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NERC's Reliability Assurance Initiative: What Registered Entities Can Do

J. Porter Wiseman and Julia E. Sullivan

In the summer of 2003, a handful of power lines in Ohio tripped after making contact with overgrown trees. Over the next 13 minutes, the electric grid experienced cascading failures that left an estimated 50 million people in the United States and Canada without power. Two years later, Congress added Section 215 to the Federal Power Act,¹ giving the Federal Energy Regulatory Commission (FERC) jurisdiction over the reliability of the bulk power system (BPS). Section 215 also directed FERC to designate an Electric Reliability Organization (ERO) to establish and enforce reliability standards with penalties up to a million dollars per day per violation.

FERC certified the North American Electric Reliability Corporation (NERC) as the ERO² and authorized NERC to delegate its authority to monitor and enforce compliance with the reliability standards to Regional Entities (REs).³ The geographic scope of each RE is shown in **Exhibit 1**.

The mandatory reliability standards adopted under Section 215 first became effective on June 18, 2007, and from that date until December 31, 2012, NERC processed 5,115 confirmed standards violations.⁴ While all of these violations had to be processed through NERC's labyrinth of technical audits and reviews, NERC later determined that just 1.6 percent of them had a serious impact on reliability.⁵ More recently, NERC has

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worked to streamline its reliability standards, increase reliance on internal compliance programs to find, fix, and track violations that pose minimal or moderate threats, and focus enforcement resources on the violations that have the most serious potential impacts.

While all of these violations had to be processed through NERC's labyrinth of technical audits and reviews, NERC later determined that just 1.6 percent of them had a serious impact.

Under this new regime, companies that can demonstrate to NERC that they have good internal controls and a strong culture of compliance will have opportunities to ease the regulatory burden hatched by Section 215.

FAILURE OF ZERO-TOLERANCE ENFORCEMENT

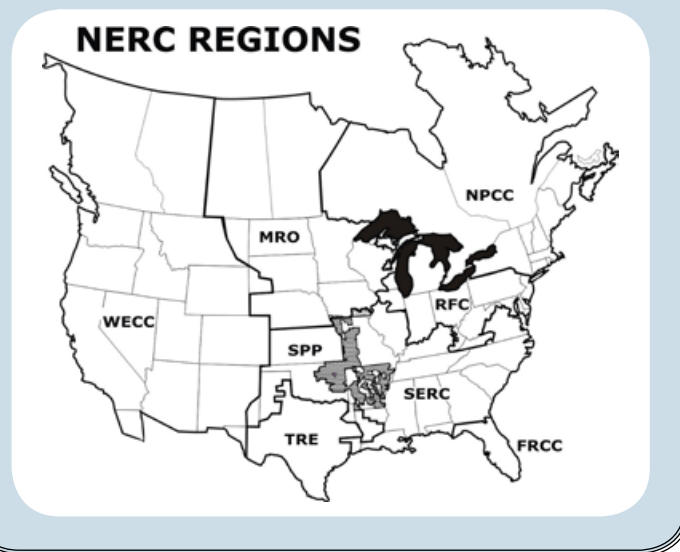
NERC and the REs originated as voluntary organizations founded in response to a 1965 blackout.⁶ By the time of the 2003 blackout, most industry participants voluntarily adhered to most of NERC's operating policies, planning standards, and compliance requirements. In 2004, NERC translated its rules into 90 standards⁷ that formed the core of the mandatory reliability requirements approved by FERC in 2007.⁸

The reliability standards, having originated in the context of voluntary industry self-regulation, are numerous, highly technical, and frequently ambiguous. They cover not only major threats to system stability, but also a vast swath of conduct that ordinarily poses little risk to the reliability of the BPS. Many of the reliability standards would be beneficial as best practices, but do not fit comfortably within a rigid enforcement framework.

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Until 2012, the ERO's⁹ enforcement approach was highly mechanistic. The delegation of enforcement authority to the REs "came with the requirement and expectation that every violation, regardless of risk, [would] be prosecuted."¹⁰ The result of this "zero-tolerance" approach was an overwhelming backlog.¹¹ As of June 18, 2007,

Exhibit 1. NERC Regions



when the reliability standards first became mandatory, NERC already had more than 5,000 potential violations to process, because, to avoid enforcement actions, entities self-reported violations before the standards became mandatory.¹² By September 2011, NERC had identified an additional 7,500 potential violations.¹³

Under the zero-tolerance framework, even minor violations resulted in drawn-out enforcement proceedings that often cost the registered entity¹⁴ more time, resources, and hassle than the violations did in penalties. NERC provided this example in a September 2011 FERC filing:

A small entity failed to have on file and available to its staff a record of the local FBI office to aid in reporting possible sabotage events, a violation of CIP-001 Requirement (R) 4. The resulting [Notice of Penalty ("NOP")] and supporting material for this single issue violation was over 40 pages long and took 21.5 months to process from discovery to the filing of the NOP.¹⁵

This seems excessive, considering that contact information for the local FBI office likely could be located on the Internet.

