

May 31, 2018

VIA ELECTRONIC FILING

Ms. Kimberly D. Bose Secretary Federal Energy Regulatory Commission 888 First Street, N.E. Washington, DC 20426

Re: NERC Full Notice of Penalty regarding Oncor Electric Delivery Company LLC, FERC Docket No. NP18- -000

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby provides this Notice of Penalty¹ regarding Oncor Electric Delivery Company LLC (Oncor), NERC Registry ID# NCR04109,² with information and details regarding the nature and resolution of the violation³ discussed in detail in the Settlement Agreement attached hereto (Attachment A), in accordance with the Federal Energy Regulatory Commission's (Commission or FERC) rules, regulations, and orders, as well as NERC's Rules of Procedure including Appendix 4C (NERC Compliance Monitoring and Enforcement Program (CMEP)).⁴

3353 Peachtree Road NE Suite 600, North Tower Atlanta, GA 30326 404-446-2560 | www.nerc.com

¹ Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards (Order No. 672), III FERC Stats. & Regs. ¶ 31,204 (2006); Notice of New Docket Prefix "NP" for Notices of Penalty Filed by the North American Electric Reliability Corporation, Docket No. RM05-30-000 (February 7, 2008). See also 18 C.F.R. Part 39 (2018). Mandatory Reliability Standards for the Bulk-Power System, FERC Stats. & Regs. ¶ 31,242 (2007) (Order No. 693), reh'g denied, 120 FERC ¶ 61,053 (2007) (Order No. 693-A). See 18 C.F.R § 39.7(c)(2).

² Oncor was included on the NERC Compliance Registry as a Distribution Provider and Transmission Owner (TO) on January 30, 2018, Transmission Planner on January 30, 2008, and Transmission Operator on May 4, 2010.

³ For purposes of this document, each violation at issue is described as a "violation," regardless of its procedural posture and whether it was a possible, alleged, or confirmed violation.

⁴ See 18 C.F.R § 39.7(c)(2) and 18 C.F.R § 39.7(d).



NERC is filing this Notice of Penalty with the Commission because Texas Reliability Entity, Inc. (Texas RE) and Oncor have entered into a Settlement Agreement to resolve all outstanding issues arising from Texas RE's determination and findings of a violation of FAC-003-3 R2.

According to the Settlement Agreement, Oncor neither admits nor denies the violation and accepts the assessed penalty of three hundred thousand dollars (\$300,000), in addition to other activities as outlined in the Settlement Agreement.

Oncor is a transmission and distribution utility that delivers electricity to end-use customers located principally in the north-central, eastern, and western regions of Texas. This service territory has an estimated population in excess of 10 million – about 40 percent of the population of Texas – and comprises 99 counties and over 400 incorporated municipalities, including Dallas/Fort Worth and the surrounding suburbs.

Statement of Findings Underlying the Violation

This Notice of Penalty incorporates the findings and justifications set forth in the Settlement Agreement, by and between Texas RE and Oncor. The details of the findings and basis for the penalty are set forth in the Settlement Agreement and herein. This Notice of Penalty filing contains the basis for approval of the Settlement Agreement by the NERC Board of Trustees Compliance Committee (NERC BOTCC).

In accordance with Section 39.7 of the Commission's regulations, 18 C.F.R. § 39.7 (2018), NERC provides the following summary table identifying each violation of a Reliability Standard resolved by the Settlement Agreement. Further information on the subject violation is set forth in the Settlement Agreement and herein.

* Violation(s) Determined and Discovery Method *SR = Self-Report / SC = Self-Certification / CA = Compliance Audit / SPC = Spot Check / CI = Compliance Investigation								
NERC Violation ID	Standard	Req.	VRF/VSL	Applicable Function(s)	Discovery Method*	Violation Start-End Date	Risk	Penalty Amount
TRE2017017087	FAC-003-3	R2	High/ High	то	SR 3/1/2017	7/20/2016	Moderate	\$300,000



TRE2017017087 FAC-003-3 R2 - OVERVIEW

On July 20, 2016, Oncor's Monticello to Farmersville Line (345 kV) tripped at approximately 2:30 p.m. because of a vegetation contact. Oncor dispatched a crew to determine the cause of the fault. The crew arrived approximately 20 minutes after the fault. During this line inspection, the Monticello to Farmersville Line experienced another trip related to the same vegetation contact at approximately 4:00 p.m. Throughout both sequences, all applicable protection devices operated as designed, avoiding a Sustained Outage. Shortly after the second sequence, the Oncor inspection team located a black willow tree encroaching into the line's Minimum Vegetation Clearance Distance (MVCD). The Oncor team removed the encroaching tree and all other trees from the same root mass on July 20, 2016, the same day as the initial vegetation contact. Oncor personnel determined the tree was approximately 36 feet above grade height. The maximum possible sag for the Monticello to Farmersville Line was 35 feet. Under FAC-003-3, Table 2, the line's MVCD was 3.19 feet. Accordingly, the tree had encroached into the MVCD when the vegetation contact occurred. The area where the encroachment occurred experienced 62 percent higher than average rainfall the previous year. This in turn caused the encroaching tree to grow more quickly than is typical for that area.

On July 21, 2016, Oncor orally notified Texas RE of a tree contact with the subject line. Oncor met with Texas RE enforcement staff to discuss the details of the event on November 10, 2016. Oncor then provided documentation in January 2017, before submitting its formal Self-Report on March 1, 2017.

The cause of this violation was that Oncor did not have adequate vegetation management processes and procedures to address changing field or weather conditions that may result in increased vegetation growth rates.

Texas RE determined that this violation posed a moderate and not serious or substantial risk to the reliability of the bulk power system (BPS). Oncor's failure to prevent vegetation from encroaching into the MVCD of a line could have caused extended transmission outages. Oncor's footprint also interconnects with at least six other Transmission Owners (TOs), and an outage of a transmission line could have affected these registered entities as well.

Nevertheless, other factors were in place during the pendency of the violation that mitigated the risk. Oncor performed annual system planning studies of its transmission system consistent with the Transmission Planning Standards, including studies in both 2015 and 2016. These studies established that even the loss of both Monticello to Farmersville Line 345 kV circuits would not result in any line overloading or instability. The line at issue was correctly rated and was operating within its rating when the faults occurred. The relays on the line functioned correctly as designed, minimizing the amount of



time the line flow was interrupted and limiting the extent of the fault. As a result, there was no load or generation loss because of the vegetation contacts.

Oncor discovered and removed the cause of the vegetation contacts on the same day the contacts occurred. Oncor possesses and has previously successfully implemented its overall vegetation management program. Oncor uses a "ground-to-sky" vegetation management approach for the floors and edges of rights-of-way, which achieves a greater clearance than required by the designed MVCD.

Oncor submitted its Mitigation Plan with an anticipated completion date of August 31, 2018, to address the referenced violation.

To mitigate this violation, Oncor removed the encroaching tree and all other trees from the same root mass. To prevent recurrence of this violation, Oncor:

- 1. conducted ground and helicopter patrols and an aerial survey;
- 2. conducted herbicide treatments;
- 3. established an internal team to evaluate Oncor's existing vegetation management processes;
- 4. reemphasized the importance of the 345 kV line corridors to relevant personnel;
- will develop and implement enhanced inspection methods and a formal process requiring that trained observers be added to Spring 345 aerial patrols; and
- 6. will establish a customized wetland layer within Oncor's geospatial transmission mapping system.

Addendum A to the Settlement Agreement and Attachment B include descriptions of the mitigation activities Oncor took to address this violation. A copy of the Mitigation Plan is included as Attachment B.

Regional Entity's Basis for Penalty

According to the Settlement Agreement, Texas RE has assessed a penalty of three hundred thousand dollars (\$300,000) for the referenced violation. In reaching this determination, Texas RE considered the following factors:



- 1. the instant violation constitutes Oncor's first occurrence of violation of the subject NERC Reliability Standard;
- Oncor had an internal compliance program at the time of the violation, which Texas RE treated as a neutral factor in determining the penalty;
- Oncor self-reported the violation;
- 4. Texas RE considered Oncor's cooperation a neutral factor in determining the penalty;
- 5. there was no evidence of any attempt to conceal a violation nor evidence of intent to do so;
- the violation posed a moderate and not a serious or substantial risk to the reliability of the BPS, as discussed in Addendum A to the Settlement Agreement; and
- 7. there were no other mitigating or aggravating factors or extenuating circumstances that would affect the assessed penalty.

After consideration of the above factors, Texas RE determined that, in this instance, the penalty amount of three hundred thousand dollars (\$300,000) is appropriate and bears a reasonable relation to the seriousness and duration of the violation.

Statement Describing the Assessed Penalty, Sanction or Enforcement Action Imposed⁵

Basis for Determination

Taking into consideration the Commission's direction in Order No. 693, the NERC Sanction Guidelines and the Commission's July 3, 2008, October 26, 2009 and August 27, 2010 Guidance Orders, 6 the NERC BOTCC reviewed the violation on May 8, 2018, and approved the resolution between Texas RE and Oncor. In approving the resolution, the NERC BOTCC reviewed the applicable requirements of the Commission-approved Reliability Standards and the underlying facts and circumstances of the violation at issue.

⁵ See 18 C.F.R. § 39.7(d)(4).

