

March 29, 2019

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 2019 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”).<sup>1</sup> 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 2018 annual directives report filed on March 30, 2018, the Commission issued nine directives. In that time, NERC filed petitions with the Commission addressing ten directives.<sup>2</sup> Currently, there are 14 outstanding directives, eight 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 are being addressed through other mechanisms.<sup>3</sup>

The 2019-2021 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

<sup>1</sup> The Federal Energy Regulatory Commission (“FERC” or “Commission”) approved Rule 321 on March 17, 2011 in the above captioned docket. *N. Am. Elec. Reliability Corp., Order on Compliance Filing*, 134 FERC ¶ 61,216 (2011).

<sup>2</sup> See Directives Report at Chapter 2, Table 1 for a list of the directives that were addressed since April 1, 2018.

<sup>3</sup> See Directives Report at Chapter 2, Table 2 for a list of outstanding directives and status.

3353 Peachtree Road NE  
Suite 600, North Tower  
Atlanta, GA 30326  
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or future development projects that are prioritized by the NERC Standards Committee and reflected in the RSDP. The 2019-2021 RSDP was filed with the Commission on December 14, 2018.<sup>4</sup>

In addition to the above information, NERC includes, as Appendix A to the Directives Report, NERC's Response to Directives on Vegetation Management on Federal Lands.

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

Respectfully submitted,

/s/ Lauren A. Perotti

Lauren A. Perotti

Senior Counsel

North American Electric Reliability Corporation

1325 G St., NW, Suite 600

Washington, DC 20005

202-400-3000

lauren.perotti@nerc.net

*Counsel to the North American Electric Reliability Corporation*

Enclosure:

2019 NERC Standards Report, Status and Timetable for Addressing Regulatory Directives

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<sup>4</sup> NERC's 2019-2021 RSDP is accessible at the following link:  
<https://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/2019-2021%20RSDP%20FERC%20Filing.pdf>.

# NERC Standards Report

Status and Timetable for Processing Regulatory  
Directives

March 29, 2019

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# Table of Contents

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Table of Contents.....	2
Chapter 1 – Introduction .....	3
Chapter 2 – Status of Directives .....	4
Chapter 3 – Conclusion.....	12
Appendix A – NERC Response to Directives on Vegetative Management on Federal Lands .....	13

## Chapter 1 – Introduction

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In accordance with Section 321.6 of the North American Electric Reliability Corporation (“NERC”) Rules of Procedure (“ROP”),<sup>1</sup> this report provides an update on the status and timetable for addressing outstanding directives issued by the Federal Energy Regulatory Commission (“FERC” or “Commission”).<sup>2</sup>

As discussed below, since NERC’s 2018 annual directives report filed on March 30, 2018, the Commission has issued nine directives.<sup>3</sup> As detailed in Table 1 below, NERC has also filed petitions with the Commission addressing ten directives. Currently, there are 14 outstanding directives listed in Table 2, eight 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 directive relates to data gathering, registration, or the performance of research/studies) and being addressed through other mechanisms.

NERC’s 2019-2021 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 2019-2021 RSDP was filed with the Commission on December 14, 2018.<sup>4</sup>

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<sup>1</sup> 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.

<sup>2</sup> This report includes both Reliability Standard-related directives and non-Reliability Standard-related directives (i.e., directives that pertain to information or data collection as opposed to the development of new or modified Reliability Standards). Prior to the 2017 annual directives report, non-Reliability Standard directives were not included in the annual report.

<sup>3</sup> These directives consist of: two directives related to Cyber Security Incident Reporting; two directives relating to the CIP-003 Reliability Standard; two directives related to the Supply Chain Reliability Standards; and three directives related to the TPL-007 Reliability Standard.

<sup>4</sup> NERC’s 2018-2020 RSDP was filed in Docket Nos. RM05-17-000, RM-05-25-000, and RM06-16-000 and is available on NERC’s website at: <https://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/2019-2021%20RSDP%20FERC%20Filing.pdf>.

## Chapter 2 – Status of Directives

The two tables below contain a status update on the directives. Table 1 contains a complete list of the directives NERC addressed since the 2018 directives report. Table 2 provides a list of the outstanding directives and an update on NERC’s plans to address those directives.

