

May 26, 2015

**VIA ELECTRONIC FILING**

Kirsten Walli, Board Secretary  
Ontario Energy Board  
P.O Box 2319  
2300 Yonge Street  
Toronto, Ontario, Canada  
M4P 1E4

RE: *North American Electric Reliability Corporation*

Dear Ms. Walli:

The North American Electric Reliability Corporation (“NERC”) hereby submits Supplemental Information to Petition of the North American Electric Reliability Corporation for Approval of Proposed Transmission Operations and Interconnection Reliability Operations and Coordination Reliability Standards. NERC requests, to the extent necessary, a waiver of any applicable filing requirements with respect to this filing.

Please contact the undersigned if you have any questions.

Respectfully submitted,

/s/ Holly A. Hawkins

Holly A. Hawkins  
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Enclosure

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**ONTARIO ENERGY BOARD  
OF THE PROVINCE OF ONTARIO**

**NORTH AMERICAN ELECTRIC )  
RELIABILITY CORPORATION )**

**SUPPLEMENTAL INFORMATION TO PETITION OF THE  
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION  
FOR APPROVAL OF PROPOSED TRANSMISSION OPERATIONS AND  
INTERCONNECTION RELIABILITY OPERATIONS AND COORDINATION  
RELIABILITY STANDARDS**

The North American Electric Reliability Corporation (“NERC”)<sup>1</sup> hereby submits supplemental information to its March 25, 2015 filing of nine proposed Transmission Operations (“TOP”) and Interconnection Reliability Operations and Coordination (“IRO”) Reliability Standards (the “TOP/IRO filing”).<sup>2</sup> NERC is providing this supplemental information to address the removal of Load Serving Entities (“LSEs”) from the applicability of proposed Reliability Standard TOP-001-3 in light of the Federal Energy Regulatory Commission’s (“FERC”) order on NERC’s Risk-Based Registration (“RBR”) initiative.<sup>3</sup>

**I. BACKGROUND**

**a. Applicability of Proposed Reliability Standard TOP-001-3**

As discussed in greater detail in the TOP/IRO filing, proposed Reliability Standard TOP-001-3 contains 20 requirements relating to transmission operations and applies primarily to the

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<sup>1</sup> The Commission certified NERC as the electric reliability organization (“ERO”) in accordance with Section 215 of the Federal Power Act (“FPA”) on July 20, 2006. *North American Electric Reliability Corporation*, 116 FERC ¶ 61,062 (2006).

<sup>2</sup> The nine proposed Reliability Standards are: TOP-001-3 (Transmission Operations); TOP-002-4 (Operations Planning); TOP-003-3 (Operational Reliability Data); IRO-001-4 (Reliability Coordination – Responsibilities); IRO-002-4 (Reliability Coordination –Monitoring and Analysis); IRO-008-2 (Reliability Coordinator Operational Analyses and Real-time Assessments); IRO-010-2 (Reliability Coordinator Data Specification and Collection); IRO-014-3 (Coordination Among Reliability Coordinators); and IRO-017-1 (Outage Coordination) (collectively, the “Proposed TOP/IRO Standards”).

<sup>3</sup> *North American Electric Reliability Corporation*, 150 FERC ¶ 61,213 (2015) (“RBR Order”).

responsibilities of Transmission Operators and Balancing Authorities for maintaining reliable operations.<sup>4</sup> The only other functional entities subject to requirements under proposed Reliability Standard TOP-001-3 are Distribution Providers and Generator Operators, whose sole responsibilities under the proposed standard are to:

- comply with Operating Instructions<sup>5</sup> issued by a Transmission Operator or Balancing Authority (Requirements R3 and R5); or
- notify the Transmission Operator or Balancing Authority if they are unable to comply with the Transmission Operator's or Balancing Authority's Operating Instructions (Requirements R4 and R6).