⁶ North American Electric Reliability Corporation, "Guidance Order on Reliability Notices of Penalty," 124 FERC ¶ 61,015 (2008); North American Electric Reliability Corporation, "Further Guidance Order on Reliability Notices of Penalty," 129 FERC ¶ 61,069 (2009); North American Electric Reliability Corporation, "Notice of No Further Review and Guidance Order," 132 FERC ¶ 61,182 (2010).



For the foregoing reasons, the NERC BOTCC approved the terms of the Settlement Agreement and believes that the assessed penalty of three hundred thousand dollars (\$300,000) is appropriate for the violation and circumstances at issue, and is consistent with NERC's goal to promote and ensure reliability of the BPS.

Pursuant to 18 C.F.R. § 39.7(e), the penalty will be effective upon expiration of the 30-day period following the filing of this Notice of Penalty with FERC, or, if FERC decides to review the penalty, upon final determination by FERC.

Attachments to be Included as Part of this Notice of Penalty

The attachments to be included as part of this Notice of Penalty are the following documents:

- 1. Settlement Agreement by and between Texas RE and Oncor executed May 16, 2018, included as Attachment A; and
 - a. Disposition Document, included as Addendum A to the Settlement Agreement;
 - b. Oncor's Self-Report for FAC-003-3 R2 dated March 1, 2017, included as Addendum B to the Settlement Agreement; and
 - c. Texas RE's Notice of Possible Violation for FAC-003-3 R2 dated September 6, 2017, included as Addendum C to the Settlement Agreement.
- 2. Oncor's Mitigation Plan designated as TREMIT013704 for FAC-003-3 R2, submitted April 9, 2018, included as Attachment B.



Notices and Communications: Notices and communications with respect to this filing may be addressed to the following:

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*Persons to be included on the Commission's service list are indicated with an asterisk. NERC requests waiver of the Commission's rules and regulations to permit the inclusion of more than two people on the service list.



Conclusion

NERC respectfully requests that the Commission accept this Notice of Penalty as compliant with its rules, regulations, and orders.

Respectfully submitted,

/s/ Alexander Kaplen

Sonia C. Mendonça Vice President, Deputy General Counsel, and Director of Enforcement Edwin G. Kichline Senior Counsel and Director of **Enforcement Oversight** Alexander Kaplen **Associate Counsel** North American Electric Reliability Corporation 1325 G Street N.W. Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 - facsimile sonia.mendonca@nerc.net edwin.kichline@nerc.net alexander.kaplen@nerc.net

cc: Oncor Electric Delivery Company LLC Texas Reliability Entity, Inc.

Attachments



Attachment A

Settlement Agreement by and between Texas RE and Oncor executed May 16, 2018

- 1.a Disposition Document, included as Addendum A to the Settlement Agreement;
- 1.b Oncor's Self-Report for FAC-003-3 R2 dated March 1, 2017, included as Addendum B to the Settlement Agreement; and
- 1.c Texas RE's Notice of Possible Violation for FAC-003-3 R2 dated September 6, 2017, included as Addendum C to the Settlement Agreement



SETTLEMENT AGREEMENT

OF

TEXAS RELIABILITY ENTITY, INC.

AND

ONCOR ELECTRIC DELIVERY COMPANY LLC

I. INTRODUCTION

- 1. The North American Electric Reliability Corporation (NERC) delegated authority to Texas Reliability Entity, Inc. to become the regional entity for the ERCOT region effective July 1, 2010, pursuant to Section 215(e)(4) of the Federal Power Act. NERC also delegated to Texas Reliability Entity, Inc. the authority and responsibility for the continuation of all compliance monitoring and enforcement activities that it had previously delegated to Texas Regional Entity (a division of Electric Reliability Council of Texas, Inc.). The term "Texas RE" is used herein to refer to both Texas Regional Entity and Texas Reliability Entity, Inc.
- 2. Texas RE and Oncor Electric Delivery Company LLC (Oncor) enter into this Settlement Agreement (Settlement Agreement or Agreement) to resolve all outstanding issues arising from a preliminary and non-public assessment resulting in Texas RE's determination and findings, pursuant to the NERC Rules of Procedure, of one alleged violation by Oncor of NERC Reliability Standard FAC-003-3 R2 (NERC Violation ID No. TRE2017017087).
- 3. Oncor neither admits nor denies the violation of NERC Reliability Standard FAC-003-3 R2, and has agreed to the proposed penalty of \$ 300,000 to be assessed to Oncor, in addition to other remedies and mitigation actions to mitigate the instant alleged violation and facilitate future compliance under the terms and conditions of the Settlement Agreement.

II. STIPULATION

4. The facts stipulated herein are stipulated solely for the purpose of resolving, between Oncor and Texas RE, the matters discussed herein and do not constitute stipulations or admissions for any other purpose. The attached Disposition Document is incorporated herein in its entirety. Oncor and Texas RE hereby stipulate and agree to the following:



BACKGROUND

5. See Section I of Addendum A in the Disposition Document for a description of Oncor.

VIOLATION OF NERC RELIABILITY STANDARD FAC-003-3 R2

6. See Section III of Addendum A in the Disposition Document for the description of the violation.

III. PARTIES' SEPARATE REPRESENTATIONS

STATEMENT OF TEXAS RE AND SUMMARY OF FINDINGS

- 7. On March 1, 2017, Oncor submitted a Self-Report, as a Transmission Owner (TO), stating it was possibly in violation of FAC-003-3 R2. Specifically, Oncor failed to manage vegetation to prevent encroachments into the Minimum Vegetation Clearance Distance (MVCD) of a 345 kV Transmission line from vegetation within the line's Right of Way (ROW), but such encroachment did not result in a sustained outage.
- 8. Based upon its review of the facts and circumstances regarding the violation identified in Oncor's March 1, 2017 Self-Report, Texas RE determined that Oncor, as a TO, was in violation of FAC-003-3 R2. Section III of the attached Disposition Document, Addendum "A" to this Agreement provides a full and complete description of basis for Texas RE's determination.
- 9. Texas RE agrees that this Agreement is in the best interest of the parties and in the best interest of bulk power system reliability.

STATEMENT OF ONCOR

- Oncor neither admits nor denies that the facts set forth and agreed to by the parties for purposes of this Agreement constitute a violation of NERC Reliability Standard FAC-003-3 R2.
- 11. Oncor has agreed to enter into this Settlement Agreement with Texas RE to avoid extended litigation with respect to the matters described or referred to herein, to avoid uncertainty, and to effectuate a complete and final resolution of the issues set forth herein. Oncor agrees that this Settlement Agreement is in the best interest of the parties and in the best interest of maintaining a reliable electric infrastructure.

IV. MITIGATING ACTIONS, REMEDIES AND SANCTIONS

12. Texas RE and Oncor agree that Oncor has completed or will complete and Texas RE has verified completion or will verify completion of the mitigating actions set forth in Section III of Addendum A in the Disposition Document. Further, Texas RE will verify that Oncor has completed or will complete the additional actions



addressed in Section III of Addendum A in the Disposition Document (if any). The Mitigating Actions, Remedies, and Sanctions are discussed in detail in the Disposition Document.

13. For purposes of settling any and all disputes arising from Texas RE's assessment into the matter reported by Oncor in its Self-Report, Texas RE and Oncor agree that on or after the effective date of this Agreement, Oncor has taken or shall take, on or after the effective date of this Agreement, the following actions to enhance the reliability of the bulk power system and prevent recurrence of the issues presented in this Agreement:

Activity	Dates to be completed
i. Remove the encroaching black willow tree and all other trees from the same root mass	Complete
ii. Conduct ground patrols of other spans in the area of the Monticello to Farmersville Line trip to determine if other areas of concerns existed in the area	Complete
iii. Conduct an aerial survey of the Monticello to Farmersville Line to determine if any imminent vegetation management threats existed	Complete
iv. Conduct helicopter patrols of the 345 kV lines throughout more than half of the Oncor service territory	Complete
v. Re-emphasize the importance of 345 kV line corridors to District Managers, field personnel, and craft personnel	Complete
vi. Conduct individual plant herbicide treatment for the area that contained the encroaching tree, as well as on all three transmission lines in the transmission corridor at issue	Complete
vii. Establish an internal team to evaluate Oncor's existing vegetation management processes	Complete
viii. Conduct additional herbicide treatments for 345 kV lines in the same geographic area as the Monticello to Farmersville 345 kV line at issue	Complete
ix. Establish a customized wetland layer within Oncor's geospatial Transmission mapping system that will allow Oncor to incorporate changing field conditions into the mapping system directly and share such information with regional transmission offices	August 31, 2018
x.Develop and implement specific enhanced inspection methods, including requirements that fixed-wing aircraft perform additional passes or helicopters use hovering techniques, in identified enhanced risk corridors	July 31, 2018
xi. Develop and implement a formal process requiring that adequately trained observers are added to Spring 345 kV aerial patrols, including aerial patrols of identified enhanced risk corridors	July 31, 2018

The preceding mitigating actions, as well as Remedies and Sanctions, are discussed in detail in the Disposition Document, Addendum "A" to this Agreement.



