

March 30, 2018

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: NERC Standards Report, Status and Timetable for Addressing Regulatory Directives
Docket No. RR09-6-003

Dear Secretary Bose:

The North American Electric Reliability Corporation (“NERC”) hereby submits the 2018 NERC Standards Report, Status and Timetable for Addressing Regulatory Directives (the “Directives Report”) in accordance with Section 321.6 of the NERC Rules of Procedure (“ROP”).¹ This annual report summarizes the progress made, and plans for addressing the Reliability Standards-related directives issued by applicable governmental authorities.

Section 321.6 of NERC’s ROP requires NERC, on or before March 31 of each year, to file a report with applicable governmental authorities on the status and timetable for addressing each outstanding regulatory directive. As discussed in the attached Directives Report, since NERC’s 2017 annual directives report filed on March 31, 2017, the Commission issued one directive.² In that time, NERC filed petitions with the Commission addressing 13 directives. Currently, there are 13 outstanding directives, six of which NERC is addressing through existing standards development current projects. The other outstanding directives are not related to Reliability Standards development (i.e., the directives relate to data gathering, registration, or the performance of research/studies) and being addressed through other mechanisms.

The 2018-2020 Reliability Standards Development Plan (“RSDP”) provides a plan to address the remainder of the standards-related directives. NERC’s annual RSDP establishes priorities related to Reliability Standards to help ensure that those issues that most directly impact Bulk-Power System reliability are addressed first. Directives to create new or modify existing Reliability Standards are assigned to existing

¹ The Federal Energy Regulatory Commission (“FERC” or “Commission”) approved Rule 321 on March 17, 2011 in the above captioned docket. *Order on Compliance Filing*, 134 FERC ¶ 61,216 (2011).

² See *Reliability Standard for Transmission System Planned Performance for Geomagnetic Disturbance Events*, Order on GMD Research Work Plan, 161 FERC ¶ 61,048 (2017).

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or future development projects that are prioritized by the NERC Standards Committee and reflected in the RSDP. The 2018-2020 RSDP was filed with the Commission on December 21, 2017.³

The attached Directives Report includes the following appendices to aid in understanding the specific regulatory directives received to date and the standard development projects assigned to address those directives:

- Appendix A – Directives Issued by the Commission Since April 1, 2017
- Appendix B – Directives Addressed Since April 1, 2017
- Appendix C – Outstanding Directives

In prior years, the report included more historical data. Appendix A of the prior Directive Reports listed all FERC orders that included directives, including the date the order was issued, the numbers of directives from that order, and the year those directives were addressed. Further, Appendix B of those prior Directive Reports listed all of the directives issued by Commission since the initial set of NERC's Reliability Standards became mandatory and enforceable within the United States, and included a summary of each directive, information on the order in which it was issued, and the status of the directive. After consultation with Commission staff, NERC sought to streamline the Directives Report to provide updates on directives addressed since the last report and the status of any outstanding directives. As NERC has made significant progress over the last several years to remove the backlog of outstanding directives, the historical data was no longer a useful measure for tracking progress.

Please contact me if you have questions or need additional information.

Respectfully submitted,

/s/ Shamai Elstein

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³ NERC's 2018-2020 RSDP is accessible at the following link:
<https://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/2018-2020%20RSDP%20FERC%20Filing.pdf>.

NERC Standards Report

Status and Timetable for Processing Regulatory
Directives

March 30, 2018

RELIABILITY | ACCOUNTABILITY



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Chapter 1 – Introduction

In accordance with Section 321.6 of the North American Electric Reliability Corporation (“NERC”) Rules of Procedure (“ROP”),¹ this report provides an update on the status and timetable for addressing outstanding directives issued by the Federal Energy Regulatory Commission (“FERC” or “Commission”). This is the ninth annual directives report summarizing NERC’s progress and plans for addressing outstanding directives issued by the Commission.

