

Electric Reliability Organization Enterprise Strategic Plan ~~2015–2018~~2016–2019

The Electric Reliability Organization (ERO) Enterprise is a collaborative, international network comprised of the North American Electric Reliability Corporation (NERC) and the eight Regional Entities that brings together collective leadership, experience, judgment, skills, and technologies for assuring the reliable operation of the North American Bulk Electric System (BES). This plan summarizes the ERO Enterprise's mission, vision, values, and goals and provides strategic direction and priorities for ~~2015~~2016 and beyond.

Mission

To assure the reliable operation of the North American Bulk Electric System.

Vision

To be the trusted leadership that assures the reliable operation of the North American BES by promoting effective collaboration, cooperation, and communication around important risks to reliability; implementing relevant standards; and ~~utilizing~~using expertise from the industry to produce outcomes and manage risks to reliability in a cost-effective manner.

Core Values and Guiding Principles

The following core values and guiding principles serve as guidelines for the conduct and behavior of all involved in the ERO Enterprise.

Accountability and Independence – The ERO Enterprise will:

- Be accountable for the public responsibilities delegated to it (a public trust obligation).
- Be impartial, independent of special interests, and impervious to improper influence.
- Balance its own independent regulatory judgment with the need to involve those with expert knowledge and experience in BES reliability matters.

Responsiveness – The ERO Enterprise will act in a timely manner on the basis of unfolding events, emerging reliability risks, and the needs of industry and other stakeholders.

Fairness and Inclusiveness – The ERO Enterprise will:

- Be open and transparent.
- Provide access for clear communication with stakeholders.

- Ensure the legitimate interests of all parties, including costs imposed on registered entities, are duly considered and balanced in the development of policies and reliability standards, and in its programs and operations.
- Conduct compliance and enforcement actions judiciously and in proportion to risk, paying regard to both potential and actual (realized) risks.

Adaption and Innovation – The ERO Enterprise will:

- Continuously assess and prioritize its goals.
- Embrace change and encourage new ideas that contribute to effective action.
- Recognize the complex relationships and potential tensions between reliability objectives and business imperatives (including cost control).
- Be nimble and artful in development of tools and dissemination of lessons learned and other information to respond to novel, unfamiliar, and emerging challenges.

Excellence – The ERO Enterprise will:

- Promote and rely upon the active participation of the best technical leaders from industry.
- Strive for excellence and efficiency in all aspects of Enterprise activities.

Efficiency – The ERO Enterprise will make informed decisions regarding efficient use of its resources and resources shared by industry, with due consideration of cost.

Integrity – The ERO Enterprise will:

- Maintain the highest levels of professional and ethical conduct.
- Be independent, impartial, fair, intellectually honest, truthful, and candid.
- Be rigorous and thorough in all it does, doing the right things the right way.
- Earn trust by treating every person with fairness and respect.
- Work to meet or exceed expectations of stakeholders.

Four Pillars ~~for~~Of Success

In order to succeed, the ERO Enterprise will emphasize:

- **Reliability** – to address events and identifiable risks, thereby ensuring the reliability of the BES through proper mitigation and remediation.
- **Assurance** – to provide assurance to the public, industry, and government for the reliable performance of the BES.

- **Learning** – to promote learning and continuous improvement of operations and adapt to lessons learned for BES reliability.
- **Risk-Based Approach** – to focus attention, resources, and actions on issues most important to BES reliability.

Strategic Goals ~~2015–2018~~2016–2019

The ERO Enterprise has identified five goals in the following strategic areas: standards; compliance **monitoring, enforcement**, registration, and certification; risks to reliability; **and** coordination; and collaboration.

Standards

Goal 1. Develop clear, reasonable, and technically sound mandatory ~~reliability standards~~Reliability Standards in a timely and efficient manner. These standards establish threshold requirements for assuring the BES is planned, operated, and maintained ~~in a manner that minimizes~~to minimize risks of cascading failures, avoids damage to major equipment, or limits interruptions of bulk electric supply.

