1. Risk-responsive Reliability Standards

2. Objective, risk-informed entity registration, compliance monitoring, mitigation, and enforcement

3. Reduction of known reliability risks

4. Identification and assessment of emerging reliability risks

5. Identification and reduction of cyber and physical security risks

6. Improving ERO Enterprise efficiency and effectiveness

RELIABILITY | RESILIENCE | SECURITY

The goal has been fully achieved

The goal has been partially achieved and is on track for 2019 completion

The goal has been partially achieved but is off schedule for 2019 completion

The goal will not be reached in 2019 or the goal no longer applies

RELIABILITY | RESILIENCE | SECURITY

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Sub Goals

1.	Complete Phase I of the Operating and Planning Standards Efficiency Review and seek FERC approval for sought after retirements.
2.	Launch Phase II of the O&P Standards Efficiency Review
3.	Initiate CIP Standards Efficiency Review and establish a process and timeline
4.	Complete Supply Chain effort • Complete the final report and gain Board acceptance • Develop a plan to realize the recommendations in the report • Begin Plan Implementation • Develop a plan to evaluate the effectiveness of the supply chain standard

Status Through Q2

- ✓ Completed and filed with FERC on 6/7/2019
- ✓ Completed – Phase II Launched Q 1
- ✓ In process expected to be complete by Q4
- ✓ Report accepted by BOT; recommendations expected to be complete by Q 4

4

RELIABILITY | RESILIENCE | SECURITY

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Compliance

Sub Goals

1. Complete certification and registration of the new Western Reliability Coordinators on-time, consistent with dissolution of Peak Reliability.

2. Review effectiveness of the Compliance Guidance program and develop plan to enhance; and evaluate opportunities to expand industry-led development of guidance to other program areas.

3. Provide training and education on control evaluations to industry with supporting guidance to the Regional Entities for consistent implementation in audits.

4. Improve alignment in processes across Regional Entities and when appropriate, memorialize the aligned processes into CMEP Tool design.

Status Through Q2

- RC Certifications are on track

- Project Plan developed
- Survey for participants planned Q3 2019
- Tracking completion by Q4

- RE training provided April
- Industry training provided at Standards and Compliance Workshop July

- Improvements are ongoing

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Sub Goals

1. For the following BPS reliability risks identify the extent of condition, develop plan, and mitigate impacts from:
   - Protection system misoperations
   - Unacceptable inverter performance
   - Increased dependency on natural gas
   - Compromised situational awareness from the loss of Energy Management Systems
   - Distributed energy resources

   Identification and syndication of best practices through new Reliability Guidelines and other tools, including enhancements to Reliability Standards.

2. Finalize business case and begin implementation of new SAFNR Tool

Status Through Q2

- **Complete:**
  - 2019 SOR
  - DER-A Model Reliability Guideline – Distributed through NARUC to reach state-level
  - IBR Performance Reliability Guideline
  - EGWG Formed
- **Tracking completion by Q4:**
  - Monitoring and Situation Awareness Conference

- Implementation in progress and on target
- Tracking completion by Q4

RELIABILITY | RESILIENCE | SECURITY

Sub Goals

1. Develop and implement a plan to expand the consistent use of probabilistic based assessment processes for reliability assessments with common tools and practices.

2. Expand the 2020 Long Term Reliability Assessment to include considerations of energy assurance risks.

3. Scope out options and determine if work should be undertaken on the use of reserve margin targets given:
   - changing level of resource firmness,
   - uncertainty around actual loads due to DER expansion, and
   - recent experiences at managing tight reserve margins without incident.

Status Through Q2

- Probabilistic Assessment Working Group Technical Reference Document in development
- Tracking completion by Q4

- Plan in development for 2020 Probabilistic Assessment (Expected Unserved Energy Metric)
- Tracking completion by Q4

- Plan in development
- Tracking completion by Q4

RELIABILITY | RESILIENCE | SECURITY

Sub Goals

1. Information Sharing:
   - Enhance data collection capabilities
   - Establish two way sharing of machine readable cyber indicators through the Cyber Automated Information Sharing System
   - Implement E-ISAC Watch 24 hours/5 days per week by executing hiring plan

2. Analysis: Increase the identification of indicators of compromise

3. Engagement:
   - Expand the Industry Engagement Program (IEP) and host minimum of 6 IEP sessions
   - Execute Canadian Engagement Strategy, and gain Canadian support for 2020 Business P&B
   - Develop plans to address key findings identified in the 2018 biennial Effectiveness Survey
   - Design and execute GridEx V

Status Through Q2

- Developing MS-ISAC agreement
- Long Term Data strategy under development
- Focused industry outreach on information sharing

- Total indicators through 6/30: 14,045
- Tracking completion by Q4

- Executed IESO agreement
- Outreach with Hydro Quebec
- CEA SIPC Meeting in June
- Participating in Canadian Entre for Cyber Security Monthly Briefings
- GridEx V planning on track
- Tracking completion by Q4