As discussed below, since NERC’s 2017 annual directives report filed on March 31, 2017, the Commission has issued one directive.² In that time, NERC has filed petitions with the Commission addressing 13 outstanding directives. Currently, there are 13 outstanding directives, six of which NERC is addressing through existing standards development current projects. The other outstanding directives are not related to Reliability Standards development (i.e., the directives relates to data gathering, registration, or the performance of research/studies) and being addressed through other mechanisms.

NERC’s 2018-2020 Reliability Standards Development Plan (“RSDP”) provides a plan to address the outstanding Reliability Standards-related directives. NERC’s annual RSDP establishes priorities related to Reliability Standards to help ensure that those issues that most directly impact Bulk-Power System reliability are addressed first. Directives to create new, or modify existing, Reliability Standards are assigned to existing or future development projects that are prioritized by the NERC Standards Committee and reflected in the RSDP. The 2018-2020 RSDP was filed with the Commission on December 21, 2017.³

¹ Section 321.6 of NERC’s ROP requires NERC, on or before March 31 of each year, to file a report with applicable governmental authorities on the status and timetable for addressing each outstanding regulatory directive.

² See *Reliability Standard for Transmission System Planned Performance for Geomagnetic Disturbance Events*, Order on GMD Research Work Plan, 161 FERC ¶ 61,048 (2017).

³ NERC’s 2018-2020 RSDP is accessible at the following link:
<https://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/2018-2020%20RSDP%20FERC%20Filing.pdf>.

Chapter 2 – Status of Directives

Appendix A to this report contains a list of all of the directives issued by Commission since the 2017 directives report. Appendix B contains a complete list of the directives NERC addressed since the 2017 directives report. Appendix C provides a list of the outstanding directives and an update on NERC's plans to address those directives.

Tabulated by year of issuance, the number of directives issued and addressed since 2007 is provided in Table 1:

| Year | Issued | Addressed |
|-------------------------------|------------|-----------------|
| 2007 | 435 | 40 |
| 2008 | 123 | 99 |
| 2009 | 62 | 102 |
| 2010 | 67 | 49 |
| 2011 | 32 | 121 |
| 2012 | 18 | 31 ⁴ |
| 2013 | 42 | 143 |
| 2014 | 10 | 104 |
| 2015 | 26 | 80 |
| 2016 | 13 | 25 |
| 2017 | 5 | 14 |
| 2018 (through March 30, 2018) | 0 | 5 |
| Total | 833 | 813 |

⁴ A directive previously indicated as being resolved in 2012 was withdrawn by FERC Order 788 and, in turn, was moved to 2013.

Chapter 3 – Conclusion

NERC is continuing to work closely with industry stakeholders and FERC to resolve all outstanding directives. Completing the majority of this work has provided the opportunity for industry to strategically review the standards and address as many directives as possible to date.

Appendix A – Directives Issued Since April 1, 2017

Directives Issued by the Commission since April 1, 2017

Below is a list of all of the directives issued by Commission since the last directives report. The table includes a summary of the directive, information on the order in which it was issued, and the status of the directive.

| Directives Issued by Commission Order since April 1, 2007 | | | | | | |
|---|---------------------------------|------------------|-----------|--------------------------------|---------------------|--------------------------------------|
| Directive Summary | Document Name | Publication Date | Order No. | FERC ORDER / DOCKET | Paragraph Reference | Status |
| “In addition, we direct NERC to file for Commission review a final, or otherwise updated, GMD Work Plan within six months of the date of this order.” | Order on GMD Research Work Plan | 10/19/2017 | | 161 FERC ¶ 61,048/ RM15-11-002 | 1 | On track to be filed April 19, 2018. |

Appendix B –Directives Addressed since April 1, 2017

Directives Addressed Since April 1, 2017

Below is a list of all of the directives NERC addressed since the last directives report. The table includes a summary of the directive, the action taken to address the directive, as well as the NERC project name and date of filing with the Commission.

