b>Reliability Standards Program Resources</b>			
(in whole dollars)			
	2018 Budget	2019 Budget	Increase (Decrease)
Total FTEs	1.93	1.93	0.00
Direct Expenses	\$647,633	\$665,870	\$18,237
Indirect Expenses	\$375,586	\$375,014	(\$572)
Other Non-Operating Expenses	\$0	\$0	\$0
Inc(Dec) in Fixed Assets	(\$12,974)	(\$5,494)	\$7,480
Total Funding Requirement	\$1,010,246	\$1,035,390	\$25,144

#### Program Scope and Functional Description

The NPCC Reliability Standards Program Area operates in accordance with NPCC’s filed and approved Regional Delegation Agreement and NERC Rules of Procedure Section 300. The program supports the ERO Standards Program Area roles and responsibilities, the ERO Enterprise Operating Plan and the ERO Enterprise Long-Term Strategy. NPCC’s Reliability Standards Program Area provides an efficient and effective mechanism for stakeholders to provide input and facilitate the development of, and improvement to, NERC and Regional reliability standards which are clear, responsive to reliability and security risks, practical to implement, “results based”, and are cost effective. The primary objectives of NPCC’s Reliability Standards Program Area is to support the development of ERO standards and Regional variances which establish “results-based” requirements for addressing reliability risks with due consideration given to cost. NPCC supports the ERO efforts to develop reliability standards in a timely and efficient manner and which are responsive to FERC Directives and industry risk. NERC and Regional reliability standards must ensure the bulk electric system is planned, operated, and maintained in a manner that minimizes risks of cascading failures, system separation, and instability, and also avoids damage to major equipment, is responsive to risks, or limits interruptions of bulk power supply.

At the Regional level, the standards program area develops, and maintains NPCC Regional Reliability Standards, and ERO Standards Variances for the northeast as required. In addition, the NPCC Reliability Standards Program Area provides oversight to ensure that NPCC Regional Reliability Criteria contained in the form of Directories, are developed and maintained as necessary to implement, to augment, or to facilitate compliance with NERC Reliability Standards. NPCC’s reliability criteria are not reliability standards but are mandatory and subject to enforcement as outlined in NPCC Member agreements and various tariffs, and interconnection agreements, and other executed contractual agreements. Regional Reliability Criteria may also address issues not within NERC’s statutory jurisdiction for Reliability Standards, such as resource adequacy, and conform to requirements in Section 313 of the NERC Rules of Procedure.

#### 2019 Key Assumptions

- The number of continent-wide Reliability Standards development projects is expected to remain relatively stable, except as required to address any new FERC directives to create or modify Reliability Standards, or industry submittals of standard authorization requests.

- Continent-wide Reliability Standards projects will consist primarily of acting on recommendation of the Standards Efficiency Review project, conducting periodic reviews on existing Reliability Standards to improve their content and quality, responding to identified risks to reliability (including those that may be identified through the implementation of risk-based Compliance Monitoring and Enforcement), and addressing FERC directives that may arise. This activity will require the allocation of technical resources from several internal NERC departments (e.g., Reliability Assessment and Performance Analysis (RAPA), Reliability Risk Management, Compliance Analysis and Certification, and Compliance Assurance) and support from across the ERO Enterprise.
- During the periodic review of Reliability Standards, any associated Regional Reliability Standards will be reviewed for potential incorporation as variances or as improvements to the continent-wide requirements. Regional and NERC Reliability Standards development processes may require modification to efficiently accomplish this task. NPCC will work with NERC and other Regional Entities as necessary on projects where there is a Regional Reliability Standard/variance.
- NPCC’s Regional Reliability Standards development activity is expected to remain at a stable level, driven by requests that the Regional Entity may receive or reliability issues that are identified. Creation of variances to NERC standards to address reliability concerns or to recognize the unique topology and reliability considerations of the Northeast (i.e. Québec’s recognition of an asynchronous interconnection within NPCC’s footprint).
- The number of NERC and Regional standards interpretations is expected to remain low. However, implementation guidance requests may increase. The NPCC Reliability Standards program area will assist and facilitate support of these activities.
- Consistent with the NERC Rules of Procedure Sections 312 and 313, as continent wide standards continue to evolve, NPCC Regional Standards and Criteria will need to be continually reviewed to ensure they augment but do not add redundancy to the ERO standards.

### 2019 Goals and Key Deliverables

- Participate in the annual development and revision of the NERC’s three year Reliability Standards Development Plan (RSDP) through review, commenting, and other RSC activities.
- Participate in the NERC Standards Committee, as a representative of the NERC Regional Entities and NPCC Regional stakeholders to advance strategic initiatives, to measure the effectiveness and quality of standards, support ERO efforts to address outstanding FERC Directives, and provide input in the prioritization of standards development projects.
- Support further development of cost effectiveness principles using the “Cost of Risk Reduction Analysis” (CRRA) process and pilots. Continue to provide insights to NERC, based on NPCC experiences, regarding strategy for developing cost effectiveness analysis for standards and identify opportunities to identify cost of risk mitigation for the draft standards.
- Participate in the NERC Standards Efficiency Review Project phases and resulting activities.
- Participate in the development of ERO Reliability Standards specified in NERC’s three-year Reliability Standards Development Plan with the emphasis placed on reducing the amount of new FERC Directives issues by closer coordination with the Commission staff.



- Conduct thorough reviews of all NERC standards under development or revision by leveraging existing NPCC Task Forces and subject matter experts and coordinate NPCC comments for Northeastern North America.
- Participate in the Enhanced Periodic Review Standing Team’s grading efforts and coordinate and represent the Regional and interregional input.
- Assist NERC’s review of all industry “Requests for Interpretations” of standards.
- NPCC staff and Regional drafting team volunteers will participate in the drafting of ERO standards and provide support for development of improvements to standards.
- NPCC and its members will review and coordinate comments on FERC staff informal assessments of the ERO Enterprise as appropriate.
- Participate in pre-ballot reviews of ERO standards and coordinate the development of consensus recommendations of the NPCC Members to the NERC Standards Drafting Team (SDT) and provide a list of any unaddressed issues to allow the Members to cast a ballot based on regional concerns to enhance the efficiency of the ERO standards development projects.
- Review and identify issues and concerns raised in FERC NOPRs and NOIs for any and all standards related issues as appropriate.
- Educate and notify stakeholders and regulators about issues related to standards development through various means such as webinars and workshops.
- Provide outreach to industry trade groups such as the North American Generator Forum and North American Transmission Forum when requested.
- Monitor the NERC RISC activities and provide a Regional point of contact for all potential reliability related risks and gaps within the Northeast or as noted by NPCC’s stakeholders.
- Participate in and provide support to critical standards projects, such as CIP Supply Chain, Facility Ratings (IROL and SOL development), Geomagnetic Disturbances, etc.
- Identify opportunities and initiate Regional Variances to the NERC Reliability Standards as soon as possible, allowing incorporation into the continent wide standard during the development process.
- Conduct reviews of Regional Standards as necessitated by the revision and approval of any associated Continent-wide NERC reliability standards or further reliability related need.
- Conduct the development of any Québec Interconnection Wide variances to NERC continent-wide standards using the NPCC Reliability Standards Development Process.
- Identify impacts to the BES as a result of Distributed Energy Resources (DER) penetration.
- Identify opportunities to improve resilience of the BES.
- Identify and coordinate reliability issues with local governmental authorities where jurisdictional issues may exist.
- Ensure the topics addressed by the Reliability Standards align with changing industry and reliability objectives.
- Participate in reliability metrics developmental activities to identify potential measures for benchmarking of reliability and standards to determine if an adequate level of reliability is being achieved through the Enhanced Periodic Review Standing Review Team activities.
- Identify opportunities and processes for cost-effectiveness CRRA analysis activities to determine the need to revise a standard during the PR process.

- Identify any emerging interconnection-wide reliability issues which may need standards solutions and forward to the NERC Reliability Issues Steering Committee for their consideration.
- Identify opportunities to increase reliability or mitigate emerging risk through the revision of standards and their associated requirements.
- Identify any North American Electric Standards Review Board (NAESB) activities which may impact ERO standards.
- Identify potential market related issues for Regional Standards through NPCC RSC coordination and reviews.

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

### **Resource Requirements**

- No significant changes.

## Reliability Standards Program

Funding sources and related expenses for the Reliability Standards section of the 2019 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures 2018 Budget & Projection, and 2019 Budget						
Reliability Standards						
	2018 Budget	2018 Projection	Variance 2018 Projection v 2018 Budget Over(Under)	2019 Budget	Variance 2019 Budget v 2018 Budget Over(Under)	
<b>Funding</b>						
<b>ERO Funding</b>						
ERO Assessments	\$ 1,005,230	\$ 1,005,230	\$ -	\$ 1,035,390	\$ 30,160	
Penalty Sanctions	5,016	5,016	-	-	(5,016)	
<b>Total ERO Funding</b>	<b>\$ 1,010,246</b>	<b>\$ 1,010,246</b>	<b>\$ -</b>	<b>\$ 1,035,390</b>	<b>\$ 25,144</b>	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
<b>Total Funding (A)</b>	<b>\$ 1,010,246</b>	<b>\$ 1,010,246</b>	<b>\$ -</b>	<b>\$ 1,035,390</b>	<b>\$ 25,144</b>	
<b>Expenses</b>						
<b>Personnel Expenses</b>						
Salaries	\$ 377,093	\$ 377,093	\$ -	\$ 382,872	\$ 5,779	
Payroll Taxes	21,390	21,390	-	22,735	1,346	
Benefits	98,851	98,851	-	106,764	7,912	
Retirement Costs	40,299	40,299	-	41,599	1,300	
<b>Total Personnel Expenses</b>	<b>\$ 537,633</b>	<b>\$ 537,633</b>	<b>\$ -</b>	<b>\$ 553,970</b>	<b>\$ 16,337</b>	
<b>Meeting Expenses</b>						
Meetings	\$ 7,000	\$ 7,000	\$ -	\$ 7,000	\$ -	
Travel	93,000	93,000	-	94,900	1,900	
Conference Calls	-	-	-	-	-	
<b>Total Meeting Expenses</b>	<b>\$ 100,000</b>	<b>\$ 100,000</b>	<b>\$ -</b>	<b>\$ 101,900</b>	<b>\$ 1,900</b>	
<b>Operating Expenses</b>						
Consultants & Contracts	\$ 10,000	\$ 10,000	\$ -	\$ 10,000	\$ -	
Office Rent	-	-	-	-	-	
Office Costs	-	-	-	-	-	
Professional Services	-	-	-	-	-	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Depreciation	-	-	-	-	-	
<b>Total Operating Expenses</b>	<b>\$ 10,000</b>	<b>\$ 10,000</b>	<b>\$ -</b>	<b>\$ 10,000</b>	<b>\$ -</b>	
<b>Total Direct Expenses</b>	<b>\$ 647,633</b>	<b>\$ 647,633</b>	<b>\$ -</b>	<b>\$ 665,870</b>	<b>\$ 18,237</b>	
<b>Indirect Expenses</b>	<b>\$ 375,586</b>	<b>\$ 375,586</b>	<b>\$ -</b>	<b>\$ 375,014</b>	<b>\$ (572)</b>	
<b>Other Non-Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Total Expenses (B)</b>	<b>\$ 1,023,220</b>	<b>\$ 1,023,220</b>	<b>\$ -</b>	<b>\$ 1,040,884</b>	<b>\$ 17,664</b>	
<b>Change in Assets</b>	<b>\$ (12,974)</b>	<b>\$ (12,974)</b>	<b>\$ -</b>	<b>\$ (5,494)</b>	<b>\$ 7,480</b>	
<b>Fixed Assets</b>						
Depreciation	\$ -	-	\$ -	-	\$ -	
Computer & Software CapEx	-	-	-	-	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	(12,974)	(12,974)	-	(5,494)	7,480	
<b>Inc(Dec) in Fixed Assets (C)</b>	<b>(12,974)</b>	<b>(12,974)</b>	<b>-</b>	<b>(5,494)</b>	<b>7,480</b>	
<b>TOTAL BUDGET (=B+C)</b>	<b>\$ 1,010,246</b>	<b>\$ 1,010,246</b>	<b>\$ -</b>	<b>\$ 1,035,390</b>	<b>\$ 25,144</b>	
<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>\$ (0)</b>	<b>\$ (0)</b>	<b>\$ -</b>	<b>\$ (0)</b>	<b>\$ 0</b>	

## Compliance Monitoring and Enforcement and Organization Registration and Certification Program

<b>Compliance Monitoring and Enforcement and Organization Registration and Certification Program Resources</b>			
(in whole dollars)			
	2018 Budget	2019 Budget	Increase (Decrease)
Total FTEs	16.00	17.00	1.00
Direct Expenses	\$5,247,634	\$5,561,849	\$314,216
Indirect Expenses	\$3,113,668	\$3,303,230	\$189,562
Other Non-Operating Expenses	\$0	\$0	\$0
Inc(Dec) in Fixed Assets	(\$67,554)	(\$48,392)	\$19,161
Total Funding Requirement	\$8,293,748	\$8,816,687	\$522,939

### Program Scope and Functional Description

The Compliance Monitoring and Enforcement and Organization Registration and Certification Program (CORC) Program scope covers:

- 1) the identification, registration and certification of those entities responsible for meeting the NERC Reliability Standards and any approved Regional Standards;
- 2) the implementation of the risk-based NERC Compliance Monitoring and Enforcement Program (CMEP) in the United States, including the compliance monitoring, assessment and enforcement of NERC Reliability Standards and Regional Reliability Standards;
- 3) in accordance with the relevant memorandums of understanding (MOU's), the implementation of the risk-based NERC CMEP in Ontario and Nova Scotia, including the assessment and enforcement of NERC Reliability Standards and Regional Reliability Standards effective in those jurisdictions,
- 4) the implementation of the Québec Reliability Standards Compliance Monitoring and Enforcement Program (QCMEP), including the compliance monitoring, assessment and enforcement of NERC Reliability Standards and Regional Reliability Standards effective in Quebec, and
- 5) the implementation of the New Brunswick Compliance Monitoring and Enforcement Program (NBCMEP) in New Brunswick, including the compliance monitoring, assessment and enforcement recommendations of the NERC Reliability Standards and Regional Reliability Standards effective in New Brunswick.

Through the CORC Program, NPCC strives to be a strong enforcement authority that is objective, fair, and promotes a culture of reliability excellence through risk-informed compliance monitoring, mitigation, enforcement, and registration. To accomplish this goal, NPCC's compliance staff is divided into four sub-program areas: Compliance Implementation, Registration, and Certification; Compliance Entity Risk Assessment; Compliance Monitoring; and Compliance Enforcement.

#### ***Compliance Implementation, Registration and Certification***

The Compliance Implementation and Registration sub-program area is responsible for registration and certification activities and for general compliance activities that span across the

other three sub-program areas. The Compliance Implementation and Registration sub-program area:

- Identifies and registers the BES owners, operators, and users that are required to comply with the NERC and Regional Reliability Standards,
- Conducts Certifications in accordance with the NERC ROP,
- Leads the development of the annual implementation plans (ERO Enterprise, NPCC, Quebec, New Brunswick),
- Responds to any Complaints submitted to NPCC,
- Maintains NPCC's compliance portal and compliance tracking system, and;
- Conducts outreach, training, and education as necessary to support the implementation of Reliability Standards.

### ***Compliance Entity Risk Assessment***

The Compliance Entity Risk Assessment sub-program area is responsible for assessing the inherent risk and internal controls of registered entities. The Compliance Entity Risk Assessment sub-program area:

- Conducts Inherent Risk Assessments (IRA) on registered entities,
- Conducts Internal Controls Evaluations (ICE) on volunteering registered entities,
- Assists with the development of the annual implementation plans, and;
- Provides the basis for each registered entity's Compliance Oversight Plan.

### ***Compliance Monitoring***

The Compliance Monitoring sub-program area is responsible for conducting all compliance monitoring activities. The Compliance Monitoring sub-program area is focused on the most significant risks to the BES. The Compliance Monitoring sub-program area:

- Conducts NPCC compliance monitoring activities, including audits, spot checks, and guided self-certifications,
- Incorporates the results of the IRA and ICE into its compliance monitoring process,
- Issues reports, including audit reports, spot check reports, guided self-certification reports, and;
- Implements and maintains the Critical Infrastructure Protection (CIP) Standards Technical Feasibility Exceptions process.

### ***Compliance Enforcement***

The Enforcement sub-program area is responsible for undertaking enforcement activities in accordance with risk-based approaches and conducting technical assessments of registered entities' plans and activities to mitigate noncompliance. Depending on the jurisdiction, enforcement either makes official recommendations to the appropriate regulatory authority or assists and coordinates with NERC to make such official recommendations. The Enforcement sub-program area:

- Determines the relevant facts and circumstances necessary to understand each non-compliance,
- Evaluates and assigns a risk level to each non-compliance,
- Evaluates and approves the mitigation activities or Mitigation Plan for each non-compliance,
- Assesses the relevant compliance history for each non-compliance,
- Determines the disposition method for each non-compliance, and
- Evaluates registered entities for the self-logging program.

## 2019 Key Assumptions and Cost Impacts

2018	Projected 2019
4 On-Site Audits	7 On-Site O&P Audits
10 On-Site CIP Audits	10 On-Site CIP Audits
30 Off-Site Audits	30 Off-Site O&P Audits
15 Off-Site CIP Audits	15 Off-Site CIP Audits
15 Spot Checks	10 Spot Checks
25 Guided self-certifications	25 Guided self-certifications
50 Inherent Risk Assessments	50 Inherent Risk Assessments
4 On-site O&P Internal Control Evaluations	7 On-site O&P Internal Control Evaluations
5 On-site CIP Internal Control Evaluations	10 On-Site CIP Internal Control Evaluations
120 Violations (Estimated)	225 Violations (Estimated)
Settlements Covering 50 Violations	Settlements Covering 80 Violations
2 Hearings (Unbudgeted)	2 Hearings (Unbudgeted)
1 CI (Estimated)	1 CI (Estimated)
2 Entity Certifications	2 Entity Certifications

- Audit costs will increase slightly in 2019 from 2018. NPCC predicts three additional on-site audits for 2019.
- Potential increases in 2019 due to the continuation of monitoring and enforcement activities related to implementing the QCMEP in Québec and the NB CMEP in New Brunswick.
- The 2019 Business Plan projects increases in Enforcement Processing activities over the 2018 Budget. It is expected that the increase in violation processing will continue in 2019. For the first time, in late 2018, low impact cyber systems will be in scope for compliance in most jurisdictions and the medium and high impact cyber systems will be in scope for compliance in Quebec.
- The 2019 Business Plan projects the need for one Compliance Investigation. These Compliance Investigations are manpower intensive for NPCC staff (requiring allocation of more resources and potentially higher than normal costs).

## 2019 Goals and Key Deliverables

- Conduct scheduled compliance monitoring and enforcement activities pursuant to the 2019 Implementation Plans.
- Continue applying risk-based approaches for CMEP, registration, and certification activities.
- Identify potential issues related to NERC Reliability Standards as a result of compliance monitoring, enforcement and event analysis activities.
- Implement compliance responsibilities in Canada based on the regulatory structure specific to each jurisdiction.
- Evaluate monitoring, violation processing, risk-assessment, registration and certification program for sufficiency and effectiveness. Modify as needed.
- Collaborate with the ERO Enterprise to develop common and consistent CMEP processes, information systems, and methods among Regions.

- Provide education and outreach to the registered entities on all CMEP, registration, and certification topics, including the development and implementation of the ERO Enterprise Registration and CMEP software reporting systems and tools.
- Conduct two in-person Compliance Workshops.
- Develop annual reports for QCMEP/CMEP activity in Québec and New Brunswick.
- Develop and/or provide input on 2020 CMEP Implementation Plans (ERO Enterprise, NPCC, Québec, New Brunswick).
- Attend training necessary and/or beneficial to performing Registration, Certification, Entity Risk Assessment, Monitoring, and Enforcement activities.
- Assure that NPCC staff is appropriately trained to conduct Certification and Auditing activities.
- Provide detailed responses to oversight activity performed by NERC, FERC, and other relevant authorities.
- Continue to perform and update IRAs for registered entities.
- Continue to perform an ICE for registered entities that volunteer for such an assessment.
- Conduct 2019 Compliance Engagement Schedule based on risk to the BES and number of registered entities and promote the ERO Risk-Based Approach initiatives by:
  - Utilizing the Audit Checklist and Auditor’s Handbook for all on-site and off-site audits.
  - Preparing an updated Inherent Risk Assessment as necessary for all scheduled engagements and performing an Internal Controls Evaluation for all entities that volunteer.
- Implement physical security outreach and cyber security outreach by visiting registered entity sites to perform an assessment of their physical security, evaluate their cyber security and supply recommendations for improvements.
- Continue to perform comprehensive enforcement investigations to determine the relevant facts and circumstances necessary to understand each non-compliance, assess the risk, and evaluate the mitigation activities or Mitigation Plan for each non-compliance. Determine the disposition method in accordance with established risk-based approaches (i.e. Compliance Exceptions, FFTs, Simplified Identification Correction Method (Québec), Settlements, etc.)
- Evaluate the mitigation activities or Mitigation Plan for each non-compliance, track the progress and verify the completion of each Mitigation Plan.
- As necessary, represent NPCC during any enforcement hearings before the NPCC Hearing Body, the NERC Hearing Body, the Régie, or the NBEUB.
- Evaluate registered entities for the self-logging program.
- Continue to promote practices to enhance the benefits of the self-reporting of violations by the registered entity. This could include the emphasis on the benefits of a registered entity improving its internal processes used for identifying and submitting self-reports, improvement in the way Regional Entities process self-reports, and the streamlining and standardizing of the amount and type of data needed to evaluate a self-report.