- 14. In order to facilitate Texas RE's need to communicate the status and provide accountability to the ERO (NERC), Oncor will provide updates quarterly, or more frequently, upon request by Texas RE. Oncor will submit these status updates to Texas RE in accordance with the confidentiality provisions of Section 1500 of the NERC Rules of Procedure.
- 15. It is understood that Texas RE staff shall audit the progress of mitigation plans and any other remedies of this Agreement, including, but not limited to, site inspection, interviews, and request other documentation to validate progress and/or completion of the mitigation plans and any other remedies of this Agreement. Texas RE shall reasonably coordinate audits and information requests with Oncor related to this Agreement.
- 16. Texas RE staff considered the facts and circumstances of the violation and Oncor's actions in response to the violation in determining a proposed penalty that meets the requirement in Section 215 of the Federal Power Act that "[a]ny penalty imposed under this section shall bear a reasonable relation to the seriousness of the violation and shall take into consideration the efforts of such user, owner, or operator to remedy the violation in a timely manner." The factors considered by Texas RE staff in the determination of the appropriate penalty are set forth in Section IV of Addendum A in the Disposition Document.
- 17. Based on the above factors, as well as the mitigation actions and preventative measures taken, Oncor shall pay the monetary penalty of \$ 300,000 to Texas RE within thirty days after the Agreement is either approved by the Federal Energy Regulatory Commission (Commission) or by operation of law, and Texas RE shall notify NERC if the payment is not received. If the Agreement is not approved by NERC or the Commission, then Texas RE and Oncor have the rights described in paragraphs 21 and 23 below.
- 18. Failure to make a timely penalty payment, or to comply with any of the terms and conditions agreed to herein, or any other conditions of this Settlement Agreement, shall be deemed to be either the same alleged violations that initiated this Settlement and/or additional violation(s) and may subject Oncor to new or additional enforcement, penalty, or sanction actions in accordance with the NERC Rules of Procedure.
- 19. If the Agreement is approved by NERC and the Commission and Oncor does not make the monetary penalty payment above at the times agreed to by the parties, interest payable to Texas RE will begin to accrue from the date that payment is due pursuant to the Commission's regulations at 18 C.F.R. § 35.19a(a)(2)(iii), in addition to the penalty specified above. Oncor shall retain all rights to defend against such additional enforcement actions in accordance with the NERC Rules of Procedure.

¹ 16 U.S.C. § 824o(e)(6).



V. ADDITIONAL TERMS

- 20. The signatories to the Settlement Agreement agree that they enter into the Settlement Agreement voluntarily and that, other than the recitations set forth herein, no tender, offer, or promise of any kind by any member, employee, officer, director, agent, or representative of Texas RE or Oncor has been made to induce the signatories or any other party to enter into the Settlement Agreement.
- 21. Texas RE shall report the terms of all settlements of compliance matters to NERC will review the settlement for the purpose of evaluating its NERC. consistency with other settlements entered into for similar violations or under other. Based on this review, NERC will either approve the similar circumstances. settlement or reject the settlement and notify Texas RE and Oncor of changes to the settlement that would result in approval. If NERC rejects the settlement, NERC will provide specific written reasons for such rejection and Texas RE will attempt to negotiate a revised settlement agreement with Oncor, including any changes to the settlement specified by NERC. If a settlement cannot be reached, the enforcement process shall continue to conclusion, and in that enforcement process, Oncor will have all rights it would have otherwise had if this Agreement had not been signed and will not be considered to have waived any defenses or positions as a result of entering into this Agreement. If NERC approves the settlement, NERC will (i) report the approved settlement to the Commission for the Commission's review and approval by order or operation of law, and (ii) publicly post this Settlement Agreement.
- 22. This Settlement Agreement shall become effective upon the Commission's approval of the Settlement Agreement by order or operation of law as submitted to it or as modified in a manner acceptable to the parties.
- 23. Oncor agrees that this Settlement Agreement, when approved by NERC and the Commission, shall represent a final settlement of all matters set forth herein and Oncor waives its right to further hearings and appeal, unless and only to the extent that Oncor contends that any NERC or Commission action on the Settlement Agreement contains one or more material modifications to the Settlement Agreement. If a NERC or Commission action of the Settlement Agreement contains one or more material modifications to the Settlement Agreement, then this Agreement will not become effective, and Oncor will have all rights it would have otherwise had if this Agreement had not been signed and will not be considered to have waived any defenses or positions as a result of entering into this Agreement. Texas RE reserves all rights to initiate enforcement, penalty, or sanction actions against Oncor in accordance with the NERC Rules of Procedure in the event that Oncor fails to comply with the Mitigation Plan and compliance program agreed to in this Settlement Agreement. In the event Oncor fails to comply with any of the stipulations, remedies, sanctions, or additional terms, as set forth in this Settlement Agreement, Texas RE will initiate enforcement, penalty, or sanction actions against Oncor to the maximum extent allowed by the NERC Rules of Procedure, up to the maximum statutorily allowed penalty. Except as otherwise specified in this Settlement Agreement, Oncor shall retain all rights to defend against such enforcement actions, also according to the NERC Rules of Procedure.



- 24. Oncor consents to the use of Texas RE's determinations, findings, and conclusions set forth in this Agreement for the purpose of assessing the factors, including the factor of determining the company's history of violations, in accordance with the NERC Sanction Guidelines and applicable Commission orders and policy statements. Such use may be in any enforcement action or compliance proceeding undertaken by NERC and/or any Regional Entity; provided, however, that Oncor does not consent to the use of the specific acts set forth in this Settlement Agreement as the sole basis for any other action or proceeding brought by NERC and/or Texas RE, nor does Oncor consent to the use of this Settlement Agreement by any other party in any other action or proceeding.
- 25. Each of the undersigned warrants that he or she is an authorized representative of the entity designated, is authorized to bind such entity, and accepts the Settlement Agreement on the entity's behalf.
- 26. The undersigned representative of each party affirms that he or she has read the Settlement Agreement, that all of the matters set forth in the Settlement Agreement are true and correct to the best of his or her knowledge, information, and belief, and that he or she understands that the Settlement Agreement is entered into by such party in express reliance on those representations, provided, however, that such affirmation by each party's representative shall not apply to the other party's statements of position set forth in Section III of this Settlement Agreement.
- 27. The Settlement Agreement may be signed in counterparts.
- 28. This Settlement Agreement is executed in duplicate, each of which so executed shall be deemed to be an original.



Oncor Electric Delivery Company LLC

Agreed to and accepted:

W. Lane Lanford

President & CEO

Texas Reliability Entity, Inc.

5/16/18 Date

Wes Speed

Vice President, Transmission Operations

Oncor Electric Delivery Company LLC

Date



Addendum A DISPOSITION OF VIOLATION(S)¹

Regional Entity: Texas Reliability Entity, Inc. (Texas RE)

Registered Entity Name: Oncor Electric Delivery Company LLC

NERC Registry ID: NCR04109

I. ENTITY REGISTRATION INFORMATION

ENTITY IS REGISTERED FOR THE FOLLOWING FUNCTIONS:

Registered Function	Registration Date
Transmission Planner (TP)	June 28, 2007
Transmission Owner (TO)	June 28, 2007
Transmission Operator (TOP)	May 4, 2010
Distribution Provider (DP)	January 30, 2008

Description of Registered Entity

Oncor Electric Delivery Company LLC (Oncor) is a transmission and distribution utility that delivers electricity to end-use customers through its transmission and distribution system, which is located principally in the north-central, eastern, and western regions of Texas. This service territory has an estimated population in excess of ten million, about forty percent of the population of Texas, and comprises 99 counties and over 400 incorporated municipalities, including Dallas/Fort Worth and surrounding suburbs, as well as Waco, Wichita Falls, Odessa, Midland, Tyler, and Killeen. Oncor employs approximately 3,500 full-time employees.

II. EXECUTIVE SUMMARY

Overview of the Alleged Violation and Mitigation

Section III of this Disposition Document provides a full and complete description of basis for Texas RE's determination that Oncor was noncompliant with FAC-003-3 R2. The same section further describes the mitigation actions Oncor has performed or will perform to address all applicable instances of noncompliance.

Assessed Penalty or Sanction:	\$300,000
Is there a settlement agreement? Yes ☑ No □	

¹ For purposes of this document and attachments hereto, each violation at issue is described as a "violation," regardless of its procedural posture and whether it was a possible, alleged or confirmed violation.



Oncor Electric Delivery Company LLC

If there is no settlement agreement, Registere Findings Penalty Both	ed Entity contests:
Hearing Requested Yes	
Date Outcome Appeal Requested	
With respect to the violation, the Registered Neither admits nor denies it (settlement only) Admits to it Does not contest it (Including within 30 days)	Entity:
With respect to the proposed penalty or sand Accepts it/Does not contest it	etion, the Registered Entity:



III. VIOLATION INFORMATION

NERC Violation ID

TRE2017017087

RELIABILITY STANDARD	REQUIREMENT(S)	SUB- REQUIREMENT(S)	VRF(S)	VSL(S)
FAC-003-3	R2		High	High

<u>Purpose of FAC-003-3</u>: To maintain a reliable electric transmission system by using a defense-in-depth strategy to manage vegetation located on transmission rights of way (ROW) and minimize encroachments from vegetation located adjacent to the ROW, thus preventing the risk of those vegetation-related outages that could lead to Cascading.