| Directives Addressed since April 1, 2017 | | | |
|---|--|---|--|
| Directive Summary | Action Taken | Project Name | Filing Date |
| <p>S-Ref 10919 - The Commission adopts the proposal to direct NERC to make an informational filing addressing whether Reliability Standard CIP-014-1 provides physical security for all “High Impact” control centers, as that term is defined in Reliability Standard CIP-002-5.1, necessary for the reliable operation of the Bulk-Power System. However, the Commission extends the deadline for that informational filing until two years following the effective date of Reliability Standard CIP-014-1.</p> <p>The Commission adopts the NOPR proposal and directs NERC to submit an informational filing that addresses whether there is a need for consistent treatment of “High Impact” control centers for cybersecurity and physical security purposes through the development of Reliability Standards that afford physical protection to all “High Impact” control centers. The Commission, however, modifies the NOPR proposal and extends the due date for the informational filing to two years following the effective date of Reliability Standard CIP-014-1.</p> <p>NERC indicated that NERC staff will submit to the NERC Board of Trustees a report three months following implementation of Requirements R1, R2 and R3 concerning the scope of facilities identified as critical, including the number of facilities identified as critical and their defining characteristics. NERC also committed to sending this report to Commission staff.</p> | Report submitted to FERC | CIP-014 Report Physical Security Protection for High Impact control Centers | 10/2/2017 |
| <p>S-Ref 10920 - “[W]e direct NERC to obtain, maintain, and make available to the Commission upon request, one year following the effective date of the standard and on an annual basis thereafter, data sufficient to analyze the effectiveness of PRC-005-3, whether it be through NERC’s Event Analysis process or other means.</p> | The Events Analysis process now collects data on how many times auto-reclosing has | NA | Data is being collected as part of NERC’s Events Analysis process and will be made available to the Commission upon request. |

| Directives Addressed since April 1, 2017 | | | |
|---|---|--------------|-------------|
| Directive Summary | Action Taken | Project Name | Filing Date |
| Specifically, NERC is to collect relevant information regarding Bulk Power System events that involve high speed auto-reclosing relays. Such information would include the operations of auto-reclosing relays and their supervisory functionalities (e.g., time delays, synchronism check, voltages, etc.) that caused or exacerbated the events, and any unintended consequences of the events. The Commission encourages NERC and FERC staff to collaborate on the specific data to be collected, which could include, but is not limited to, the approximate distance from the fault and the generation loss associated with the event. Further, the Commission is also interested in knowing if those auto-reclosing relays identified as causing or exacerbating an event operated as designed, and if PRC-005-3 is applicable to the auto-reclosing relays that were involved. We expect NERC to share all appropriate data as needed to evaluate auto-reclosing relay performance, in accordance with our general expectation that NERC will “cooperate with and share all appropriate data and information with Commission staff” as needed “to ensure that the ERO Enterprise and the Commission are both able to effectively perform their duties under section 215 of the FPA.” | an effect on a reportable event. | | |
| S-Ref 10949 - “[W]e direct NERC to conduct a study that assesses the effectiveness of the CIP version 5 remote access controls, the risks posed by remote access-related threats and vulnerabilities, and appropriate mitigating controls for any identified risks. NERC should consult with Commission staff to determine the general contents of the directed report. We direct NERC to submit a report on the above outlined study within one year of the implementation of the CIP version 5 Standards for High and Medium Impact BES Cyber Systems.” | NERC filed a Remote Access Study Report | NA | 6/30/2017 |
| S- Ref 10951 - “[W]e direct NERC to develop a forward-looking, objective-based Reliability Standard to require each affected entity to develop and implement a plan that includes security controls for supply chain management for industrial control system hardware, software, and services associated with bulk electric system operations. The new or modified Reliability Standard should address the following security objectives, discussed in | NERC developed a new standard (CIP-013-1) and modified two existing standards (CIP-005-6, CIP-010-2). | 2016-03 | 9/26/2017 |