Based on the portion of professional/technical staff time and other resources devoted to Compliance monitoring and enforcement and organizational registration and certification, NPCC estimates that it will expend 53% of its resources on this activity.

**Resource Requirements****Personnel**

- One additional FTE to increase in-house expertise rather than utilizing an additional contractor. The increase in personnel expenses will be partially offset by a lesser increase in Consultants and Contracts than without this FTE addition.

**Consultants and Contracts**

- Increase in consultants and contracts associated with an ERO Enterprise-wide increase in audit activity.

**Fixed Assets**

- No new functionality is planned for the Compliance Issues Tracking System and CMEP Data Administration Application at this time.



## Compliance Monitoring and Enforcement and Organization Registration and Certification Program

Funding sources and related expenses for the compliance enforcement and organization registration and certification section of the 2019 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

<b>Statement of Activities and Capital Expenditures</b>						
<b>2018 Budget &amp; Projection, and 2019 Budget</b>						
<b>Compliance Monitoring and Enforcement and Organization Registration and Certification</b>						
				Variance		Variance
	2018	2018	2018 Projection	2018 Projection	2019	2019 Budget
	Budget	Projection	Over(Under)	Over(Under)	Budget	v 2018 Budget
						Over(Under)
<b>Funding</b>						
<b>ERO Funding</b>						
ERO Assessments	\$ 7,692,569	\$ 7,692,569	\$ -	\$ 8,183,815	\$ 491,246	
Penalty Sanctions	41,580	41,580	-	-	(41,580)	
<b>Total ERO Funding</b>	<b>\$ 7,734,149</b>	<b>\$ 7,734,149</b>	<b>\$ -</b>	<b>\$ 8,183,815</b>	<b>\$ 449,666</b>	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
<b>Total Funding (A)</b>	<b>\$ 7,734,149</b>	<b>\$ 7,734,149</b>	<b>\$ -</b>	<b>\$ 8,183,815</b>	<b>\$ 449,666</b>	
<b>Expenses</b>						
<b>Personnel Expenses</b>						
Salaries	\$ 2,716,635	\$ 2,565,935	\$ (150,700)	\$ 2,815,882	\$ 99,247	
Payroll Taxes	171,841	168,841	(3,000)	191,849	20,008	
Benefits	524,801	521,801	(3,000)	585,543	60,742	
Retirement Costs	282,356	255,956	(26,400)	301,025	18,669	
<b>Total Personnel Expenses</b>	<b>\$ 3,695,634</b>	<b>\$ 3,512,534</b>	<b>\$ (183,100)</b>	<b>\$ 3,894,299</b>	<b>\$ 198,666</b>	
<b>Meeting Expenses</b>						
Meetings	\$ 9,000	\$ 9,000	\$ -	\$ 15,000	\$ 6,000	
Travel	289,000	289,000	-	295,400	6,400	
Conference Calls	-	-	-	-	-	
<b>Total Meeting Expenses</b>	<b>\$ 298,000</b>	<b>\$ 298,000</b>	<b>\$ -</b>	<b>\$ 310,400</b>	<b>\$ 12,400</b>	
<b>Operating Expenses</b>						
Consultants & Contracts	\$ 1,254,000	\$ 1,254,000	\$ -	\$ 1,357,150	\$ 103,150	
Office Rent	-	-	-	-	-	
Office Costs	-	-	-	-	-	
Professional Services	-	-	-	-	-	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Depreciation	-	-	-	-	-	
<b>Total Operating Expenses</b>	<b>\$ 1,254,000</b>	<b>\$ 1,254,000</b>	<b>\$ -</b>	<b>\$ 1,357,150</b>	<b>\$ 103,150</b>	
<b>Total Direct Expenses</b>	<b>\$ 5,247,634</b>	<b>\$ 5,064,534</b>	<b>\$ (183,100)</b>	<b>\$ 5,561,849</b>	<b>\$ 314,216</b>	
<b>Indirect Expenses</b>	<b>\$ 3,113,668</b>	<b>\$ 3,113,668</b>	<b>\$ -</b>	<b>\$ 3,303,230</b>	<b>\$ 189,562</b>	
<b>Other Non-Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Total Expenses (B)</b>	<b>\$ 8,361,302</b>	<b>\$ 8,178,202</b>	<b>\$ (183,100)</b>	<b>\$ 8,865,080</b>	<b>\$ 503,778</b>	
<b>Change in Assets</b>	<b>\$ (627,153)</b>	<b>\$ (444,053)</b>	<b>\$ 183,100</b>	<b>\$ (681,264)</b>	<b>\$ (54,112)</b>	
<b>Fixed Assets</b>						
Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	
Computer & Software CapEx	40,000	40,000	-	-	(40,000)	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	(107,554)	(107,554)	-	(48,392)	59,161	
<b>Inc(Dec) in Fixed Assets (C)</b>	<b>(67,554)</b>	<b>(67,554)</b>	<b>-</b>	<b>(48,392)</b>	<b>19,161</b>	
<b>TOTAL BUDGET (=B+C)</b>	<b>\$ 8,293,748</b>	<b>\$ 8,110,648</b>	<b>\$ (183,100)</b>	<b>\$ 8,816,687</b>	<b>\$ 522,939</b>	
<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>\$ (559,599)</b>	<b>\$ (376,499)</b>	<b>\$ 183,100</b>	<b>\$ (632,872)</b>	<b>\$ (73,273)</b>	

## Reliability Assessment and Performance Analysis Program

<b>Reliability Assessment and Performance Analysis Program Resources</b>			
(in whole dollars)			
	2018 Budget	2019 Budget	Increase (Decrease)
Total FTEs	5.83	5.83	0.00
Direct Expenses	\$2,145,368	\$2,216,468	\$71,101
Indirect Expenses	\$1,134,543	\$1,132,814	(\$1,729)
Other Non-Operating Expenses	\$0	\$0	\$0
Inc(Dec) in Fixed Assets	(\$39,190)	(\$16,596)	\$22,594
Total Funding Requirement	\$3,240,721	\$3,332,686	\$91,966

### Program Scope and Functional Description

NPCC, through its top technical committee, the Reliability Coordinating Committee (RCC), integrates the deliverables of its Task Forces' and Working Groups' Reliability Assessment and Performance Analysis (RAPA) related activities.

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

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

### 2019 Key Focus Areas

In collaboration with NERC, Key Focus Area activities for 2019 include:

- Integration of RAPA information systems for assessments and associated data requirements, including expanded and enhanced enterprise-wide data collection and analysis systems and capabilities for performance analyses, with a focus on independent and technically sound reliability assessments supporting delivery of high quality reports.
- Development of assessment and performance analysis techniques as well as resource capabilities and tools, including probabilistic and scenario evaluations, which address the impacts of new technologies, changing resource or demand resource composition, and environmental related regulations or legislation.
- Support ERO activities to identify key reliability risks and appropriate projects designed to enhance reliability and/or mitigate risks.
- Providing technical resources to support NERC special reliability assessments which focus on specific reliability risk areas in geographic areas with specific identified reliability concerns.
- Advancing analytical capabilities for identifying and determining reliability risks and conducting associated related reliability assessments.

### **Eastern Interconnection Reliability Assessment Group**

The primary function of the Eastern Interconnection Reliability Assessment Group (ERAG) is to support reliability of the bulk-power system in the Eastern Interconnection through periodic reviews of generation and transmission expansion. These assessments are conducted by the ERAG Committee. These assessment-related activities support ERO Goal 3: “*Reduction of Known Risks to Reliability*” and 4 “*Identification and Assessment of Emerging Reliability Risks*.”

NPCC RAPA staff participates with the ERAG Committee as one of the five Eastern Interconnection Regional Entities, and acts as the liaison between the ERAG MMWG and the NPCC SS-37 Working Group.

### **ERAG Committee Activities 2019 Goals and Deliverables**

- Oversee the steady state and dynamic simulation base case data compilation and development.
- Oversee the ERAG assessment plan and coordinate assessment efforts with NERC Assessment Program staff.
- Make appropriate revisions, as necessary, to the ERAG Strategic Direction (i.e. anticipated new developments in MMWG process and system assessments).
- Develop and approve the ERAG activity budgets.
- Continue discussions with Eastern Interconnection Planning Collaborative (EIPC) regarding proposed transition of the Eastern Interconnection steady state and dynamics base case development role as the MOD-032, Requirement R4 Designee.

### **Multi-Regional Modeling Working Group 2019 Goals and Deliverables**

- Facilitate the completion of the steady state and dynamic simulation base case data compilation and development for the 2019 series of cases.
- Check and confirm that the dynamic model data passes all applicable checks and acceptance criteria.
- Incorporate dispatch information into the future and seasonal ERAG MMWG base cases so that the dispatches are more closely aligned with economic dispatch practices.
- Continue to improve the representations of the governor-turbine plant control models.
- Apply MMWG base case non-disclosure agreement process so that MMWG cases continue to have sufficient protections in place for use and transmittal of confidential data and information.

### **ERAG System Assessments 2019 Goals and Deliverables**

- Conduct the 2019 ERAG Assessment and associated documentation.
- Coordinate Assessment efforts with the NERC Reliability Assessment and System Analysis (RASA) Program staff to incorporate any risk-based or other approaches to supplement NERC Assessments.

### **Bulk Electric System Notification and Exception (BESnet) application and Exception Request (ERs)**

NPCC supports maintenance of the BESnet application and the processing of the Regional BES Exception Requests (ERs), including periodic certifications that the basis for an Element being included or excluded in the BES through the Exception remains valid. At least one NPCC Exception Request will require recertification in 2019; analysis of an Exception Request from a New Brunswick entity is expected to continue into 2019.

### 2019 NERC Activities

NPCC will provide the Regional perspective with appropriate NPCC RAPA staff participation on selective NERC Planning and Operating Committees and key related NERC Subcommittees, Task Forces and Working Groups, including:

- Load Modeling Task Force;
- System Protection and Control Subcommittee;
- Demand Response Availability Data System Working Group;
- Generating Availability Data System Working Group;
- Transmission Availability Data System Working Group;
- Power Plant Model Verification Task Force;
- Reliability Assessment Subcommittee;
- Probabilistic Assessment Working Group;
- System Analysis and Modeling Subcommittee;
- Synchronized Measurement Subcommittee;
- Event Analysis Subcommittee;
- Performance Analysis Subcommittee; and,
- Misoperation Information Data Analysis System.

### ERO – Executive Management Group (EMG) 2019 Activities

Provide analytic support for the ERO-EMG:

- Operations Leadership Team;
- Bulk Electric System Exception Process Working Group;
- ERO-RAPA Group; and,
- Other activities as directed by the ERO-Executive Management Group.

### 2019 Goals and Key Deliverables

NPCC Task Force activities support ERO Goal No. 3 “Identification and Assessment of Significant Risks to Reliability” and ERO Goal No. 4 “Identification and Assessment of Emerging Risks to Reliability.”

### Task Force on Coordination of Planning

The primary mission of the NPCC Task Force on Coordination of Planning (TFCP) is to promote reliability through the coordination of NPCC Area and NERC planning processes and activities.

### TFCP Reliability Assessment and Performance Analysis 2019 Goals and Deliverables

- Coordinate NPCC responses to the approved NERC Essential Reliability Services Working Group recommendations with the Task Force on Coordination of Operation and the Task Force on System Studies to ensure that the recommendations are addressed.
- Coordinate the development of additional NPCC Criteria as necessary and track any new and developing Regional NPCC Standards through the NPCC Regional Standards Committee.
- Monitor industry practices and make recommendations to the NPCC Regional Standards Committee regarding related NERC Standards.
- Oversee the NPCC Directory No. 1 Implementation Plan (Dated: September 30, 2015).
- Oversee the activities of the NPCC CP-8 Working Group.
- Evaluate and recommend RCC approval of NPCC Area Transmission Reviews.
- Evaluate and recommend RCC approval of NPCC Area Reviews of Resource Adequacy.

- Coordinate, monitor, review, and make recommendations on the retirement of existing in-service and/or implementation of proposed or modified Special Protection Systems Remedial Action Schemes.
- Lead the NPCC Task Forces in the completion of the review and revision the *A-10 Criteria– NPCC Classification of Bulk Power System Elements*.
- Support related reliability activities, including consideration of any requests for sub-regional assessments.
- Keep informed on studies and developments in neighboring systems which might impact NPCC reliability.
- Review Events Analysis Lessons Learned using the Events Analysis discussion/review template.

### **Task Force on System Studies**

The primary mission of the NPCC Task Force on System Studies (TFSS) is to provide active overall coordination of system studies of the reliability of the interconnected bulk power systems and for the review of related NPCC documents.

### **TFSS Reliability Assessment and Performance Analysis 2019 Goals and Deliverables**

- Review and recommend approval of Area Transmission Reviews.
- Review and classify new and modified Special Protection Systems and/or Remedial Action Schemes.
- Review and Implement the NPCC A-10 Criteria.
- Perform annual review and update of the Major Project List.
- Participate in the development and submission of NPCC comments/inputs into the development of regional and/or continent-wide reliability standards that address the NERC Reliability Standards.
- Provide support and technical input, for Task Force related Bulk Electric System risks as identified by the NERC Reliability Issues Steering Committee.
- Review existing NPCC Regional Criteria and procedures for validation of data used in power flow and dynamic simulations; propose changes to provide for adequate data validation.
- Perform investigation of Distributed Energy Resources modeling practices.
- Update the NPCC Electric System Map.
- Annually develop a library of power flow base cases and associated dynamic cases.
- Support the performance of event replication by benchmarking simulations against actual system performance.
- Work with software vendors and NERC to enhance the capability for dynamic simulations.
- Continue to investigate the use of dynamic load models for transient stability studies.
- Investigate the use of load monitoring equipment to aid in the benchmarking of dynamic load models used in transient stability studies.

### **Task Force on System Protection**

The primary purpose of the NPCC Task Force on System Protection (TFSP) is to promote the reliable and efficient operation of the interconnected bulk power systems in Northeastern North America through the establishment of directories, criteria, guidelines, and procedures and coordination of design, relative to NPCC protection systems.

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**TFSP Reliability Assessment and Performance Analysis 2019 Goals and Deliverables**

- Assess proposed protection systems and Special Protection Systems/Remedial Action Schemes.
- Participate and/or serve as lead Task Force in the implementation of applicable Regional NERC Reliability Standards.
- Review and respond to Questions, Requests for Interpretations and/or Clarifications related to bulk power system protection requirements in NPCC Directories and Criteria.
- Participate in the ongoing development and submission of NPCC inputs/comments into the development of related NERC Reliability Standards.
- Review and analyze misoperations of protection systems and Remedial Action Schemes/Special Protection Systems as they occur in the NPCC Region.
- Review mitigations and/or progress reports for Bulk Power System Risk Reduction Implementation.
- Provide support and technical input for related protection system risks as identified by the NERC Reliability Issues Steering Committee.
- Conduct review/development of related NPCC Directories.
- Consistent with the TFSP’s scope, conduct joint meeting with other Regions to share best practices and experiences.
- Review ongoing changes to the North American Reliability Corporation Critical Infrastructure Protection Standards and evaluate impacts to Registered Entities Protection Systems, SCADA, and Monitoring Systems.

**Task Force on Coordination of Operation**

The NPCC Task Force on Coordination of Operation (TFCO) primarily facilitates the coordination of operations among the NPCC Reliability Coordinator areas and adjacent NERC Regions to enhance the reliability of the bulk power system.

**TFCO Reliability Assessment and Performance Analysis 2019 Goals and Deliverables**

- Prepare and conduct the spring and autumn NPCC System Operator Seminars.
- Develop and securely disseminate the annual compilation of “Facilities for Notification.”
- Support and take part in the biennial, continent-wide Grid Security Exercise, including a review of the associated reports and Lessons Learned.
- Support an annual enhanced, wide area restoration drill among the Reliability Coordinator areas of NPCC and their neighboring Reliability Coordinators, incorporating the annual review of the NPCC regional restoration plan.
- Conduct pre-seasonal NPCC Reliability Assessments.
- Conduct reviews of applicable NPCC Directories, Criteria, Guides and Procedures in accordance with their applicable review dates.
- Coordinate system awareness among NPCC Reliability Coordinators through periodic conference calls.
- Monitor the trends and impacts of the changing resource mix and the effects of the proliferation of the new resources on real-time operations, as well as behavior during and impacts on recovery and restoration plans.
- Provide assistance to the NERC Event Analysis Process and evaluate the operational applicability of the identified Lessons Learned.

- Perform a voluntary Critical Operating Tool Analysis Survey accompanied with the previous surveys recommendation to disseminate and assess the implementation of best practices and recommendations.

### **NPCC Regulatory/Governmental Affairs Advisory Group**

The NPCC Governmental/Regulatory Affairs Advisory Group provides a forum where industry and governmental and/or regulatory representatives can exchange views and strive to develop consensus policy recommendations on reliability issues specific to the NPCC Region (Northeastern United States and Eastern Canada) and share actionable information among NPCC, NERC and other related governmental and/or regulatory agencies related to Regional reliability matters.

The Regulatory/Governmental Affairs Advisory Group activities indicated below are done in support of ERO Goal No. 3 “*Reduction of Known Risks to Reliability*” and ERO Goal No. 4 “*Identification and Assessment of Emerging Risks to Reliability.*”

### **NPCC Regulatory/Governmental Affairs Advisory Group 2019 Goals and Deliverables**

- Continued outreach to NPCC’s state electricity and environmental regulators stressing the importance of understanding and considering reliability impacts during the development of State/Provincial initiatives (such as the identified Essential Reliability Services).
- Focus on initiatives concerning regional planning, distributed energy resource requirements, the timing of new generation resources and transmission infrastructure projects.

Based on the portion of professional/technical staff time and other resources devoted to Reliability Assessment and Performance Analysis, NPCC estimates that it will expend 22% of its resources on these activities.

## **Resource Requirements**

### **Personnel**

- NPCC anticipates no need to hire additional personnel in this program area in 2019.

### **Consultants and Contracts**

- Increase in consultants and contracts expense is associated with increase in inherent risk and emerging risk reliability assessments.

## Reliability Assessment and Performance Analysis Program

Funding sources and related expenses for the Reliability Assessment and Performance Analysis section of the 2019 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures						
2018 Budget & Projection, and 2019 Budget						
Reliability Assessment and Performance Analysis						
	2018	2018	Variance	2019	Variance	
	Budget	Projection	2018 Projection	Budget	2019 Budget	
			v 2018 Budget		v 2018 Budget	
			Over(Under)		Over(Under)	
<b>Funding</b>						
<b>ERO Funding</b>						
ERO Assessments	\$ 3,225,570	\$ 3,225,570	\$ -	\$ 3,332,686	\$ 107,116	
Penalty Sanctions	15,151	15,151	-	-	(15,151)	
<b>Total ERO Funding</b>	<b>\$ 3,240,721</b>	<b>\$ 3,240,721</b>	<b>\$ -</b>	<b>\$ 3,332,686</b>	<b>\$ 91,966</b>	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
<b>Total Funding (A)</b>	<b>\$ 3,240,721</b>	<b>\$ 3,240,721</b>	<b>\$ -</b>	<b>\$ 3,332,686</b>	<b>\$ 91,966</b>	
<b>Expenses</b>						
<b>Personnel Expenses</b>						
Salaries	\$ 1,106,772	\$ 1,106,772	\$ -	\$ 1,135,264	\$ 28,491	
Payroll Taxes	65,805	65,805	-	69,027	3,222	
Benefits	220,007	220,007	-	219,655	(352)	
Retirement Costs	117,144	117,144	-	123,322	6,179	
<b>Total Personnel Expenses</b>	<b>\$ 1,509,728</b>	<b>\$ 1,509,728</b>	<b>\$ -</b>	<b>\$ 1,547,268</b>	<b>\$ 37,541</b>	
<b>Meeting Expenses</b>						
Meetings	\$ 22,000	\$ 22,000	\$ -	\$ 23,000	\$ 1,000	
Travel	212,000	212,000	-	216,200	4,200	
Conference Calls	-	-	-	-	-	
<b>Total Meeting Expenses</b>	<b>\$ 234,000</b>	<b>\$ 234,000</b>	<b>\$ -</b>	<b>\$ 239,200</b>	<b>\$ 5,200</b>	
<b>Operating Expenses</b>						
Consultants & Contracts	\$ 401,640	\$ 551,640	\$ 150,000	\$ 430,000	\$ 28,360	
Office Rent	-	-	-	-	-	
Office Costs	-	-	-	-	-	
Professional Services	-	-	-	-	-	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Depreciation	-	-	-	-	-	
<b>Total Operating Expenses</b>	<b>\$ 401,640</b>	<b>\$ 551,640</b>	<b>\$ 150,000</b>	<b>\$ 430,000</b>	<b>\$ 28,360</b>	
<b>Total Direct Expenses</b>	<b>\$ 2,145,368</b>	<b>\$ 2,295,368</b>	<b>\$ 150,000</b>	<b>\$ 2,216,468</b>	<b>\$ 71,101</b>	
<b>Indirect Expenses</b>	<b>\$ 1,134,543</b>	<b>\$ 1,134,543</b>	<b>\$ -</b>	<b>\$ 1,132,814</b>	<b>\$ (1,729)</b>	
<b>Other Non-Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Total Expenses (B)</b>	<b>\$ 3,279,911</b>	<b>\$ 3,429,911</b>	<b>\$ 150,000</b>	<b>\$ 3,349,282</b>	<b>\$ 69,371</b>	
<b>Change in Assets</b>	<b>\$ (39,190)</b>	<b>\$ (189,190)</b>	<b>\$ (150,000)</b>	<b>\$ (16,596)</b>	<b>\$ 22,594</b>	
<b>Fixed Assets</b>						
Depreciation	\$ -	-	\$ -	\$ -	\$ -	
Computer & Software CapEx	-	-	-	-	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	(39,190)	(39,190)	-	(16,596)	22,594	
<b>Inc(Dec) in Fixed Assets (C)</b>	<b>(39,190)</b>	<b>(39,190)</b>	<b>-</b>	<b>(16,596)</b>	<b>22,594</b>	
<b>TOTAL BUDGET (=B+C)</b>	<b>3,240,721</b>	<b>3,390,721</b>	<b>150,000</b>	<b>3,332,686</b>	<b>91,966</b>	
<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>\$ 0</b>	<b>\$ (150,000)</b>	<b>\$ (150,000)</b>	<b>\$ (0)</b>	<b>\$ (0)</b>	



## Training, Education, and Operator Certification Program

<b>Training, Education, and Operator Certification Program Resources</b>			
(in whole dollars)			
	2018 Budget	2019 Budget	Increase (Decrease)
Total FTEs	0.10	0.10	0.00
Direct Expenses	\$230,263	\$233,297	\$3,034
Indirect Expenses	\$19,460	\$19,431	(\$30)
Other Non-Operating Expenses	\$0	\$0	\$0
Inc(Dec) in Fixed Assets	(\$672)	(\$285)	\$388
Total Funding Requirement	\$249,051	\$252,443	\$3,392

### Program Scope and Functional Description

The NPCC Training, Education, and Operator Certification program supports NERC Rules of Procedure Section 900. The program provides education and training necessary to understand and operate the bulk electric system. The target audience of the program is bulk power system operating personnel - including system operations personnel, operations support personnel (engineering and information technology), supervisors and managers, and training personnel. NPCC staff training and development is incorporated within each respective program area.

