

February 26, 2016

VIA ELECTRONIC FILING

David Erickson
President and Chief Executive Officer
Alberta Electric System Operator
2500, 330 - 5 Avenue SW
Calgary, Alberta
T2P 0L4

Re: Clarifying Supplemental Information for Notice of Filing of BAL-002-2

Dear Mr. Erickson:

On February 18, 2016, the North American Electric Reliability Corporation (“NERC”) submitted a Notice of Filing of proposed Reliability Standard BAL-002-2—Balancing Authority Reliability-based Controls (“Filing”).¹ NERC hereby submits this supplement to the Filing to address the pending retirement of Reliability Standard TOP-007-0, referenced in the Filing, and to clarify the statement in the Filing that BAL-002-2 would operate in conjunction with TOP-007-0 to control system frequency by addressing transmission line loading (“TLL”) in the event of a transmission overload.

Proposed Reliability Standard BAL-002-2 was developed to help ensure that responsible entities balance resources and demand and recover from a system contingency that is within a responsible entity’s Most Severe Single Contingency (“MSSC”) through deployment of reserves and restoration of frequency.² As explained in the Filing, proposed Reliability Standard BAL-002-2 will “operate in coordination with requirements under other Reliability Standards, including BAL-001-2, BAL-003-1, TOP-007-0, EOP-002-3, and EOP-011-1, that may be implicated upon a significant system disruption.”³ As an example of this coordination, NERC noted that “Reliability Standard TOP-007-0 addresses transmission line loading to account for transmission overloads if certain units were lost and reserves responded.”⁴ NERC also stated that “Reliability Standard TOP-007-0 addresses transmission line loading by ensuring that the Reliability Coordinator is apprised of exceedances of Interconnection Reliability Operating Limits and System Operating Limits so that the Reliability Coordinator can direct appropriate corrective action. Because transmission overloads could occur if certain units are lost and reserves are deployed, TOP-007-0 is critical

¹ *Notice of Filing of the North American Electric Reliability Corporation of Proposed Reliability Standard BAL-002-2* (filed February 18, 2016).

² *See, id.* at 4.

³ *Id.* at 5.

⁴ *Id.* at n.9.

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to ensure reliability upon an energy event.”⁵ Finally, NERC explained that BAL-002-2 only covers events that are within an entity’s MSSC, and that when events occur that are larger than a Responsible Entity’s MSSC, “Balancing Authorities... must respond to these large events under a coordinated suite of NERC standards including TOP-007-0, EOP-002-3, and EOP-011-1...”⁶

NERC clarifies that although the Federal Energy Regulatory Commission (“FERC”) has approved the retirement of TOP-007-0 on November 19, 2015,⁷ the obligations related to TLL under TOP-007-0 will be covered by TOP-001-3, EOP-003-2, IRO-009-2,⁸ and IRO-008-2. As explained below, these standards require Reliability Coordinators (“RC”), the entities with “the highest level of authority” and with the “wide-area view necessary for situational awareness,”⁹ to communicate with Transmission Operators (“TOP”) and Balancing Authorities (“BA”) to address transmission overload issues by providing for real-time monitoring of operating limit exceedances and directing mitigation of those exceedances.

First, Requirement R1 of TOP-007-0, which required the TOP to inform the RC of an Interconnection Reliability Operating Limit (“IROL”) or System Operating Limit (“SOL”) exceedance and the actions being taken to return the system to its normal condition, will be replaced by Requirement R15 of TOP-001-3 and Requirements R5 and R6 of IRO-008-2. Together, these new requirements continue this mandatory communication by requiring the RC to notify the TOP and BA of an IROL or SOL exceedance and the TOP to inform the RC of corrective actions and the RC to notify the TOP when the exceedance has been prevented or mitigated.¹⁰ Second, responsibilities under Requirement R2 of TOP-007-0, which required the TOP to return the system to normal conditions within 30 minutes, are covered by existing Requirement R3 of IRO-009-2 and new Requirement R12 of TOP-001-3. Under these requirements, the TOP still must return the system to normal conditions within 30 minutes.¹¹ Third, obligations under Requirement R3 of TOP-007-0, which required the TOP to “take all appropriate actions up to and including shedding firm load, or directing the shedding of firm load” to return the transmission system to within the

⁵ *Id.* at 15.