As explained in the TOP/IRO filing, proposed Reliability Standard TOP-001-3 replaces currently-effective Reliability Standards TOP-001-1a and certain requirements from other currently-effective TOP and IRO Reliability Standards.<sup>6</sup> The requirement for Distribution Providers and Generator Operators to comply with Operating Instructions issued by a Transmission Operator is a carry-over from Reliability Standard TOP-001-1a, Requirements R3 and R4, which require Generator Operators (Requirement R3) and Distribution Providers (Requirement R4) to comply with "reliability directives" issued by a Transmission Operator unless such actions would violate safety, equipment, regulatory or statutory requirements.<sup>7</sup> Requirement R4 also required LSEs to comply with the reliability directives issued by a Transmission Operator. LSEs were not subject to any other requirements in TOP-001-1a nor were LSEs subject to the other currently-effective TOP/IRO requirements that proposed

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<sup>4</sup> See TOP/IRO filing.

<sup>5</sup> As defined in the Glossary of Terms Used in NERC Reliability Standards, an "Operating Instruction" is "[a] command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)"

<sup>6</sup> See Exhibit D to the TOP/IRO filing.

<sup>7</sup> As explained in the TOP/IRO filing, the term "Operating Instruction" replaces the term "reliability directive" used in currently effective Reliability Standards TOP-001-1a. TOP-001-1a did not require Generator Operators, Distribution Providers, or LSEs to comply with reliability directives issued by a Balancing Authority.

Reliability Standard TOP-001-3 is designed to replace. While LSEs were initially included in Requirements R3-R6 of proposed Reliability Standard TOP-001-3 along with Distribution Providers and Generator Operators, the standard drafting team decided to remove LSEs from the proposed standard following the NERC Board of Trustees's approval of proposed revisions to the NERC Rules of Procedure to eliminate the LSE functional registration category.

The proposal to eliminate the LSE functional registration category was part of a broader initiative at NERC, referred to as the RBR initiative, to revise the NERC registration criteria to ensure that the right entities are subject to the right set of Reliability Standards using a consistent approach to risk assessment and registration. The goal of the RBR initiative was to develop enhanced registry criteria, including the use of thresholds and specific Reliability Standards applicability, where appropriate, to better align compliance obligations with material risk to Bulk Electric System reliability. Eliminating the LSE functional registration category was one of a number of reforms proposed as part of the RBR initiative. On January 6, 2015, NERC submitted a filing of proposed revisions to the NERC Rules of Procure to implement the reforms proposed as part of the RBR initiative (the "RBR filing").

#### **b. RBR Order**

On March 19, 2015, FERC issued the RBR Order. Among other things, FERC denied, without prejudice, NERC's proposal to remove the LSE function and directed NERC to submit a compliance filing providing additional information on the effect of deregistering LSEs.<sup>8</sup> FERC found NERC's analysis incomplete, stating that it is concerned that NERC has not adequately explained how certain LSE reliability tasks will be performed going forward.<sup>9</sup> In particular,

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<sup>8</sup> RBR Order at PP 37-43.

<sup>9</sup> *Id.*

FERC focused on the LSEs' role as a provider of information required for reliable operation of the Bulk Electric System.<sup>10</sup> FERC stated:

Upon elimination of the load-serving entity as a registered function, it is unclear whether and how some entities will continue to provide information or who will assume their obligations. It appears that some of the load-serving entities will be required to continue to provide the information through their responsibilities as other registered functions. However, NERC has not adequately explained which entities will continue to provide this information. Because of the gaps in NERC's analysis, discussed below, we are unable to satisfactorily conclude on the current record in this proceeding that the elimination of the load-serving entity function will have no material impact on the reliability of the Bulk-Power System.<sup>11</sup>

More specifically, FERC expressed concern with the information provided by LSEs that serve as inputs into power system models and assessments under the Modeling, Data, and Analysis ("MOD") group of Reliability Standards:

NERC does not adequately address whether, going forward, all balancing authorities and planners will have the ability to reasonably estimate demand and energy forecast data for areas where the load-serving entity is deregistered. In areas of significant load-growth, the cumulative effect of deregistered entities not having to provide accurate load data projections as required by certain MOD Reliability Standards could have an increasing effect on reliability over time as load increases, e.g., as a result of demand and energy forecast data omitted or not accurately depicted in power system models and assessments.<sup>12</sup>