### Training Program Background and Description

This NPCC Program establishes and coordinates training for system operators relating to inter-Reliability Coordinator area matters, criteria, terminology, standards and operating procedures and instructions. It includes development and execution of training seminars, held twice yearly, at which:

- potential operational problems for the coming season are discussed,
- physical layouts and electrical characteristics of the NPCC and PJM Areas are discussed,
- application of NPCC Directory and NERC Standard requirements pertinent to operation are discussed,
- major industry issues that are important for system operators are discussed,
- significant disturbances are reviewed for lessons learned; and
- table-top drills and communication and coordination exercises are conducted.

The seminars promote camaraderie and better communication among system operators from the NPCC and PJM Reliability Coordinator (RC) Areas and the Nova Scotia Balancing Authority (BA) area. PJM RC has significant interaction with the NPCC RCs and system operators from PJM have been regular participants at past seminars. Examples of specific topics addressed at recent seminar include: 1) additions and impacts to operations of renewable resources, 2) the development of conditions and violations related to major system Blackouts, 3) human performance related to system operations, 4) cybersecurity threats and system operator concerns, 5) system restoration approaches and tie-ins to neighboring systems and 6) application of NPCC Simultaneous Activation of Reserve. Usually, control center visits are included as part of the seminar activities.

This Program also provides for:

- sharing of RC/BA existing training program and system simulator area content;
- training techniques and methods;
- evaluation of new techniques and training and simulator aids as they become available;
- opportunities to consolidate training among the NPCC RCs and BAs, which includes opportunities to share training material and training sessions; and
- exchange of information on internal methods of system operator training.

The training activities indicated below are done in support of ERO Goals No. 3 “*Reduction of Known Reliability Risks*” and No. 6 “*Effective and Efficient Operation*”. Related contributing activities to these goals include “Working with industry forums, expand communication and encourage sharing of good industry practices for increasing Human Performance (HP) effectiveness” and “Acquire, engage, develop, and retain highly qualified talent with requisite technical expertise to execute the ERO Enterprise’s statutory functions.”

### **Funding Drivers and Reliability Benefits**

- System operators participating in the Seminars: 1) share their approaches to addressing operational problems and learn about the characteristics of neighboring systems; 2) gain exposure to NPCC issues and current industry operational topics; 3) review recent NPCC and major external disturbances; 4) review key operational related content in NPCC Directories and NERC Standards; and 5) participate in hands-on “table top exercises” pertaining to system operational practices. PJM system operators and trainers are also invited to participate and normally attend these seminars;
- Seminar attendees also receive Continuing Education Hours (CEHs) (normally 3 CEHs) and operator trainers from each RC / BA area can utilize the seminar content by including it in their internal training programs to provide CEHs to all system operators; and,
- The seminars help to improve system operational coordination through better contact among system operators at other Reliability Coordinator areas.
- Continually review and revise the curriculum of the training seminars to better emphasize NERC Standard requirements related to system operation, NPCC wide-area operations and Regionally-specific criteria and procedures.
- Enhance the system operator’s awareness and knowledge of the standards, criteria and procedures they apply in real time operation.
- Provide more sharing of new training approaches, exchange of information on internal methods of system operator selection, training material and training sessions;
- Enhance efficiency and cost savings in the training programs in the NPCC RC / BA areas.
- Provide a forum among NPCC RC/BA areas for sharing of approaches to meet the requirements of the NERC PER and COM standards. The sharing of approaches used by some NPCC Areas to address any changes needed to existing system operator training programs due to PER-005-2 requirements is valuable to CO-2 Working Group members.
- NPCC will conduct two Standards and Compliance workshops in 2018, for NPCC Stakeholders, for the express purpose of providing the most current and applicable information related to the development of NERC and Regional Reliability Standards and the implementation of the Compliance Monitoring and Enforcement Program (CMEP).

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## 2019 Key Assumptions

NPCC regularly conducts seminars as well as Spring and Fall Standards and Compliance workshops specifically designed, primarily through the conduct of targeted breakout classroom sessions and presentations on current industry related activities, to provide for the most efficient exchange of information between the NPCC Compliance and Standards staff and the NPCC Stakeholders. Presentations in the past have been conducted by FERC, NERC and Stakeholder representatives in addition to NPCC staff members. To supplement these workshops, NPCC develops webinars that will focus on specific topics pertinent to developments related to compliance program implementation, standards development or technical issues.

NPCC regularly conducts Spring and Fall System Operator Seminars. These seminars involve system operators from the NPCC RC/BA Areas and PJM, and are held in early May and early November.

### Training, Education and Operator Certification 2019 Goals and Deliverables

- Prepare and conduct the 2019 Spring and Fall NPCC System Operator Seminars.
- Continue collaboration and sharing of the intended RC/BA approaches, experiences and materials to task identification and training development
- As needed, enhance the NPCC repository of training resources and learning verification activities addressing fundamental power system topics, training methods and operation procedure training exercises, which may be shared as elements of operator training in compliance with NERC Standard PER-005, “*System Personnel Training.*”
- Develop on-line operational training webinars that focus on specific topics pertinent to compliance program implementation, standards development or technical issues.

Based on the portion of professional/technical staff time and other resources devoted to training, education, and operator certification, NPCC estimates that it will expend 2% of its resources on this activity.

### Resource Requirements

#### Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2019.

## Training, Education, and Operator Certification Program

Funding sources and related expenses for the training, education, and operator certification section of the 2019 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures						
2018 Budget & Projection, and 2019 Budget						
Training, Education, and Operator Certification						
	2018 Budget	2018 Projection	Variance 2018 Projection v 2018 Budget Over(Under)	2019 Budget	Variance 2019 Budget v 2018 Budget Over(Under)	
<b>Funding</b>						
<b>ERO Funding</b>						
ERO Assessments	\$ 184,791	\$ 184,791	\$ -	\$ 184,943	\$ 152	
Penalty Sanctions	260	260	-	-	(260)	
<b>Total ERO Funding</b>	<b>\$ 185,051</b>	<b>\$ 185,051</b>	<b>\$ -</b>	<b>\$ 184,943</b>	<b>\$ (108)</b>	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	64,000	64,000	-	67,500	3,500	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
<b>Total Funding (A)</b>	<b>\$ 249,051</b>	<b>\$ 249,051</b>	<b>\$ -</b>	<b>\$ 252,443</b>	<b>\$ 3,392</b>	
<b>Expenses</b>						
<b>Personnel Expenses</b>						
Salaries	\$ 18,399	\$ 18,399	\$ -	\$ 18,600	\$ 201	
Payroll Taxes	1,350	1,350	-	1,513	163	
Benefits	4,893	4,893	-	6,805	1,912	
Retirement Costs	2,320	2,320	-	2,379	58	
<b>Total Personnel Expenses</b>	<b>\$ 26,963</b>	<b>\$ 26,963</b>	<b>\$ -</b>	<b>\$ 29,297</b>	<b>\$ 2,334</b>	
<b>Meeting Expenses</b>						
Meetings	\$ 188,300	\$ 188,300	\$ -	\$ 189,000	\$ 700	
Travel	15,000	15,000	-	15,000	-	
Conference Calls	-	-	-	-	-	
<b>Total Meeting Expenses</b>	<b>\$ 203,300</b>	<b>\$ 203,300</b>	<b>\$ -</b>	<b>\$ 204,000</b>	<b>\$ 700</b>	
<b>Operating Expenses</b>						
Consultants & Contracts	\$ -	\$ -	\$ -	\$ -	\$ -	
Office Rent	-	-	-	-	-	
Office Costs	-	-	-	-	-	
Professional Services	-	-	-	-	-	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Depreciation	-	-	-	-	-	
<b>Total Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Total Direct Expenses</b>	<b>\$ 230,263</b>	<b>\$ 230,263</b>	<b>\$ -</b>	<b>\$ 233,297</b>	<b>\$ 3,034</b>	
<b>Indirect Expenses</b>	<b>\$ 19,460</b>	<b>\$ 19,460</b>	<b>\$ -</b>	<b>\$ 19,431</b>	<b>\$ (30)</b>	
<b>Other Non-Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Total Expenses (B)</b>	<b>\$ 249,723</b>	<b>\$ 249,723</b>	<b>\$ -</b>	<b>\$ 252,728</b>	<b>\$ 3,005</b>	
<b>Change in Assets</b>	<b>\$ (672)</b>	<b>\$ (672)</b>	<b>\$ -</b>	<b>\$ (285)</b>	<b>\$ 388</b>	
<b>Fixed Assets</b>						
Depreciation	\$ -	-	\$ -	\$ -	\$ -	
Computer & Software CapEx	-	-	-	-	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	(672)	(672)	-	(285)	388	
<b>Inc(Dec) in Fixed Assets (C)</b>	<b>(672)</b>	<b>(672)</b>	<b>-</b>	<b>(285)</b>	<b>388</b>	
<b>TOTAL BUDGET (=B+C)</b>	<b>249,051</b>	<b>249,051</b>	<b>-</b>	<b>252,443</b>	<b>3,392</b>	
<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ -</b>	<b>\$ (0)</b>	<b>\$ (0)</b>	

## Situation Awareness and Infrastructure Security Program

<b>Situation Awareness and Infrastructure Security Program Resources</b>			
(in whole dollars)			
	2018 Budget	2019 Budget	Increase (Decrease)
Total FTEs	5.00	5.00	0.00
Direct Expenses	\$1,373,791	\$1,409,379	\$35,589
Indirect Expenses	\$973,021	\$971,538	(\$1,483)
Other Non-Operating Expenses	\$0	\$0	\$0
Inc(Dec) in Fixed Assets	(\$33,611)	(\$14,233)	\$19,377
Total Funding Requirement	\$2,313,202	\$2,366,685	\$53,483

### Program Scope and Functional Description

The Situation Awareness and Infrastructure Security Program is the combination of near real-time awareness of conditions on the bulk power system with the programs necessary to increase the physical and cyber security of the electricity infrastructure, including the operation and maintenance of tools and other support services for the benefit of Reliability Coordinators and the system operators within the registered entities. Maintaining the real-time awareness of conditions on the interconnected bulk power systems by the NPCC Reliability Coordinator is critical to maintaining reliable operation within NPCC, including the communication of information concerning system conditions and abnormal events among the neighboring system operators responsible for the reliable operation of the bulk power systems. When an event does occur, it is critical to provide a forum for active coordination of reliability and operation among the NPCC Reliability Coordinator areas and neighboring NERC Regions and to use an event as a learning opportunity to enhance the reliability of the interconnected bulk power system through the lessons learned, which can be gleaned from such an event.

These Situation Awareness and Infrastructure Security activities indicated below are done in support of ERO Goal No. 3 “*Reduction of Known Risks to Reliability.*” Related contributing activities to this Goal include “Analyzing system performance, events, and relationships among data sources to identify risks and mitigation strategies and provide recommendations and lessons learned, including those that are lower impact, to discover potential reliability trends early in their lifecycles” and “Promoting the use of NERC cause codes to establish a common understanding of HP triggers, collect and evaluate trends in data, and develop metrics as needed.”

### Event Analysis Program Description

NERC and the industry analyzes events, identifies the lessons to be learned, and conducts a formal cause code analysis.

The Event Analysis Program recognizes that many events which occur on the bulk power system beyond those identified through NERC Reliability Standard EOP-004-3, “Event Reporting,” (EOP-004-4, Effective April 1, 2019) can have varying levels of significance to the electric system, providing otherwise unrealized lessons to be learned from these events and the trending of such events to identify possible reliability concerns. By implementing a “bottom-up” approach to an event review within the framework of the NERC Event Analysis Program,

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consistency, comparability, flexibility and timeliness in the event analysis process will be promoted by NPCC, the registered entities and NERC in a collaborative initiative.

Upon the identification of an event, the goal of the Event Analysis Program is to:

- identify what transpired;
- categorize the event within the NERC Event Analysis Program;
- establish the sequence of events;
- understand the essential root causes of the event;
- identify recommendations or corrective actions; and,
- develop and disseminate to the industry lessons to be learned so that the operational reliability of the bulk power system can be further enhanced.

In assessing any system event, it is recognized that, if the timely dissemination of lessons learned from an event is to be realized, any potential compliance implications associated with an event must be addressed and dismissed. Throughout an event analysis effort, to make this process successful and complete, and to solidify the “bottom-up” approach, registered entities are encouraged to establish a liaison between the event analysis and compliance functions internal to the registered entity during the event analysis process. This serves to facilitate the development of a registered entity compliance self-assessment report, which is accomplished by performing a sufficiency review of the reliability standards deemed applicable to the event, assisting in the self-reporting of possible violations should any be discovered.

To complete this voluntary effort, the entity, the Region and NERC staff will collaborate to assess the NERC Brief Report or Event Analysis Report and perform a formal cause code analysis, identifying a root cause and publish any pertinent lessons learned gathered from the event.

The adoption by NERC of the Event Analysis Program brings clarity and certainty about what system events are relevant to analyze and to what level of detail, targeting potential risks to the reliability of the bulk power system for detailed and in-depth analysis; only concise and succinct reviews are desired for more minor events. It also delineates the expectations roles and responsibilities of the registered entities, NPCC and NERC in a uniform review of system events by the industry and promotes a timely development and dissemination of valuable lessons learned to the industry. The identification and tracking of emerging common risks through the assessment of events will further distinguish trends which may be of concern to reliability. By rigorously pursuing the lesser events on the system and learning from these events, larger events can be avoided or mitigated.

NPCC staff works step-by-step with the registered entity throughout the total event analysis process, permitting the entity to assume the primary role in the development of the initial analysis, lessons learned which may benefit the industry and the Standards sufficiency review and cause coding for trending and reporting. NPCC staff, throughout the process, guides, supports and stands as an advocate of the registered entity as they continue to develop an improved culture of reliability and compliance.

### **2019 Key Assumptions**

- The monitoring of Lessons Learned will continue to be a major focus of NERC in 2019, including an added aspect of reporting in the voluntary Event Analysis Program to collect detailed information on station equipment failure, and response to a recommendation of

the AC Substation Equipment Task Force, to solicit and collect this data, for applicable qualifying events to aid in future analysis of station equipment failures and to identify trends that may be a threat to the reliability of the Bulk Electric System, and utilization and added aspects of a revised Category 1h - EMS/Loss of monitoring or control at a Control Center events Brief Report Template and Addendum, developed with the input of the EMS Working Group to improved information collection related to such events and associated analysis.

- Critical infrastructure protection will fully integrate the requirements of version 5 of the Cyber Standards in 2019.
- NERC will post updates to the Critical Infrastructure Protection Standards to address the three FERC Directives and the four industry concerns that were not satisfactorily responded to by the version 5 Transition Advisory Group.
- Resource allocation to this program area will support: expanded Events Analysis activities; coordination with NERC's evolving E-ISAC capabilities; and cybersecurity outreach efforts.

### **Situation Awareness 2019 Goals and Deliverables**

- NPCC will provide the Regional perspective and support through NPCC Event Analysis staff participation on selective NERC Planning and Operating Committees and key related NERC Subcommittees, Task Forces and Working Groups, including the Event Analysis Subcommittee, the ERO – Event Analysis/Situational Awareness Group; and the Event Analysis Management System.
- Work directly with applicable NPCC Task Forces and Working Groups to provide an in-depth assessment of Lessons Learned unique to the NPCC Members and NPCC Criteria.
- Promote NPCC's Event Analysis group's established process for sharing and dissemination of the detailed Event Analysis Report information among industry participants (Registered Entities).
- Incorporate the Lessons Learned from participation in the GridEx IV wide-area exercise.
- Utilize the NPCC's "what if" methodology to examine select events, with potential for greater impact under a different set of system conditions, to evaluate whether the event's proximity to becoming a more significant event would suggest that an appropriate level of analysis, with due weight to risk and impact, be conducted.
- Monitor the operational status of the bulk power system and coordinate normal and pre-emergency communication, awareness and assistance in addition to the same during an emergency among the Reliability Coordinators within NPCC. Notify the Reliability Coordinators of significant bulk power system events that have occurred in one Reliability Coordinator Area, and which have the potential to impact reliability in other NPCC Reliability Coordinator Areas or Regions external to NPCC. These events include contingencies on the bulk power system, potential shortfalls of operating reserve, operating problems, potential security threats and potential threats or disruptions to the cyber systems.
- Conduct a daily conference call to serve as a complement to the NPCC Emergency Preparedness Conference Call. The participants of the call are the Reliability Coordinators within NPCC and its neighboring RCs, the Midcontinent ISO and PJM. The conference call is implemented through a bridge, the initiation of the call quickly ringing all pre-selected telephones simultaneously. The goal of the call is to alert all Reliability Coordinators of emerging problems. If no system difficulties are anticipated for the day, no unnecessary information is to be discussed. Subjects for discussion are limited to credible events which could impact the ability of an entity to serve its load and

meet its operating reserve obligations or would impose a burden to the interconnection, including the following: Projected Load; Adverse Weather; Operating Reserve; Generation; Transmission; and Sabotage. If conditions worsen in the course of the day, the NPCC Emergency Preparedness Conference Call will be implemented.

- Monthly test of the satellite telephone network, to ensure the capability for continued voice communications among NPCC and its Reliability Coordinators. This back-up communications system will function in the event of a collapse of the Public Switched Telephone Network, permitting continued cross-border voice communications among the Canadian Reliability Coordinators of NPCC, the Reliability Coordinators in the United States as well as NPCC Situation Awareness staff.
- Coordination and communication with the NERC Bulk Power System Awareness group in preparation for and during ongoing significant events in the NPCC’s footprint and participation in the ERO Enterprise-wide Situation Awareness activities. Monitor the status of the bulk power system through the NERC Situational Awareness-FERC, NERC, Regions initiative, a near real-time operating display for the United States portion of the Reliability Coordinators footprints of North America. Transmission voltage levels of 230 kV and above are displayed, and the tool provides the ability to “drill down” to detailed bus information, including generation outputs and bus voltages.

### **Critical Infrastructure Objectives**

NPCC’s critical infrastructure objectives are defined within the scope of the NPCC Task Force on Infrastructure Security & Technology, and include, but are not limited to:

- Providing a forum for NPCC review of proposed and posted documents from the NERC Critical Infrastructure Protection Committee; and,
- Representing and advocating NPCC’s position in the activities of NERC groups involved in the development and/or implementation of physical and cyber security.

NPCC’s 2019 critical infrastructure goals and objectives, supporting ERO Goal No. 5 – *“Identification and Reduction of Cyber and Physical Risks.”* Related contributing activities to this Goal include “Expand the use, availability, and value of physical security and cybersecurity threat and vulnerability information sharing, including cross sector communications, and analytics” and “In collaboration with the Critical Infrastructure Protection Committee and industry stakeholders, develop a risk process to address the potential impact of cyber and physical security threats and vulnerabilities.”

### **Critical Infrastructure 2019 Goals and Deliverables**

- Monitor the reliable implementation of the Cyber Security Standards.
- Monitor the Homeland Security Information Network, E- ISAC, NERC Alerts and Canadian Information Sharing and share information with the NPCC CO-8 Working Group.
- Review and submit comments on NERC proposed Reliability Standards, modified Reliability Standards, proposed Guidelines and modified Guidelines related to Infrastructure Security and Technology.
- Keep current on all governmental agencies regarding applicable security recommendations and requirements, and other applicable security and reliability recommendations and keep the RCC and its committees appropriately informed, e.g. Sector Specific Plan.
- Conduct an annual review of cross border emergency telecommunications to verify each Area can communicate with each other.