**Table 1: Directives Addressed since April 1, 2018**

Directive Summary	Action Taken	Project Name	Filing Date
Order on GMD Work Plan at P 9 <sup>5</sup> - FERC “directs NERC to file for Commission review a final, or otherwise updated, GMD Work Plan within six months of the date of this order.”	GMD Work Plan was filed.	N/A	4/19/2018
S-Ref 10912 (Order No. 794 at P 34 <sup>6</sup> ) - 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.”	Report was drafted and filed.	N/A	6/29/2018 and supplemented on 8/7/2018
S-Ref 10913 (Order No. 794 at P 60) - “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.”  Order No. 794 at P 60 - “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.”	Report was drafted and filed.	N/A	6/29/2018 and supplemented on 8/7/2018

<sup>5</sup> *Reliability Standard for Transmission System Planned Performance for Geomagnetic Disturbance Events, Order on GMD Research Work Plan*, 161 FERC ¶ 61,048 (2017).

<sup>6</sup> *Frequency Response and Frequency Bias Setting Reliability Standard*, 146 FERC ¶ 61,024 (2014) (“Order No. 794”).

Directive Summary	Action Taken	Project Name	Filing Date
<p>S-ref10953 (Order No. 835 at P 23<sup>7</sup>) - “[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>Order No. 835 at P 37 - “[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 propose an equally efficient and effective alternative.”</p>	Standard was modified.	Project 2017-06 Modifications to BAL-002-2	8/17/2018
<p>S-Ref 10948 (Order No. 822 at P 53<sup>8</sup>) – “[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).”</p>	Standard was modified.	Project 2016-02 Modifications to CIP Standards	9/18/2018
<p>S-Ref 10926 (Order No. 810 at P 2<sup>9</sup>) – “The Commission also directs NERC to submit an informational filing 90 days after the end of the two-year period following implementation that includes an analysis of data on whether experience with the Balancing Authority ACE Limit in the first two years after approval has seen ACE swings and inadvertent interchange and unscheduled power flows that could cause system operating limit (SOL) and interconnection reliability operating limit (IROL) exceedances. . . .”</p> <p>Order No. 810 at P 36 – “We determine that the field trial NERC conducted for Reliability Standard BAL-001-2 raised sufficient concerns regarding unscheduled power flows and inadvertent interchange to warrant NERC’s continued monitoring and submission of an informational filing 90 days after the end of the two-year period following implementation, as proposed in the NOPR. Further, we find that the informational filing should encompass both the Western and Eastern Interconnections, as there were concerns about possible increases of SOL/IROL exceedances in both Interconnections.”</p>	Report was created and filed.	N/A	10/1/2018

<sup>7</sup> Disturbance Control Standard—Contingency Reserve for Recovery from a Balancing Contingency Event Reliability Standard, 158 FERC ¶ 61,030 (2017) (“Order No. 835”).

<sup>8</sup> Revised Critical Infrastructure Protection Reliability Standards, 154 FERC ¶ 61,037 (2016).

<sup>9</sup> Real Power Balancing Control Performance Reliability Standard, 151 FERC ¶ 61,048 (2015) (“Order No. 810”).

Directive Summary	Action Taken	Project Name	Filing Date
S- Ref 10894 (Order No. 786 at P 40 <sup>10</sup> ) – “[We] 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.”	Standard was modified.	Project 2015-10- Single Points of Failure	12/7/2018
S- Ref 10896 (Order No. 786 at P 89) – “[The Commission] directs NERC to consider a similar spare equipment strategy for stability analysis upon the next review cycle of Reliability Standard TPL-001-4.”	Standard was modified.	Project 2015-10- Single Points of Failure	12/7/2018
Order No. 848 at P37 <sup>11</sup> - “Therefore, pursuant to FPA section 215(d)(5), we direct NERC to develop and submit modifications to the Reliability Standards to include the mandatory reporting of Cyber Security Incidents that compromise, or attempt to compromise, a responsible entity’s ESP or associated EACMS. As noted above, we direct NERC to submit the directed modifications within six-months of the effective date of this Final Rule.”	Standard was modified.	Project 2018-02 Modifications to CIP-008 Cyber Security Incident Reporting	3/7/2019
<p>S- Ref 10101 (Order No. 693 at P 732<sup>12</sup>) - “The Commission... directs the ERO to collect outage data for transmission outages of lines that cross both federal and non-federal lands, analyze it, and use the results of this analysis and information to develop a Reliability Standard that would apply to transmission lines crossing both federal and non-federal land.”</p> <p>Order No. 777 at P 130<sup>13</sup> - “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>	Data was collected and report is submitted as Appendix A to this filing.	N/A	3/29/2019

<sup>10</sup> *Transmission Planning Reliability Standards*, 145 FERC ¶ 61,051 (2013) (“Order No. 786”).