Reliability Standard FAC-003-3 R2: Each applicable Transmission Owner and applicable Generator Owner shall manage vegetation to prevent encroachments into the MVCD of its applicable line(s) which are not either an element of an IROL, or an element of a Major WECC Transfer Path; operating within its Rating and all Rated Electrical Operating Conditions of the types shown below² [Violation Risk Factor: High] [Time Horizon: Real-time]:

- 1. An encroachment into the MVCD, observed in Real-time, absent a Sustained Outage,³
- 2. An encroachment due to a fall-in from inside the ROW that caused a vegetation-related Sustained Outage,⁴
- 3. An encroachment due to blowing together of applicable lines and vegetation located inside the ROW that caused a vegetation-related Sustained Outage,⁵
- 4. An encroachment due to vegetation growth into the line MVCD that caused a vegetation-related Sustained Outage $^{\rm 6}$

² This requirement does not apply to circumstances that are beyond the control of an applicable Transmission Owner or applicable Generator Owner subject to this reliability standard, including natural disasters such as earthquakes, fires, tornados, hurricanes, landslides, wind shear, fresh gale, major storms as defined either by the applicable Transmission Owner or applicable Generator Owner or an applicable regulatory body, ice storms, and floods; human or animal activity such as logging, animal severing tree, vehicle contact with tree, or installation, removal, or digging of vegetation. Nothing in this footnote should be construed to limit the Transmission Owner's or applicable Generator Owner's right to exercise its full legal rights on the ROW.

³ If a later confirmation of a Fault by the applicable Transmission Owner or applicable Generator Owner shows that a vegetation encroachment within the MVCD has occurred from vegetation within the ROW, this shall be considered the equivalent of a Real-time observation.

⁴ Multiple Sustained Outages on an individual line, if caused by the same vegetation, will be reported as one outage regardless of the actual number of outages within a 24-hour period.
⁵ *Id*.

⁶ *Id*.



VIOLATION DESCRIPTION

On March 1, 2017, Oncor submitted a Self-Report stating that, as a Transmission Owner (TO), it was possibly in violation of FAC-003-3 R2. Specifically, Oncor failed to manage vegetation to prevent encroachments into the Minimum Vegetation Clearance Distance (MVCD) of a 345 kV Transmission line from vegetation within the line's Right of Way (ROW), but such encroachment did not result in a sustained outage.

The vegetation encroachment and contact at issue occurred on Oncor's Monticello to Farmersville 345 kV Circuit #1 Transmission line ("Monticello to Farmersville Line"). The Monticello to Farmersville Line possesses pairs of breakers at both the Monticello and Farmersville line ends. In case of a trip, the lead breaker on the Farmersville end is designed to attempt to reclose a single time one second after opening. In contrast, the lead breaker on the Monticello end is designed to only attempt a single reclosing after 10 seconds because there is a generation Facility located on that end of the line.

At approximately 2:33:50 p.m. on July 20, 2016, the Monticello to Farmersville Line tripped as a result of a vegetation contact. This fault caused the breakers at the Monticello end of the line to immediately open as designed. About a half cycle later, both breakers likewise opened at the Farmersville end as designed in response to the fault, de-energizing the line. At 2:33:51 p.m., the lead breaker on the Farmersville end closed and then tripped again because it continued to detect the fault on the line. Since both breakers at Monticello were still open, the line was deenergized again at 2:33:51 p.m. for approximately 10 seconds. At 2:34:01 p.m., the Monticello end breakers successfully closed as designed, re-energizing the line. Oncor then performed a successful manual reclosing of the Farmersville end breakers at 2:36:54 p.m. and 2:37:02 p.m., respectively. Throughout this initial sequence, all applicable protection devices operated as designed.

After the first fault occurred, Oncor dispatched a crew to the Farmersville station to determine the cause of the fault. The crew arrived at the switching station at 2:49:12 p.m. and began collecting fault information and patrolling the line to locate the fault. While this line inspection was ongoing, the Monticello to Farmersville Line experienced a trip related to the same vegetation contact at approximately 4:00:54 p.m., again causing an immediate trip on the Monticello breakers as designed and both breakers at the Farmersville end to open a half cycle later, de-energizing the line. At 4:00:55 p.m., the lead breaker on the Farmersville end closed and then tripped again because it continued to detect the fault on the line. Since both breakers at Monticello were still open, the line was again de-energized at 4:00:55 p.m. for approximately 9 seconds when one of the Monticello breakers closed as designed, re-energizing the line. Oncor then manually performed a second successful manual reclosing of the Farmersville end breakers at 4:01:54 p.m. and 4:02:00 p.m., respectively. Throughout this second sequence, all applicable protection devices operated as designed.

When the line tripped again at 4:00:54 p.m., Oncor had not yet located the cause of the fault. However, shortly after the second occurrence, the Oncor inspection team located a black willow tree encroaching into the line's MVCD. The Oncor team removed the encroaching tree and all other trees from the same root mass on July 20, 2016, the same day as the initial vegetation contact. Oncor personnel then assessed the tree remnants and determined that the tree was



Oncor Electric Delivery Company LLC

approximately 36 feet above grade height. The maximum possible sag for the Monticello to Farmersville Line was 35 feet. Pursuant to FAC-003-3, Table 2, the line's MVCD was 3.19 feet. Accordingly, the tree had encroached into the MVCD at the time of the vegetation contact. Oncor foresters and certified arborists determined that the tree in question was five growing seasons old and had 9.5 feet of terminal bud in the 2016 growing season prior to the vegetation contact.

On July 21, 2016, Oncor orally notified Texas RE of a tree contact with a 345 kV line. Following this initial notification, Oncor met with Texas RE Enforcement staff at the Texas RE offices to discuss the details of the event on November 10, 2016. Oncor then provided some initial documentation in January 2017, prior to submitting its formal self-report in March.

The root cause of this violation was that Oncor did not have adequate vegetation management processes and procedures to address changing field or weather conditions that may result in increased vegetation growth rates. The area where the encroachment occurred experienced higher than average rainfall the previous year. This is in turn caused the encroaching tree to grow more quickly than is typical for that area. The average annual rainfall for that area is 46.13 inches. However, in 2015, the annual rainfall was 74.79 inches, which is approximately 62% more than usual. Oncor's vegetation management procedure includes a process to modify its annual vegetation management plan as warranted to address these types of weather-related conditions and other issues triggering a need for more frequent line inspections. However, Oncor's process did not specifically require that these inspections be conducted using techniques such as helicopter hovering or using trained observers to enhance the possibility of identifying encroachments. As a result, Oncor's inspections were not adequate to detect the encroachment ultimately triggering this noncompliance.

DURATION DATE(S)

The violation began on July 20, 2016, when a black willow tree encroached into the MVCD on the Monticello to Farmersville Line, and ended on July 20, 2016, when Oncor cut the tree down and resolved the encroachment issue.

Region Notified of/Found Violation On: 7/21/2016 – Oncor orally notified Texas RE 3/1/2017 – The date Oncor submitted the Self-Report to Texas RE. Is the violation still occurring: Yes \(\subseteq \text{No } \subseteq \)

Rem	edi	al A	ctior	n Dir	ectiv	e iss	ued
Yes		No [\boxtimes				





Reliability Impact Statement – Potential and Actual

This violation posed a moderate risk to the reliability of the bulk power system. Oncor's failure to prevent vegetation from encroaching into the MVCD of a line could have caused extended transmission outages. Oncor's footprint also interconnects with at least six other TOs, and an outage of a transmission line could have impacted these entities as well.

However, a number of factors served to reduce the actual and potential risk posed by this issue. First, there was no load or generation loss as a result of the vegetation contacts. Regarding this fact, the line at issue possessed a second parallel circuit. During the issue duration, the load on this second parallel circuit increased from 650 amps to approximately 800 amps, but remained well within its rating of 2729 amps. Second, Oncor performed annual system planning studies of its transmission system consistent with the Transmission Planning Standards, including studies in both 2015 and 2016. These studies established that even the loss of both Monticello to Farmersville Line 345 kV circuits would not result in any line overloading or instability. Third, the relays on the line functioned correctly as designed, minimizing the amount of time the line flow was interrupted and limiting the extent of the fault. To that end, the line was de-energized for a maximum of 10 seconds during each contact. Fourth, Oncor discovered and removed the cause of the vegetation contacts on the same day the contacts occurred. Fifth, the line at issue was correctly rated and was operating within its rating at the time of the faults. Finally, the risk from this incident was also reduced by the fact that Oncor possesses and has previously successfully implemented its overall vegetation management program. Oncor employs a "ground-to-sky" vegetation management approach for the floor and edge of ROWs, which achieves a greater clearance than required by the designed MVCD. management practices reduce the potential risk that circumstances leading to a vegetation contact in this instance could occur on other parts of the Oncor system. This is further evidenced by the fact that Oncor has had no sustained outages resulting from vegetation encroachments in its ROWs prior to the current incident.