- Provide support and technical input for Task Force related Bulk Electric System risks as identified by the NERC Reliability Issues Steering Committee. The Task Force will conduct a thorough review, provide comments as necessary and act on posted materials as directed.
- Support the NERC CIPC Grid Exercise Working Group in GridEx V planning and simulation. Participate in the development of lessons learned from GridEx IV.
- Review infrastructure security & technologies and provide recommendations to enhance physical and cyber security in compliance with NERC guidelines/standards.
- Provide recommendations to enhance physical and cyber security, in compliance with NERC standards, based on assessments of available and emerging infrastructure security technologies, methodologies, and best practices.
- Sponsor periodic workshop presentations to address timely issues and update NPCC Members associated with infrastructure security and technology.
- Provide education, awareness, and support for Cross Sector coordination in Entity agreements and response plans with focus upon Telecommunications, Water and Natural Gas, including monitoring and sharing with the E-ISAC.

### **Related System Operations Security 2019 Goals and Deliverables**

NPCC's system operations security objectives are defined within the scope of the NPCC Task Force on Coordination of Operation and include, but are not limited to:

- Coordinating inter-Regional pre-emergency actions in the event of a threat to the security of the Northeastern North American bulk power supply system; and,
- Assisting in the development of real time operating tools ensuring cyber security concerns are addressed.

Based on the portion of professional/technical staff time and other resources devoted to situation awareness and infrastructure security, NPCC estimates that it will expend 16% of its resources on this activity.

### **Resource Requirements**

#### **Personnel**

- NPCC anticipates no need to hire additional personnel in the Situation Awareness and Infrastructure Security program area in 2019.

## Situation Awareness and Infrastructure Security Program

Funding sources and related expenses for the situation awareness and infrastructure security section of the 2019 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures						
2018 Budget & Projection, and 2019 Budget						
Situation Awareness and Infrastructure Security						
	2018	2018	Variance	2019	Variance	
	Budget	Projection	2018 Projection	Budget	2019 Budget	
			v 2018 Budget		v 2018 Budget	
			Over(Under)		Over(Under)	
<b>Funding</b>						
<b>ERO Funding</b>						
ERO Assessments	\$ 2,300,208	\$ 2,300,208	\$ -	\$ 2,366,685	\$ 66,477	
Penalty Sanctions	12,994	12,994	-	-	(12,994)	
<b>Total ERO Funding</b>	<b>\$ 2,313,202</b>	<b>\$ 2,313,202</b>	<b>\$ -</b>	<b>\$ 2,366,685</b>	<b>\$ 53,483</b>	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
<b>Total Funding (A)</b>	<b>\$ 2,313,202</b>	<b>\$ 2,313,202</b>	<b>\$ -</b>	<b>\$ 2,366,685</b>	<b>\$ 53,483</b>	
<b>Expenses</b>						
<b>Personnel Expenses</b>						
Salaries	\$ 825,560	\$ 825,560	\$ -	\$ 832,408	\$ 6,848	
Payroll Taxes	53,677	53,677	-	57,432	3,755	
Benefits	189,417	189,417	-	201,196	11,780	
Retirement Costs	87,637	87,637	-	89,043	1,406	
<b>Total Personnel Expenses</b>	<b>\$ 1,156,291</b>	<b>\$ 1,156,291</b>	<b>\$ -</b>	<b>\$ 1,180,079</b>	<b>\$ 23,789</b>	
<b>Meeting Expenses</b>						
Meetings	\$ 10,000	\$ 10,000	\$ -	\$ 10,000	\$ -	
Travel	87,500	87,500	-	89,300	1,800	
Conference Calls	-	-	-	-	-	
<b>Total Meeting Expenses</b>	<b>\$ 97,500</b>	<b>\$ 97,500</b>	<b>\$ -</b>	<b>\$ 99,300</b>	<b>\$ 1,800</b>	
<b>Operating Expenses</b>						
Consultants & Contracts	\$ 120,000	\$ 120,000	\$ -	\$ 130,000	\$ 10,000	
Office Rent	-	-	-	-	-	
Office Costs	-	-	-	-	-	
Professional Services	-	-	-	-	-	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
Depreciation	-	-	-	-	-	
<b>Total Operating Expenses</b>	<b>\$ 120,000</b>	<b>\$ 120,000</b>	<b>\$ -</b>	<b>\$ 130,000</b>	<b>\$ 10,000</b>	
<b>Total Direct Expenses</b>	<b>\$ 1,373,791</b>	<b>\$ 1,373,791</b>	<b>\$ -</b>	<b>\$ 1,409,379</b>	<b>\$ 35,589</b>	
<b>Indirect Expenses</b>	<b>\$ 973,021</b>	<b>\$ 973,021</b>	<b>\$ -</b>	<b>\$ 971,538</b>	<b>\$ (1,483)</b>	
<b>Other Non-Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Total Expenses (B)</b>	<b>\$ 2,346,812</b>	<b>\$ 2,346,812</b>	<b>\$ -</b>	<b>\$ 2,380,918</b>	<b>\$ 34,106</b>	
<b>Change in Assets</b>	<b>\$ (33,611)</b>	<b>\$ (33,611)</b>	<b>\$ -</b>	<b>\$ (14,233)</b>	<b>\$ 19,377</b>	
<b>Fixed Assets</b>						
Depreciation	\$ -	-	\$ -	\$ -	\$ -	
Computer & Software CapEx	-	-	-	-	-	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	(33,611)	(33,611)	-	(14,233)	19,377	
<b>Inc(Dec) in Fixed Assets (C)</b>	<b>(33,611)</b>	<b>(33,611)</b>	<b>-</b>	<b>(14,233)</b>	<b>19,377</b>	
<b>TOTAL BUDGET (=B+C)</b>	<b>2,313,202</b>	<b>2,313,202</b>	<b>-</b>	<b>2,366,685</b>	<b>53,483</b>	
<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ -</b>	<b>\$ (0)</b>	<b>\$ (0)</b>	

## Administrative Services

Administrative Services Program Resources						
(in whole dollars)						
	Direct Expenses			FTEs		
	2018 Budget	2019 Budget	Increase (Decrease)	2018 Budget	2019 Budget	Increase (Decrease)
Technical Committees and Members Forum	\$70,680	\$74,483	\$3,803	0.50	0.50	0.00
General and Administrative	\$3,607,132	\$3,646,903	\$39,771	2.50	2.50	0.00
Legal and Regulatory	\$592,049	\$612,934	\$20,886	1.00	1.00	0.00
Information Technology	\$1,044,490	\$1,083,781	\$39,291	2.00	2.00	0.00
Human Resources	\$181,145	\$156,946	(\$24,199)	1.00	1.00	0.00
Finance and Accounting	\$537,236	\$642,798	\$105,562	1.00	2.00	1.00
<b>Total Administrative Services<sup>1</sup></b>	<b>\$6,032,732</b>	<b>\$6,217,845</b>	<b>\$185,113</b>	<b>8.00</b>	<b>9.00</b>	<b>1.00</b>

<sup>1</sup> NPCC's 2019 Administrative Services Direct Expenses total \$6,217,845, of which \$415,818 is allocated to NPCC's Criteria Services division, which is a non-statutory function. As a result of the allocation to the Criteria Services division, the Administrative Expenditures included in the 2019 statutory budget are \$5,802,027 which is an increase of \$185,748 from the 2018 budget of \$5,616,279.

### Program Scope and Functional Description

Administrative services support the previously identified five program areas of: reliability standards; compliance monitoring and enforcement and organization registration and certification; training, education, and operator certification; reliability assessment and performance analysis; and situation awareness and infrastructure security. Administrative services consist of: technical committees and members' forums; general and administrative; legal and regulatory; information technology; human resources; and finance and accounting.

### Methodology for Allocation of Administrative Services Expenses to Programs

NPCC total overhead expenses, such as office rent and office costs, will be charged to the Administrative Services Programs and then reallocated proportionately based on FTE to the programs through Indirect Expenses.

## Administrative Services

Funding sources and related expenses for the Administrative Services section of the 2019 business plan are shown in the table below. Explanations of variances by expense category are included with the Supplemental Tables found in Section B.

Statement of Activities and Capital Expenditures 2018 Budget & Projection, and 2019 Budget						
ADMINISTRATIVE SERVICES						
	2018 Budget	2018 Projection	Variance 2018 Projection v 2018 Budget Over(Under)	2019 Budget	Variance 2019 Budget v 2018 Budget Over(Under)	
<b>Funding</b>						
<b>ERO Funding</b>						
ERO Assessments	\$ (66,581)	\$ (66,581)	\$ -	\$ (100,108)	\$ (33,527)	
Penalty Sanctions	-	-	-	-	-	
<b>Total ERO Funding</b>	<b>\$ (66,581)</b>	<b>\$ (66,581)</b>	<b>\$ -</b>	<b>\$ (100,108)</b>	<b>\$ (33,527)</b>	
Membership Dues	-	-	-	-	-	
Testing Fees	-	-	-	-	-	
Services & Software	-	-	-	-	-	
Workshops	-	-	-	-	-	
Interest	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	
<b>Total Funding (A)</b>	<b>\$ (66,581)</b>	<b>\$ (66,581)</b>	<b>\$ -</b>	<b>\$ (100,108)</b>	<b>\$ (33,527)</b>	
<b>Expenses</b>						
<b>Personnel Expenses</b>						
Salaries	\$ 2,063,139	\$ 2,043,839	\$ (19,300)	\$ 2,147,254	\$ 84,115	
Payroll Taxes	97,378	95,378	(2,000)	107,437	10,059	
Benefits	438,408	437,408	(1,000)	493,115	54,707	
Retirement Costs	295,596	288,996	(6,600)	296,142	546	
<b>Total Personnel Expenses</b>	<b>\$ 2,894,522</b>	<b>\$ 2,865,622</b>	<b>\$ (28,900)</b>	<b>\$ 3,043,948</b>	<b>\$ 149,426</b>	
<b>Meeting Expenses</b>						
Meetings	\$ 116,750	\$ 116,750	\$ -	\$ 126,750	\$ 10,000	
Travel	138,000	138,000	-	135,100	(2,900)	
Conference Calls	37,000	37,000	-	36,000	(1,000)	
<b>Total Meeting Expenses</b>	<b>\$ 291,750</b>	<b>\$ 291,750</b>	<b>\$ -</b>	<b>\$ 297,850</b>	<b>\$ 6,100</b>	
<b>Operating Expenses</b>						
Consultants & Contracts	\$ 92,000	\$ 92,000	\$ -	\$ 95,000	\$ 3,000	
Office Rent	810,700	810,700	-	820,700	10,000	
Office Costs	664,760	664,760	-	676,347	11,587	
Professional Services	960,000	960,000	-	978,000	18,000	
Computer & Equipment Leases	-	-	-	-	-	
Miscellaneous	50,000	50,000	-	51,000	1,000	
Depreciation	269,000	269,000	-	255,000	(14,000)	
<b>Total Operating Expenses</b>	<b>\$ 2,846,460</b>	<b>\$ 2,846,460</b>	<b>\$ -</b>	<b>\$ 2,876,047</b>	<b>\$ 29,587</b>	
<b>Total Direct Expenses</b>	<b>\$ 6,032,732</b>	<b>\$ 6,003,832</b>	<b>\$ (28,900)</b>	<b>\$ 6,217,845</b>	<b>\$ 185,113</b>	
<b>Indirect Expenses</b>	<b>\$ (6,032,732)</b>	<b>\$ (6,032,732)</b>	<b>\$ -</b>	<b>\$ (6,217,845)</b>	<b>\$ (185,113)</b>	
<b>Other Non-Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Total Expenses (B)</b>	<b>\$ 0</b>	<b>\$ (28,900)</b>	<b>\$ (28,900)</b>	<b>\$ -</b>	<b>\$ (0)</b>	
<b>Change in Assets</b>	<b>\$ (66,581)</b>	<b>\$ (37,681)</b>	<b>\$ 28,900</b>	<b>\$ (100,108)</b>	<b>\$ (33,527)</b>	
<b>Fixed Assets</b>						
Depreciation	(269,000)	(269,000)	\$ -	(255,000)	\$ 14,000	
Computer & Software CapEx	75,000	75,000	-	170,000	95,000	
Furniture & Fixtures CapEx	-	-	-	-	-	
Equipment CapEx	-	-	-	-	-	
Leasehold Improvements	-	-	-	-	-	
Allocation of Fixed Assets	194,000	194,000	-	85,000	(109,000)	
<b>Inc(Dec) in Fixed Assets (C)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	
<b>TOTAL BUDGET (=B+C)</b>	<b>0</b>	<b>(28,900)</b>	<b>(28,900)</b>	<b>-</b>	<b>(0)</b>	
<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>\$ (66,581)</b>	<b>\$ (37,681)</b>	<b>\$ 28,900</b>	<b>\$ (100,108)</b>	<b>\$ (33,527)</b>	

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## Technical Committees and Member Forums

### Program Scope and Functional Description

The success of the NPCC programs depends on the active and direct volunteerism and participation of its members. The stakeholders are the source of subject matter expertise in the industry. To promote the reliable and efficient operation of the interconnected bulk power systems in Northeastern North America, NPCC invites high level policy makers from Federal, Provincial and State regulatory and/or governmental authorities and senior executives within NPCC and NERC to identify and discuss emerging issues related to the reliability of the NPCC Region.

### 2019 Key Assumptions

- NPCC’s standing committee and subgroup structure for effective stakeholder involvement will continue in 2019.
- NPCC will continue to utilize methods to encourage active involvement in its Regional programs that require less stakeholder travel and face-to-face meetings, as the economy improves in 2019.
- NPCC will continue to invest in technology and innovation to allow efficient collaboration on technical issues related to reliability.

The Technical Committees and Member Forums activities indicated below are done in support of ERO Goal No. 4 “*Identification and Assessment of Emerging Risks to Reliability.*” A related contributing activity to this Goal is to “Educate policy makers, regulators, and the industry of reliability effects and interconnection requirements for the changing resource mix.”

### Technical Committees and Member Forums 2019 Goals and Deliverables

- The 2019 NPCC General Meeting provides an opportunity for NPCC Members to meet high level policy makers from Federal, Provincial and State regulatory and/or governmental authorities and senior NERC and NPCC executives to discuss topics related to the reliable planning and operation of the power system, including consideration of emerging reliability, critical infrastructure and environmental issues; and,
- The objective of the NPCC Public Information Committee is to highlight and summarize NPCC activities and accomplishments in the past year, disseminate and coordinate the appropriate release of information to the media, respond to related requests for information, and coordinate with related NPCC Area, NERC media and public information activities. Activities anticipated include, but are not limited to:
  - Conducting the Media Event – release of the Summer 2019 NPCC Reliability Assessment; and,
  - Participation in NERC Regional communication initiatives:
    - Regional communications teleconferences as required
    - Coordination of Emergency or Blackout communications plans
    - Coordination with other NERC activities as required (i.e., situation awareness, event analysis, reliability assessments, etc.)

### Resource Requirements

#### Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2019.

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## General and Administrative

### Program Scope and Functional Description

The NPCC general and administrative function provides executive management of the corporation, management of NPCC office, and other administrative support programs.

NPCC total overhead expenses, such as office rent and office costs, will be charged to the Administrative Services Programs and then reallocated proportionately based on FTE to the programs through Indirect Expenses.

### Resource Requirements

#### Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2019.

#### Office Rent

- Projected increase in real estate taxes.

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## Legal and Regulatory

### Program Scope and Functional Description

NPCC's professional legal services provide counsel to the President and CEO, Board of Directors, Senior Vice President and COO, Treasurer, General Counsel and staff on a wide range of legal and regulatory matters including legislation, corporate law, code of conduct, confidentiality, governance, employment law, tax matters, contract law and other areas affecting NPCC, consistent with ERO Goal 6. In support of ERO Goal 4., NPCC's in-house counsel evaluates internal controls and corporate, operational, strategic and reputational risk, and participates in risk identification, evaluation and mitigation activities. In-house counsel provides legal advice to advance significant corporate policy and strategic planning initiatives and also provide legal support to other program areas on matters arising in connection with the performance of NPCC's delegated functions. In-house counsel draft agreements and pleadings and provide interpretations of relevant statutes, regulations, court opinions, and regulatory decisions of FERC, state agencies and provincial authorities. Outside counsel, as necessary, reviews items filed with the governmental agencies for legal sufficiency, maintains relationships with U.S. and Canadian jurisdictions and provides contract review.

### Resource Requirements

#### Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2019.

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## Information Technology

### Program Scope and Functional Description

NPCC's Information Technology services ensure information assets and the environment in which they operate are secure and in conformance to NPCC IT Policies and Procedures and all applicable Critical Electric Infrastructure Information protection and Confidentiality requirements. NPCC maintains an offsite backup server for continuity of essential operations in the event that its primary location is unavailable.

NPCC supports the ERO efforts to implement, operate and maintain software tools supporting common enterprise wide operations and leveraging ERO solutions which have been approved by the ERO Executive Management Group (ERO EMG), which is comprised of the senior leadership of NERC and each of the Regional Entities. NPCC's budget assumes the availability of enterprise software tools as described in NERC's business plan and budget. If implementation of these software applications is delayed or otherwise not available as planned, NPCC could incur additional costs to implement ERO Enterprise-wide programs pending the availability of these applications.

NERC and the Regional Entities are committed to working collaboratively to minimize duplication of effort and investments, and improve operational efficiency. This collaboration continues to refine existing strategies, governance and procurement practices applicable to the development, operation and maintenance of enterprise architecture, software and data systems supporting complementary and combined NERC and Regional Entity operations.

The NERC information technology budget does not supplant NPCC's need for IT expenditures for specific regional projects and internal region specific IT support needs. NPCC's 2019 Business Plan and Budget assumes agreed-upon ERO Enterprise applications will be available and includes only NPCC costs for Region specific support needs.

### 2019 Key Assumptions

- Continue to maintain the compliance portal through collaboration with other Regional Entities and NERC (CUG).
- Support the Event Analysis program through continued participation in the tools used for the tracking and analysis of system events and identification of better practice elements.
- Support the Bulk Electric System Exception Process (BEP) to enable and facilitate tracking and processing of exceptions submitted. Maintenance of the BESNET support services such as updates, patching, coordinating issues with NERC.
- Support Cyber Security Reviews done by Compliance to provide advisory role during those reviews.

### 2019 Goals and Key Deliverables

Responsibilities encompass a variety of complex technical, administrative, and supervisory work in the development, installation, and maintenance of information technology systems. IT goals include, but are not limited to:

- Expand the utilization of the document management system throughout the company.
- Create an information security program and environment aimed at reducing breach of security risks.
- Determine longer-term software and systems needs and hardware acquisitions.
- Develop and implement information security standards and procedures.



- Ensure all information systems are functional and secure, and that all applications running on those systems meet business requirements for performance, availability, and security.
- Plan and implement organization-wide information systems, services, and network facilities, including local area networks, wide-area networks, and peripheral systems.
- Provide outreach and education to NPCC members in IT best practices.
- Continually improve Disaster Recovery and Business Continuity policies and practices to ensure continuity and reliability of IT and business related services.

## **Resource Requirements**

### **Personnel**

- NPCC anticipates no need to hire additional personnel in this program area in 2019.

### **Fixed Assets**

- Capital expenditures planned for 2019 include the continuing implementation and enhancement of the document management system.

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## Human Resources

### Program Scope and Functional Description

NPCC has assembled an exceptional team of highly qualified employees to carry out its activities. The human resources function, in adherence with applicable federal and state laws, designs, plans, and implements human resources policies and procedures, including: staffing; compensation; benefits; employee relations; training and development; and employee time tracking.

### Resource Requirements

#### Personnel

- NPCC anticipates no need to hire additional personnel in this program area in 2019.

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## Accounting and Finance

### Program Scope and Functional Description

The accounting and finance function directs the overall financial plans and accounting practices of the organization; oversees treasury, accounting, budget, tax, and audit activities; and oversees financial and accounting system controls and standards. NPCC uses a CPA firm to prepare its unaudited statements of activities and financial statements for quarterly reviews. Independent audits have identified this system as a best practice.

### 2019 Goals and Key Deliverables

The objectives are to provide or obtain the financial and accounting services for NPCC and coordinate with NERC requirements:

- Utilize the NERC System of Accounts for consistency
- Utilize an accrual method of accounting for consistency with NERC in methodology
- Alignment of changes in budget and changes in aggregate assessment
- Cash Management
- Budget Development using the NERC budget template formats
- Forecasts and Projections
- Alignment of NPCC Committees, Task Forces and Working Groups with the programs
- Payroll and expense administration
- Preparation of unaudited Quarterly Financial Variance Reports
- IRS Reporting
- Annual Independent Audit initiated by the Regional Entity

### Resource Requirements

#### Personnel

- One additional FTE will replace a continuous series of interns retained over several years in order to meet the ongoing resource needs in this program area and enable long-term sustained knowledge transfer.

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## Regional Entity Assessment Analysis

In the area of assessments there are distinct funding mechanisms as outlined in the following table. For the Regional Entity division, the North American Electric Reliability Corporation (NERC) will assess load serving entities (LSEs) or their designees (within NPCC the designees are the Balancing Authority Areas (BAAs) for New York, New England, New Brunswick, Nova Scotia, Ontario and Québec) based upon 2017 proportional Net Energy for Load (NEL) and other specific program area funding arrangements and make quarterly remittances to the Regional Entity on or about the 15th day of January, April, July and October. For funding associated with the Criteria Services division, the Independent System Operators/Balancing Authority Areas (ISO/BAAs) will be assessed by NPCC for their proportional share of the divisional budget based upon 2017 NEL within the Region. Non ISO/BAA Full Members will be assessed no membership fee.

### NPCC Cost Allocation Methodology

The accompanying table provides information regarding cost allocation for both the Regional Entity division and the Criteria Services division of NPCC, including the details associated with the funding of the Compliance Program within the RE division. For purposes of determining assessments to support NPCC's resource requirements, costs are allocated among the BAAs within NPCC as the designees for the load-serving-entities in New York, New England, Ontario, Québec, New Brunswick and Nova Scotia.