<sup>11</sup> *Cyber Security Incident Reporting Reliability Standards*, 164 FERC ¶ 61,033 (2018).

<sup>12</sup> *Mandatory Reliability Standards for the Bulk-Power System*, 118 FERC ¶ 61,218 (2007)

<sup>13</sup> *Revisions to Reliability Standard for Transmission Vegetation Management*, 142 FERC ¶ 61,208 (2013) (Order No. 777).



**Table 2: Status of Outstanding Directives**

Directive Summary	Owner	Publication Date	Order No.	FERC ORDER / DOCKET	Paragraph Reference	Project Number	Project Name	Status
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.”	Performance Analysis	1/16/2014	Order No. 794	RM13-11-000	P 100	2017-01	Modifications to BAL-003-1.1	Ongoing. Table 1 in Attachment A has not been updated; however, Project 2017-01 will be proposing Table 1 changes.
<p>S- Ref 10871 - “As discussed below, we also direct NERC to develop a means to assure that IROLs are communicated to transmission owners.”</p> <p>P 41 - “NERC should establish a clearly defined communication structure to assure that IROLs and changes to IROL status are timely communicated to transmission owners.”</p> <p>P 42 - “We encourage NERC to inform us 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 [FAC-003-2] standard becomes effective as to those lines.”</p>	Standards	3/21/2013	Order No. 777	RM12-4-000	PP 6, 41, 42	2015-09	Establish and Communicate System Operating Limits	Ongoing; Communications are currently being addressed, but IROLS are also be addressed through Methods for Identifying IROLS Task Force
S- Ref 10820 : “[The Commission] believe[s] 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 No. 706	RM06-22-000	P 51	N/A	N/A	Ongoing

Table 2: Status of Outstanding Directives

Directive Summary	Owner	Publication Date	Order No.	FERC ORDER / DOCKET	Paragraph Reference	Project Number	Project Name	Status
S-ref 10957- “[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.”	Performance Analysis	9/22/2016	Order No. 830	RM15-11-000	P 89	N/A	N/A	NERC Board Approved Section 1600 Data Request in August 2018; NERC is developing detailed data reporting instructions and developing IT solutions to collect and store GMD data.
<p>S-ref10954- 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-ref10954- 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 No. 835	RM16-7-000	PP 23 and 46	N/A	N/A	<p>Data is currently being collected.</p> <p>On track to be filed by the due date.</p>

Table 2: Status of Outstanding Directives

Directive Summary	Owner	Publication Date	Order No.	FERC ORDER / DOCKET	Paragraph Reference	Project Number	Project Name	Status
S-ref 10955- “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 No. 835	RM16-7-000	P 23	N/A	N/A	Data is currently being collected.
“[W]e... direct NERC to conduct a study to assess the implementation of Reliability Standard CIP-003-7. The study should address what electronic access controls entities choose to implement and under what circumstances, and whether the electronic access controls adopted by responsible entities provide adequate security, as well as other relevant information found by NERC as a result of the study. NERC must file the study within eighteen months of the effective date of Reliability Standard CIP-003-7.”	Standards	4/19/2018	Order No. 843	RM17-11-000	P 30	N/A	N/A	On track to be filed by due date.
“We adopt the NOPR proposal and, pursuant to section 215(d)(5) of the FPA, direct that NERC develop modifications to Reliability Standard CIP-003-7 to address our concern and ensure that responsible entities implement controls to mitigate the risk of malicious code that could result from third-party transient electronic devices. NERC could satisfactorily address the identified concern, for example, by modifying Section 5 of Attachment 1 to CIP-003-7 to clarify that responsible entities must implement controls to mitigate the risk of malicious code that could result from the use of third-party transient electronic devices.”	Standards	4/19/2018	Order No. 843	RM17-11-000	P 37	2016-02	Modifications to CIP Standards	In development