Entities with strong compliance programs felt penalized under this system, because they were more likely to uncover minor issues that had to be self-reported than entities with weaker compliance programs.¹⁶ As NERC observed in

a FERC petition, “[t]he focus on finding and penalizing violations appears to be leading to an undesirable, increasing focus on control and management of compliance risk and penalty liability, rather than control and management of reliability risk.”¹⁷

STREAMLINING THE RELIABILITY STANDARDS

FERC observed that if many reliability violations involve little risk to the BPS, then perhaps the standards themselves require revisions.¹⁸ FERC authorized NERC to retire 34 reliability requirements that were found to “(1) provide little protection for Bulk-Power System reliability or (2) [be] redundant with other aspects of the Reliability Standards.”¹⁹ When NERC made its submission suggesting the retirement of certain requirements, every commenter gave their support.²⁰

Recently, NERC’s CEO stated that more than 200 requirements will be abolished, while others will be revised for quality and clarity.²¹

RELIABILITY ASSURANCE INITIATIVE

Having concluded that the existing enforcement regime was “not practical, effective, nor sustainable,”²² the ERO developed the Reliability Assurance Initiative (RAI) and began implementation in early 2013.

The industry has generally embraced the reforms that have been implemented.

When fully implemented, the RAI will allow entities with strong compliance programs to take primary responsibility for the detection, remediation, and reporting of lower-risk violations, subject to RE and NERC oversight. Enforcement resources will be concentrated on violations that pose “serious or substantial” risks to the BPS, such as those involving or (potentially) resulting in extended outages, loss of load, cascading blackouts, vegetation contacts, systemic or significant performance issues, intentional misconduct, and gross negligence.²³ The RAI is scheduled to be fully implemented in 2016.

The industry has generally embraced the reforms that have been implemented to date and has urged NERC and FERC to implement the remaining changes expeditiously.

Changes to NERC’s Compliance Program

The ERO has found that the majority of reliability standard violations are discovered by the registered entity, whether through voluntary self-reporting or as part of a required self-certification. In the first quarter of 2014, registered entities detected 89 percent of reported reliability violations.²⁴ Accordingly, the ERO is revising its compliance program to improve auditing and self-reporting procedures.

The auditing changes will narrow the overall scope of audits and add an evaluation of the registered entity’s internal compliance controls.

Audit Reforms

Although registered entities remain responsible for compliance with all applicable reliability standards,²⁵ NERC has narrowed the number of standards that will be actively monitored by the ERO. For each upcoming calendar year, NERC develops an ERO Implementation Plan that includes an Actively Monitored List (AML) of reliability standards that will be the ERO’s enforcement and monitoring priorities. For 2014, the AML identified 24 standards for audit and 52 standards for self-certification,²⁶ representing a 75 percent reduction in audit scope and a 55 percent reduction in self-certification scope compared with 2013.²⁷

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According to NERC, risk assessments showed that violation of the standards included in the 2014 AML would pose a serious reliability threat. The standards included in the 2014 AML address, among other things, emergency operations during capacity or energy shortages, vegetation management, load shedding, system restoration from black-start, maintenance and testing of “protection systems,” transmission operations, and the ability of operating personnel to take real-time actions to ensure stable and reliable operation. In addition, most of the Critical Infrastructure Protection (CIP) requirements, which cover both cyber- and physical security, were included on the AML.²⁸

Currently, the ERO is developing a formal oversight framework that will supplement or

supplant the AML as the central focus of compliance monitoring.²⁹ The documentation for this framework, which includes risk assessment and internal control evaluations, is scheduled to be completed by mid-2014. The new framework will then be incorporated into the 2015 ERO Implementation Plan, which should be complete in October 2014.

This new framework will tie into the ongoing standardization of the audit process. In August 2013, the REs adopted a standard auditing checklist, and the ERO has released the first draft of a *Compliance Auditor Manual and Handbook*.³⁰ The *Auditor Manual* includes standardized processes for risk-based audit scoping and assessing a company's internal compliance controls. By the end of 2014, NERC anticipates that the *Auditor Manual* will be in use for all audits.³¹

NERC is also revising its Reliability Standard Audit Worksheets so that they are more concise and more accommodating of an entity's internal compliance controls.

Emphasis on Self-Reporting

The ERO is seeking to improve the process for self-reporting violations.