Objectives and valued outcomes include:

- Reliability Standards are clear, responsive to reliability and security risks, practical to implement, and cost-effective.**

Key deliverables include:

- ~~Ensure all standards meet quality and results-based criteria¹ by 2017 with subsequent~~ **Include in** periodic ~~review~~reviews **an assessment of whether the Reliability Standard is properly structured for emerging risks.**
- Evaluate significant BES events (Category 3 and above) to identify and address any gaps in ~~standards~~**Reliability Standards.**
- ~~Develop a BES risk profile and assess standards~~**Assess Reliability Standards** compared to the **BES risk** profile; address the most important unmitigated risks, including applicable high-impact, low-frequency risks.
- **Develop and use ERO Enterprise feedback loops to provide information from compliance and other program areas to assist in development of Reliability Standard improvement projects.**
- Address all high-priority risks that are designated for mitigation through a ~~standard~~**Reliability Standard** within one year, or two years if technical study is required.
- Address all new ~~FERC~~directives **from applicable governmental authorities** within one year, or two years if technical study is required; ~~close all pre-2013 directives by 2015 (by filing or negotiated resolution).~~

¹Quality criteria are the attributes of excellent reliability standards as stated in Section 300 of NERC's Rules of Procedure. Results-based criteria mean each requirement defines a performance outcome, risk mitigation, or essential competency necessary for a reliable BES.

- Facilitate smooth transition to new ~~standards~~**Reliability Standards**, including providing ~~standards~~**Reliability Standards** implementation guidance **when needed** in collaboration with industry.
- ~~Continue to develop~~**Develop** and implement procedures for assessing the cost-effectiveness ~~impact~~ **of Reliability Standards**, as needed.

Compliance **Monitoring, Enforcement, Registration, and Certification**

Goal 2. Be a strong enforcement authority that is independent, without conflict of interest, objective, and fair, and promote a culture of reliability excellence through risk-informed compliance monitoring and enforcement. The ERO Enterprise retains and refines its ability to use ~~standards~~**Reliability Standards** enforcement when warranted and imposes penalties and sanctions commensurate with risk.

Objectives and valued outcomes include:

- The ERO Enterprise registers and deregisters entities commensurate with risk to the BES and ensures all key reliability entities are certified to have essential capabilities.**

Key deliverables include:

- ~~Continue to implement~~**Consistently register entities based on risk to the BES and** the BES definition.
- ~~Evaluate t~~The certification program ~~for sufficiency and effectiveness; modify as needed~~ **is effective and implemented consistently across the ERO Enterprise.**
- ~~Implement criteria for registration based on risk to the BES.~~
- ~~Develop common and consistent registration and deregistration processes, information systems, and methods among regions, including ensuring that the risk determinations are informed by the Inherent Risk Assessments (IRAs).~~

- The ERO Enterprise holds industry accountable for violations ~~that create serious~~commensurate with risk to the BES; resulting actions are timely and transparent to industry.**

Key deliverables include:

- ~~Enforcement actions are proportional to risk and harm.~~**Compliance Oversight Plans developed for registered entities address relevant risks.**
- ~~Transform the Reliability Assurance Initiative (RAI) from concept to implementation.~~**ERO Enterprise compliance monitoring is focused on the most significant risks to the BES.**
- ~~Continue to develop and implement discretion-based enforcement strategies based on the RAI, such as enhancements to Find, Fix, and Track (FFT), compliance exceptions, and self-logging.~~**Non-compliance is processed using the appropriate method, considering the risk to the BES.**

- The ERO Enterprise conducts outreach, training, and education as necessary to support the smooth implementation of new Reliability Standards.

~~Goal 3. Promote a culture of compliance that supports reliability excellence within industry. The ERO Enterprise works with industry to identify standards, procedures, practices, and controls to address reliability risks.~~

~~Objectives and valued outcomes include:~~

- ~~a. Industry has effective procedures and programs to monitor, detect, correct, report, and prevent compliance, reliability, and security issues.~~

~~Key deliverables include:~~

- ~~Transform RAI from concept to implementation; all Regions implement RAI techniques and principles consistently.~~
- ~~Continue to support effective internal controls around standards.~~
- ~~Initiate compliance phase in learning periods for new standards.~~

- ~~b. All ERO Enterprise compliance activities are risk-informed, efficient, and effective.~~