| Directives Addressed since April 1, 2017 | | | |
|---|---|----------------|------------------|
| Directive Summary | Action Taken | Project Name | Filing Date |
| <p>detail below: (1) software integrity and authenticity; (2) vendor remote access; (3) information system planning; and (4) vendor risk management and procurement controls. In making this directive, the Commission does not require NERC to impose any specific controls, nor does the Commission require NERC to propose “one-size-fits-all” requirements. The new or modified Reliability Standard should instead require responsible entities to develop a plan to meet the four objectives, or some equally efficient and effective means to meet these objectives, while providing flexibility to responsible entities as to how to meet those objectives.”</p> | | | |
| <p>S-Ref 10952P44: “[T]he Commission, as proposed in the NOPR, directs NERC to develop revisions to the benchmark GMD event definition so that the reference peak geoelectric field amplitude component is not based solely on spatially-averaged data.”</p> <p>P47: “Without prejudging how NERC proposes to address the Commission’s directive, NERC’s response to this directive should satisfy the NOPR’s concern that reliance on spatially-averaged data alone does not address localized peaks that could potentially affect the reliable operation of the Bulk-Power System.”</p> <p>P48: “NERC could revise [the standard] to apply a higher reference peak geoelectric field amplitude value to assess the impact of localized hot spots on the Bulk-Power System, as suggested by the Trade Associations.”</p> <p>P49: “Consistent with Order No. 779, the Commission does not specify a particular reference peak geoelectric field amplitude value that should be applied to hot spots given present uncertainties.”</p> | <p>TPL-007-1 was revised to address the directives.</p> | <p>2013-03</p> | <p>1/22/2018</p> |
| <p>S-Ref 10953- P65: “Consistent with our determination above regarding the reference peak geoelectric field amplitude value, the Commission directs NERC to revise Requirement R6 to require registered entities to apply spatially averaged and non-spatially averaged peak geoelectric field values, or some equally efficient</p> | <p>TPL-007-1 was revised to address the directives.</p> | <p>2013-03</p> | <p>1/22/2018</p> |

| Directives Addressed since April 1, 2017 | | | |
|--|--|--------------|-------------|
| Directive Summary | Action Taken | Project Name | Filing Date |
| and effective alternative, when conducting thermal impact assessments.” | | | |
| <p>S-Ref 10954 P 88: “The Commission ... adopts the NOPR proposal in relevant part an directs NERC to develop revisions to Reliability Standard TPL-007-1 to require responsible entities to collect GIC monitoring and magnetometer data as necessary to enable model validation and situational awareness, including from any devices that must be added to meet this need.</p> <p>The NERC standard drafting team should address the criteria for collecting GIC monitoring and magnetometer data discussed below and provide registered entities with sufficient guidance in terms of defining the data that must be collected, and NERC should propose in the GMD research work plan how it will determine and report on the degree to which industry is following that guidance.”</p> <p style="text-align: center;">Magnetometer Requirements</p> <p>P90: “In developing a requirement regarding the collection of magnetometer data, NERC should consider the following criteria discussed at the March 1, 2016 Technical Conference: (1) the data is sampled at a cadence of at least 10-seconds or faster; (2) the data comes from magnetometers that are physically close to GIC monitors; (3) the data comes from magnetometers that are not near sources of magnetic interference (e.g., roads and local distribution networks); and (4) data is collected from magnetometers spread across wide latitudes and longitudes and from diverse physiographic regions.”</p> <p style="text-align: center;">GIC Requirements</p> <p>P 91: “Each responsible entity that is a transmission owner should be required to collect necessary GIC monitoring data. However, a transmission owner should be able to apply for an exemption from the GIC monitoring data collection requirement if it demonstrates that little or no value would be added to planning and operations.</p> | TPL-007-1 was revised to address the directives. | 2013-03 | 1/22/2018 |