Table 2: Status of Outstanding Directives

Directive Summary	Owner	Publication Date	Order No.	FERC ORDER / DOCKET	Paragraph Reference	Project Number	Project Name	Status
“We also find that it is reasonable for NERC to file annually an anonymized report providing an aggregated summary of the reported information, similar to the ICS-CERT annual report. The annual report will provide the Commission, NERC, and the public a better understanding of any Cyber Security Incidents that occurred during the prior year without releasing information on specific responsible entities or Cyber Security Events.”	E-ISAC	7/19/2018	Order No. 848	RM18-2-000	P 90	N/A	Annual Report	Will submit annually after proposed CIP-008-6 becomes effective
“Thus, pursuant to section 215(d)(5) of the FPA, we direct NERC to develop modifications to the CIP Reliability Standards to include EACMS within the scope of the supply chain risk management Reliability Standards. We direct NERC to submit the directed modifications within 24 months of the effective date of this final rule.”	Standards	10/18/2018	Order No. 850	RM17-13-000	P 30	N/A	N/A	Standards development project will begin after the final Supply Chain report is presented to the NERC Board at its May 2019 meeting.
“Accordingly, we accept NERC’s commitment to evaluate the cybersecurity supply chain risks presented by PACS and PCAs in the cybersecurity supply chain risks study directed by the BOT. The Commission further directs NERC to file the BOT-directed final report with the Commission upon its completion.”	Standards	10/18/2018	Order No. 850	RM17-13-000	P 31	N/A	N/A	The final Supply Chain report will be filed with FERC upon its completion and after the May 2019 NERC Board meeting.

Table 2: Status of Outstanding Directives

Directive Summary	Owner	Publication Date	Order No.	FERC ORDER / DOCKET	Paragraph Reference	Project Number	Project Name	Status
“As proposed in the NOPR, pursuant to section 215(d)(5) of the FPA, we also determine that it is appropriate to direct NERC to develop and submit modifications to Reliability Standard TPL-007-2 to require the development and completion of corrective action plans to mitigate assessed supplemental GMD event vulnerabilities . . . The Commission...directs NERC to submit the modified Reliability Standard for approval within 12 months from the effective date of Reliability Standard TPL-007-2.”	Standards	11/15/2018	Order No. 851	RM10-8-000	P 29	2019-01	Modifications to TPL-007-3	In development – on track to be filed by due date.
“We also determine, pursuant to section 215(d)(5) of the FPA, that it is appropriate to direct that NERC develop further modifications to Reliability Standard TPL-007-2, Requirement R7.4 . . . [W]e direct NERC to develop a timely and efficient process, consistent with the Commission’s guidance in Order No. 830, to consider time extension requests [for completion of Corrective Action Plan activities] on a case-by-case basis.”	Standards	11/15/2018	Order No. 851	RM10-8-000	P 30	2019-01	Modifications to TPL-007-3	In development – on track to be filed by due date.
“Further, as proposed in the NOPR, we direct NERC to prepare and submit a report addressing how often and why applicable entities are exceeding corrective action plan deadlines as well as the disposition of time extension requests. The report is due within 12 months from the date on which applicable entities must comply with the last requirement of Reliability Standard TPL-007-2.”	Standards	11/15/2018	Order No. 851	RM10-8-000	P 30	2019-01	Modifications to TPL-007-3	In development – on track to be filed by due date.

## Chapter 3 – Conclusion

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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 – NERC Response to Directives on Vegetation Management on Federal Lands

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NERC hereby provides the Commission information regarding analysis of access to federal lands and vegetation management as directed in Commission Order No. 693 and requested in Order No. 777.<sup>14</sup> In Order No. 693, the Commission issued directives focused on assessing any issues regarding minimum clearances on National Forest Service lands. In addition to the Commission’s directives in Order No. 693, FERC reiterated in Order No. 777 that NERC should assess data to determine whether there were vegetation management issues on public lands.<sup>15</sup> Based on analysis of data regarding transmission outages, enforcement dispositions, and events, NERC concluded that the data reviewed did not indicate that limited access to federal lands for vegetation management poses a significant risk to the Bulk Electric System (“BES”).

This response provides the analysis performed by NERC to determine whether there are vegetation management issues on public lands. Section I includes background on the Commission orders related to vegetation management on public lands. Section II provides information on the analysis of data collected performed by NERC.

