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## FAC-003-4 – Transmission Vegetation Management

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### 1. OVERVIEW OF THE STANDARD

#### 1.1. Applicability

FAC-003-4 applies to the Transmission Owner (TO) and Generator Owner (GO) functional entities. However, only Generator Owners that own lines operating at  $\geq 200$  kV and meet certain criteria found in FAC-003-4 Section A.4.3 are applicable owners.

#### 1.2. Purpose of the Standard

The purpose of FAC-003-4 is to maintain the reliability of the power transmission system by using a defense-in-depth strategy to manage vegetation located on transmission line rights-of-way (ROW) and minimize encroachments from vegetation located adjacent to the ROW, thus preventing the risk of vegetation-related outages that could lead to cascading. Poor vegetation management control may jeopardize the reliability of the power transmission system and associated equipment.

#### 1.3. Regulatory Context

The FAC-003-4 standard is an update of the FAC-003-3 standard. The Régie de l'énergie (hereinafter "the Régie") adopted FAC-003-3 in Decision D-2016-195.<sup>1</sup> Some of its requirements became effective on July 1, 2017, and others, on January 1, 2018.

The NERC Board of Trustees adopted FAC-003-4 on February 11, 2016. FERC subsequently approved the standard on April 26, 2016 in Docket No. RD16-4-000.<sup>2</sup>

#### 1.4. Specific Provisions for Québec

The Reliability Coordinator proposes renewing the specific provision for FAC-003-3 Requirement R6, considering that it is not adverse to reliability and may help reduce the impact on the applicable responsible entities in Québec. The Reliability Coordinator asks, however, that registered entities affected by this specific provision indicate whether it actually reduces the impact of applying the reliability standard in Québec or else could be retired without consequences.

#### 1.5. Proposed Effective Dates

The NERC Implementation Plan allows for a period of three months between regulatory approval and the implementation of the standard.<sup>3</sup> The standard became effective in the United States on October 1, 2016.

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<sup>1</sup> Régie de l'énergie, Decision D-2016-195, consulted online on June 28, 2019, at: [publicsde.regie-energie.qc.ca/projets/332/DocPrj/R-3944-2015-A-0062-Dec-Dec-2016\\_12\\_22.pdf](https://publicsde.regie-energie.qc.ca/projets/332/DocPrj/R-3944-2015-A-0062-Dec-Dec-2016_12_22.pdf).

<sup>2</sup> FERC letter RD16-4-000, consulted online on July 19, 2019, at: <https://www.nerc.com/FilingsOrders/us/FERCOrdersRules/Order%20on%20FAC-003-4.pdf> (en anglais seulement).

<sup>3</sup> NERC Implementation Plan for FAC-003-4, consulted online on March 22, 2019, at: [https://www.nerc.com/pa/Stand/Project%202010071%20Vegetation%20Management%20DL/FAC-003-4\\_Implementation\\_Plan.pdf](https://www.nerc.com/pa/Stand/Project%202010071%20Vegetation%20Management%20DL/FAC-003-4_Implementation_Plan.pdf)

The Reliability Coordinator proposes a period of nine months between the adoption of the FAC-003-4 standard by the Régie and its effective date.

### **1.6. Standards or Requirements to Retire**

FAC-003-3 will have to be retired as soon as FAC-003-4 comes into effect.

## **2. ASSESSMENT OF RELEVANCE**

The FAC-003-4 standard meets FERC Order No. 777<sup>4</sup> regarding the FAC-003-3 standard, intended to review the calculations for minimum vegetation clearance distances in order to minimize the risk of cascading outages. Clearance distances would be increased to minimize the occurrence of vegetation-related events.

As part of NERC Project 2010-07.1, an analysis based on research by the Electric Power Research Institute (EPRI) was undertaken to validate the calculations based on Gallet equations. The results are found in Table 2 of the standard.

Following that analysis, the main changes to the revised standard are as follows:

- The gap factor used to calculate minimum clearance distance in FAC-003-4 Table 2 was adjusted from 1.3 to 1.
- The distance values in Table 2 were modified, and distances up to 4,572 metres (15,000 feet) were added.
- Reasons for the use of the term Planning Coordinator as opposed to Planning Authority were clarified for the sake of consistency with FAC-014, which uses the term Planning Authority.
- The Guidelines and Technical Basis section was updated.

In accordance with the agreement made in 2009 between the Régie, NERC and the NPCC and with the authorization of the Québec government,<sup>5</sup> this standard was developed and approved by external agencies for North America, including Québec. In the opinion of the Reliability Coordinator, this standard is relevant for system reliability in Québec and the standard contributes to harmonization with neighboring systems.

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<sup>4</sup> FERC Order No. 777, consulted online on July 11, 2019, at: <https://www.ferc.gov/whats-new/comm-meet/2013/032113/E-5.pdf>

<sup>5</sup> Agreement entered into in accordance with Order-in-Council 443-21009 dated April 8, 2019.

### 3. PRELIMINARY IMPACT ASSESSMENT

	Low	Moderate	High
Implementation of the standard		X	
Enforcement of the standard		X	
Compliance monitoring	X		

#### Legend:

**Low:** Normal industry practice that only requires minor adjustments to existing processes or practices.

**Moderate:** Change that requires allocation of some physical, human or financial resources to implement the proposed standard, maintain it or monitor its compliance.

**High:** Change that requires allocation of significant physical, human or financial resources to plan and implement the proposed standard, maintain it or monitor its compliance.

### 4. FINAL IMPACT ASSESSMENT

This section shall be completed upon receipt of the impact assessment forms and at the conclusion of the consultation process prior to filing of reliability standards with the Régie de l'énergie.