Regional Entity required a formal Mitigation Plan Yes ⊠ No □	
NERC Mitigation Plan No. TREMIT013704	
Date submitted to Regional Entity Date accepted by Regional Entity Date approved by NERC Date provided to FERC	
f applicable, identify and explain all prior versions that were accepted or rejected:	
Mitigation Plan Completed? Yes	
Proposed approved completion date: 08/31/2018	



Oncor Electric Delivery Company LLC

Extens	sions	req	uest	ed?
Yes 🗀	l No l	\boxtimes		

Date Regional Entity submitted Completion Certification

Date Registered Entity certified it completed the Mitigation Plan

Date Regional Entity verified completion of the Mitigation Plan

Actual Completion Date as determined by the Regional Entity

Description of Mitigation:

To mitigate this violation, Oncor:

- 1) removed the encroaching black willow tree and all other trees from the same root mass;
- 2) conducted ground patrols of other spans in the area of the Monticello to Farmersville Line trip to determine if other areas of concerns existed in the area:
- 3) conducted an aerial survey of the Monticello to Farmersville Line to determine if any imminent vegetation management threats existed;
- 4) conducted helicopter patrols of the 345 kV lines throughout more than half of the Oncor service territory:
- 5) re-emphasized the importance of 345 kV line corridors to District Managers, field personnel, and craft personnel;
- 6) conducted individual plant herbicide treatment for the area that contained the encroaching tree, as well as on all three transmission lines in the transmission corridor at issue;
- 7) established an internal team to evaluate Oncor's existing vegetation management processes; and
- 8) conducted additional herbicide treatments for 345 kV lines in the same geographic area as the Monticello to Farmersville line at issue.

Additionally, Oncor will complete the following mitigation actions by August 31, 2018:

- 1) establish a customized wetland layer within Oncor's geospatial Transmission mapping system that will allow Oncor to incorporate changing field conditions into the mapping system directly and share such information with regional transmission offices;
- 2) develop and implement specific enhanced inspection methods, including requirements that fixed-wing aircraft perform additional passes or helicopters use hovering techniques, in identified enhanced risk corridors; and
- 3) develop and implement a formal process requiring that adequately trained observers are added to Spring 345 kV aerial patrols, including aerial patrols of identified enhanced risk corridors.



List of evidence reviewed by Regional Entity to evaluate completion of mitigation activity

Mitigation Activity #	Evidence Supporting Mitigation Action	Mitigation Completion Date
1	Attachment 08 - Tree Root Mass	7/20/2016
2	Attachment 09 - Attestation	7/21/2016
3	Attachment 11 - Monticello - Farmersville Aerial Survey	7/21/2016
4	Attachment 12 - Helicopter Patrols	8/3/2016
5	Attachment 10 - Attestations, Attachment 13 - Learning Center Database	8/12/2016
6	Attachment 14 - Plant Herbicide Treatment	9/4/2016
7	Attachment 15 - Management Team Results	8/23/2016
8	Attachment 16 – Additional Herbicide	10/12/2016

EXHIBITS

- SR_NCR04109_FAC-003-3 R2._2017-03-01.pdf
- TRE2017017087_Notice of Possible Violation_Oncor.pdf



IV. PENALTY INFORMATION

Assessed Penalty or Sanction:	\$300,000
A. Factors Affecting Penalty Determination	
1. REGISTERED ENTITY'S COMPLIANCE HISTORY	
Any previously filed violations of the same or similar Requirement(s)? Yes \square No \boxtimes	Reliability Standard(s) or
If yes, list violations and status N/A	
Any previously filed violations of the same or similar Reliabiling Requirement(s) for affiliate entities? Yes \square No \boxtimes	ty Standard(s) or
If yes, list violations and status N/A	
Does the Registered Entity's compliance history indicate that compliance culture problems? Yes \(\subseteq No \(\subseteq \) If yes, state whether such problems were considered aggrava determination.	
Regional Entity Conclusion Regarding Compliance History:	
Texas RE reviewed Oncor's compliance history and determining instances of noncompliance.	ned there were no relevant
2. THE PRESENCE AND QUALITY OF THE REGISTERED PROGRAM	ENTITY'S COMPLIANCE
Is there a documented compliance program Yes ☑ No ☐ Undetermined ☐	
Explain	
Oncor has had a compliance department since 2007. Oncor's in	nternal compliance program is

established and governed through its NERC Compliance Policy and its RSC-NERC Compliance Program (Program). Oncor's Corporate Compliance team manages and coordinates Oncor's



Oncor Electric Delivery Company LLC

NERC Compliance Program with management and subject matter experts across the organization to meet and maintain compliance with NERC's Reliability Standards.

Oncor established its NERC Compliance Policy to: (1) demonstrate Oncor's commitment to compliance with NERC's Reliability Standards and to the reliability of the Bulk Electric System (BES), and (2) define Oncor's approach for ensuring compliance with those Standards. Oncor's Compliance Program was established to provide reasonable assurance of compliance with NERC's Reliability Standards and create a culture of compliance and reliability excellence. The Program is designed to involve personnel at all levels of the organization who share responsibility to maintain a safe and reliable BES. Furthermore, the Program describes the functional structure and specific roles and responsibilities of employees with respect to the Program.

The Program is managed in a three-tiered role structure that includes Program Sponsors, Stakeholders, and Standard Owners. The specific ownership and responsibility for each NERC Reliability Standard applicable to Oncor is defined in the Oncor Standards Owner Matrix. The Matrix names the Standard Owner, Requirement Owner, Stakeholder, and Compliance Facilitator by Standard/Requirement, and the responsibility of each role is defined in the Program.

Oncor's Reliability and Security Compliance Team has established and manages a comprehensive awareness and training program throughout Oncor to support its culture of compliance and reliability excellence.

Explain senior management's role and involvement with respect to the Registered Entity's Compliance Program, including whether senior management takes actions that support the compliance program, such as training, compliance as factor in employee evaluations, or otherwise.

Oncor Senior Management is actively involved in supporting and participating in the NERC Compliance Program. Their support of and participation in Oncor's Program is demonstrated in numerous ways, including the following:

- The attendance of Senior Management at quarterly compliance meetings of Oncor's personnel responsible for compliance. Attendance includes personnel from the Senior Leadership Team to Subject Matter Experts:
- Periodic meetings of the NERC Steering Committee (composed of AEO, COO, CIP Senior Manager, PCC, and Program Sponsors);
- Discussions of NERC compliance at monthly Asset Planning meetings: and
- Day-to-day participation in meetings, conference calls, and discussions concerning compliance with NERC Reliability Standards.

Oncor Senior Management also routinely participates in self-assessments and in investigations of potential instances of noncompliance.



3.	THE DEGREE AND QUALITY OF COOPERATION BY THE REGISTERED ENTITY
Full co	poperation Yes 🗵 No 🗌
If no, e	explain
4.	ANY ATTEMPT BY THE REGISTERED ENTITY TO CONCEAL THE VIOLATION(S) OR INFORMATION NEEDED TO REVIEW, EVALUATE, OR INVESTIGATE THE VIOLATION?
Yes [] No ⊠
If yes,	explain:
5.	ANY EVIDENCE THE VIOLATION(S) WERE INTENTIONAL?
] No 🖂
If yes,	explain:
6.	ANY OTHER AGGRAVATING FACTORS FOR CONSIDERATION?
Yes 🗌] No ⊠
If yes,	explain:
7.	ANY OTHER EXTENUATING CIRCUMSTANCES?
Yes 🗵] No □
If yes,	explain:
Texas	RE considered that Oncor self-reported the FAC-003-3 R2 violation at issue and appl

Texas RE considered that Oncor self-reported the FAC-003-3 R2 violation at issue and applied some mitigating credit. The vegetation contact at issue occurred on July 20, 2016. Oncor initially reached out to Texas RE regarding these issues on July 21, 2016. Furthermore, Oncor met with Texas RE enforcement at Texas RE offices on November 10, 2016 to orally discuss details of this event. Oncor provided some initial documentation in January of 2017 prior to submitting its formal self-report. In applying this self-reporting credit, Texas RE also noted that because this was not a sustained outage, Oncor was not under an obligation to report this vegetation contact through the established vegetation contact reporting process.





Texas RE also considered the following facts:

- Oncor spent an additional \$437,000 for herbicide treatments and additional aerial patrols, including:
 - An additional \$300,000 for herbicide treatments in the same geographic area as the Monticello to Farmersville 345 kV line at issue;
 - An additional \$86,000 for treatments for the area containing the encroaching tree; and
 - o An additional \$51,000 for helicopter patrols in the Dallas-Fort Worth metroplex and areas of east of the Dallas-Fort Worth metroplex.
- Oncor estimates that the use of helicopters and hovering techniques during the 2018 Spring 345 kV aerial patrols will cost at least \$180,000 to \$200,000.



B. REGIONAL ENTITY CONCLUSION REGARDING FACTORS AFFECTING THE PENALTY DETERMINATION:

Based on a consideration of the factors identified throughout this disposition document and all factors specified throughout the NERC Sanction Guidelines, Texas RE concludes that in the current circumstances, a penalty of \$300,000 reflects the seriousness of Oncor's FAC-003-3 R2 violation and the impact to the Texas RE region.

V. OTHER RELEVANT INFORMATION

(1) Notice of Date	Alleged Violation
Or N/A	\boxtimes
(2) Settlemei Date Or N/A	nt Requested by Registered Entity 9/7/2017
• •	Confirmed Violation issued
Date Or N/A	\boxtimes
(4) Supplemo	ental Record information
Or N/A	\boxtimes



Addendum B

SERVICE LIST- Oncor Electric Delivery Company LLC (NCR04109) NERC Violation ID TRE2017017087

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Partner
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(214) 999-7735
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Entity Name: Oncor Electric Delivery Company LLC (Oncor)

NERC ID: NCR04109 Standard: FAC-003-3 Requirement: FAC-003-3 R2. Date Submitted: March 01, 2017

Has this violation previously No been reported or discovered?:

Entity Information:

Joint Registration Organization (JRO) ID:

Coordinated Functional JRO00061, JRO00073

Registration (CFR) ID:

Contact Name: Ray Averitt Contact Phone: 2147436825

Contact Email: raymond.averitt@oncor.com

Violation:

Violation Start Date: July 20, 2016 End/Expected End Date: July 20, 2016

Reliability Functions: Transmission Owner (TO)

Is Possible Violation still No

occurring?:

Number of Instances: 1

Has this Possible Violation $\,N_{0}$

been reported to other

Regions?:

Which Regions:

Date Reported to Regions:

Detailed Description and On July 20, 2016, at 14:33:50 and 52, Oncor's Monticello to Farmersville 345 Cause of Possible Violation: kV line tripped during fair weather. This line is approximately 81 miles long. It is not an element of an IROL, and it was operating within its rating at the time of this incident.