### Background on Commission Orders

In Order No. 693, FERC approved Reliability Standard FAC-003-1 and issued directives to NERC to further revise Reliability Standard FAC-003-1 and analyze vegetation management issues. Among others, the Commission directed NERC to “collect outage data for transmission outages of lines that cross both federal and non-federal lands, analyze it, and use the results of this analysis and information to develop a Reliability Standard that would apply to transmission lines crossing both federal and non-federal land.”<sup>16</sup>

In Order No. 777, the Commission directed that “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.”<sup>17</sup> FERC noted in Order No. 777 that the directive to collect outage data for transmission outages of lines that cross both federal and non-federal lands was still outstanding in 2013.<sup>18</sup> In that order, FERC noted that it was “difficult for the Commission to gauge the nature or seriousness” of the issues raised by commenters without objective data.<sup>19</sup> Therefore, FERC reiterated that NERC should gather and analyze the necessary data regarding vegetation management issues on public lands.

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<sup>14</sup> *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, *order on reh’g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007) (“Order No. 693”); *Revisions to Reliability Standard for Transmission Vegetation Management*, Order No. 777, 142 FERC ¶ 61,208, (2013) (“Order No. 777”).

<sup>15</sup> Order No. 777 at P 130.

<sup>16</sup> Order No. 693 at P 732.

<sup>17</sup> Order No. 777 at P 130.

<sup>18</sup> *Id.* at P 129.

<sup>19</sup> *Id.*

## NERC Analysis

In response to the statement in Order No. 777 regarding “necessary data,” NERC reviewed the following data: (A) NERC enforcement data; (B) information reported through NERC’s Event Analysis process; and (C) information collected from entities owning or operating transmission assets. NERC concludes that, based on the available data, there are no major risks to BES reliability caused by issues with access to federal and public lands for vegetation management. While some entities report that permitting processes to access or perform vegetation management on federal or public lands add challenges to the vegetation management process, NERC concludes that, based on the data reviewed,<sup>20</sup> these processes have not contributed to transmission outages or violations.

### Review of Enforcement Data

NERC reviewed its enforcement data to identify reported vegetation management issues by the responsible entities related to federal lands. First, NERC reviewed vegetation-related transmission outages reported pursuant to the Periodic Data Submittal of currently effective Reliability Standard FAC-003-4. Second, NERC reviewed data on noncompliance with Reliability Standards FAC-003-3 and FAC-003-4 for any issues related to access to federal or public lands. Each of these areas and NERC’s resulting analysis is discussed in turn below.

Applicable Transmission Owners and Generator Owners submit quarterly reports on Sustained Outages<sup>21</sup> caused by vegetation to their Regional Entities as part of the Periodic Data Submittal in Reliability Standard FAC-003-4. The Regional Entities in turn submit the reports to NERC. NERC then posts quarterly and annual reports on this data.<sup>22</sup>

NERC reviewed this data for the past five years to determine whether any reported outages were related to vegetation management on federal land. The data did not indicate that any reported transmission outages or vegetation contacts within the last five years were due to issues between electric utilities and federal or public landowners.

NERC also reviewed its enforcement dispositions, including those filed and those in process, related to Reliability Standards FAC-003-3 and FAC-003-4 from 2008 until January 2019.<sup>23</sup> This data set included 9 Compliance Exceptions; 9 Find, Fix, Track, and Reports; 87 Notices of Penalty; 2 Administrative Citation Notices of Penalty; and 9 Spreadsheet Notices of Penalty. Within this data set, NERC did not find

<sup>20</sup> NERC did not include the Transmission Availability Data System (“TADS”) in its review. In TADS, NERC compiles information on transmission outages collected from applicable entities through a mandatory data request. The TADS template includes fields to select cause codes for transmission outages, including vegetation as a cause of an outage. This information, when analyzed at the regional and continent-wide level, provides data that may help to improve reliability. TADS, however, does not collect information on whether outages are occurring on federal or public lands. In addition, the cause codes on the reporting template do not indicate whether any outages caused by vegetation were due to limited or delayed access to federal or public lands for vegetation management. Due to these two factors, NERC cannot conclude from TADS data whether any of the reported outages resulted from vegetation management issues on federal or public land.

<sup>21</sup> The Glossary of Terms Used in NERC Reliability Standards defines Sustained Outage as, “The deenergized condition of a transmission line resulting from a fault or disturbance following an unsuccessful automatic reclosing sequence and/or unsuccessful manual reclosing procedure.” *Glossary of Terms Used in NERC Reliability Standards*, [http://www.nerc.com/files/Glossary\\_of\\_Terms.pdf](http://www.nerc.com/files/Glossary_of_Terms.pdf).