In order to reflect and respect the international membership and nature of NPCC, any sub-regional reliability assessment costs in response to U.S. only regulatory initiatives will be considered for allocation to U.S. only BAAs consistent with NERC Rules of Procedure section 1102. Additionally, the compliance responsibilities and authorities within the U.S., and the specific compliance responsibilities within each of the Canadian provinces within NPCC, and the attendant costs of portions of the compliance program differ among the areas within the Regional Entity. Within the U.S. portion of NPCC all costs attributable to delegated (statutory) functions performed by NPCC, including all compliance functions, are assessed based on a NEL allocation. Within the Canadian portion of NPCC those costs attributable to compliance functions performed by NPCC on behalf of provincial governmental and/or regulatory authorities are allocated consistent with the unique Memoranda of Understanding or Agreements that have been entered into for those provinces. To address these different compliance regimes, NPCC developed a composite cost allocation methodology that allocates U.S. only reliability assessment and compliance costs on a fair and equitable basis within the Regional Entity.

As an initial step of that methodology, the NEL for each of the BAAs and their relative percentage to the NPCC total NEL is calculated for the most recent year for which data is available, the second previous year. In order to establish the RE division funding requirements for each Balancing Authority Area on a NEL basis for all programs except for Compliance, the proposed expenses and fixed assets of all other programs are calculated and the adjustment for the RE division cash reserve requirement is identified. Any penalty monies received from NPCC registered entities within the U.S. prior to June 30<sup>th</sup> of the year preceding the business plan and budget year are then allocated among the NPCC program areas based on their FTE ratio and between the U.S. BAAs based on their relative NELs. Consistent with each of the Canadian provincial MOUs and agreements, all penalty monies resulting from compliance actions within Canada, if any, would remain within the applicable province. The total budgeted fees for NPCC workshop participation are indicated as a credit, with the resultant addition being the RE division assessment, without the compliance program costs, calculated on a NEL basis.

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In accordance with the *NPCC Amended and Restated Bylaws* the CS division proposed expenses and fixed assets of all programs are calculated and the adjustment for the CS division cash reserve requirement is identified, with the resultant addition being the CS division funding requirement and assessment, calculated on a NEL basis.

For costs associated with the RE division compliance program, NPCC's allocation methodology apportions 21.31% of the costs for the program, attributed to CORC Fundamentals (CF), between the BAAs in the United States and Canada on a NEL basis.

Audits and Investigations (AI) related costs, representing 59.85% of the costs of the compliance program, are allocated between U.S. and Canadian BAAs in NPCC, and among the Canadian provinces, using an audit-based methodology. The audit-based methodology incorporates relative costs based on categories of compliance audits which are reflective of their size and complexity, as well as the differing compliance program implementation models that are utilized in NPCC due to the international nature of the Regional Entity. The portion allocated to the U.S. BAAs in NPCC is calculated using the audit-based methodology, and this amount is then re-allocated between the New York and New England BAAs based on their relative NEL.

The remaining 18.84% of the costs of the compliance program represent Mitigation and Enforcement (ME) related costs and are allocated between U.S. and Canadian BAAs in NPCC, and among the Canadian provinces, using an enforcement activity based methodology. Based on historical data, NPCC reviewed each BAA's percentage of violations, mitigation plans and settlement agreements to determine each BAA's total average percentage of enforcement activities. The portion allocated to the U.S. BAA's in NPCC is calculated using the enforcement activity based methodology, and this amount is then re-allocated between the New York and New England BAAs based on their relative NEL.

Any penalty monies received from NPCC registered entities within the U.S. by June 30th of the year preceding the business plan and budget year are then allocated among the NPCC program areas based on their FTE ratio and between the U.S. BAAs based on their relative NELs, and then added to the total compliance program expenses and fixed assets to yield a total compliance program assessment.

The CORC actual vs budget variance from the most recent year for which audited financials are available is broken out from the rest of the Adjustment to Cash Reserve and assigned to the CORC program allocation of costs. Within Québec these costs are funded directly by the regulator, therefore, the assignment of program area variances needs to respect those specific circumstances.

Finally, the total RE division funding requirements and assessments by BAA are tabulated and the total funding requirements and assessments for NPCC, both the RE and CS divisions, are combined.

NPCC 2019 Regional Entity (RE) and Criteria Services (C-S) Divisional Funding Information

A-1	B-1	B-1a.	C-1	C-1a.	D-1	E-1	F-1	G-1	H-1	I-1	J-1	K-1	L-1	M-1
NPCC Balancing Authorities (LSE Designees)	2017 Net Energy for Load (MWh)	2017 NPCC US NEL (MWh)	2017 NEL % of NPCC	2017 U.S. NEL % of NPCC	Costs Associated with U.S. Only Reliability	2019 NPCC RE Division Expenses & Fixed Assets Minus CORC and U.S. Only	Adjustment to RE Division Cash Reserve Requirement Less CORC	2019 NPCC RE Division Funding Requirement Minus	2019 NPCC RE Division Penalty Monies Applied to RE Division Minus	Budgeted Workshop Fees	2019 NPCC RE Division Assessment Minus CORC (G-1 plus H-1)	2019 NPCC CS Division Expenses & Fixed Assets	2019 CS Division Adjustment to Cash Reserve Requirement	2019 NPCC CS Division Funding Requirement & Member Fees (K-1 plus L-1)
New England	121,220,000	121,220,000	20.03%	43.66%	TBD	1,399,757	-20,055	1,379,702	0	-13,522	1,366,180	222,082	-9,958	212,124
New York	156,370,000	156,370,000	25.84%	56.31%	TBD	1,805,643	-25,870	1,779,773	0	-17,443	1,762,329	286,479	-12,845	273,634
Ontario	132,091,000	132,091,000	21.83%			1,525,287	-21,853	1,503,434	0	-14,735	1,488,699	241,999	-10,851	231,148
Quebec	170,705,000	170,705,000	28.21%			1,971,150	-28,241	1,942,908	0	-19,042	1,923,866	312,738	-14,023	298,715
New Brunswick	13,796,000	13,796,000	2.28%			159,306	-2,282	157,023	0	-1,539	155,484	25,275	-1,133	24,142
Nova Scotia	10,917,000	10,917,000	1.80%			126,061	-1,806	124,255	0	-1,218	123,037	20,001	-897	19,104
<b>Total</b>	<b>605,097,000</b>	<b>277,590,000</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$0</b>	<b>\$6,987,204</b>	<b>-\$100,108</b>	<b>\$6,887,096</b>	<b>\$0</b>	<b>-\$67,500</b>	<b>\$6,819,596</b>	<b>\$1,108,574</b>	<b>-\$49,707</b>	<b>\$1,058,866</b>

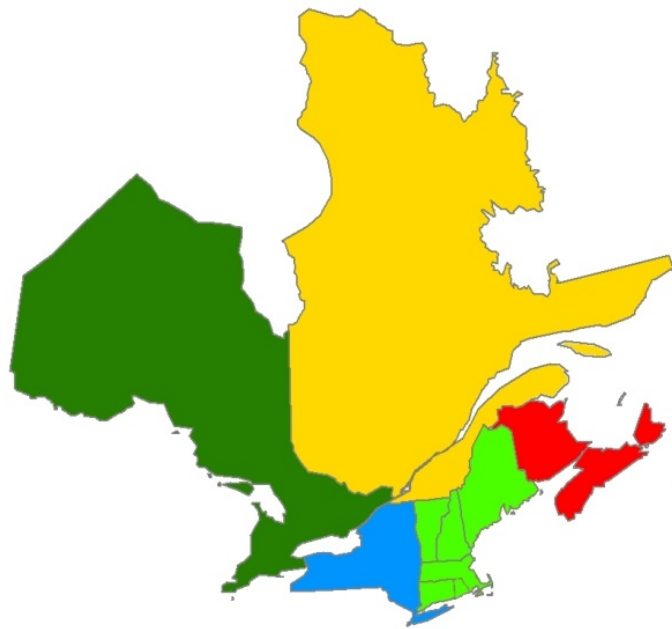
A-2	B-2	C-2	D-2	E-2	F-2	G-2	H-2	I-2	J-2	K-2	L-2	M-2	N
NPCC Balancing Authorities (LSE Designees)	2017 NEL Based Allocation of CORC Program Fundamentals <sup>3</sup>	2019 Audit and Investigation Allocation Methodology	2019 59.85% of CORC Allocation Methodology	2019 Mitigation and Enforcement Allocation Methodology	2019 18.84% of CORC Allocation Methodology	2019 Total CORC Program Expenses & Fixed Assets	2019 CORC Program Penalty Monies Applied to CORC Program	Assigned CORC Program 2017 Actual vs Budget Variance	2019 Total CORC Program Assessment (G-2 plus H-2 plus I-2)	2019 RE Division Total Funding Requirement (G-1 plus G-2 plus I-2)	2019 RE Division Total Assessment Requirement (J-1 plus J-2)	2019 NPCC Total Funding Requirement (M-1 plus K-2)	2019 NPCC Total Assessment & Member Fees (M-1 plus L-2)
New England	376,351	44,497%	1,908,051	41.856%	559,686	2,844,087	0	-210,278	2,633,809	4,013,512	3,999,989	4,225,636	4,212,114
New York	485,481	38.395%	2,466,027	35.303%	721,977	3,673,485	0	-266,547	3,406,938	5,186,710	5,169,267	5,460,344	5,442,901
Ontario	410,102	4.231%	223,291	5.753%	95,270	728,962	0	-53,312	675,651	2,179,085	2,164,350	2,410,232	2,395,497
Quebec	529,980	8.921%	470,751	12.888%	214,086	1,214,817	0	-80,406	1,134,411	3,077,319	3,058,277	3,376,034	3,356,992
New Brunswick	42,832	2.045%	107,910	3.625%	60,206	210,949	0	-12,041	198,908	355,931	354,392	380,073	378,534
Nova Scotia	33,894	1.913%	100,941	0.575%	9,552	144,387	0	-10,289	134,098	258,353	257,136	277,457	276,239
<b>Total</b>	<b>\$1,878,640</b>	<b>100.00%</b>	<b>\$4,374,078</b>	<b>100.00%</b>	<b>\$1,281,662</b>	<b>\$8,816,687</b>	<b>\$0</b>	<b>-\$632,872</b>	<b>\$8,183,815</b>	<b>\$15,070,911</b>	<b>\$15,003,411</b>	<b>\$16,129,777</b>	<b>\$16,062,277</b>

1 Any sub-regional reliability assessment costs in response to U.S. only regulatory initiatives will be considered for allocation to U.S. only BAs consistent with NERC Rules of Procedure section 1102.  
 2 Consistent with NERC's Policy on Allocation of Certain Compliance and Enforcement Costs, the NPCC Board approved Allocation Methodologies for Certain NPCC Compliance Program Area Costs Assessed to Non-U.S. Entities.  
 3 CORC Program Fundamentals expenses of \$1,878,640 represent 21.31% of the Total CORC Program Costs and are allocated using the Regional NEL based methodology.  
 4 Audit and Investigation expenses of \$5,276,971 represent 59.85% of the Total CORC Program Costs. The Canadian costs are allocated utilizing an audit based methodology. The portion of \$2,89% attributable to U.S. NPCC is allocated between the New York and New England balancing authority areas based on their respective net energy for load (NEL) as shown in Columns B-1a. and C-1a. The ratios in C-1a. are applied to the 82.89% of U.S. audit costs to obtain the percentages (Column C-2 b) which are then applied to the 59.85% of CORC costs. Audit based allocation uses Compliance Registry Data registrants as of May 1, 2017.  
 5 Mitigation and Enforcement expenses of \$1,661,076 represent 18.84% of the Total CORC Program Costs. The Canadian costs are allocated utilizing an enforcement activity based methodology. The portion of 77.15% attributable to U.S. NPCC is allocated between the New York and New England balancing authority areas based on their respective net energy for load (NEL) as shown in Columns B-1a. and C-1a. The ratios in C-1a. are applied to the 82.89% of U.S. enforcement costs to obtain the percentages (Column C-2 b) which are then applied to the 18.84% of CORC costs.

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## Section B — Supplemental Financial Information 2019 Business Plan and Budget

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## Section B – Supplemental Financial Information

## Reserve Balance

Table B-1 Reserve Balance

Working Capital and Operating Reserve Analysis 2018-2019				
REGIONAL ENTITY DIVISION				
	Total Reserve	Operating Reserve	Working Capital	Business Continuity
<b>Beginning Total Reserve, December 31, 2017</b>	5,017,751	2,818,887	1,258,864	940,000
Plus: 2018 ERO Funding (from LSEs or designees)	14,341,787	14,341,787		
Plus: 2018 Other funding sources	139,000	139,000		
Less: 2018 Projected expenses & capital expenditures	(15,044,967)	(15,044,967)		
<b>Projected Total Reserve, December 31, 2018</b>	<b>4,453,571</b>	<b>2,254,707</b>	<b>1,258,864</b>	<b>940,000</b>
<b>Desired Total Reserve, December 31, 2019</b>	<b>3,720,590</b>	<b>1,463,652</b> <sup>1</sup>	<b>1,316,938</b> <sup>2</sup>	<b>940,000</b> <sup>3</sup>
Less: Projected Total Reserve, December 31, 2018	(4,453,571)	(2,254,707)	(1,258,864)	(940,000)
<b>Increase(decrease) in assessments to achieve desired Total Reserve</b>	<b>(732,980)</b>	<b>(791,055)</b>	<b>58,075</b>	<b>0</b>
2019 Expenses and Capital Expenditures	15,803,891			
Less: Penalty Sanctions <sup>4</sup>	0			
Less: Other Funding Sources	(67,500)			
Less: Release of Business Continuity Reserve Funds <sup>3</sup>	0			
Adjustment to Working Capital to achieve desired Total Reserve balance <sup>2</sup>	58,075			
Adjustment to Operating Reserve to achieve desired Total Reserve balance <sup>1</sup>	(791,055)			
<b>2019 Assessment</b>	<b>15,003,411</b>			

<sup>1</sup> Operating Reserve within a range from 8.33% to 25.00% of Budget. \$1,463,652 represents 9.26% of the 2019 budget of \$15,803,891

<sup>2</sup> Working Capital equal to 8.33% of Budget. \$1,316,938 represents 8.33% of the 2019 budget of \$15,803,891

<sup>3</sup> Business Continuity Reserve (BCR) established in 2017 as approved by the NPCC Board of Directors to fund Succession Planning related expenses.

<sup>4</sup> Represents collections July 1, 2017 to June 30, 2018.

## Explanation of Changes in Reserve Policy from Prior Year

There was no change to the existing Working Capital and Operating Reserve Policy. A separate Business Continuity Reserve (BCR) in the amount of \$1,000,000 (allocated between the Regional Entity and Criteria Services divisions) was established in 2017 as approved by the NPCC Board of Directors, upon recommendation by the Management Development and Compensation Committee and endorsement by the Finance and Audit Committee, to be identified as restricted cash and drawn upon as subsequently brought before the Board of Directors in association with President & CEO succession related activities associated with a planned or sudden retirement, as well as other sudden changing workforce staffing requirements which could be brought about by coincident multiple staff retirements.



## Breakdown by Statement of Activity Sections

The following detailed schedules are in support of the Regional Entity division Statement of Activities on page 13 of the 2019 Business Plan and Budget. All significant variances have been disclosed by program area in the preceding pages.

### Penalty Sanctions

U.S. penalty monies received prior to June 30, 2018 are to be used to offset assessments in the 2019 Budget, as documented in the NERC Policy – Accounting, Financial Statement, and Budgetary Treatment of Penalties Imposed and Received for Violations of Reliability Standard. No penalty monies were received from July 1, 2017 through June 30, 2018. Penalty monies received from July 1, 2018 through June 30, 2019 will be used to offset U.S. load serving entity designee assessments in the 2020 Budget.

Allocation Method: U.S. penalty sanctions received have been allocated to the following Regional Entity division programs to reduce assessments: Reliability Standards; Compliance Monitoring & Enforcement and Organization Registration & Certification; Reliability Assessments and Performance Analysis; Training, Education and Operator Certification; and Situation Awareness and Infrastructure Security. U.S. penalty sanctions are allocated based upon the number of FTEs in the Program divided by the aggregate total FTEs in the Programs receiving the allocation.

**Table B-2 Penalty Sanctions**

Penalty Sanctions Received Prior to June 30, 2018	Date Received	Amount Received
		\$ -
<b>Total Penalties Received</b>		<b>\$ -</b>

Table B-3 Supplemental Funding

Outside Funding Breakdown By Program (excluding ERO Assessments & Penalty Sanctions)	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget
<b>Reliability Standards</b>				
<b>Total</b>	\$ -	\$ -	\$ -	\$ -
<b>Compliance Monitoring, Enforcement &amp; Org. Registration</b>				
	\$ -	\$ -	\$ -	\$ -
	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -
<b>Reliability Assessment and Performance Analysis</b>				
	\$ -	\$ -	\$ -	\$ -
	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -
<b>Training and Education</b>				
Workshops	\$ 64,000	\$ 64,000	\$ 67,500	\$ 3,500
<b>Total</b>	\$ 64,000	\$ 64,000	\$ 67,500	\$ 3,500
<b>Situation Awareness and Infrastructure Security</b>				
	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ -	\$ -	\$ -
<b>Technical Committees and Member Forums</b>				
	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ -	\$ -	\$ -
<b>Administrative Services Programs</b>				
	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ -	\$ -	\$ -
<b>Total Outside Funding</b>	\$ 64,000	\$ 64,000	\$ 67,500	\$ 3,500

### Explanation of Significant Variances –2019 Budget versus 2018 Budget

- NPCC assumed no interest income because of continuing low market interest rates.

Table B-4 Personnel Expenses

Personnel Expenses	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget	Variance %
<b>Salaries</b>					
Salary	\$ 7,057,483	\$ 7,057,483	\$ 7,298,280	\$ 240,797	3.4%
Employment Agency Fees	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	0.0%
Temporary Office Services	\$ 40,116	\$ 40,116	\$ 24,000	\$ (16,116)	-40.2%
<b>Total Salaries</b>	<b>\$ 7,107,599</b>	<b>\$ 7,107,599</b>	<b>\$ 7,332,280</b>	<b>\$ 224,681</b>	<b>3.2%</b>
<b>Total Payroll Taxes</b>	<b>\$ 411,440</b>	<b>\$ 411,440</b>	<b>\$ 449,994</b>	<b>\$ 38,553</b>	<b>9.4%</b>
<b>Benefits</b>					
Education Reimbursement	\$ 30,000	\$ 30,000	\$ 32,000	\$ 2,000	6.7%
Training and Seminars	\$ 44,232	\$ 44,232	\$ 58,290	\$ 14,058	31.8%
Medical Insurance	\$ 811,369	\$ 811,369	\$ 901,783	\$ 90,414	11.1%
Life-LTD-STD Insurance	\$ 90,465	\$ 90,465	\$ 94,804	\$ 4,339	4.8%
Worker's Compensation	\$ 15,000	\$ 15,000	\$ 20,000	\$ 5,000	33.3%
Vacation	\$ 485,312	\$ 485,312	\$ 506,201	\$ 20,889	4.3%
Relocation	\$ -	\$ -	\$ -	\$ -	-
<b>Total Benefits</b>	<b>\$ 1,476,378</b>	<b>\$ 1,476,378</b>	<b>\$ 1,613,078</b>	<b>\$ 136,700</b>	<b>9.3%</b>
<b>Retirement</b>					
Pension Contribution	\$ 38,000	\$ 38,000	\$ -	\$ (38,000)	-100.0%
Employee Savings Plan	\$ 714,353	\$ 714,353	\$ 741,511	\$ 27,157	3.8%
Savings Admin	\$ 35,000	\$ 35,000	\$ 36,000	\$ 1,000	2.9%
Deferred Compensation	\$ 38,000	\$ 38,000	\$ 76,000	\$ 38,000	100.0%
<b>Total Retirement</b>	<b>\$ 825,353</b>	<b>\$ 825,353</b>	<b>\$ 853,511</b>	<b>\$ 28,157</b>	<b>3.4%</b>
<b>Total Personnel Costs</b>	<b>\$ 9,820,770</b>	<b>\$ 9,820,770</b>	<b>\$ 10,248,862</b>	<b>\$ 428,092</b>	<b>4.4%</b>
<b>FTEs</b>	<b>36.86</b>	<b>36.86</b>	<b>38.86</b>	<b>2.00</b>	<b>5.4%</b>
<b>Cost per FTE</b>					
Salaries	\$ 192,827	\$ 192,827	\$ 188,685	\$ (4,142)	-2.1%
Payroll Taxes	\$ 11,162	\$ 11,162	\$ 11,580	\$ 418	3.7%
Benefits	\$ 40,054	\$ 40,054	\$ 41,510	\$ 1,456	3.6%
Retirement	\$ 22,392	\$ 22,392	\$ 21,964	\$ (428)	-1.9%
<b>Total Cost per FTE</b>	<b>\$ 266,434</b>	<b>\$ 266,434</b>	<b>\$ 263,738</b>	<b>\$ (2,696)</b>	<b>-1.0%</b>

### Explanation of Significant Variances –2019 Budget versus 2018 Budget

- Pension Contribution decrease is offset by Deferred Compensation increase of the same amount due to the reclassification of 457(b) expenses.
- Decrease in cost per FTE is related to the retirement of a number of seasoned professionals resulting in vacancies which were filled through a combination of in-house promotions, resource re-allocations and the retention of less seasoned successors.
- Increase in Training and Seminars is due to increased per employee training budget.
- Medical Insurance increase reflects a premium increase of 10%.