Protective line relaying at Monticello (CB4650/4355) and Farmersville (CB7265/7270) operated correctly to isolate the fault. The line terminal at Monticello has a 10 second reclose delay, and a trip/reclose occurred. The line terminal at Farmersville switching station has a 1 second reclose delay, and a trip/reclose/trip to lockout occurred. The breakers at the Farmersville switching station were closed remotely by an Oncor Transmission Grid Management ("TGM") controller at 14:36:54 and 14:37:02. Although line flow was interrupted for three minutes, the line remained energized. Therefore, there was no Sustained Outage.

An Oncor crew was dispatched immediately to the Farmersville switching station to determine what caused the fault. The crew arrived at that station at 14:49:12 and began collecting fault distance information and developing a plan to patrol the line to locate the fault.

Later that afternoon, at 16:00:54, the same line tripped again and operated correctly, just as before, to isolate the fault. At that time, Oncor's crew had not yet located the cause of the fault. The breakers at the Farmersville switching station were closed remotely by a TGM controller at 16:01:54 and 16:02:00. Again, although line flow was interrupted for approximately one minute, the line

remained energized. Therefore, there was no Sustained Outage. Oncor's crew was then able to locate the tree that likely caused the fault

Possible Cause of Incident

Soon after the line tripped the second time, the Oncor crew in the field determined that a black willow tree likely encroached into the MVCD on the Monticello to Farmersville 345 kV line, which caused the circuit breakers to trip. The encroaching tree was on Oncor's rightof-way in an area of low topography (commonly called the Blundell Creek bottom) directly under the middle of the line span between structures 5/2 and 5/3. This area is in western Titus County and in the Lake Monticello floodplain. The average annual rainfall for the subject area is 46.13 inches, but in 2015, the annual rainfall was 74.79 inches. From January 1 to July 20, 2016, the rainfall in the area was 26.27 inches.

The GPS coordinates for the encroaching tree are Longitude: -95.099514 and Latitude: 33.128097. Attachment 1 is a photograph from Oncor's OTIS application showing the general area in which the subject tree was located and its proximity to Lake Monticello. The red dot in Attachment 1 marks the location of the encroaching tree using GPS coordinates.

Attachment 2 is a closer aerial view of the subject right-of-way that shows all lines in that right-of-way and the related structures. Again, the red dot marks the location of the encroaching tree using GPS coordinates. Attachment 2 also shows that the Monticello to Farmersville 345 kV line is on the outer edge of the right-of-way. Attachment 3 is a topographical map showing that Blundell Creek runs parallel to that line in the relevant area just outside of the right-of-way boundary.

On July 20, 2016, the high temperature in the area was 97° Fahrenheit (based on the temperature in nearby Mount Pleasant, Texas). Oncor determined that the maximum possible sag of the line span at issue is approximately 35 feet. The encroaching tree was approximately 36 feet tall and had a diameter at breast height of approximately five inches.

On August 8, 2016, two degreed foresters and certified arborists who are employed by Oncor inspected the tree's original location and the remains of the tree that caused this event. They determined that the top of the encroaching tree was burned. Their analysis showed that the encroaching tree was five growing seasons old and had approximately 9.5 feet of terminal bud growth since the spring of 2016. They also determined that the encroaching tree was part of a multi-trunked tree from a larger root mass and was likely a smaller understory stem that was "released" after the surrounding larger stems died as a result of the herbicide treatment Oncor performed in 2013 (described below). The encroaching tree and all other trees from that root mass were cut on July 20, 2016.

Attachment 4 is a photograph of the subject tree on August 8, 2016 when it was inspected by the Oncor foresters/arborists at Oncor's Sulphur Springs office. Attachment 5 is a photograph of the subject tree's growth rings.

Mitigating Activities:

Description of Mitigating To address this issue, Oncor has taken or plans to take the following actions: Activities and Preventative

Measure: 1. Oncor immediately cut down the encroaching black willow tree and all other trees from the same root mass. (completed July 20, 2016)

2. Oncor immediately conducted ground patrols of the other spans in the area that are near heavy vegetation, with particular attention paid to spans near Lake Monticello. No areas of concern were identified. (completed July 21, 2016)

- 3. On July 20 and 21, 2016, Oncor's Region Directors re-emphasized to Oncor's District Managers the critical importance of Oncor's 345 kV line corridors. District Managers then re-emphasized the same to Oncor's field personnel. (completed approximately July 29, 2016)
- 4. On July 21, 2016, Oncor conducted an aerial survey via fixed wing aircraft (Cessna 172) of the Monticello to Farmersville line, and no imminent vegetation management threats to the line were identified. (completed July 21, 2016)
- 5. Oncor conducted helicopter patrols of all 345 kV lines located east of Interstate 35 as well as all 345 kV lines in the Dallas-Fort Worth Metroplex and the 345 kV lines serving Comanche Peak Steam Electric Station. Those patrols were conducted on July 27, 28, and 29, 2016, and August 2 and 3, 2016. The Monticello to Farmersville 345 kV line was the subject of this helicopter patrol on July 27, 2016. Although some additional vegetation management work was identified through those patrols, no imminent threats to the subject lines were identified during those patrols. (completed August 3, 2016)
- 6. Annual training for Oncor's craft personnel is conducted in July and August. After the subject incident, Oncor emphasized the critical importance of Oncor's 345 kV line corridors during training of Oncor's craft personnel in late July and in August 2016. (completed August 12, 2016)
- 7. Oncor conducted floor maintenance (individual plant herbicide treatment) for the same area in which the encroaching tree was located and including all three transmission lines in the same transmission corridor as the Monticello to Farmersville 345 kV transmission line. The area covered by this herbicide treatment is approximately one mile in length and is bounded by structures 4/4 and 5/5 on the Monticello to Farmersville 345 kV transmission line. As shown on Attachment 2, the encroaching tree was between structures 5/2 and 5/3 on that line. (completed August 22, 2016)
- 8. Oncor reallocated an additional \$300,000 of O&M funding to herbicide treatments for 345 kV lines in 2016. Specifically, this was used to treat 345 kV corridors in the same geographic area as the Monticello to Farmersville 345 kV line. This allowed Oncor to treat more 345 kV transmission lines in that area in 2016 than would have been accomplished under the original 2016 budget. (completed October 2016)
- 9. Oncor has established a team to evaluate Oncor's existing vegetation management processes to determine if any changes to those processes are advisable. That team is evaluating: (1) Oncor's line patrol methods and related data collection methods; (2) technologies available to monitor vegetation; (3) possible additional factors to consider when developing or adjusting VM cycles; and (4) techniques other utilities are using to monitor vegetation. The team has members from Oncor's Vegetation Management group, Transmission Operations group, and T&D Maintenance Strategy group. The initial meeting of this team was held on August 23, 2016. This team's work is ongoing. (estimated completion, Spring 2017)

Date Mitigating Activities Completed:

Impact and Risk Assessment:

Potential Impact to BPS: Moderate
Actual Impact to BPS: Minimal

On July 20, 2016, Oncor's Monticello to Farmersville 345 kV line tripped during fair weather due to encroachment of vegetation into the MVCD observed in

Description of Potential and real time absent a sustained outage. This line is not an element of an IROL, Actual Impact to BPS: and it was operating within its rating at the time of this incident.

All protective line relaying at Monticello operated correctly to isolate the fault. Although line flow was interrupted for three minutes, the line remained energized, therefore there was no Sustained Outage and the actual impact to the BPS was minimal.

Risk Assessment of Impact to The risk to the BPS as it relates to the facts of this self report is minimal BPS:

Additional Entity Comments:

Additional Comments		
From	Comment	User Name
Entity	Consistent with FAC-003-3 Requirement 3, Oncor has documented maintenance processes that it uses to prevent encroachment of vegetation into the MVCD. Those processes are captured in Oncor's "Transmission Vegetation Management Plan for 345kV." That Plan includes a minimum of two facility/vegetation inspections of 345 kV transmission facilities per year. The first inspection is performed during the first part of the year before the summer peak load. Vegetation that is identified as an issue is reported to the Oncor District responsible for maintaining that line, and that Oncor District is responsible for following up.	Tammy Porter
	Consistent with this process, Oncor conducted its spring aerial patrol of the line in question on June 17, 2016. This patrol was conducted by a fixed wing aircraft (Cessna 172). The Oncor District responsible for the subject line also conducted an aerial patrol of this line via helicopter (Bell 206) on June 10, 2016. Neither of these aerial patrols identified the subject black willow tree as an issue.	
	On June 20, 2016, an aerial patrol via helicopter (Bell 206) was conducted for other lines contained in the same corridor in which the Monticello to Farmersville 345 kV line is located. Although not specifically associated with the line segment in question, that aerial patrol resulted in a suggestion that trees on all lines near Lake Monticello should be checked. However, no imminent threats from trees were identified during that patrol, and no issues were identified for the specific area where the subject black willow tree was located.	
	Oncor's Vegetation Management Plan includes herbicide use and identifies the subject line as being on a four-year floor cycle. Prior to the subject incident, Oncor had last completed floor maintenance (individual plant herbicide treatment) of the Monticello to Farmersville 345 kV line on June 2, 2013. Oncor completed a post-work herbicide audit of the 2013 herbicide spraying of the Monticello to Farmersville line on October 3, 2013. That audit did not recommend rework for the line span at issue herein. Re-work identified in the audit on other line spans was performed in July 2014, and the area where re-work was done was reinspected in August 2014.	
	Oncor's Vegetation Management Plan also includes a six-year side trimming cycle for this line. Prior to the subject incident, Oncor had last trimmed the side of the right-of-way for this line on November 30, 2010.	