| Directives Addressed since April 1, 2017 | | | |
|--|---|----------------|------------------|
| Directive Summary | Action Taken | Project Name | Filing Date |
| <p>In developing a requirement regarding the collection of GIC monitoring data, NERC should consider the following criteria discussed at the March 1, 2016 Technical Conference: (1) the GIC data is from areas found to have high GIC based on system studies; (2) the GIC data comes from sensitive installations and key parts of the transmission grid; and (3) the data comes from GIC monitors that are not situated near transportation systems using direct current (e.g., subways or light rail.”</p> <p>***</p> <p>P 91: GIC monitoring and magnetometer locations should also be revisited after GIC system models are run with improved ground conductivity models. NERC may also propose to incorporate the GIC monitoring and magnetometer data collection requirements in a different Reliability Standard (e.g., real-time reliability monitoring and analysis capabilities as part of the TOP Reliability Standards).</p> <p>P 92: “[T]he Commission determines that requiring responsible entities to collect necessary GIC monitoring and magnetometer data, rather than install GIC monitors and magnetometers, affords greater flexibility while obtaining significant benefits.”</p> | | | |
| <p>S-ref 10955 P 101: “The Commission directs NERC to modify Reliability Standard TPL-007-1 to include a deadline of one year from the completion of the GMD Vulnerability Assessments to complete the development of corrective action plans.”</p> <p>P 102: “The Commission also directs NERC to modify Reliability Standard TPL-007-1 to include a two-year deadline after the development of the corrective action plan to complete the implementation of non-hardware mitigation and four-year deadline to complete hardware mitigation...”</p> <p>“The Commission agrees that NERC should consider extensions of time on a case-by-case basis.”</p> | <p>TPL-007-1 was revised to address the directives.</p> | <p>2013-03</p> | <p>1/22/2018</p> |

| Directives Addressed since April 1, 2017 | | | |
|--|--|--------------|------------------|
| Directive Summary | Action Taken | Project Name | Filing Date |
| <p>S-Ref 10956 P 77: “First, the Commission adopts the NOPR proposal and directs NERC to submit a GMD research work plan and, subsequently, informational filings that address the GMD-related research areas identified in the NOPR, additional research tasks identified in this Final Rule... and, in NERC’s discretion, any GMD-related research areas generally that may impact the development of new or modified GMD Reliability Standards.”</p> <p>“The research required by this directive should be informed by ongoing GMD-related research efforts of entities such as [USGS], [NOAA], [NASA], [DOE], academic and other publicly available contributors, including work performed for the National Space Weather Action Plan.”</p> <p>P 81: “[W]e do not set specific deadlines for completion of the research; we only require NERC to submit the GMD research work plan within six months of the effective date of a final rule. The GMD research work plan, in turn, should include target dates for the completion of research topics and the reporting of findings to the Commission.</p> <p>The Commission intends to notice and invite comment on the GMD research work plan.</p> <p>An extension of time to submit the GMD research work plan may be available if six months proves to be insufficient.</p> <p>In addition, given the uncertainties commonly associated with complex research projects, the Commission will be flexible regarding changes to the tasks and target dates established in the GMD research work plan.”</p> | <p>A GMD work plan was created and filed.</p> | <p>NA</p> | <p>5/30/2017</p> |
| <p>S-Ref 10956- P68: “[W]e direct NERC to assign a “high” violation risk factor to Reliability Standard BAL-002-2, Requirements R1 and R2.”</p> | <p>BAL-002-02 was revised to address the directive</p> | <p>NA</p> | <p>8/14/2017</p> |