To obtain additional information about the effects of deregistering LSEs, FERC directed NERC to submit a compliance filing that provides, among other things: (1) an adjusted estimate on the number of LSEs that would be deregistered; (2) additional information regarding the peak load of such entities on an individual and balancing authority basis; and (3) for the LSEs for which NERC anticipates deregistration, specific information regarding the alternative sources of

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<sup>10</sup> RBR Order at PP 37-41. As provided in the NERC Functional Model (at 55), LSEs, among other things, provide (1) load profiles and characteristics, plans, and forecasts as needed to the Balancing Authorities, Purchasing-Selling Entities, Planning Coordinators, Resource Planners, and Transmission Planners, (2) information as to self-provided reliability-related services to the Balancing Authority, and (3) generation commitments and dispatch schedules to the Balancing Authority.

<sup>11</sup> RBR Order at P 37.

<sup>12</sup> RBR Order at P 40 (internal citations omitted).

authority which will ensure the continuation of LSE reliability activities by either the deregistered entity or another registered entity.<sup>13</sup>

Additionally, in response to NERC's statement that NERC is in the process of removing the LSE function from a number of Reliability Standards, FERC stated:

When and if NERC submits one or more petitions for revised Reliability Standards that propose to remove the load-serving entity as an applicable entity, NERC must provide an adequate explanation of how the previous load-serving entities obligations will continue. In particular, an explanation that the removal of the load-serving entity function is consistent with the RBR initiative would be inadequate, if not circular, in light of NERC's rationale in the immediate docket that the impact from eliminating the load-serving entity function is lessened by the removal of the function from Reliability Standards. NERC is responsible to explain in the context of a particular modified Reliability Standard whether removal of the load-serving entity would result in a reliability gap and, if so, how the gap is addressed.<sup>14</sup>

In light of this directive, NERC is providing supplemental information to the TOP/IRO filing to provide further explanation for removing LSEs as an applicable entity under proposed Reliability Standard TOP-001-3. As explained below, removing LSEs from proposed Reliability Standard TOP-001-3 will not create a reliability gap, and the proposed Reliability Standard TOP-001-3 is just, reasonable, not unduly discriminatory or preferential, and in the public interest.

## **II. SUPPLEMENTAL INFORMATION**

The stated purpose of proposed Reliability Standard TOP-001-3 is to “prevent instability, uncontrolled separation, or Cascading outages that adversely affect the reliability of the Interconnection by ensuring prompt action to prevent or mitigate such occurrences.”<sup>15</sup> As noted above, the proposed standard achieves this reliability goal, in part, by providing Transmission Operators and Balancing Authorities the authority to direct the actions of certain other functional

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<sup>13</sup> RBR Order at P 41.

<sup>14</sup> RBR Order at P 43 (internal citations omitted).

<sup>15</sup> *See* TOP/IRO filing.

entities (via the issuance of Operating Instructions) to maintain reliability during Real-time operations. In contrast to prior versions of proposed Reliability Standard TOP-001-3, LSEs are not included in the list of entities that must comply with a Transmission Operator's or Balancing Authority's Operating Instructions.<sup>16</sup> As explained below, that is because none of the functions performed by LSEs, as described in the NERC Functional Model, necessitate that LSEs be subject to a requirement to comply with such Operating Instructions to ensure that a Transmission Operator or Balancing Authority can maintain the reliability of its Transmission Operator Area or Balancing Authority Area, respectively.

As explained in the NERC Functional Model,<sup>17</sup> an LSE is “the functional entity that secures energy and transmission service (and reliability-related services) to serve the electrical demand and energy requirements of its end-use customers.”<sup>18</sup> An LSE does not own or operate Bulk Electric System facilities or equipment or the facilities or equipment used to serve end-use customers.<sup>19</sup> As provided in the NERC Functional Model, an LSE's tasks are limited to the following:

1. *Ahead of Time Tasks:*

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<sup>16</sup> As noted above, the only requirement in previous versions of proposed Reliability Standard TOP-001-3 applicable to LSEs was for LSEs to comply with “reliability directives” issued by a Transmission Operator. There was previously no requirement for LSEs to comply with the directives of a Balancing Authority.