⁶ *Id.*

⁷ *Transmission Operations Reliability Standards and Interconnection Reliability Operations and Coordination Reliability Standards*, Order No. 817, 153 FERC ¶ 61,178 (Nov. 19, 2015). NERC notes that, as approved, Reliability Standard TOP-007-0 will retire on April 1, 2017. *See, Notice of Filing of the North American Electric Reliability Corporation of Proposed Transmission Operations and Interconnection Reliability Operations and Coordination Reliability Standards* (“TOP/IRO Filing”) at Exhibit D (filed Mar. 25, 2015).

⁸ NERC notes that the Mapping Document in the TOP/IRO Filing referenced Requirement R4 of Reliability Standard IRO-009-1 as one requirement that would continue obligations required in retiring TOP-007-0, as it obligated the RC to “act or direct others to act” to mitigate an Interconnection Reliability Operating Limit exceedance. Since filing the TOP/IRO Filing, NERC submitted a filing on October 20, 2015 of proposed Reliability Standard IRO-009-2 to replace existing IRO-009-1. As explained in the Mapping Document for IRO-009-2, Requirement R4 of IRO-009-1 has been moved to Requirement R3 in IRO-009-2. The Commission approved IRO-009-2 on December 4, 2015. *See N. Am. Elec. Reliability Corp.*, Docket No. RD15-7-000 (Dec. 4, 2015) (unpublished letter order).

⁹ TOP/IRO Filing at 5.

¹⁰ Requirement R15 of TOP-001-3 maintains the requirement that a TOP must inform the RC of the actions taken to correct an SOL exceedance. Requirements R5 and R6 of IRO-008-2 require the RC to notify TOPs and BAs when conditions indicate that an IROL or SOL may be or has been exceeded and when the exceedance has been prevented or mitigated. *See Id.* at 12.

¹¹ Requirement R3 of IRO-009-2 requires the RC to act, or to direct others to act, to mitigate the IROL exceedance within the IROL T_v. Requirement R12 of TOP-001-3 prohibits the TOP from operating outside of an IROL for a continuous duration exceeding the time period described in IRO-009-2. IROL T_v is defined in the *NERC Glossary* as a maximum of 30 minutes.

IROL, are covered by existing Requirement R3 of IRO-009-2 and Requirement R1 of EOP-003-2. These requirements obligate the RC to “act or direct others to act” to mitigate an exceedance of the IROL, and they require either the relevant TOP or BA to shed load to maintain sufficient generation or transmission (particularly in the case of an operating limit exceedance) when all other remedial actions have failed.¹² Finally, Requirement R4 of TOP-007-0, which required the RC to assess the sufficiency of actions taken to address an IROL or SOL exceedance and associated corrective action, is replaced by Requirement R6 of IRO-008-2. Under this new requirement, the RC must communicate the status of SOL or IROL exceedances with impacted TOPs and BAs, and until that time, impacted entities must continue to mitigate the SOL or IROL exceedance as described in the abovementioned requirements.¹³

Accordingly, Reliability Standards TOP-001-3, EOP-003-2, IRO-009-2, and IRO-008-2 will address transmission line issues covered by TOP-007-0 by requiring relevant functional entities to communicate IROL and SOL exceedances so that the RC can direct appropriate corrective action to mitigate or prevent those events.¹⁴ These standards will fill the gap left by the retirement of TOP-007-0 and will support implementation of BAL-002-2 by addressing TLL issues caused by IROL and SOL exceedances for events that exceed an entity’s MSSC.

Respectfully submitted,

/s/ Andrew C. Wills

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¹² Requirement R3 of IRO-009-2 requires the RC to act or direct others to act to mitigate the IROL exceedance within a predefined time period. Requirement R1 of EOP-003-2 requires a TOP or BA to shed load after “taking all other remedial steps” when operating with insufficient generation or transmission capacity.

¹³ Requirement R6 of IRO-008-2 now requires the RC, which has responsibility for mitigate the IROL, to notify affected TOPs and Balancing Authorities when the IROL exceedance has been prevented or mitigated.

¹⁴ See, TOP/IRO Filing at 4 (NERC stated that the proposed Reliability Standards and retirements, as included in that filing, will “ensure that RCs and TOPs work together, and with other functional entities, to operate the Bulk Electric System within System Operating Limits (“SOLs”) and Interconnection Reliability Operating Limits (“IROLs”).”).