Appendix B –Directives Addressed since April 1, 2017

| Directives Addressed since April 1, 2017 | | | |
|---|--|-------------------|-------------|
| Directive Summary | Action Taken | Project Name | Filing Date |
| S-Ref 10752 - The Commission directs RFC to add time horizons to the two main requirements when RFC reviews BAL-502-RFC-02 at the scheduled five-year review. | BAL-502-RF-003 was revised to address the directive. | Regional Standard | 9/7/2017 |
| S-Ref 10753 - Consider, at the time of its five-year review, whether to add a requirement to BAL-502-RFC-02 that would require Planning Coordinators to identify any gap between the needed amount of planning reserves defined in Requirement R1.1 and the planning reserves determined from the resource adequacy analysis. | BAL-502-RF-003 was revised to address the directive. | Regional Standard | 9/7/2017 |
| S-Ref 10893 - Direct NERC to report on the use of footnote 12 including the use and effectiveness of the local regulatory review and NERC review. This report is important because it will provide an analysis of the use of footnote 12, including but not limited to information on the duration, frequency and magnitude of planned non-consequential load loss, and typical (and if significant, atypical) scenarios where entities plan for non-consequential load loss. | Data was collected and filed with FERC. | NA | 3/30/2018 |

Appendix C – Outstanding Directives

Outstanding Directives

Below is a list of the outstanding directives as of the date of this filing.

| Directive Summary | Owner | Publication Date | Order No. | FERC ORDER / DOCKET | Paragraph Reference | Project Number | Project Name | Status |
|--|----------------------|-------------------------|-------------------|----------------------------|---|----------------|--------------|--|
| <p>S-Ref 10101 - Collect outage data for transmission outages of lines that cross both federal and non-federal lands, analyze it, and use the results to develop a standard that would apply to both federal and non-federal lands.</p> <p>NERC should gather and analyze the necessary data regarding vegetation management issues on public lands. If NERC’s analysis indicates that there are issues that should be addressed, NERC should propose a means to address the concern, for example by issuing an alert, or propose other appropriate action.”</p> | Performance Analysis | 3/16/2007; 3/21/2013 | Order 693, 777 | RM06-16-000; RM12-4-000 | Order 693 Para 732; Order 777 Para 129, 130 | NA | NA | Ongoing- NERC is currently analyzing data. |
| <p>S-Ref 10917 - Accordingly, should NERC make changes to Table 1 based upon NERC’s Procedure document, the Commission directs NERC to submit an informational notice describing the basis for the changes at least 30 days in advance of the effective date of any such changes.</p> | Performance Analysis | 1/16/2014 | Order 794 | RM13-11-000 | Para 100 | NA | NA | Table 1 was not modified last year. For details, see FRAA filed in this docket on November 29, 2017. |

Table 3: Directives by Commission Order

| Directive Summary | Owner | Publication Date | Order No. | FERC ORDER / DOCKET | Paragraph Reference | Project Number | Project Name | Status |
|---|----------------------|------------------|-----------|---------------------|---------------------|----------------|--------------|--|
| S-Ref 10912 - The Commission directs NERC to continue its evaluation of the use of the linear regression methodology based upon experience and data collected following the implementation of BAL-003-1 and to submit a report to the Commission within three months after two years of operating experience once Requirement R1 of BAL-003-1 becomes effective (i.e., 27 months from the effective date of Requirement R1). The report should assess the accuracy of the linear regression methodology compared to the median methodology for purposes of determining Frequency Response Measure. Based on this report and actual experience, the Commission may revisit this issue. | Performance Analysis | 1/16/2014 | Order 794 | RM13-11-000 | Para 34 | NA | NA | On track for submission on July 1, 2018. |
| S-Ref 10913 - The Commission adopts the NOPR proposal and directs NERC to submit a report that provides an analysis of the availability of resources for each balancing authority and Frequency Response Sharing Group to meet its Frequency Response Obligation during the first year of implementation. However, NERC indicates in its comments that it needs more than the proposed 15 months to prepare the report based on the time frame for NERC to receive relevant data from applicable entities. Accordingly, we direct NERC to submit this report within 27 months of implementation of Requirement R1. Further, consistent with NERC's representation in its comments, the Commission directs that, upon completion of the required analysis, should the findings indicate that the Frequency Response Obligation was not met, NERC shall provide appropriate recommendations to ensure that frequency response can be maintained at all times within each balancing authority's footprint. | Performance Analysis | 1/16/2014 | Order 794 | RM13-11-000 | Para 60 | NA | NA | On track for submission on July 1, 2018. |