Table B-5 Meeting Expense

Meeting Expenses	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget	Variance %
Meetings	\$ 353,050	\$ 353,050	\$ 370,750	\$ 17,700	5.0%
Travel	\$ 834,500	\$ 834,500	\$ 845,900	\$ 11,400	1.4%
Conference Calls	\$ 37,000	\$ 37,000	\$ 36,000	\$ (1,000)	-2.7%
<b>Total Meeting Expenses</b>	<b>\$ 1,224,550</b>	<b>\$ 1,224,550</b>	<b>\$ 1,252,650</b>	<b>\$ 28,100</b>	<b>2.3%</b>

## Explanation of Significant Variances –2019 Budget versus 2018 Budget

- Continued efforts to limit the number of attendees to offsite meetings and hold more meetings on-site and via webinar.
- Spring and Fall Standards and Compliance Workshops compressed from three days to two days.

Table B-6 Consultants and Contracts

Consultants	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget	Variance %
<b>Consultants</b>					
Reliability Standards	\$ -	\$ -	\$ -	\$ -	-
Compliance Enforcement and Organization Registration and Certification	\$ -	\$ -	\$ -	\$ -	-
Reliability Assessment and Performance Analysis	\$ -	\$ -	\$ -	\$ -	-
Training and Education	\$ -	\$ -	\$ -	\$ -	-
Situation Awareness and Infrastructure Security	\$ -	\$ -	\$ -	\$ -	-
Member Forums	\$ -	\$ -	\$ -	\$ -	-
General and Administrative	\$ -	\$ -	\$ -	\$ -	-
Legal and Regulatory	\$ -	\$ -	\$ -	\$ -	-
Information Technology	\$ -	\$ -	\$ -	\$ -	-
Human Resources	\$ -	\$ -	\$ -	\$ -	-
Accounting and Finance	\$ -	\$ -	\$ -	\$ -	-
<b>Consultants Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>-</b>
Contracts	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget	Variance %
Reliability Standards	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	0.0%
Compliance Enforcement and Organization Registration and Certification	\$ 1,254,000	\$ 1,254,000	\$ 1,357,150	\$ 103,150	8.2%
Reliability Assessment and Performance Analysis	\$ 401,640	\$ 401,640	\$ 430,000	\$ 28,360	7.1%
Training and Education	\$ -	\$ -	\$ -	\$ -	-
Situation Awareness and Infrastructure Security	\$ 120,000	\$ 120,000	\$ 130,000	\$ 10,000	8.3%
Member Forums	\$ -	\$ -	\$ -	\$ -	-
General and Administrative	\$ 85,000	\$ 85,000	\$ 88,000	\$ 3,000	3.5%
Legal and Regulatory	\$ -	\$ -	\$ -	\$ -	-
Information Technology	\$ -	\$ -	\$ -	\$ -	-
Human Resources	\$ -	\$ -	\$ -	\$ -	-
Accounting and Finance	\$ 7,000	\$ 7,000	\$ 7,000	\$ -	0.0%
<b>Contracts Total</b>	<b>\$ 1,877,640</b>	<b>\$ 1,877,640</b>	<b>\$ 2,022,150</b>	<b>\$ 144,510</b>	<b>7.7%</b>
<b>Total Consultants and Contracts</b>	<b>\$ 1,877,640</b>	<b>\$ 1,877,640</b>	<b>\$ 2,022,150</b>	<b>\$ 144,510</b>	<b>7.7%</b>

## Explanation of Significant Variances –2019 Budget versus 2018 Budget

- Ongoing effort to decrease the use of consultants and contractors when possible. (See program area sections for detail regarding a specific program area.)

Table B-7 Office Rent

Office Rent	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget	Variance %
Office Rent	\$ 650,000	\$ 650,000	\$ 650,000	\$ -	0.0%
Utilities	\$ 43,000	\$ 43,000	\$ 45,000	\$ 2,000	4.7%
Maintenance	\$ 35,000	\$ 35,000	\$ 37,000	\$ 2,000	5.7%
Security	\$ 2,700	\$ 2,700	\$ 2,700	\$ -	0.0%
Real Estate Taxes	\$ 80,000	\$ 80,000	\$ 86,000	\$ 6,000	7.5%
<b>Total Office Rent</b>	<b>\$ 810,700</b>	<b>\$ 810,700</b>	<b>\$ 820,700</b>	<b>\$ 10,000</b>	<b>1.2%</b>

## Explanation of Significant Variances –2019 Budget versus 2018 Budget

- Projected increase in real estate taxes.

Table B-8 Office Costs

Office Costs	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget	Variance %
Telephone	\$ 111,660	\$ 111,660	\$ 88,720	\$ (22,940)	-20.5%
Internet Expense	\$ 95,000	\$ 95,000	\$ 82,740	\$ (12,260)	-12.9%
Office Supplies	\$ 33,000	\$ 33,000	\$ 33,000	\$ -	0.0%
Computer Supplies and Maintenance	\$ 350,600	\$ 350,600	\$ 397,387	\$ 46,787	13.3%
Subscriptions & Publications	\$ 13,500	\$ 13,500	\$ 13,500	\$ -	0.0%
Dues	\$ 3,400	\$ 3,400	\$ 3,400	\$ -	0.0%
Postage	\$ 1,200	\$ 1,200	\$ 1,200	\$ -	0.0%
Express Shipping	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	0.0%
Copying	\$ 26,400	\$ 26,400	\$ 26,400	\$ -	0.0%
Reports	\$ 8,000	\$ 8,000	\$ 8,000	\$ -	0.0%
Stationary and Office Forms	\$ 2,000	\$ 2,000	\$ 2,000	\$ -	0.0%
Equipment Repair/Service Contracts	\$ -	\$ -	\$ -	\$ -	-
Bank Charges	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	0.0%
Sales and Use Tax	\$ -	\$ -	\$ -	\$ -	-
Merchant Credit Card Fees	\$ -	\$ -	\$ -	\$ -	-
Presentation and Publicity	\$ -	\$ -	\$ -	\$ -	-
<b>Total Office Costs</b>	<b>\$ 664,760</b>	<b>\$ 664,760</b>	<b>\$ 676,347</b>	<b>\$ 11,587</b>	<b>1.7%</b>

## Explanation of Significant Variances –2019 Budget versus 2018 Budget

- Total Office costs are expected to remain relatively flat.

Table B-9 Professional Services

Professional Services	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget	Variance %
BOT Fee	\$ 340,000	\$ 340,000	\$ 346,000	\$ 6,000	1.8%
BOT Search Fee	\$ -	\$ -	\$ -	\$ -	-
Legal - Reorganization	\$ -	\$ -	\$ -	\$ -	-
Accounting & Auditing Fees	\$ 300,000	\$ 300,000	\$ 300,000	\$ -	0.0%
Legal Fees - Other	\$ 250,000	\$ 250,000	\$ 262,000	\$ 12,000	4.8%
Insurance - Commercial	\$ 70,000	\$ 70,000	\$ 70,000	\$ -	0.0%
<b>Total Services</b>	<b>\$ 960,000</b>	<b>\$ 960,000</b>	<b>\$ 978,000</b>	<b>\$ 18,000</b>	<b>1.9%</b>

Table B-10 Miscellaneous

Miscellaneous Expense	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget	Variance %
Miscellaneous Expense	\$ 50,000	\$ 50,000	\$ 51,000	\$ 1,000	2.0%
<b>Total Miscellaneous Expense</b>	<b>\$ 50,000</b>	<b>\$ 50,000</b>	<b>\$ 51,000</b>	<b>\$ 1,000</b>	<b>2.0%</b>

Table B-11 Other Non-Operating Expenses

Other Non-Operating Expenses	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget	Variance %
Interest Expense	\$ -	\$ -	\$ -	\$ -	-
Office Relocation	\$ -	\$ -	\$ -	\$ -	-
<b>Total Non-Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>-</b>

Table B-12 Fixed Assets

Fixed Assets	Budget 2018	Projection 2018	Budget 2019	Variance 2019 Budget v 2018 Budget	Variance %
Depreciation	\$ (269,000)	\$ (269,000)	\$ (255,000)	\$ 14,000	-5.2%
Equipment CapEx	\$ -	\$ -	\$ -	\$ -	-
Computer & Software CapEx	\$ 115,000	\$ 115,000	\$ 170,000	\$ 55,000	47.8%
Furniture & Fixtures CapEx	\$ -	\$ -	\$ -	\$ -	-
Leasehold Improvements	\$ -	\$ -	\$ -	\$ -	-
Allocation of Fixed Assets	\$ -	\$ -	\$ -	\$ -	-
<b>Total Increase (Decrease) in Fixed Assets</b>	<b>\$ (154,000)</b>	<b>\$ (154,000)</b>	<b>\$ (85,000)</b>	<b>\$ 69,000</b>	<b>-44.8%</b>

### Explanation of Significant Variances –2019 Budget versus 2018 Budget

- Capital expenditures planned for 2019 include the continuing implementation of the document management system.

Table B-13 2020 and 2021 Projections

Statement of Activities and Capital Expenditures 2019 Budget & Projected 2020 and 2021 Budgets							
	2019 Budget	2020 Projection	\$ Change 19 v 20	% Change 19 v 20	2021 Projection	\$ Change 20 v 21	% Change 20 v 21
<b>Funding</b>							
<b>ERO Funding</b>							
ERO Assessments	\$ 15,003,411	\$ 15,299,904	\$ 296,493	2.0%	\$ 15,628,577	\$ 328,672	2.1%
Penalty Sanctions	-	-	-	-	-	-	-
<b>Total ERO Funding</b>	<b>\$ 15,003,411</b>	<b>\$ 15,299,904</b>	<b>\$ 296,493</b>	<b>2.0%</b>	<b>\$ 15,628,577</b>	<b>\$ 328,672</b>	<b>2.1%</b>
Membership Dues	-	-	-	-	-	-	-
Testing Fees	-	-	-	-	-	-	-
Services & Software	-	-	-	-	-	-	-
Workshops	67,500	64,000	(3,500)	-5.2%	64,000	-	0.0%
Interest	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-
<b>Total Funding (A)</b>	<b>\$ 15,070,911</b>	<b>\$ 15,363,904</b>	<b>\$ 292,993</b>	<b>1.9%</b>	<b>\$ 15,692,577</b>	<b>\$ 328,672</b>	<b>2.1%</b>
<b>Expenses</b>							
<b>Personnel Expenses</b>							
Salaries	\$ 7,332,280	\$ 7,552,249	\$ 219,968	3.0%	\$ 7,778,816	\$ 226,567	3.0%
Payroll Taxes	449,994	463,493	13,500	3.0%	477,398	13,905	3.0%
Benefits	1,613,078	1,709,863	96,785	6.0%	1,812,455	102,592	6.0%
Retirement Costs	853,511	879,116	25,605	3.0%	905,489	26,373	3.0%
<b>Total Personnel Expenses</b>	<b>\$ 10,248,862</b>	<b>\$ 10,604,721</b>	<b>\$ 355,858</b>	<b>3.5%</b>	<b>\$ 10,974,158</b>	<b>\$ 369,438</b>	<b>3.5%</b>
<b>Meeting Expenses</b>							
Meetings	\$ 370,750	\$ 374,458	\$ 3,708	1.0%	\$ 378,202	\$ 3,745	1.0%
Travel	845,900	854,359	8,459	1.0%	862,903	8,544	1.0%
Conference Calls	36,000	36,360	360	1.0%	36,724	364	1.0%
<b>Total Meeting Expenses</b>	<b>\$ 1,252,650</b>	<b>\$ 1,265,177</b>	<b>\$ 12,527</b>	<b>1.0%</b>	<b>\$ 1,277,828</b>	<b>\$ 12,652</b>	<b>1.0%</b>
<b>Operating Expenses</b>							
Consultants & Contracts	\$ 2,022,150	\$ 2,022,150	-	0.0%	\$ 2,022,150	\$ -	0.0%
Office Rent	820,700	828,907	8,207	1.0%	837,196	8,289	1.0%
Office Costs	676,347	689,874	13,527	2.0%	703,671	13,797	2.0%
Professional Services	978,000	978,000	-	0.0%	978,000	-	0.0%
Miscellaneous	51,000	51,510	510	1.0%	52,025	515	1.0%
Depreciation	255,000	257,550	2,550	1.0%	260,126	2,576	1.0%
<b>Total Operating Expenses</b>	<b>\$ 4,803,197</b>	<b>\$ 4,827,991</b>	<b>\$ 24,794</b>	<b>0.5%</b>	<b>\$ 4,853,168</b>	<b>\$ 25,177</b>	<b>0.5%</b>
<b>Total Direct Expenses</b>	<b>\$ 16,304,709</b>	<b>\$ 16,697,888</b>	<b>\$ 393,179</b>	<b>2.4%</b>	<b>\$ 17,105,154</b>	<b>\$ 407,266</b>	<b>2.4%</b>
<b>Indirect Expenses</b>	<b>\$ (415,818)</b>	<b>\$ (424,135)</b>	<b>\$ (8,316)</b>	<b>2.0%</b>	<b>\$ (432,617)</b>	<b>\$ (8,483)</b>	<b>2.0%</b>
<b>Other Non-Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ -</b>	<b>\$ -</b>	
<b>Total Expenses (B)</b>	<b>\$ 15,888,891</b>	<b>\$ 16,273,753</b>	<b>\$ 384,862</b>	<b>2.4%</b>	<b>\$ 16,672,537</b>	<b>\$ 398,784</b>	<b>2.5%</b>
<b>Change in Assets</b>	<b>\$ (817,980)</b>	<b>\$ (909,849)</b>	<b>\$ (91,869)</b>	<b>11.2%</b>	<b>\$ (979,960)</b>	<b>\$ (70,111)</b>	<b>7.7%</b>
<b>Fixed Assets</b>							
Depreciation	\$ (255,000)	\$ (257,550)	\$ (2,550)	1.0%	\$ (260,126)	\$ (2,576)	1.0%
Computer & Software CapEx	170,000	100,000	(70,000)	-41.2%	50,000	(50,000)	-50.0%
Furniture & Fixtures CapEx	-	-	-	-	-	-	-
Equipment CapEx	-	-	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-	-	-
<b>(Incr)Dec in Fixed Assets (C)</b>	<b>\$ (85,000)</b>	<b>\$ (157,550)</b>	<b>\$ (72,550)</b>	<b>85.4%</b>	<b>\$ (210,126)</b>	<b>\$ (52,576)</b>	<b>33.4%</b>
<b>TOTAL BUDGET (=B+C)</b>	<b>\$ 15,803,891</b>	<b>\$ 16,116,203</b>	<b>\$ 312,312</b>	<b>2.0%</b>	<b>\$ 16,462,411</b>	<b>\$ 346,208</b>	<b>2.1%</b>
<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>\$ (732,980)</b>	<b>\$ (752,299)</b>	<b>\$ (19,319)</b>	<b>2.6%</b>	<b>\$ (769,835)</b>	<b>\$ (17,536)</b>	<b>0.0%</b>
<b>FTEs</b>	38.86	38.86	0	0.0%	38.86	0	0.0%

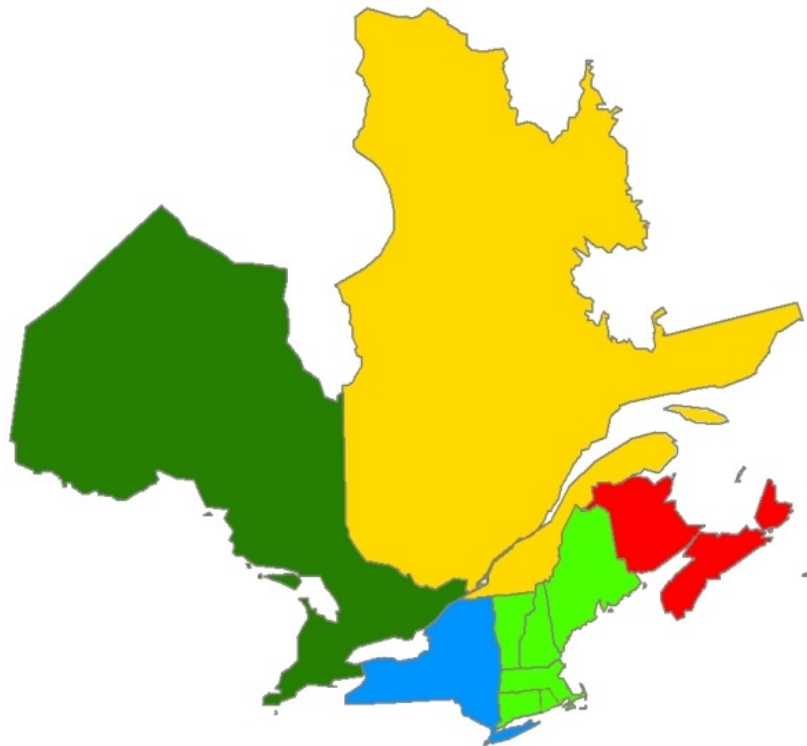
## Assumptions

- No changes in assumptions
- Staffing remains flat
- Change in assessments is equal to change in total budget

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## Section C — Criteria Services Division Activities 2019 Business Plan and Budget

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## Section C – Criteria Services Division Activities

<b>Criteria Services Division</b>			
(in whole dollars)			
	2018 Budget	2019 Budget	Increase (Decrease)
Total FTEs	2.14	2.14	0.00
Total Direct Expenses	\$666,530	\$676,756	\$10,226
Total Indirect Expenses	\$416,453	\$415,818	(\$635)
Other Non-Operating Expenses	\$0	\$0	\$0
Working Capital and Operating Reserves Requirement	(\$47,843)	(\$49,707)	(\$1,865)
Inc(Dec) in Fixed Assets	(\$16,000)	\$16,000	\$32,000
Funding Requirement	\$1,019,141	\$1,058,866	\$39,726

### NPCC Regionally-Specific Criteria Services Background

NPCC Criteria Services division activities are based on the development, maintenance (including retirement when no longer needed), and promulgation of new or revised Regionally-specific, more stringent reliability criteria and supporting guideline or procedural documents. The requirements in NPCC Reliability Criteria apply only to those facilities defined as NPCC Bulk Power System elements through the performance based methodology identified in the NPCC Document A-10, “Classification of Bulk Power System Elements.”

In accordance with the NERC Rules of Procedure (RoP) Section 313, Regional Entities may develop Regional Criteria necessary to implement, augment, or facilitate compliance with NERC Reliability Standards. These Regional Criteria may also be utilized to address issues not within the scope or jurisdiction of FERC as outlined in Section 215 of the Federal Power Act, such as resource adequacy. Regional Criteria may also address Canadian Provincial reliability issues, and may include specific operating or planning parameters, guides, agreements, protocols or other documents used to enhance the reliability of the Bulk Power System in the Region. These documents typically provide benefits by promoting more consistent implementation of the NERC Reliability Standards within the Region. These documents are not NERC Reliability Standards, Regional Reliability Standards, or Regional Variances, and therefore are not enforceable under the authority delegated by NERC pursuant to delegation agreements.

As NERC Reliability Standards are revised or new standards are developed, NPCC performs reviews of any associated Regional Criteria for possible impact.

For 2019 and beyond, the potential reliability impacts of increased penetration of Distributed Energy Resources (DER, e.g. solar and wind), and changing fuel mixes warrant further consideration. The Criteria Services Division has a unique opportunity to review these issues and develop criteria, guideline, and procedural documents for DER which may be outside of the jurisdiction of FERC and NERC Reliability Standards. Participation of the entities responsible for development of DER renewable resources to develop reliability documents will become increasingly important over time. Outreach, collaboration, and coordination of topics related to DER will enable NPCC to develop guidelines allowing more effective integration of these resources.

Increasing resilience of the BPS through alternative approaches to standards development using potential NPCC criteria, guidelines, and whitepapers will also be continually reviewed by NPCC's body of subject matter experts.

### **Membership and Governance**

Full members, in accordance with NPCC's Amended and Restated Bylaws, are subject to compliance with Regionally-specific criteria and receive criteria-related services from the Criteria Services division.

Full Members, aside from those who perform the Balancing Authority function, are not assessed an annual membership fee. Those that perform Balancing Authority functions are assessed and remit a proportional net energy for load share of expenses for Criteria Services. NPCC would also directly assign Criteria Service division costs to a Balancing Authority Area or entity, where significant costs are incurred for that Balancing Authority Area. The funding for NPCC's Criteria Services division is approved by the NPCC Board of Directors.

Under Criteria Services NPCC will identify for membership, those entities involved in emerging technologies to assure that those entities that have an impact on Bulk Electric System reliability are included in appropriate NPCC activities.

### **Criteria Services Division Functional Scope**

Through its Criteria Services division, NPCC promotes the reliable and efficient operation of the international, interconnected bulk power systems in Northeastern North America through the establishment of Regionally-specific criteria, and monitoring and enforcement of compliance with such criteria.

NPCC provides Full Members with Regional reliability assurance services, and acts as the vehicle through which States and Provinces can fulfill their political mandates, with respect to resource adequacy, as well as overseeing the Northeastern North American electric infrastructure.

### **Major 2019 Assumptions and Cost Impacts**

The Criteria Services division activities are expected to remain stable or slightly increase throughout 2019 depending on reliability need.

- The Criteria Compliance Enforcement Program (CCEP) review and evaluation process is the mechanism for monitoring key criteria attributes as determined by the respective NPCC Task Forces and the Compliance Committee.
- Past non-compliances, if any, followed the due process stated in the CCEP-1 process document and proper resolution/enforcement action taken.