<sup>17</sup> The NERC Functional Model is available at: [http://www.nerc.com/pa/Stand/Functional%20Model%20Archive%201/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/pa/Stand/Functional%20Model%20Archive%201/Functional_Model_V5_Final_2009Dec1.pdf) The NERC Functional Model was approved by the NERC Board of Trustees and provides the framework for the development and applicability of NERC's Reliability Standards. See *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, 72 FR 16416 at PP 117-129 (Apr. 4, 2007), FERC Stats. & Regs. ¶ 31,242, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

<sup>18</sup> NERC Functional Model at 55. As defined in the NERC Glossary, an LSE “[s]ecures energy and transmission service (and related Interconnected Operations Services) to serve the electrical demand and energy requirements of its end-use customers.”

<sup>19</sup> The Distribution Provider is the functional entity that provides facilities that interconnect an end-use customer load and the electric system for the transfer of electrical energy to the end-use customer. If a company registered as an LSE also owned facilities, the company would be registered for other functions as well.

- Submits load profiles and characteristics, plans, and forecasts to Balancing Authorities, Purchasing-Selling Entities, Planning Coordinators, Resource Planners, and Transmission Planners.
- Identifies new facility connection needs for end-use customers.
- Provides generation commitments and dispatch schedules to the Balancing Authority.
- Provides information as to self-provided reliability-related services to the Balancing Authority.
- Provides planned purchases to the Resource Planner and Transmission Planner for system modeling and reliability evaluation.
- Arranges for transmission service from Transmission Service Providers and makes arrangements for reliability-related services with Generator Owners or Load-Serving Entities.
- Submits Requests For Interchange to Interchange Coordinators.
- Notifies Generator Operators if Arranged Interchange requests are approved or denied.
- Receives final approval or denial of Arranged Interchange from Interchange Coordinator.
- Coordinates with Distribution Provider on identifying new facility interconnection needs.
- Receives notification from Purchasing-Selling Entity if Arranged Interchange requests approved or denied.

2. *Real-Time Tasks:*

- Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment.
- Communicates requests for voluntary load curtailment to end-use customers as directed by the Balancing Authority and Distribution Provider.
- Notifies Interchange Coordinators of Confirmed Interchange cancellations or terminations.
- Receives notice of Confirmed Interchange curtailments from Interchange Coordinator.<sup>20</sup>

In evaluating these functional obligations, the standard drafting team for proposed Reliability Standard TOP-001-3 did not identify any circumstances under which a Transmission Operator or Balancing Authority would need to issue an Operating Instruction to an LSE to meet

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<sup>20</sup> NERC Functional Model at 55.

the goal of the standard (i.e., to prevent instability, uncontrolled separation, or Cascading outages that adversely affect the reliability of the Interconnection in Real-time).<sup>21</sup> First, with respect to the LSE's role as a provider of information to other functional entities, which was FERC's focus in the RBR Order, that role is primarily carried out ahead of Real-time and would not be the subject of an Operating Instruction. For instance, the LSE's submission of (1) load profiles and characteristics, plans, and forecasts, (2) generation commitments and dispatch schedules, and (3) information as to self-provided reliability related services to the Balancing Authority occurs in advance of Real-time operations. As explained above, the purpose of issuing Operating Instructions is to provide Transmission Operators and Balancing Authorities the authority to direct the actions of others so as to maintain reliable transmission operation in Real-time. Proposed Reliability Standard TOP-001-3 is not the standard by which Transmission Operators or Balancing Authorities obtain operational or planning data from other functional entities.