Table 3: Directives by Commission Order

| Directive Summary | Owner | Publication Date | Order No. | FERC ORDER / DOCKET | Paragraph Reference | Project Number | Project Name | Status |
|--|--------------|------------------|-----------|---------------------------|---------------------|----------------|--------------------------|---|
| S-Ref 10894 - Direct NERC to modify Reliability Standard TPL-001-4 to address the concern that the six month threshold could exclude planned maintenance outages of significant facilities from future planning assessments. | Standards | 10/17/2013 | Order 786 | RM12-1-000 and RM13-9-000 | Para 40 | 2015-10 | Single Points of Failure | In development |
| S-Ref 10896 - Directs NERC to consider a similar spare equipment strategy for stability analysis upon the next review cycle of Reliability Standard TPL-001-4. | Standards | 10/17/2013 | Order 786 | RM12-1-000 and RM13-9-000 | Para 89 | 2015-10 | Single Points of Failure | In development |
| <p>S-Ref 10871 - ...a. “As discussed below, we also direct NERC to develop a means to assure that IROLs are communicated to transmission owners.” (P 6)</p> <p>“NERC must establish a clearly defined communication structure to assure that IROLs and changes to IROL status are timely communicated to transmission owners. Left to NERC how to accomplish this objective. Commission identifies modification of FAC-014 as a vehicle that would meet the objective.” (P 41)</p> <p>“NERC should inform the Commission of when it has developed means for communication of IROLs to transmission owners to help ensure that they receive notice of each of their applicable lines before the standard becomes effective as to those lines.” (P 42)</p> | Standards | 3/21/2013 | Order 777 | RM12-4-000 | Para 6, 41, 42 | NA | NA | Directive is currently being reviewed by the Operating Committee’s Method for Establishing IROL Task Force. |
| S-Ref 10820 - The Commission “believe that NERC should register demand side aggregators if the loss of their load shedding capability, for reasons such as a cyber incident, would affect the reliability or operability of the Bulk-Power System.” | Registration | 1/18/2008 | Order 706 | RM06-22-000 | Para 051 | NA | NA | Ongoing |

Table 3: Directives by Commission Order

| Directive Summary | Owner | Publication Date | Order No. | FERC ORDER / DOCKET | Paragraph Reference | Project Number | Project Name | Status |
|--|-----------|------------------|---------------|---------------------|---------------------|----------------|--------------------------------|--|
| S-Ref 10948 - “[W]e adopt the NOPR proposal and direct that NERC, pursuant to section 215(d)(5) of the FPA, develop modifications to the CIP Reliability Standards to require responsible entities to implement controls to protect, at a minimum, communication links and sensitive bulk electric system data communicated between bulk electric system Control Centers in a manner that is appropriately tailored to address the risks posed to the bulk electric system by the assets being protected (i.e., high, medium, or low impact).” | Standards | 1/21/2016 | Order No. 822 | RM15-14-000 | Para 53 | 2016-02 | Modifications to CIP Standards | In development |
| <p>S-Ref 10957 - COLLECT EXISTING AND NEW GIC/MAGNETOMETER DATA AND MAKE IT PUBLICLY AVAILABLE</p> <p>P 88: “[T]he Commission directs NERC, pursuant to Section 1600 of the NERC Rules of Procedure, to collect GIC monitoring and magnetometer data from registered entities for the period beginning May 2013, including both data existing as of the date of this order and new data going forward, and to make that information available.”</p> <p>FN118: “The Commission’s directives to collect and make available GIC monitoring and magnetometer data do not apply to non-U.S. responsible entities or Alaska and Hawaii.”</p> <p>P 93: “We also direct NERC, pursuant to Sections 1500 and 1600 of the NERC Rules of Procedure, to collect and make GIC monitoring and magnetometer data available.”</p> <p>FN 112: “If GIC monitoring and magnetometer data is already publicly available (e.g., from a government</p> | Standards | 9/22/2016 | Order 830 | RM15-11-000 | Para 88, 93-95 | NA | NA | A draft Section 1600 data request has been developed, submitted to FERC staff, and was posted for public comment through March 26, 2018. |