### **2019 Primary Goals and Objectives**

- Continue with the development and maintenance of a set of NPCC Directories which augment or add specificity to the NERC Reliability Standards and which clearly delineate the more stringent NPCC criteria requirements. The combination of North American and more stringent NPCC Regional criteria provide for consistency and operational clarity while providing more robust defense in-depth, results based, criteria requirements to ensure NPCC BPS reliability.
- Continually review the criteria found in the NPCC Directories and the ERO standards to ensure no redundancies or inconsistencies exist.

- Retire Directories and/or Criteria which have been overtaken by improved NERC standards.
- Identify opportunities to develop criteria, procedures or guideline documents to address reliability related matters with DER.
- Identify opportunities to address improvements in BES resilience with NPCC processes and documentation.
- Continually review the need to file revised and updated more stringent requirements with the New York State Department of Public Service and Canadian Provinces as applicable.
- Review, maintain, and revise the NPCC Regional Reliability Directories to facilitate compliance assessments and ensure the Criteria portions of the Directories augment and are not duplicative with, the approved and effective NERC Standards.
- The Criteria Services division and CCEP Working Group (reporting to the Compliance Committee) will work with the various Task Forces to develop Criteria Compliance Reporting Forms for any additional NPCC Directories to ensure that the more stringent or Regionally-specific criteria is being met.
- The Criteria Services division and CCEP working group will work with TFCCO, TFCCP, TFSSS, and TFSSP to review criteria and measures within each specific NPCC Directory to identify and develop them into specific reporting forms for approval.
- Continually review impact of Bulk Electric System definition on Directory and Criteria content and compliance reporting.
- Continually review potential impacts of Sector or NPCC organizational changes on the Directories and Criteria by performing a review of enforcement and arbitration processes as needed.
- Assist Legal with preparation of revised Directories for Regulatory filings with the individual Provinces in accordance with their respective Memorandum of Understandings (MOUs) as well as the State of New York Public Service Commission.
- Facilitate any requested clarifications for NPCC Criteria with the necessary subject matter experts and also identify any other potential opportunities for clarifications of the Criteria.
- Conduct review of the following Documents:
  - Directory No. 7 – *Special Protection Systems* – the TFSSP will serve as lead Task Force working in conjunction with TFCCP and TFSSS on revisions required to ensure consistency with the development of the NERC standard on Remedial Action Schemes.
  - *A-10 - Classification of Bulk Power System Elements* - the TFCCP will conclude its review of the A-10 methodology in 2019.
  - Review and respond to Requests for Clarifications to existing NPCC Standards, Directories, and Criteria.

### **NPCC Reliability Directory Maintenance and Development**

The NPCC Regional Reliability Directories were developed to demonstrate that the NPCC more stringent criteria augment, add specificity, or address issues not covered in the NERC Reliability Standards as mandated by the NERC Rules of Procedure. The conversion of NPCC’s reliability criteria into Directories was undertaken to remove any redundancies with the NERC or NPCC Regional Reliability Standards and to clearly delineate the more stringent NPCC criteria requirements, assign Functional Model designations to those responsible for compliance and create measurable compliance criteria. Subsequent to the initial establishment of the Directories, which also organized functionally related B Guidelines and C Procedures into a single Directory, the Directories were further reviewed to translate existing criteria language into a requirements and “standards type” format. The development of the criteria into NERC style requirements facilitates the NPCC Region’s CCEP and also ensures the delineation of the more stringent and

more specific Regional criteria from the latest approved and effective set of NERC ERO standards.

In 2019, work will continue with the maintenance, revision, or potential retirement of individual Directories to address any actual or anticipated redundancies with new or modified NERC or NPCC Reliability Standards. The ongoing review and maintenance of the Directories will require Task Force and Criteria Services staff to support this effort and to serve as subject matter experts. In addition to the ongoing review of the criteria within the Directories for potential duplicity with the NERC standards, any Directories that have not had the criteria translated into NERC style requirements will also be reviewed in order to achieve criteria ‘requirements’ which are clear, concise and measurable. Also, a standards style template will continue to be applied to the existing Directories to make them more consistent with the format of NERC standards. As NERC standards improve, the need for NPCC Directories and the amount of criteria contained therein may decrease over time, however in the interim, significant review is necessary to ensure the criteria remain consistent with the NERC standards as outlined in the NERC Rules of Procedure. NPCC will conduct internal reviews of all draft standards against Regional criteria and utilize subject matter experts to identify reliability and compliance related concerns. NPCC will file the revised NPCC Directories and notifications of retirements of Directories with the Canadian governmental and/or provincial Regulatory authorities within the NPCC “footprint”, on an as needed basis, in accordance with established provincial procedures and agreements executed with NPCC.

### **NPCC Operations and Planning Directories**

The following Directories are envisioned to remain active for 2019.

#### *Directory #1, Design and Operation of the Bulk Power System.*

This Directory documents NPCC’s Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with all the existing NERC TPL, BAL, IRO, INT, MOD, TOP, PRC and VAR standards. The NPCC TFCP and TFCO completed a review of the Directory#1 criteria in 2015, during which the criteria was translated into NERC style requirements and revisions were enacted to ensure consistency with recent changes to the TPL and TOP standards.

#### *Directory #2, Emergency Operations*

This Directory documents NPCC’s Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with all the existing NERC EOP and TOP standards. The NPCC Task Force on Coordination of Operation is reviewing this Directory in 2018.

#### *Directory #4, System Protection Criteria*

This Directory documents NPCC’s Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with certain applicable NERC PRC standards. The NPCC Task Force on System Protection will lead this review and revision.

#### *Directory #5, Reserve*

This Directory documents NPCC’s Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with all the existing applicable NERC BAL, INT, and IRO standards. The NPCC Task Force on Coordination of Operation will lead this review and revision and ensure consistency with the BAL standards.

Directory #7, *Special Protection Systems*

This Directory documents NPCC's Regionally-specific, more stringent criteria for application and approval of SPS. The NPCC Task Force on System Protection will lead this review and revision and ensure consistency with the Remedial Action Scheme PRC-012 standard.

Directory #8, *System Restoration*

This Directory documents NPCC's Regionally-specific, more stringent criteria with which each applicable entity must plan for and perform power system restoration following a major or a total blackout, and demonstrates coordination and consistency with applicable NERC EOP standards. The NPCC Task Force on Coordination of Operation lead the review and revision of this Directory in 2018. The Directory was re-formatted to be consistent with the style of NERC standards.

Directory #11, *Disturbance Monitoring Equipment*,

This directory documents NPCC's Regionally-specific, more stringent criteria, and demonstrates coordination and consistency with certain existing NERC PRC standards. The NPCC Task Force on System Protection anticipates the development and approval of Directory#11 in order to facilitate the retirement of PRC -002-NPCC-1 and will lead this review and revision.

## **NPCC Criteria Compliance and Enforcement Program (CCEP)**

The NPCC Criteria Services division supports the reliable operation of the NPCC Bulk Power System (BPS) through implementation of the NPCC Criteria Compliance Program (CCEP). This program monitors, assesses and enforces compliance with regionally specific, more stringent NPCC Criteria. The criteria are unique to the NPCC BPS and are not duplicative of the NERC Reliability Standards. The criteria evolved over many years and were determined to be technically necessary, to maintain the reliability of the NPCC BPS and prevent cascading outages. In addition, the physical characteristics and topology of the transmission system within the Region require that these specific, more stringent criteria be developed and that compliance be monitored for these criteria.

NPCC Membership, in conjunction with the Criteria Services Division of the NPCC Staff, developed the CCEP. The NPCC Compliance Committee administers the CCEP. The NPCC Compliance Committee is a stakeholder body consisting of NPCC Members, structured with seven sectors. They are Transmission Owners; Reliability Coordinators; Transmission Dependent Utilities, Distribution Providers and Load-Serving Entities; Generator Owners; Marketers, Brokers and Aggregators; Regulators; Sub-Regional Reliability Councils, Customers, Other Regional Entities and Interested Entities.

Non-compliance to NPCC Criteria are not subject to monetary sanctions, whereas violations of NERC Reliability Standards are subject to monetary sanctions. Currently non-compliance of NPCC Criteria result in escalating notification to appropriate entities based on the severity of the non-compliance.

The following two guiding documents describe the implementation of the CCEP:

- The CCEP program is described in document CCEP-1, *NPCC Criteria Compliance and Enforcement Program (CCEP) Process Document*
- The implementation plan is described in document CCEP-2, *Implementation Plan for 2011 NPCC Criteria Compliance and Enforcement Program*

The NPCC Compliance Committee reviews these documents on a regular basis. Should the NPCC Compliance Committee revise the CCEP-1 document, it will prepare an approved final version that is distributed to the NPCC Membership for vote. As the CCEP is only applicable to the NPCC Criteria, which is the responsibility of the Full Members of NPCC, the Full Members of NPCC must vote on revisions to the document

The CCEP-1 document also:

- 1) Provides a comprehensive CCEP Process Diagram showing the process of evaluating and approving Criteria Certification submittals, and additional processes and responsibilities in the event that non-compliances, disputes and sanctions arise;
- 2) Describes the roles and responsibilities of Reporting Members, the NPCC Compliance Committee, the NPCC Reliability Coordinating Committee and the Enforcement Panel in the compliance review and enforcement process;
- 3) Describes Levels of Non-Compliance, associated non-monetary Sanctions, Lateness Policy and the Arbitration/Dispute Resolution process;
- 4) Addresses Mitigation Plans for any violations under the enforcement process; and
- 5) Lists the Certification Forms to be submitted for review.

Annually, the CCEP Working Group, under the NPCC Compliance Committee, develops the CCEP implementation plan and also reviews the compliance submittals and prepares a report for the entire NPCC Compliance Committee. The NPCC Compliance Committee has final approval of compliance assessments related to CCEP. Once the Compliance Committee approves the final report, it is presented to the NPCC Reliability Coordinating Committee for its approval.

Compliance to the NPCC Criteria is a responsibility of the NPCC Members and is codified in the *AMENDED AND RESTATED BYLAWS OF NORTHEAST POWER COORDINATING COUNCIL, INC.* Implementation of the CCEP is also consist with the current Memorandum of Understanding that NPCC has with its Canadian Members.

### **Explanation of Significant Variances – 2019 Budget versus 2018 Budget**

- None.

## 2018 Budget and Projection and 2019 Budget Comparisons

<b>Statement of Activities and Capital Expenditures</b>						
<b>2018 Budget &amp; Projection, and 2019 Budget</b>						
<b>CRITERIA SERVICES DIVISION</b>						
				Variance		Variance
	2018	2018	2018 Projection	v 2018 Budget	2019	2019 Budget
	Budget	Projection	v 2018 Budget	Over(Under)	Budget	v 2018 Budget
				Over(Under)		Over(Under)
<b>Funding</b>						
<b>ERO Funding</b>						
ERO Assessments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Penalty Sanctions	-	-	-	-	-	-
<b>Total ERO Funding</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Membership Dues	1,019,141	1,019,141	-	-	1,058,866	39,726
Testing Fees	-	-	-	-	-	-
Services & Software	-	-	-	-	-	-
Workshops	-	-	-	-	-	-
Interest	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-
<b>Total Funding (A)</b>	<b>\$ 1,019,141</b>	<b>\$ 1,019,141</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,058,866</b>	<b>\$ 39,726</b>
<b>Expenses</b>						
<b>Personnel Expenses</b>						
Salaries	\$ 404,848	\$ 404,848	\$ -	\$ -	\$ 371,938	\$ (32,909)
Payroll Taxes	23,413	23,413	-	-	23,696	283
Benefits	74,991	74,991	-	-	102,779	27,788
Retirement Costs	43,272	43,272	-	-	43,182	(90)
<b>Total Personnel Expenses</b>	<b>\$ 546,523</b>	<b>\$ 546,523</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 541,596</b>	<b>\$ (4,927)</b>
<b>Meeting Expenses</b>						
Meetings	\$ 5,000	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ -
Travel	55,647	55,647	-	-	56,800	1,153
Conference Calls	-	-	-	-	-	-
<b>Total Meeting Expenses</b>	<b>\$ 60,647</b>	<b>\$ 60,647</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 61,800</b>	<b>\$ 1,153</b>
<b>Operating Expenses</b>						
Consultants & Contracts	\$ 40,360	\$ 40,360	\$ -	\$ -	\$ 55,360	\$ 15,000
Office Rent	-	-	-	-	-	-
Office Costs	-	-	-	-	-	-
Professional Services	-	-	-	-	-	-
Computer & Equipment Leases	-	-	-	-	-	-
Miscellaneous	3,000	3,000	-	-	4,000	1,000
Depreciation	16,000	16,000	-	-	14,000	(2,000)
<b>Total Operating Expenses</b>	<b>\$ 59,360</b>	<b>\$ 59,360</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 73,360</b>	<b>\$ 14,000</b>
<b>Total Direct Expenses</b>	<b>\$ 666,530</b>	<b>\$ 666,530</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 676,756</b>	<b>\$ 10,226</b>
<b>Indirect Expenses</b>	<b>\$ 416,453</b>	<b>\$ 416,453</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 415,818</b>	<b>\$ (635)</b>
<b>Other Non-Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Total Expenses (B)</b>	<b>\$ 1,082,983</b>	<b>\$ 1,082,983</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,092,574</b>	<b>\$ 9,591</b>
<b>Change in Assets</b>	<b>\$ (63,843)</b>	<b>\$ (63,843)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (33,707)</b>	<b>\$ 30,135</b>
<b>Fixed Assets</b>						
Depreciation	\$ (16,000)	(16,000)	\$ -	\$ -	\$ (14,000)	\$ 2,000
Computer & Software CapEx	-	-	-	-	30,000	30,000
Furniture & Fixtures CapEx	-	-	-	-	-	-
Equipment CapEx	-	-	-	-	-	-
Leasehold Improvements	-	-	-	-	-	-
Allocation of Fixed Assets	-	-	-	-	-	-
<b>Inc(Dec) in Fixed Assets (C)</b>	<b>(16,000)</b>	<b>(16,000)</b>	<b>-</b>	<b>-</b>	<b>16,000</b>	<b>32,000</b>
<b>TOTAL BUDGET (=B+C)</b>	<b>1,066,983</b>	<b>1,066,983</b>	<b>-</b>	<b>-</b>	<b>1,108,574</b>	<b>41,591</b>
<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>\$ (47,843)</b>	<b>\$ (47,843)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (49,707)</b>	<b>\$ (1,865)</b>

## Personnel Analysis

Total FTEs by Program Area	Budget 2018	Projection 2018	Direct FTEs 2019 Budget	Shared FTEs <sup>1</sup> 2019 Budget	Total FTEs 2019 Budget	Change from 2018 Budget
<b>CRITERIA SERVICES DIVISION</b>						
<b>Operational Programs</b>						
Reliability Standards	1.07	1.07	1.00	0.07	1.07	0.00
Compliance Enforcement and Organization Registration and Certification	0.00	0.00	0.00	0.00	0.00	0.00
Training and Education	0.00	0.00	0.00	0.00	0.00	0.00
Reliability Assessment and Performance Analysis	1.07	1.07	1.00	0.07	1.07	0.00
Situation Awareness and Infrastructure Security	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total FTEs Operational Programs</b>	<b>2.14</b>	<b>2.14</b>	<b>2.00</b>	<b>0.14</b>	<b>2.14</b>	<b>0.00</b>
<b>Administrative Programs</b>						
Member Forums	0.00	0.00	0.00	0.00	0.00	0.00
General and Administrative	0.00	0.00	0.00	0.00	0.00	0.00
Information Technology	0.00	0.00	0.00	0.00	0.00	0.00
Legal and Regulatory	0.00	0.00	0.00	0.00	0.00	0.00
Human Resources	0.00	0.00	0.00	0.00	0.00	0.00
Accounting and Finance	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total FTEs Administrative Programs</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Total FTEs</b>	<b>2.14</b>	<b>2.14</b>	<b>2.00</b>	<b>0.14</b>	<b>2.14</b>	<b>0.00</b>

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



## Reserve Analysis 2018 - 2019

Working Capital and Operating Reserve Analysis 2018-2019				
CRITERIA SERVICES DIVISION				
	Total Reserve	Operating Reserve	Working Capital	Business Continuity
<b>Beginning Total Reserve, December 31, 2017</b>	534,786	386,031	88,755	60,000
2018 Non-Statutory Funding (from members)	1,019,141	1,019,141	0	0
2018 Other funding sources	0	0	0	0
Less: 2018 Projected expenses & fixed asset additions	(1,106,983)	(1,106,983)	0	0
<b>Projected Total Reserve, December 31, 2018</b>	<b>446,943</b>	<b>298,188</b>	<b>88,755</b>	<b>60,000</b>
<b>Desired Total Reserve, December 31, 2019</b>	<b>397,236</b>	<b>244,859</b> <sup>1</sup>	<b>92,377</b> <sup>2</sup>	<b>60,000</b> <sup>3</sup>
Less: Projected Total Reserve, December 31, 2018	(446,943)	(298,188)	(88,755)	(60,000)
<b>Increase(decrease) in assessments to achieve desired Total Reserve</b>	<b>(49,707)</b>	<b>(53,330)</b>	<b>3,622</b>	<b>0</b>
2019 Funding requirement for expenses and fixed asset additions	1,108,574			
Less: Release of Business Continuity Reserve Funds <sup>3</sup>	0			
Adjustment to Working Capital to achieve desired Total Reserve balance <sup>2</sup>	3,622			
Adjustment to Operating Reserve to achieve desired Total Reserve balance <sup>1</sup>	(53,330)			
<b>2019 Funding and reserve requirement</b>	<b>1,058,866</b>			

<sup>1</sup> Total NPCC Operating Reserve must be within a range from 8.33% to 25.00% of Budget. \$244,859 represents 22.09% of the 2019 CS budget of \$1,108,574.

<sup>2</sup> Total NPCC Working Capital must equal 8.33% of Budget. \$92,377 represents 8.33% of the 2019 CS budget of \$1,108,574.

<sup>3</sup> Business Continuity Reserve (BCR) established in 2017 as approved by the NPCC Board of Directors to fund Succession Planning related expenses.

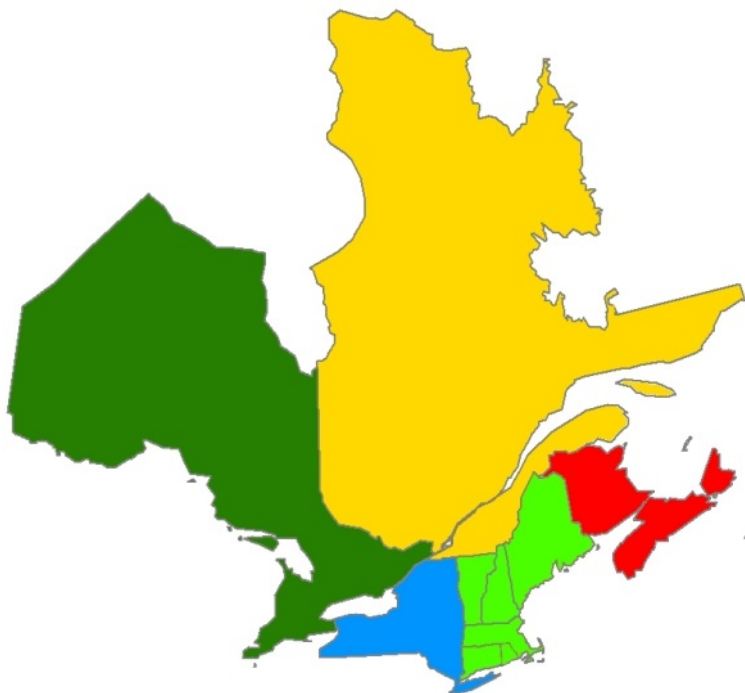
## Explanation of Changes in Reserve Policy from Prior Year

There was no change to the existing Working Capital and Operating Reserve Policy. A separate Business Continuity Reserve (BCR) in the amount of \$1,000,000 (allocated between the Regional Entity and Criteria Services divisions) was established in 2017 as approved by the NPCC Board of Directors, upon recommendation by the Management Development and Compensation Committee and endorsement by the Finance and Audit Committee, to be identified as restricted cash and drawn upon as subsequently brought before the Board of Directors in association with President & CEO succession related activities associated with a planned or sudden retirement, as well as other sudden changing workforce staffing requirements which could be brought about by coincident multiple staff retirements.