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In April 2014, the ERO released a self-report user guide with examples to explain what information needs to be included in a self-report.³² The guide describes how much information needs to be submitted and provides risk assessment guidelines. The guide also emphasizes that mitigation should be undertaken as soon as possible after the discovery of a violation and that the self-report should include information regarding mitigating activities that are in progress. The guide explains that "having comprehensive information on such actions early in the process . . . will enhance the likelihood that a [formal] Mitigation Plan will not be necessary to convey the information on mitigation activities."³³

If a mitigation plan *is* required, the ERO has released a mitigation plan drafting guide that provides clear examples of what should be included and the level of detail required.³⁴ However, the ERO may be moving away from requiring for-

mal mitigation plans for violations that pose little risk. The NERC rules of procedure require that a registered entity found in violation of a reliability standard must develop and submit a proposed mitigation plan to correct the violation.³⁵ However, with the new emphasis on self-reporting and abbreviated enforcement mechanisms, more issues are likely to be resolved without a formal finding of a reliability violation.

NERC and the REs also have begun testing an aggregated self-reporting mechanism for minimal risk violations.³⁶ Using this mechanism, a registered entity would self-assess, identify, and mitigate minimal risk breaches of the reliability standards and then report them in an aggregated spreadsheet every six months. NERC intends for the final incarnation of the program to feature real-time reporting via a web portal, with review of the aggregated violations by the RE taking place twice a year.

Changes to NERC's Enforcement Program

The ERO is implementing abbreviated enforcement procedures that are intended to reduce the administrative burden on ERO staff and registered entities. The centerpiece of this effort is the "find, fix, track, and report," or FFT, mechanism,³⁷ which FERC approved in March 2012. FFT allows NERC and the REs to post informational reports regarding certain violations, rather than filing a notice of penalty with FERC for each violation. Although the FFT mechanism does not provide for penalties, it is considered an enforcement mechanism and represents a rough equivalent to a "no contest" option for the registered entity. FFT reports do not contain a finding that a violation actually occurred, but the possible violation will be recorded in the registered entity's compliance history.

The FFT process is available for violations that pose a "lesser risk" to the BPS, and for a "limited pool" of violations that pose a "moderate risk."³⁸ The compliance history of the registered entity is a consideration in determining if FFT treatment is available, as is whether the particular possible violation was self-reported.³⁹ The registered entity is expected to mitigate the possible violation, although it is not required to create a formal mitigation plan.

The mitigation of a possible violation is subject to confirmation. If it turns out that the

problem has not been mitigated, then the possible violation will henceforth be treated as a continuing violation and be ineligible for FFT treatment.⁴⁰ FERC has authorized the inclusion of unmitigated possible violations in FFT filings; however, full mitigation measures must be in place within 90 days of the FFT filing.⁴¹ On June 20, 2014, NERC made a compliance filing with FERC requesting authority to approve case-by-case extensions of the time frame for completing mitigation measures to 12 months, with the possibility of further extensions if warranted.⁴² NERC observed that not all violations can be corrected within 90 days, and that circumstance should not bar a registered entity from receiving FFT treatment.

As of June 20, 2014, almost 2,000 FFTs had been processed since the program began in September 2011.⁴³ The processing time for violations has been reduced from an average of more than 13 months to between six and seven months over the course of 2013,⁴⁴ and NERC's processing backlog has been substantially reduced.

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On January 1, 2014, the REs adopted an "improved process flow," or "triage," for the timely resolution of minimal risk issues. Under this process, the RE will examine a potential violation

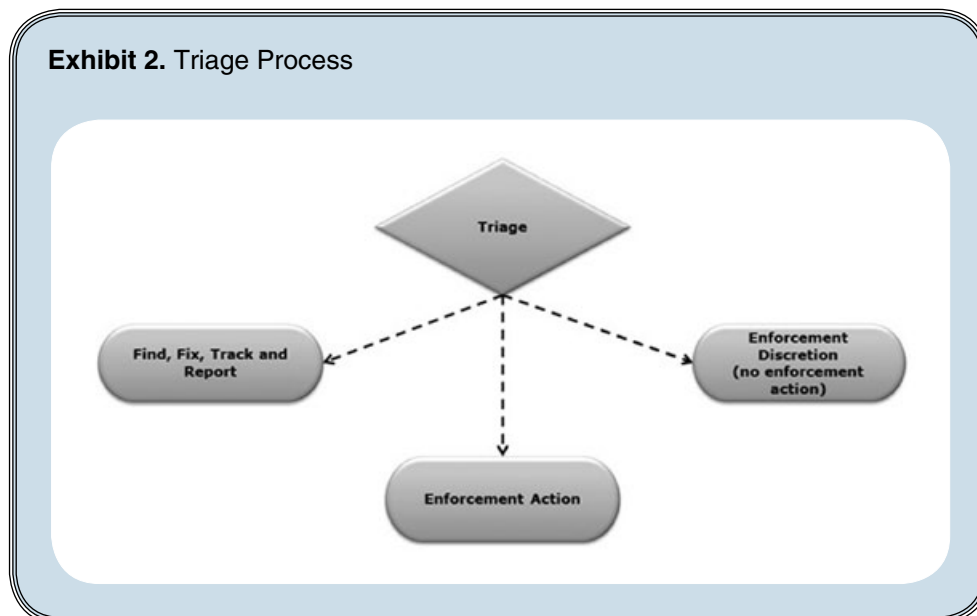
and determine if it is a minimal risk violation. If it is a minimal risk violation, then usually it will be processed using the FFT mechanism. Alternatively, the RE might determine that more information is needed, or that the violation is serious enough to warrant a full enforcement action.⁴⁵