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Self Report

Additional Documents					
From	Document Name	Description	Size in Bytes		
No Documents					



Notice of Possible Violation

Date: September 6, 2017

To: Oncor Electric Delivery Company LLC (Oncor)

Ray Averitt Email: raymond.averitt@oncor.com

NERC Compliance Registry ID: NCR04109

Re: Possible Violation of Requirement of Reliability Standard Approved by the

Applicable Governmental Authority

NERC Violation ID	Standard Requirement(s)	Violation Duration
TRE2017017087	FAC-003-3 R2	July 20, 2016 ¹

On March 1, 2017, Oncor submitted a Self-Report stating that, as a Transmission Owner (TO), it was in violation of FAC-003-3 R2. Specifically, Oncor failed to manage vegetation to prevent encroachments into the Minimum Vegetation Clearance Distance (MVCD) of its applicable line(s).

Consistent with Texas RE's March 1, 2017 acknowledgement of Oncor's Self-Report, Oncor should continue to preserve all documentation pertaining to the Possible Violation. Documentation includes, but is not limited to, operator logs, recorded voice communications, email and written correspondence, work orders, inspection records, patrol records, budget information, and any and all other documents that may be directly or indirectly related to the Possible Violation.

Oncor may submit a response to the Possible Violation should they believe Texas RE has reached this conclusion in error. Texas RE will notify you of its conclusion after reviewing any response from Oncor and upon final review of the Possible Violation. Texas RE may conclude that there is insufficient basis to pursue the matter further or may conclude sufficient basis does exist to pursue the matter further with a Notice of Alleged Violation (NAV) that sets forth Texas RE's conclusions and your response options.

Texas RE appreciates your cooperation in advance and looks forward to resolving this matter in the interests of promoting the reliability of the bulk power system. To this end, settlement negotiations may occur at any time after this notice and until such time a Notice of Penalty is filed with the Federal Energy Regulatory Commission (Commission) or Applicable Governmental Authority by NERC. Should you desire to discuss settlement negotiations, please use the webCDMS portal to make your request.

TEXAS RELIABILITY ENTITY, INC. 805 Las Cimas Parkway, Suite 200 Austin, Texas 78746

TEM 10.4.14

¹ The violation began on July 20, 2016, when a black willow tree encroached into the MVCD on the Monticello to Farmersville 345 kV line, and ended on July 20, 2016, when Oncor cut the tree down and resolved the encroachment issue.



As required by the NERC Rules of Procedure and NERC Compliance Monitoring and Enforcement Program, the information in this notice will be provided on a non-public basis to the Commission or Applicable Governmental Authority. The information regarding the possible noncompliance(s) or violation(s) will not be made public unless and until a violation is confirmed.

If you have any questions, please feel free to contact me at 512-583-4939 or via email at the address indicated below.

Respectfully submitted,

Joseph P. Younger Texas Reliability Entity, Inc. Manager, Enforcement (512) 583-4939

Email: joseph.younger@texasre.org



Attachment B

Oncor's Mitigation Plan designated as TREMIT013704 for FAC-003-3 R2 $\,$

Submitted April 9, 2018

Mitigation Plan

Mitigation Plan Summary

Registered Entity: Oncor Electric Delivery Company LLC

Mitigation Plan Code: TREMIT013704

Mitigation Plan Version: 1

NERC Violation ID Requirement Violation Validated On
TRE2017017087 FAC-003-3 R2. 07/11/2017

Mitigation Plan Submitted On: April 09, 2018

Mitigation Plan Accepted On: April 10, 2018

Mitigation Plan Proposed Completion Date: August 31, 2018

Actual Completion Date of Mitigation Plan:

Mitigation Plan Certified Complete by Oncor On:

Mitigation Plan Completion Verified by TRE On:

Mitigation Plan Completed? (Yes/No): No

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Compliance Notices

Section 6.2 of the NERC CMEP sets forth the information that must be included in a Mitigation Plan. The Mitigation Plan must include:

- (1) The Registered Entity's point of contact for the Mitigation Plan, who shall be a person (i) responsible for filing the Mitigation Plan, (ii) technically knowledgeable regarding the Mitigation Plan, and (iii) authorized and competent to respond to questions regarding the status of the Mitigation Plan. This person may be the Registered Entity's point of contact described in Section B.
- (2) The Alleged or Confirmed Violation(s) of Reliability Standard(s) the Mitigation Plan will correct.
- (3) The cause of the Alleged or Confirmed Violation(s).
- (4) The Registered Entity's action plan to correct the Alleged or Confirmed Violation(s).
- (5) The Registered Entity's action plan to prevent recurrence of the Alleged or Confirmed violation(s).
- (6) The anticipated impact of the Mitigation Plan on the bulk power system reliability and an action plan to mitigate any increased risk to the reliability of the bulk power-system while the Mitigation Plan is being implemented.
- (7) A timetable for completion of the Mitigation Plan including the completion date by which the Mitigation Plan will be fully implemented and the Alleged or Confirmed Violation(s) corrected.
- (8) Implementation milestones no more than three (3) months apart for Mitigation Plans with expected completion dates more than three (3) months from the date of submission. Additional violations could be determined or recommended to the applicable governmental authorities for not completing work associated with accepted milestones.
- (9) Any other information deemed necessary or appropriate.
- (10) The Mitigation Plan shall be signed by an officer, employee, attorney or other authorized representative of the Registered Entity, which if applicable, shall be the person that signed the Self Certification or Self Reporting submittals.
- (11) This submittal form may be used to provide a required Mitigation Plan for review and approval by regional entity(ies) and NERC.
- The Mitigation Plan shall be submitted to the regional entity(ies) and NERC as confidential information in accordance with Section 1500 of the NERC Rules of Procedure.
- This Mitigation Plan form may be used to address one or more related alleged or confirmed violations of one Reliability Standard. A separate mitigation plan is required to address alleged or confirmed violations with respect to each additional Reliability Standard, as applicable.
- If the Mitigation Plan is accepted by regional entity(ies) and approved by NERC, a copy of this Mitigation Plan will be provided to the Federal Energy Regulatory Commission or filed with the applicable governmental authorities for approval in Canada.
- Regional Entity(ies) or NERC may reject Mitigation Plans that they determine to be incomplete or inadequate.
- Remedial action directives also may be issued as necessary to ensure reliability of the bulk power system.
- The user has read and accepts the conditions set forth in these Compliance Notices.

Entity Information

Identify your organization:

Entity Name: Oncor Electric Delivery Company LLC

NERC Compliance Registry ID: NCR04109

Address: 1616 Woodall Rogers

7th Floor

Dallas TX 75202 Identify the individual in your organization who will serve as the Contact to the Regional Entity regarding this Mitigation Plan. This person shall be technically knowledgeable regarding this Mitigation Plan and authorized to respond to Regional Entity regarding this Mitigation Plan:

Name: Ray Averitt

Title: Sr. Director Risk Management Email: raymond.averitt@oncor.com

Phone: 214-743-6825

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Violation(s)

This Mitigation Plan is associated with the following violation(s) of the reliability standard listed below:

Violation ID	Date of Violation	Requirement			
Requirement Description					
TRE2017017087	07/20/2016	FAC-003-3 R2.			

Each applicable Transmission Owner and applicable Generator Owner shall manage vegetation to prevent encroachments into the MVCD of its applicable line(s) which are not either an element of an IROL, or an element of a Major WECC Transfer Path; operating within its Rating and all Rated Electrical Operating Conditions of the types shown below: 1. An encroachment into the MVCD, observed in Real-time, absent a Sustained Outage, 2. An encroachment due to a fall-in from inside the ROW that caused a vegetation-related Sustained Outage, 3. An encroachment due to blowing together of applicable lines and vegetation located inside the ROW that caused a vegetation-related Sustained Outage, 4. An encroachment due to vegetation growth into the line MVCD that caused a vegetation-related Sustained Outage.

Brief summary including the cause of the violation(s) and mechanism in which it was identified:

On July 20, 2016, the Monticello to Farmersville Line tripped twice as a result of a vegetation contact. These two faults caused the breakers at the Monticello end of the line to immediately open as designed. Each time, about a half cycle later, both breakers likewise opened at the Farmersville end as designed in response to the fault, denergizing the line. The lead breaker on the Farmersville end closed each time and then tripped again because it continued to detect the fault on the line. Since both breakers at Monticello were still open, the line was denergized for approximately ten seconds the first time and nine seconds the second time. The Monticello end breakers successfully closed as designed, re-energizing the line. Oncor then performed a successful manual reclosing of the Farmersville end breakers. Throughout the initial and second sequence, all applicable protection devices operated as designed.