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Section D – Additional Consolidated Financial  
Statements  
2019 Business Plan and Budget

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## Section D — Additional Financial Statements

### Statement of Financial Position

<b>Statement of Financial Position</b>				
<b>2017 Audited, 2018 Projection, and 2019 Budget</b>				
<b>Regional Entity and Criteria Services Division</b>				
		(Per Audit)	Projected	Budget
		31-Dec-17	31-Dec-18	31-Dec-19
<b>ASSETS</b>				
Cash		\$ 6,977,629	\$ 5,547,000	\$ 4,664,000
Restricted cash		225,143	150,000	150,000
Temporary cash investments		1,816,878	1,833,000	1,849,000
Prepaid expenses		298,254	300,000	300,000
Other assets		215,412	236,000	257,000
Equipment and leasehold improvements, net		805,594	643,000	574,000
<b>Total Assets</b>		<b>\$ 10,338,910</b>	<b>\$ 8,709,000</b>	<b>\$ 7,794,000</b>
<b>LIABILITIES AND NET ASSETS</b>				
<b>Liabilities</b>				
Accrued expenses and other liabilities		\$ 2,641,848	\$ 2,665,000	\$ 2,688,000
Deferred revenue		684,226	-	-
Deferred rent		579,705	526,000	440,000
<b>Total Liabilities</b>		<b>3,905,779</b>	<b>3,191,000</b>	<b>3,128,000</b>
Net Assets - unrestricted		6,433,131	5,518,000	4,666,000
<b>Total Liabilities and Net Assets</b>		<b>\$ 10,338,910</b>	<b>\$ 8,709,000</b>	<b>\$ 7,794,000</b>

Section D — Additional Financial Statements

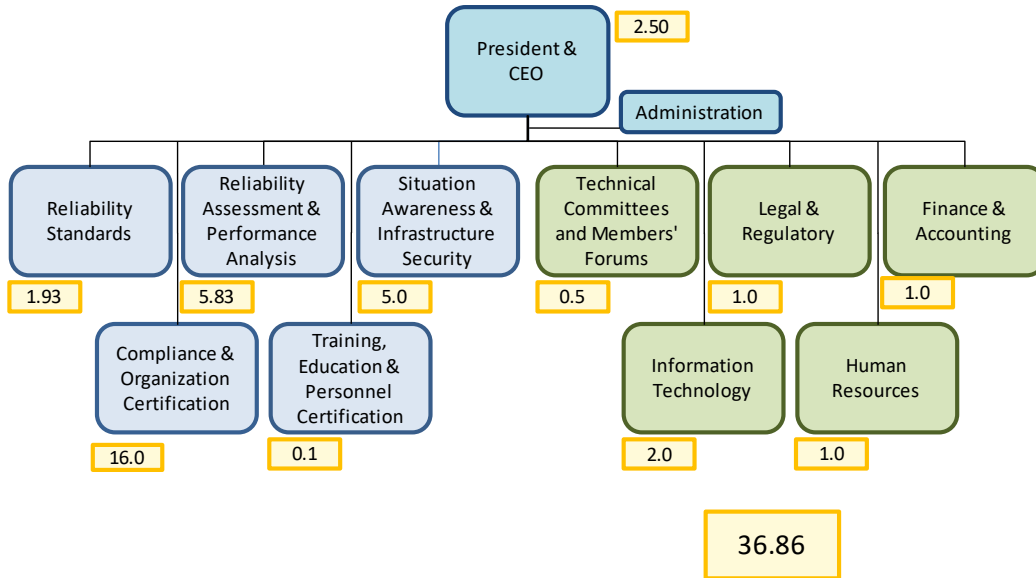
NPCC Statement of Activities 2019 Budget		RE Division Total	Reliability Standards (Section 300)	Compliance Monitoring and Enforcement and Organization Registration and Certification (Section 400 & 500)	Reliability Assessment and Performance Analysis (Section 800)	Training, Education, and Operator Certification (Section 900)	Situation Awareness and Infrastructure Security (Section 1000)	Administrative Services
<b>Funding</b>								
<b>ERO Funding</b>								
	ERO Assessments	15,003,411	1,035,390	8,183,815	3,332,686	184,943	2,366,685	(100,108)
	Penalty/Sanctions	-	-	-	-	-	-	-
	<b>Total ERO Funding</b>	<b>15,003,411</b>	<b>1,035,390</b>	<b>8,183,815</b>	<b>3,332,686</b>	<b>184,943</b>	<b>2,366,685</b>	<b>(100,108)</b>
	Members hip Dues	-	-	-	-	-	-	-
	Testing Fees	-	-	-	-	-	-	-
	Services & Software	-	-	-	-	-	-	-
	Workshops	67,500	-	-	-	67,500	-	-
	Interest	-	-	-	-	-	-	-
	Miscellaneous	-	-	-	-	-	-	-
	<b>Total Funding (A)</b>	<b>15,070,911</b>	<b>1,035,390</b>	<b>8,183,815</b>	<b>3,332,686</b>	<b>252,443</b>	<b>2,366,685</b>	<b>(100,108)</b>
<b>Expenses</b>								
<b>Personnel Expenses</b>								
	Salaries	7,332,280	382,872	2,815,882	1,135,264	18,600	832,408	2,147,254
	Payroll Taxes	449,994	22,735	191,849	69,027	1,513	57,432	107,437
	Benefits	1,613,078	106,764	585,543	219,655	6,805	201,196	493,115
	Retirement Costs	853,511	41,599	301,025	123,322	2,379	89,043	296,142
	<b>Total Personnel Expenses</b>	<b>10,248,862</b>	<b>553,970</b>	<b>3,894,299</b>	<b>1,547,268</b>	<b>29,297</b>	<b>1,180,079</b>	<b>3,043,948</b>
<b>Meeting Expenses</b>								
	Meetings	370,750	7,000	15,000	23,000	189,000	10,000	126,750
	Travel	845,900	94,900	295,400	216,200	15,000	89,300	135,100
	Conference Calls	36,000	-	-	-	-	-	36,000
	<b>Total Meeting Expenses</b>	<b>1,252,650</b>	<b>101,900</b>	<b>310,400</b>	<b>239,200</b>	<b>204,000</b>	<b>99,300</b>	<b>297,850</b>
<b>Operating Expenses</b>								
	Consultants & Contracts	2,022,150	10,000	1,357,150	430,000	-	130,000	95,000
	Office Rent	820,700	-	-	-	-	-	820,700
	Office Costs	676,347	-	-	-	-	-	676,347
	Professional Services	978,000	-	-	-	-	-	978,000
	Miscellaneous	51,000	-	-	-	-	-	51,000
	Depreciation	255,000	-	-	-	-	-	255,000
	<b>Total Operating Expenses</b>	<b>4,803,197</b>	<b>10,000</b>	<b>1,357,150</b>	<b>430,000</b>	<b>-</b>	<b>130,000</b>	<b>2,876,047</b>
	<b>Total Direct Expenses</b>	<b>16,304,709</b>	<b>665,870</b>	<b>5,561,849</b>	<b>2,216,468</b>	<b>233,297</b>	<b>1,409,379</b>	<b>6,217,845</b>
	<b>Indirect Expenses</b>	<b>(415,818)</b>	<b>375,014</b>	<b>3,303,230</b>	<b>1,132,814</b>	<b>19,431</b>	<b>971,538</b>	<b>(6,217,845)</b>
	<b>Other Non-Operating Expenses</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Expenses (B)</b>	<b>15,888,891</b>	<b>1,040,884</b>	<b>8,865,080</b>	<b>3,349,282</b>	<b>252,728</b>	<b>2,380,918</b>	<b>-</b>
	<b>Change in Assets</b>	<b>(817,980)</b>	<b>(5,494)</b>	<b>(681,264)</b>	<b>(16,596)</b>	<b>(285)</b>	<b>(14,233)</b>	<b>(100,108)</b>
<b>Fixed Assets</b>								
	Depreciation	(255,000)	-	-	-	-	-	(255,000)
	Computer & Software CapEx	170,000	-	-	-	-	-	170,000
	Furniture & Fixtures CapEx	-	-	-	-	-	-	-
	Equipment CapEx	-	-	-	-	-	-	-
	Leasehold Improvements	-	-	-	-	-	-	-
	<b>Allocation of Fixed Assets</b>	<b>-</b>	<b>(5,494)</b>	<b>(48,392)</b>	<b>(16,596)</b>	<b>(285)</b>	<b>(14,233)</b>	<b>85,000</b>
	<b>Inc (Dec) in Fixed Assets (C)</b>	<b>(85,000)</b>	<b>(5,494)</b>	<b>(48,392)</b>	<b>(16,596)</b>	<b>(285)</b>	<b>(14,233)</b>	<b>-</b>
	<b>TOTAL BUDGET (=B + C)</b>	<b>15,803,891</b>	<b>1,035,390</b>	<b>8,816,687</b>	<b>3,332,686</b>	<b>252,443</b>	<b>2,366,685</b>	<b>-</b>
	<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>(732,980)</b>	<b>(0)</b>	<b>(632,872)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(100,108)</b>
	<b>FTEs</b>	<b>38.86</b>	<b>1.93</b>	<b>17.00</b>	<b>5.83</b>	<b>0.10</b>	<b>5.00</b>	<b>9.00</b>

Section D — Additional Financial Statements

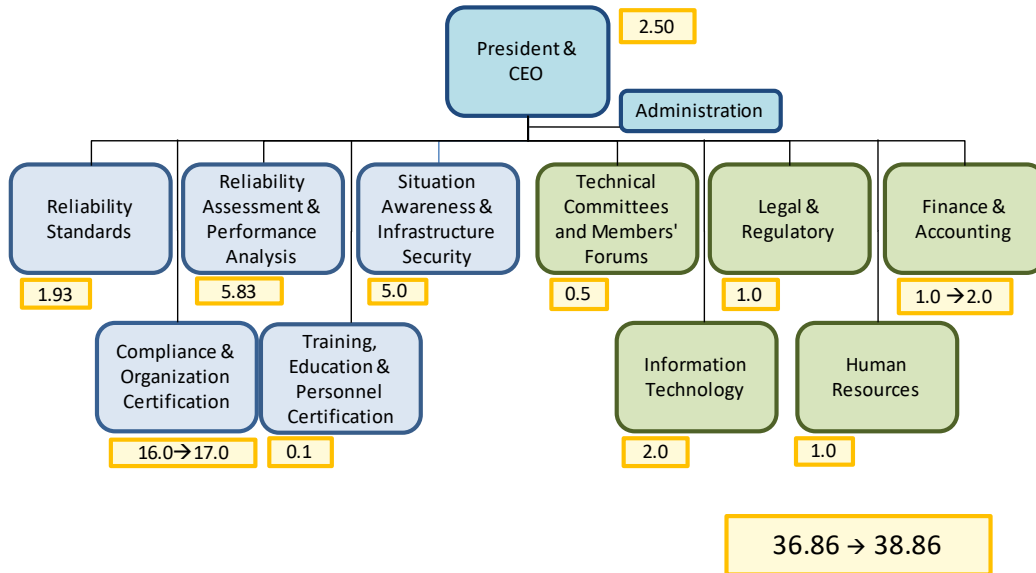
<b>NPCC Statement of Activities 2019 Budget</b>		Criteria Services Total	Criteria Development	Criteria Assessment	General and Administrative
<b>Funding</b>					
<b>ERO Funding</b>					
	ERO Assessments	-			
	Penalty Sanctions	-			
	<b>Total ERO Funding</b>	-	-	-	-
	Membership Dues	1,058,866	551,354	557,220	(49,707)
	Testing Fees	-	-	-	-
	Services & Software	-	-	-	-
	Workshops	-	-	-	-
	Interest	-	-	-	-
	Miscellaneous	-	-	-	-
	<b>Total Funding (A)</b>	<b>1,058,866</b>	<b>551,354</b>	<b>557,220</b>	<b>(49,707)</b>
<b>Expenses</b>					
<b>Personnel Expenses</b>					
	Salaries	371,938	186,285	185,654	-
	Payroll Taxes	23,696	11,805	11,891	-
	Benefits	102,779	47,476	55,303	-
	Retirement Costs	43,182	21,179	22,003	-
	<b>Total Personnel Expenses</b>	<b>541,596</b>	<b>266,745</b>	<b>274,851</b>	<b>-</b>
<b>Meeting Expenses</b>					
	Meetings	5,000	2,500	2,500	-
	Travel	56,800	28,200	28,600	-
	Conference Calls	-	-	-	-
	<b>Total Meeting Expenses</b>	<b>61,800</b>	<b>30,700</b>	<b>31,100</b>	<b>-</b>
<b>Operating Expenses</b>					
	Consultants & Contracts	55,360	29,000	26,360	-
	Office Rent	-	-	-	-
	Office Costs	-	-	-	-
	Professional Services	-	-	-	-
	Miscellaneous	4,000	2,000	2,000	-
	Depreciation	14,000	7,000	7,000	-
	<b>Total Operating Expenses</b>	<b>73,360</b>	<b>38,000</b>	<b>35,360</b>	<b>-</b>
	<b>Total Direct Expenses</b>	<b>676,756</b>	<b>335,445</b>	<b>341,311</b>	<b>-</b>
	<b>Indirect Expenses</b>	<b>415,818</b>	<b>207,909</b>	<b>207,909</b>	<b>-</b>
	<b>Other Non-Operating Expenses</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Expenses (B)</b>	<b>1,092,574</b>	<b>543,354</b>	<b>549,220</b>	<b>-</b>
	<b>Change in Assets</b>	<b>(33,707)</b>	<b>8,000</b>	<b>8,000</b>	<b>(49,707)</b>
<b>Fixed Assets</b>					
	Depreciation	(14,000)	(7,000)	(7,000)	-
	Computer & Software CapEx	30,000	15,000	15,000	-
	Furniture & Fixtures CapEx	-	-	-	-
	Equipment CapEx	-	-	-	-
	Leasehold Improvements	-	-	-	-
	Allocation of Fixed Assets	-	-	-	-
	<b>Inc (Dec) in Fixed Assets ( C )</b>	<b>16,000</b>	<b>8,000</b>	<b>8,000</b>	<b>-</b>
	<b>TOTAL BUDGET (=B + C)</b>	<b>1,108,574</b>	<b>551,354</b>	<b>557,220</b>	<b>-</b>
	<b>TOTAL CHANGE IN WORKING CAPITAL (=A-B-C)</b>	<b>(49,707)</b>	<b>-</b>	<b>-</b>	<b>(49,707)</b>
	<b>FTEs</b>	<b>2.14</b>	<b>1.07</b>	<b>1.07</b>	<b>0</b>

# Appendix A Staff Allocations

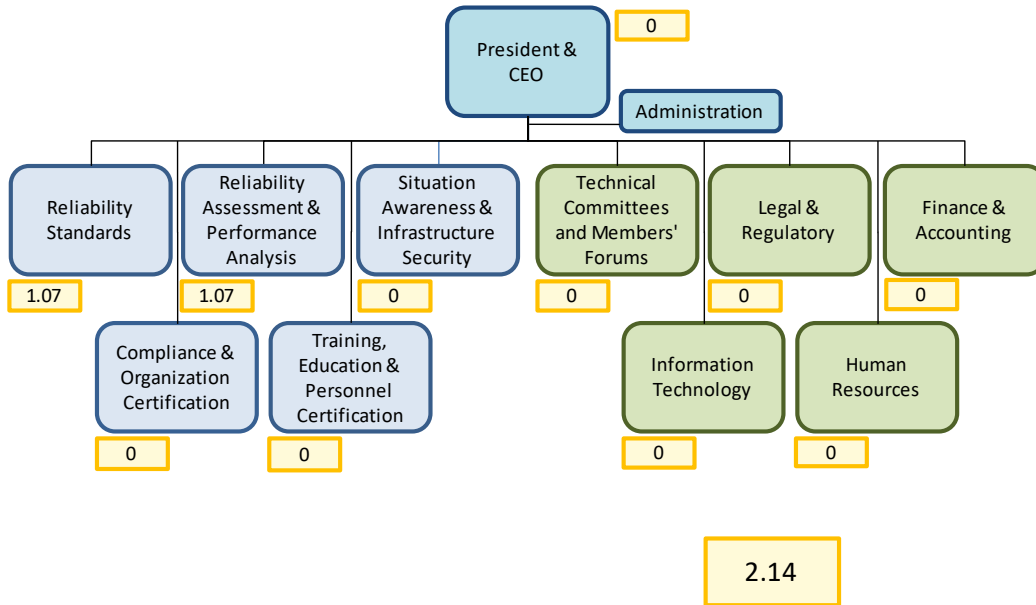
2018 Budget Staff Allocations - RE Division



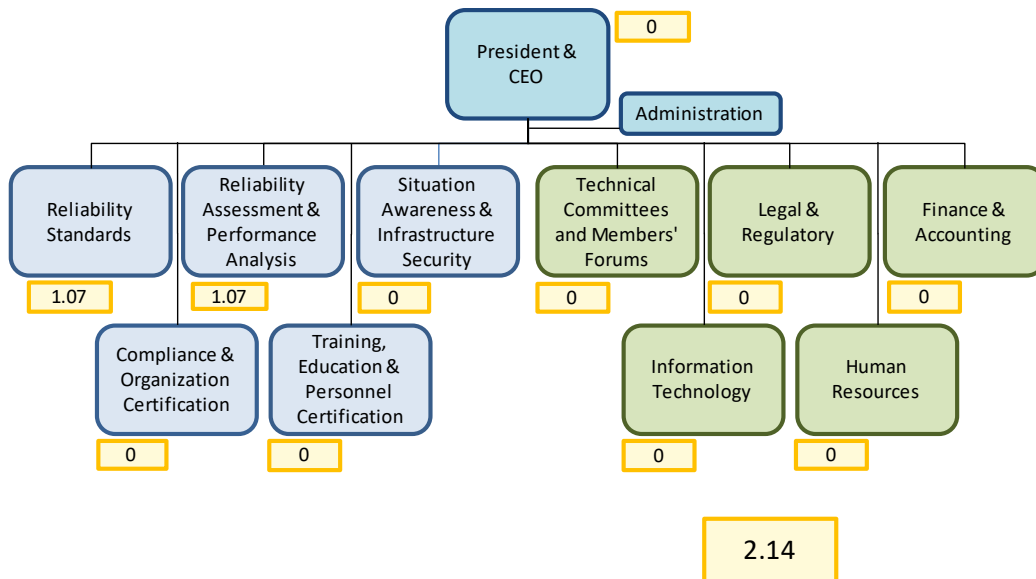
2019 Budget Staff Allocations - RE Division



2018 Budget Staff Allocations - CS Division



2019 Budget Staff Allocations - CS Division



## Appendix B Acronyms

This section lists acronyms used in this document.

Acronym	Definition
AI	Audits and Investigations
BAA	Balancing Authority Area
BEPWG	BES Exception Process Working Group
BES	Bulk Electric System
BOT	Board of Trustees
BPS	Bulk Power System
CC	Compliance Committee
CCEP	Criteria Compliance Enforcement Program
CDAA	CMEP Data Administration Application
CEAP	Cost Effective Analysis Process
CEH	Continuing Education Hour
CGNC	Corporate Governance and Nominating Committee
CIPC	Critical Infrastructure Protection Committee
CIPIS	Critical Information Protection Information Sharing
CMEP	Compliance Monitoring and Enforcement Program
CORC	Compliance Monitoring and Enforcement and Organization Registration and Certification Program
CPP	Clean Power Plan
CRRA	Cost of Risk Reduction Analysis
CUG	Consortium Users Group
DADS	Demand Availability Data System
DADSWG	Demand Response Availability Data System Working Group
ERA	Entity Reliability Assessment
ERAG	Eastern Interconnection Reliability Assessment Group
ERO	Electric Reliability Organization
EUB	Electric Utility Board
EUB	Energy and Utilities Board
FAC	Finance and Audit Committee
FERC	Federal Energy Regulatory Commission
FFT	Find, Fix, Track
GADS	Generator Availability Data System
GADSWG	Generating Availability Data System Working Group
GMD	Geomagnetic Disturbance
HQCMÉ	Hydro-Québec Contrôle des mouvements d'énergie
HSIN	Homeland Security Information Network
ICE	Internal Controls Evaluation
IED	Intelligent Electronic Device
IERP	Independent Experts Review Panel Report
IESO	Independent Electricity System Operator
IRA	Inherent Risk Assessment
ISO	Independent System Operator
ITSG	IT Steering Group
LCEFT	Load, Capacity, Energy, Fuels, and Transmission
LMS	Learning Management System
LMWG	Load Modeling Working Group
LSE	Load Serving Entity
MACD	Market Assessment and Compliance Division of the IESO
MDCC	Management Development and Compensation Committee
ME	Mitigation and Enforcement
MMWG	Multi-Regional Modeling Working Group
MOU	Memorandum of Understanding
MPLS	Multiprotocol Label Switching
MVWG	Model Validation Working Group
NAESB	North American Electric Standards Review Board



## Appendix B

Acronym	Definition
NEL	Net Energy for Load
NERC	North American Electric Reliability Corporation
NOAV	Notice of Alleged Violation
NOCV	Notice of Confirmed Violation
NOPR	Notice of Proposed Rulemaking
NOPV	Notice of Possible Violation
NPCC	Northeast Power Coordinating Council, Inc.
NRAP	NPCC Reliability Assessment program
NSPI	Nova Scotia Power Incorporated
NSUARB	Nova Scotia Utility and Review Board
OEB	Ontario Energy Board
PAS	Performance Analysis Subcommittee
PC	Pension Committee
PMOS	Project Management Oversight Subcommittee
PSMTF	Protection System Mis-operations Task Force
PSTN	Public Switched Telephone Network
QCMEP	Québec Reliability Standards Compliance Monitoring and Enforcement Program
RADS	Reliability Assessment Data System
RADWG	Reliability Assessment Data Working Group
RAS	Reliability Assessment Subcommittee
RC	Reliability Coordinator
RCC	Reliability Coordinating Committee
RISC	Reliability Issues Steering Committee
RSAW	Reliability Standards Audit Worksheet
RSC	Regional Standards Committee
RTO	Regional Transmission Organization
SAFNR	Situational Awareness-FERC, NERC, Regions
SAMS	System Analysis and Modeling Subcommittee
SAR	Standards Authorization Request
SAT	Systematic Approach to Training
SBS	Standards Balloting System
SCPS	Standards Committee Process Subcommittee
SDT	Standards Drafting Team
SEDS	Spare Equipment Database System
SEDTF	Spare Equipment Database Task Force
SPS	Special Protection Systems
TADS	Transmission Availability Data System
TADSWG	Transmission Availability Data System Working Group
TFCO	Task Force on Coordination of Operation
TFCP	Task Force on Coordination of Planning
TFE	Technical Feasibility Exception
TFIST	Task Force on Infrastructure Security and Technology
TFSP	Task Force on System Protection
TFSS	Task Force on System Studies
TLR	Transmission Loading Relief
TOP	Transmission Operator
UFLS	Underfrequency Load Shedding
UVLS	Under-Voltage Load Shedding
VRF	Violation Risk Factor
VSL	Violation Security Level

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