~~Key deliverables include:~~

- ~~Evaluate the effectiveness of compliance program implementation. Identify program revisions and necessary Rules of Procedure changes.~~
- ~~Monitor registered entities and standards requirements commensurate with the risk to reliability and role of each type of registered entity.~~

Risks to Reliability

~~Goal 4.~~ **Goal 3. Identify the most significant risks to reliability, provide assurance for mitigating reliability risks, and promote a culture of reliability excellence.** The ERO Enterprise identifies and prioritizes reliability risks, facilitates effective solutions and interventions, and monitors results. The ERO Enterprise works with industry stakeholders and experts to ensure the mitigation of known risks to reliability and facilitates a learning environment by analyzing events, communicating lessons learned, tracking recommendations, and **implementing bestsharing good industry** practices.

Objectives and valued outcomes include:

- a. Risks are identified and prioritized based on reliability impacts, cost and practicality of assessments, **and projected resources, and emerging issues.**

Key deliverables include:

- ~~Continue RISC's work to develop risk profiles and include high impact, low frequency issues.~~ **Expand development of reliability data-grounded analyses and sustain independent, technical assessments of proposed regulatory rules or proposed statutes (state, provincial, or federal) as well as significant market rules to determine potential impacts to reliability.**
- Prepare an annual ~~state of reliability report~~ **long-term reliability assessment, special reliability assessments, State of Reliability Report**, and associated reliability metrics.
- Maintain a BES risk profile to prioritize and rank reliability risks.
- Develop project plans and business case assessments for high-priority risks; implement or facilitate initiatives to address high-priority risks.

b. Events and system performance are consistently analyzed for sequence, cause, and remediation to identify and reduce reliability risks and, trends, and lessons learned to promote BES reliability.

Key deliverables include:

- Analyze significant events **(e.g., sampling of Category 2 events in addition to assessing Category 3 and above)** to identify gaps in ~~standards~~ **Reliability Standards**, compliance effectiveness, registration, and risk controls effectiveness **as well as the development of lessons learned or other information sharing activities to promote BES reliability.**
- ~~Overcome barriers to releasing BES event reports available to industry on a timely basis through a secure portal.~~ **Continue to promote the use of the event analysis secure portal to enable industry to share their event reports with others to increase the sharing of the technical details and engineering specifics of events.**
- ~~Provide lessons learned and recommendations from events and identified risks.~~ **Continue relay misoperation performance analysis to reduce misoperations, inform industry on relay misoperations trends, and share good industry practices more widely.**
- Enhance risk analysis capabilities by integrating risk data sources, such as event analysis, ~~TADS, GADS, and relay misoperations).~~ **Transmission Availability Data System (TADS), Generating Availability Data System (GADS), and relay misoperations as well as other occurrences (e.g., AC equipment failures) to expand the ability of the ERO Enterprise to provide lessons learned and recommendations from events and identified risks and their mitigation to promote reliability.**

c. ~~ERO Enterprise supports system resiliency through industry.~~ The ERO Enterprise supports the Electricity Information Sharing and Analysis Center (E-ISAC), Cybersecurity Risk Information Sharing Program (CRISP), critical infrastructure, situational awareness, physical security, and cybersecurity preparedness and provides independent reliability information to policy makers.

Key deliverables include:

- **Develop an E-ISAC implementation strategy plan from the Electricity Sector Coordinating Council (ESCC) Strategic Review recommendations.**
- **Expand communications among the E-ISAC, the Telecommunications ISAC, and Natural Gas ISAC.**
- **Continue to facilitate deployment of CRISP technology and enhanced actionable communication among participants.**
- Expand security maturity model assessments to be widely accessible across industry.
- **Complete the implementation of the GMD Reliability Standards across industry.**
- **Oversee the implementation of the Physical Security Reliability Standard.**
- Issue and track physical security and cybersecurity recommendations to protect the BES.
- Expand the use and value of physical security and cybersecurity threat and vulnerability information sharing, analytics, and analysis.
- Implement periodic wide-area security exercises (e.g., GridEx).
- Support industry acquisition of security clearances and facilitate access to secured briefings through local fusion and law enforcement centers.
- Make available to industry anonymized, timely, and actionable information regarding threats to the BES.

d. Reliability models and data accurately represent system behavior and are shared among stakeholders.