Sub Goals

1. NERC:
   - Develop and implement meeting and travel policy to support NERC stakeholder groups
   - Finish the 2019 year at or below budget and maintain at least 3 MM in operating reserves
   - Develop plans to address key findings from the 2018 biennial Effectiveness survey
   - Work with MEC to develop metrics measuring the effectiveness of the E-ISAC

2. ERO Enterprise Coordination initiatives:
   - Meet all milestones on CMEP tool development
   - Evaluate opportunities to centralize and/or standardize processes
   - Develop and implement meeting and travel policy for ERO Enterprise Working Groups

3. Stakeholder Engagement:
   - Develop and implement plan to reconceive technical committees to a lower cost model that preserves/improves effectiveness

Status Through Q2

- Current activities and action plans to address key findings from the 2018 biennial effectiveness survey included in the Summary of Results.
- Tracking completion by Q4

- Align development on track; roll-out timing
- CORES - a managed launch is in progress for select registered entities
- Meeting and travel policy developed

- Proposal for Reliability and Security Council

Questions and Answers

RELIABILITY | RESILIENCE | SECURITY

1. Expand Risk-Based Focus in Standards, Compliance Monitoring, and Enforcement

2. Assess and Take Steps to Mitigate Known and Emerging Risks to Reliability

3. Build a Strong E-ISAC-Based Security Capability

4. Strengthen Engagement across North America and the Reliability Ecosystem

5. Promote Effectiveness, Efficiency, and Continuous Improvement

RELIABILITY | RESILIENCE | SECURITY

2020 Key Objectives
1. Implement strategy for Cold Weather, Electromagnetic Pulse, and Energy Security Standards
2. Complete the recommendations in the Supply Chain report; Leverage 1600 data request results to further implement Supply Chain recommendations
3. Continue to consistently embed internal control activities within the compliance monitoring program.

RELIABILITY | RESILIENCE | SECURITY

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	2020 Key Objectives
1.	Identify the extent of condition, develop a plan, and mitigate impacts from: • **Protection system misoperations** – Develop metrics to capture impacts • **Unacceptable inverter performance** - Guideline for Bulk Power System Planning and formal Review of Reliability Standards to identify gaps and enhancements • **Reduced situational awareness from Energy Management System loss** – Develop metrics and publish mitigation best practices • **Distributed energy resources** – Complete NERC position paper with industry outreach Identify and syndicate best practices through new Reliability Guidelines and other tools, including enhancements to Reliability Standards
2.	Implement lessons learned and best practices from Grid EX V including improved use and collaboration with SAFNRv3
3.	Grid Transformation: • Assess energy adequacy in the 2020 Long Term Reliability Assessment • Develop data requirements and metrics for bulk power system resilience • Improve models, identify simulation needs, and provide guidance to address reliability considerations from DER penetration • Allocate staff to address cybersecurity risks in the planning and operational time horizon: Develop a cyber design basis in 2020

RELIABILITY | RESILIENCE | SECURITY

	2020 Key Objectives
1.	**Information Sharing:** • Increase overall information sharing by partners and industry • Increase portal posts by member organizations • Increase shares by source (channel, event type) • 24x7 incident reporting and response capability through watch operations
2.	**Analysis:** • Increase member shared joint analytical products developed with partners • Increase member shared content enriched by E-ISAC analysis • Unclassified Threat Workshop survey results (relevant, unique, timely, actionable content)

3.	**Engagement:**
	• Strengthen trusted source partnerships
	   o Implement IESO pilot and determine value
	   o Implement MOU with the U.S. Department of Energy
	   o Define and execute expanded relationship with MS-ISAC
	• Institutionalize Canadian engagement effort
	• Implement and realize value from CRM system

	2020 Key Objectives
1.	Expand outreach and coordinated communications on ERO Enterprise efforts with stakeholder and policy organizations
2.	Plan, resource, and execute joint meeting and conferences where possible: • Human Performance conference with NATF and DOE • Resiliency Summit with NATF and EPRI • Storage and Frequency response with NAGF
3.	Support corollary activities within industry and trades e.g. U.S. DOE's North American Energy Resilience Model (NAERM), IEEE Standard 2800

RELIABILITY | RESILIENCE | SECURITY

Focus Area 5: Promote Effectiveness, Efficiency, and Continuous Improvement

	2020 Key Objectives
1.	Complete the "Big 3:" • Continue development and roll-out of Align • Complete the CIP and Phase II of the O&P Standards Efficiency Reviews • Successful implementation of improved Stakeholder Engagement Process
2.	Implement plans addressing key 2018 Biennial Effectiveness Survey findings
3.	NERC: • Finish the 2020 year at or below budget and maintain at least $3MM in operating reserves
4.	Regional Entities: • With Regional Entity and stakeholder feedback, continue evaluation of compliance monitoring and enforcement processes for efficiency • Implement opportunities to centralize and/or standardize processes
5.	ERO Enterprise: • Continue ERO Enterprise Transformation to achieve process alignment and share resources

RELIABILITY | RESILIENCE | SECURITY

Questions and Answers

RELIABILITY | RESILIENCE | SECURITY