The root cause of this violation was that Oncor did not have adequate vegetation management processes and procedures to address changing field or weather conditions that may result in increased vegetation growth rates. The area where the encroachment occurred experienced higher than average rainfall the previous year. This is in turn caused the encroaching tree to grow more quickly than is typical for that area. The average annual rainfall for that area is 46.13 inches. However, in 2015, the annual rainfall was 74.79 inches, which is approximately 62% more than usual. Oncor's vegetation management procedure includes a process to modify its annual vegetation management plan as warranted to address these types of weather-related conditions and other issues triggering a need for more frequent line inspections. However, Oncor's process did not specifically require that these inspections be conducted using techniques such as helicopter hovering or using trained observers to enhance the possibility of identifying encroachments. As a result, Oncor's inspections were not adequate to detect the encroachment ultimately triggering this noncompliance.

Relevant information regarding the identification of the violation(s):

After the first fault occurred, Oncor dispatched a crew to the Farmersville station to determine the cause of the fault. The crew arrived at the switching station and began collecting fault information and patrolling the line to locate the fault. While this line inspection was ongoing, the Monticello to Farmersville Line experienced a trip related to the same vegetation contact. When the line tripped a second time Oncor had not yet located the cause of the fault. However, shortly after the second occurrence, the Oncor inspection team located a black willow tree encroaching into the line's MVCD. The Oncor team removed the encroaching tree and all other trees from the same root mass on July 20, 2016, the same day as the initial vegetation contact. Oncor personnel then assessed the tree remnants and determined that the tree was approximately 36 feet above grade height. The maximum possible sag for the Monticello to Farmersville Line was 35 feet. Pursuant to FAC-003-3, Table 2, the line's MVCD was 3.19 feet. Accordingly, the tree had encroached into the MVCD at the time of the vegetation contact. Oncor foresters and certified arborists determined that the tree in question was five growing seasons old and had 9.5 feet of terminal bud in the 2016 growing season prior to the vegetation contact.

Plan Details

Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the violation(s) identified above in Section C.1 of this form:

- 1) removed the encroaching black willow tree and all other trees from the same root mass;
- 2) conducted ground patrols of other spans in the area of the Monticello to Farmersville Line trip to determine if other areas of concerns existed in the area;
- 3) conducted an aerial survey of the Monticello to Farmersville Line to determine if any imminent vegetation management threats existed:
- 4) conducted helicopter patrols of the 345 kV lines throughout more than half of the Oncor service territory;
- 5) re-emphasized the importance of 345 kV line corridors to District Managers, field personnel, and craft personnel;
- 6) conducted individual plant herbicide treatment for the area that contained the encroaching tree, as well as on all three transmission lines in the transmission corridor at issue:
- 7) established an internal team to evaluate Oncor's existing vegetation management processes; and
- 8) conducted additional herbicide treatments for 345 kV lines in the same geographic area as the Monticello to Farmersville line at issue.

Provide the timetable for completion of the Mitigation Plan, including the completion date by which the Mitigation Plan will be fully implemented and the violations associated with this Mitigation Plan are corrected:

Proposed Completion date of Mitigation Plan: August 31, 2018

Milestone Activities, with completion dates, that your organization is proposing for this Mitigation Plan:

Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date	Entity Comment on Milestone Completion	Extension Request Pending
Management Review on Progress	The PCC and RSC Management will meet and review progress of enhanced inspection methods, changes to Spring Aerial Patrols, and enhanced mapping system.	06/29/2018			No
Enhance Inspection Methods	Develop and implement specific enhanced inspection methods, including requirements that fixed-wing aircraft perform additional passes or helicopters use hovering	07/31/2018			No

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Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date	Entity Comment on Milestone Completion	Extension Request Pending
	techniques, in identified enhanced risk corridors.				
Train Observers and add to Spring Aerial Patrols	Develop and implement a formal process requiring that adequately trained observers are added to Spring 345 kV aerial patrols, including aerial patrols of identified enhanced risk corridors.	07/31/2018			No
Establish a Customized Wetland Layer (Mapping System)	Establish a customized wetland layer within Oncor's geospatial Transmission mapping system that will allow Oncor to incorporate changing field conditions into the mapping system directly and share such information with regional transmission offices.	08/31/2018			No

Additional Relevant Information

Reliability Risk

Reliability Risk

While the Mitigation Plan is being implemented, the reliability of the bulk Power System may remain at higher Risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are known or anticipated: (i) Identify any such risks or impacts, and; (ii) discuss any actions planned or proposed to address these risks or impacts.

This violation posed a moderate risk to the reliability of the bulk power system. Oncor's failure to prevent vegetation from encroaching into the MVCD of a line could have caused extended transmission outages. Oncor's footprint also interconnects with at least six other TOs, and an outage of a transmission line could have impacted these entities as well.

However, a number of factors served to reduce the actual and potential risk posed by this issue. First, there was no load or generation loss as a result of the vegetation contacts. Regarding this fact, the line at issue possessed a second parallel circuit. During the issue duration, the load on this second parallel circuit increased from 650 amps to approximately 800 amps, but remained well within its rating of 2729 amps. Second, Oncor performed annual system planning studies of its transmission system consistent with the Transmission Planning Standards, including studies in both 2015 and 2016. These studies established that even the loss of both Monticello to Farmersville Line 345 kV circuits would not result in any line overloading or instability. Third, the relays on the line functioned correctly as designed, minimizing the amount of time the line flow was interrupted and limiting the extent of the fault. To that end, the line was de-energized for a maximum of 10 seconds during each contact. Fourth, Oncor discovered and removed the cause of the vegetation contacts on the same day the contacts occurred. Fifth, the line at issue was correctly rated and was operating within its rating at the time of the faults. Finally, the risk from this incident was also reduced by the fact that Oncor possesses and has previously successfully implemented its overall vegetation management program. Oncor employs a "ground-to-sky" vegetation management approach for the floor and edge of ROWs, which achieves a greater clearance than required by the designed MVCD. These vegetation management practices reduce the potential risk that circumstances leading to a vegetation contact in this instance could occur on other parts of the Oncor system. This is further evidenced by the fact that Oncor has had no sustained outages resulting from vegetation encroachments in its ROWs prior to the current incident.

Prevention

Describe how successful completion of this plan will prevent or minimize the probability further violations of the same or similar reliability standards requirements will occur

Oncor's successful completion of this Mitigation Plan will prevent or minimize the probability that further violations of the same or similar reliability standards requirements will occur because the mitigation actions that Oncor implemented focused both on (1) evaluating and addressing the then-existing status of vegetation on Oncor's 345 kV lines and (2) implementing improved VM tools and processes for ongoing VM work. This dual approach ensured that vegetation on the portions of Oncor's system where vegetation is most prevalent was appropriately addressed consistent with Oncor's VM Plan and applicable NERC standards and that new processes are implemented to improve Oncor's ability to identify a potential vegetation issue in a timely fashion. Together, these mitigation actions should serve to strengthen Oncor's VM performance, and prevent or minimize potential future violations of FAC-003. The specific mitigation actions that have been completed are listed below:

- 1) conducted ground patrols of other spans in the area of the Monticello to Farmersville Line trip to determine if other areas of concerns existed in the area:
- 2) conducted an aerial survey of the Monticello to Farmersville Line to determine if any imminent vegetation management threats existed;
- 3) conducted helicopter patrols of the 345 kV lines throughout more than half of the Oncor service territory;
- 4) re-emphasized the importance of 345 kV line corridors to District Managers, field personnel, and craft

personnel;

- 5) conducted individual plant herbicide treatment for the area that contained the encroaching tree, as well as on all three transmission lines in the transmission corridor at issue;
- 6) established an internal team to evaluate Oncor's existing vegetation management processes; and
- 7) conducted additional herbicide treatments for 345 kV lines in the same geographic area as the Monticello to Farmersville line at issue.

Describe any action that may be taken or planned beyond that listed in the mitigation plan, to prevent or minimize the probability of incurring further violations of the same or similar standards requirements

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Authorization

An authorized individual must sign and date the signature page. By doing so, this individual, on behalf of your organization:

- * Submits the Mitigation Plan, as presented, to the regional entity for acceptance and approval by NERC, and
- * if applicable, certifies that the Mitigation Plan, as presented, was completed as specified.

Acknowledges:

- 1. I am qualified to sign this mitigation plan on behalf of my organization.
- I have read and understand the obligations to comply with the mitigation plan requirements and ERO
 remedial action directives as well as ERO documents, including but not limited to, the NERC rules of
 procedure and the application NERC CMEP.
- 3. I have read and am familiar with the contents of the foregoing Mitigation Plan.

Oncor Electric Delivery Company LLC Agrees to be bound by, and comply with, this Mitigation Plan, including the timetable completion date, as accepted by the Regional Entity, NERC, and if required, the applicable governmental authority.

Authorized Individual Signature:

(Electronic signature was received by the Regional Office via CDMS. For Electronic Signature Policy see CMEP.)

Authorized Individual

Name: Ray Averitt

Title: Sr. Director

Authorized On: April 09, 2018

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