Key deliverables include:

- Assess data and modeling needs and develop recommendations to ensure quality planning and operating data and models are available to registered entities across each interconnection.
- Evaluate event disturbances using phasor measurements and other methods to assess sufficiency of data and models.

Goal 4. ERO Enterprise identifies, evaluates, studies, and independently assesses emerging risks to reliability. The ERO Enterprise supports the development of comprehensive reliability assessments that provide a technical platform for important policy discussions on challenges facing the interconnected North American BES, including assessment of essential reliability services (ERS).

Objectives and valued outcomes include:

- a. Increase the sophistication of reliability assessments to include measurement of ERS, the amount of control (ability to observe and dispatch), and system robustness for cyber and physical security to evaluate changing behavior of the BES.

Key deliverables include:

- Conduct a reliability validation assessment of EPA final rule 111(d) considering the potential range of implementation strategies among states, including sub-regional reliability evaluation as state plans begin to emerge, to provide a sound data/analysis framework to validate and advise relevant entities of the reliability aspects of the proposed plans, including highlighting issues, risks, and education.
- Develop sufficiency/adequacy guidelines for ERS including emerging risks. Expand the considerations to encompass the comprehensive range of reliability attributes under more diverse resource mix and load behavior, such as ramping, fast regulation, reserve services, and interdependent sector performance.
- Expand the guidelines for both short-term and long-term horizons to simulate and consider fuel and other related upstream risks in reliability assessments and capacity impacts due to extreme cold weather, interstate pipeline failure, most severe single contingency, capacity shortfalls, and other assumptions.
- Enhance reliability assessments to reflect changing resource mix behavior, including distributed energy resources and ERS, with probabilistic approaches, considering the variable and energy-limited nature of the resource shifts.
- Evaluate the impacts on recovery and restoration plans including consideration of distributed resources and mitigation of risks from physical and cyber-attacks along with supply-chain considerations.

Coordination and Collaboration

Goal 5. Improve transparency, consistency, quality, and timeliness of results; operate as a collaborative enterprise; and improve efficiencies and cost-effectiveness. The ERO accomplishes this by working with the Regional Entities and registered entities to ensure effective coordination, collaboration, and process improvements. The ERO Enterprise is an efficient steward of resources and leverages information systems to create efficiencies and process controls.

Objectives and valued outcomes include:

- a. **The ERO Enterprise acts in a coordinated and collaborative manner with stakeholders.**

Key deliverables include:

- **As the international ERO, NERC and the Regions articulate a shared vision of reliability excellence and support and inspire stakeholders continent-wide, including in international jurisdictions, in working to attain that vision.**

- Maintain a list of suggestions and recommendations made by stakeholders (e.g., through policy input) and ERO Enterprise responses to each.
- Engage the support and expertise of stakeholders in prioritizing and resourcing reliability initiatives.
- Communicate expectations clearly and foster collaboration to deliver important results in advancing system reliability.
- ~~Continue the ERO Enterprise IT application and “Rigid Core / Flexible Edges” architecture strategy.~~
- ~~Clearly delineate ERO Enterprise roles and responsibilities using the ERO Enterprise Operating Model action items to mature the collaborative processes.~~

b. The ERO Enterprise acquires, engages, and retains highly qualified talent suited to the mission.

The key deliverable is **Key deliverables include:**

- Develop qualifications requirements for ~~key compliance~~**attracting, engaging, and enforcement**~~retaining key technical and leadership~~ staff across the ERO Enterprise and implement training as needed.
- **Leverage expertise across the enterprise to support the strategic plan and goals.**

c. The ERO Enterprise internal risks are understood and managed; ERO Enterprise processes are effective, efficient, and continuously improved.

The key deliverable is **Key deliverables include:**

- Implement an ERO Enterprise internal risk management program.
- Continue the ERO Enterprise IT application and “Rigid Core / Flexible Edges” architecture strategy.
- Clearly delineate ERO Enterprise roles and responsibilities using the ERO Enterprise Operating Model action items to mature the collaborative processes.