<sup>22</sup> Quarterly and annual reports from 2005 to the present are posted at: <https://www.nerc.com/pa/comp/CE/Pages/vegetation-management-reports.aspx>.

<sup>23</sup> Enforcement and mitigation information is available at: <https://www.nerc.com/pa/comp/CE/Pages/Enforcement-and-Mitigation.aspx>.



references to issues involving federal or public lands, such as access issues or implementation of vegetation management programs. NERC did note in some instances that mitigation plans included education on relationships between entities and federal or public entities for vegetation management purposes. Nonetheless, NERC concluded that this did not suggest that entities faced issues with federal or public entities leading up to the violation. These aforementioned dispositions seem to indicate that issues with access to federal or public lands to perform vegetation management did not cause or contribute to violations of Reliability Standards FAC-003-3 or FAC-003-4.

### Events Analysis

The industry's voluntary Electric Reliability Organization ("ERO") events analysis ("EA") process provides information to the ERO and industry on the event categories and causes of qualifying events.<sup>24</sup> Review and analysis of this information can identify potential reliability risks or vulnerabilities to the Bulk Power System. During this process, participating entities identify the category of an event, choosing from Categories 1 through 5.<sup>25</sup> The level of analysis needed depends on this categorization as well as the facts and circumstances of the event. It is important to note that some incidents occur that do not meet threshold criteria for inclusion in the events analysis process. Since its initial implementation in October of 2010 until February 2019, the EA process has collected 1,274 qualifying events. Based on the analysis of these events, NERC did not find issues relating to access to federal or public lands for vegetation management as contributing to or causing qualifying events.

### Information from Entities Owning or Operating Transmission Assets

NERC worked with the North American Transmission Forum ("NATF")<sup>26</sup> to gather information from entities owning or operating transmission assets crossing federal or public land. The NATF issued a voluntary survey to relevant entities and provided non-attributable, summary results of the survey to NERC. Responding entities mostly indicated they were able to access federal or public land to maintain vegetation appropriately. However, some responding entities did note that gaining access to federal or public land often involved permitting processes to perform necessary activities that lengthened the timeframe for completing such activities. In addition, responding entities stated that some herbicides typically used to treat vegetation either were not allowed or required a permit to use. Responding entities also noted some inconsistencies in how certain regulations were applied across agencies. While this information from responding entities indicates that vegetation management on federal or public lands may present additional challenges by taking longer to complete or requiring additional efforts and adjustments to work practices to gain access based on permitting or other factors, these entities did not indicate the issues led to transmission outages.

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<sup>24</sup> *Electric Reliability Organization Event Analysis Process Version 3.1*, (Jan. 1, 2017)

[https://www.nerc.com/pa/rrm/ea/ERO\\_EAP\\_Documents%20DL/ERO\\_EAP\\_v3.1.pdf](https://www.nerc.com/pa/rrm/ea/ERO_EAP_Documents%20DL/ERO_EAP_v3.1.pdf) ("EA Process Document").

<sup>25</sup> Qualifying events are assigned to one of five categories based on reliability impact to the BES, although the categories do not cover all possible events. The event categories are intended to allow the registered entity and RE to objectively identify event thresholds. Details on the categories are listed in the EA Process Document, available at: [https://www.nerc.com/pa/rrm/ea/ERO\\_EAP\\_Documents%20DL/ERO\\_EAP\\_v3.1.pdf](https://www.nerc.com/pa/rrm/ea/ERO_EAP_Documents%20DL/ERO_EAP_v3.1.pdf).

<sup>26</sup> The NATF is an organization consisting of members who "own[], operate[], or control[] at least 50 circuit miles of integrated (network) transmission facilities at 100 kV or above, operate[] a '24/7' transmission control center with NERC-certified transmission or reliability operators, or has an open access transmission tariff or equivalent on file with a regulatory authority." NATF, Forum Flyer (Feb. 2019), <http://www.natf.net/docs/natf/documents/natf-flyer.pdf>.

## **CONCLUSION**

Following its review, NERC has concluded that the available data do not suggest the existence of issues relating to accessing federal or public land to perform vegetation management that led to transmission outages, violations, significant events, or other impacts to BES reliability. While the available data suggest that entities may face some timing challenges in accessing federal or public land to perform vegetation management relating to the regulatory process, the data also suggests that these issues are manageable and do not pose a significant risk to the reliability of the BES.