Table 3: Directives by Commission Order

| Directive Summary | Owner | Publication Date | Order No. | FERC ORDER / DOCKET | Paragraph Reference | Project Number | Project Name | Status |
|--|-----------|------------------|-----------|---------------------|---------------------|----------------|----------------------------|----------------|
| <p>entity or university), NERC need not duplicate these efforts.”</p> <p>P 94: “Based on the record in this proceeding, we believe that GIC and magnetometer data typically should not be designated as Confidential Information under the NERC Rules of Procedure.”</p> <p>95: “Notwithstanding our findings here, to the extent any entity seeks confidential treatment of the data it provides to NERC, the burden rests on that entity to justify the confidential treatment. Exceptions are possible if the providing entity obtains from NERC, at the time it submits data to NERC, a determination that GIC or magnetometer data qualify as Confidential Information. Entities denied access to GIC and magnetometer data by NERC or providers denied Confidential Information treatment of GIC and magnetometer data may appeal NERCs decision to the Commission.”</p> | | | | | | | | |
| <p>S-Ref 10953 - P23: “[W]e direct NERC to develop modifications to Reliability Standard BAL-002-2 to address our concerns, discussed below, regarding the 15-minute ACE recovery period set forth in Requirement R1.”</p> <p>P37: “[W]e direct NERC to develop modifications to Reliability Standard BAL-002-2, Requirement R1 to require balancing authorities or reserve sharing groups: (1) to notify the reliability coordinator of the conditions set forth in Requirement R1, Part 1.3.1 preventing it from complying with the 15-minute ACE recovery period; and (2) to provide the reliability coordinator with its ACE recovery plan, including a target recovery time. NERC may also</p> | Standards | 1/19/2017 | Order 835 | RM16-7 | Para 23 and Para 37 | 2017-06 | Modifications to BAL-002-2 | In development |

Table 3: Directives by Commission Order

| Directive Summary | Owner | Publication Date | Order No. | FERC ORDER / DOCKET | Paragraph Reference | Project Number | Project Name | Status |
|---|----------------------|------------------|-----------|---------------------|---------------------|----------------|--------------|------------------------------------|
| propose an equally efficient and effective alternative.” | | | | | | | | |
| <p>S-Ref 10954 - P23: “We also direct NERC to collect and report on data pertaining to the occurrence of Balancing Contingency Events that trigger resets of the 90-minute Contingency Reserve Restoration Period under Requirement R3.”</p> <p>S-Ref 10954 - P46: “[T]he Commission directs NERC to collect and report data pertaining to: (1) additional megawatt losses following Reportable Balancing Contingency Events during the Contingency Reserve Restoration Period; and (2) the time periods for contingency reserve restoration under Requirement R3 and the number of resets of the 90-minute restoration period, and submit a report to the Commission two years following the first day of implementation of Requirement R3. After NERC reports on the data in a compliance filing, the Commission will consider what further action, if any, to take.”</p> | Performance Analysis | 1/19/2017 | Order 835 | RM16-7 | Para 23 and Para 46 | NA | NA | Data is currently being collected. |
| S-Ref 10955 - P23: “We further direct NERC to study and submit a report to the Commission with findings regarding reliability risks associated with most severe single contingency exceedances that do not result in energy emergencies.” | Performance Analysis | 1/19/2017 | Order 835 | RM16-7 | Para 23 | NA | NA | Data is currently being collected. |