NERC plans to further expand the triage options to include a "prosecutorial discretion" option that would allow minimal risk issues to be identified, recorded, and mitigated without becoming a "possible violation" and without triggering any sort of enforcement action, even an FFT. Six REs began pilots of this alternative process in November 2013.⁴⁶ NERC hopes to eventually extend the possibility of prosecutorial discretion to moderate risk violations. **Exhibit 2** shows the triage process and the possible outcomes.

STRONG COMPLIANCE PROGRAM VITAL FOR TAKING ADVANTAGE OF PROCEDURAL INNOVATIONS

Internal compliance programs already play a major role in reliability monitoring and enforcement. The NERC sanction guidelines consider strong compliance programs, self-reports, and voluntary remediation to be mitigating factors in assessing penalties. The changes being adopted as part of the RAI will make internal compliance programs even more central to the reliability regime.

NERC's monitoring and enforcement processes take into account the risk posed to the BPS by a particular entity. Key to this calculation is the registered entity's compliance his-



tory and internal controls. Registered entities with strong compliance programs will be able to expect less scrutiny, lower penalties, and more access to FFT and prosecutorial discretion. Registered entities with weak compliance programs should expect more scrutiny, higher penalties, and more frequent audits. New auditing procedures will include an assessment of the registered entity's internal controls. Entities that do not wish to provide information on their internal controls will not be required to do so,⁴⁷ but because strong compliance programs are likely to result in reduced oversight, the incentive for most registered entities will be to provide information on their internal controls.

Because strong compliance programs are likely to result in reduced oversight, the incentive for most registered entities will be to provide information on their internal controls.

As NERC defines it, an internal control program “consists of processes, practices, policies or procedures” employed to help “provide a Registered Entity with reasonable assurance of compliance with the requirements of the Reliability Standards.”⁴⁸ The scale and complexity of an entity's internal controls will depend on its registered functions and size and its particular risk profile. NERC's most recent compliance filing concerning the FFT program listed internal control program (ICP) features that the ERO had found to be mitigating with regard to “real-life” reliability violations.

- NERC compliance or NERC compliance training were apparent in the registered entity's ICP; the ICP was widely available or distributed;
- the registered entity updated policies and procedures on a periodic basis to comply with the NERC Reliability Standards;
- the registered entity updated the ICP on a periodic basis;
- senior management oversaw the ICP; and
- the team that administered the ICP was independent and had access to the chief executive officer⁴⁹

Updating internal controls is mentioned twice on this list, on par with senior management in-

volvement. The ERO expects registered entities to continuously improve their internal controls, taking into account the controls already in place and their effectiveness. A reliability compliance program should be a “living document” and should be revised and updated continuously to reflect industry best practices. The need to monitor and incorporate industry best practices is particularly important with respect to security-related issues, as violations of the CIP standards are the most common reliability violations, are included on the AML, and require constant vigilance as potential threats evolve and emerge.

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A strong reliability compliance program also embraces a policy of self-reporting and submitting mitigation plans with self-reports, or shortly afterward. Both FERC and NERC view self-reporting extremely favorably. Self-reporting can result in decreased penalties, increased chance of FFT treatment, and reduced scrutiny.

In a broader sense, the ERO is looking for evidence of a culture of compliance. At a recent FERC technical conference, Gerry Cauley, the president and CEO of NERC, outlined some features of a “culture of reliability excellence” that the ERO would like to see in registered entities. He mentioned the following “sample indicators of an effective culture of reliability excellence”:

- Awareness and empowerment and training for all employees to do the right thing for reliability and customer service
- Awareness and attention to reliability at the top levels of executive management and the board
- A focus on small failures and near-misses—what can be learned and fixed to prevent bigger events
- Deference toward the technical experts on reliability matters
- A focus on learning and continuous improvement
- Continuous scanning to anticipate significant emerging risks
- Commitment to reliability actions and investments⁵⁰

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