Additionally, the LSE's Real-time role with respect to voluntary load curtailment does not necessitate requiring LSEs to comply with Operating Instructions issued by a Transmission Operator or Balancing Authority. In order to maintain reliability in their areas and prevent instability, uncontrolled separation, or Cascading outages, there may be circumstances under which Transmission Operators and Balancing Authorities need to shed load (i.e. direct non-voluntary load curtailment). Such action is implemented in Real time to address imminent or existing reliability issues such as an exceedance of an Interconnection Reliability Operating Limit or System Operating Limit, or a voltage problem. Due to the urgent nature of these circumstances, the Reliability Coordinator, Balancing Authority, or Transmission Operator may issue Operating Instructions directly to the Distribution Provider for physical implementation of

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<sup>21</sup> In its compliance filing on the RBR Order, NERC will provide further analysis on removing the LSE function from currently-effective Reliability Standards and proposed Reliability Standards. This supplement solely focuses on the removal of the LSE from proposed Reliability Standard TOP-001-3.

load shedding (except when this can be accomplished directly by the Transmission Operator). As indicated by the NERC Functional Model, as the LSE does not own or operate equipment, the LSE does not play a role in shedding load in Real-time.<sup>22</sup> It is the Distribution Provider that provides the switches and reclosers used to shed load for emergency action at the direction of the Transmission Operator or Balancing Authority.<sup>23</sup>

In contrast to a Distribution Provider's role in load shedding, the LSE's role in load curtailment is voluntary and typically arranged ahead of Real-time. In many cases, the LSE obtains interruptible load contracts with end-use customers for the purpose of providing market price relief or assistance to the Balancing Authority in tight capacity/energy situations. The LSE often notifies the Balancing Authorities and Distribution Providers of the agreements so that voluntary load curtailment may be requested under specified conditions.<sup>24</sup> In Real-time, the LSE's role is simply to "[c]ommunicate requests for *voluntary* load curtailment to end-use customers as directed by the Balancing Authority and Distribution Provider."<sup>25</sup> An LSE's compliance with such requests, however, is not necessary for the Transmission Operator or Balancing Authority to maintain reliability in its area. Transmission Operators and Balancing Authorities have the ability to shed load absent agreement by the LSE or the end-use customer,

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<sup>22</sup> Because the LSE does not own or operate equipment, LSEs cannot shed load or perform other corrective actions. LSEs thus have no control that they could exercise for purposes of load shedding even if they were directed to take action by a Transmission Operator or Balancing Authority.

<sup>23</sup> NERC Functional Model at 47.

<sup>24</sup> Voluntary load curtailment is a tool used to address capacity deficiencies, not to control transmission constraints. Under Reliability Standard EOP-001-2.1b, Requirement R4, each Transmission Operator and Balancing Authority must have an emergency plan that includes, among other things, public appeals for voluntary load reductions and energy conservation. Similarly, under proposed Reliability Standard EOP-011-1, Requirement R2, Balancing Authorities must have an Operating Plan to mitigate Capacity Emergencies and Energy Emergencies that includes, among other things, public appeals for voluntary load reductions. Removing LSEs from proposed Reliability Standard TOP-001-3 does not change the requirement for Transmission Operators and Balancing Authorities to appeal for voluntary load reduction from an LSE or directly from end-use customers. Note that LSEs are not an applicable entity under EOP-001-2.1b or EOP-011-1.

<sup>25</sup> NERC Functional Model at 55 (emphasis added).

as noted above. Requiring an LSE to comply with an Operating Instruction to exercise its rights to curtail load is thus unnecessary to maintain reliability and prevent instability, uncontrolled separation, or Cascading outages. If an LSE receives a request from a Transmission Operator or Balancing Authority to curtail load, the LSE may exercise its contractual rights to curtail or risk having its load shed by the Reliability Coordinator, Balancing Authority, Transmission Operator, and Distribution Provider according to established load shedding procedures.<sup>26</sup>

Respectfully submitted,

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<sup>26</sup> NERC's Reliability Standards should not dictate when an LSE must exercise its contractual rights to curtail load, particularly where there are other mechanisms to maintain reliable operations.