



**ARC Operations Work Group Assessment and Conversion of NERC EOP-002-2 to Alberta EOP-002-AB-2 — Capacity and Energy Emergencies**

Section	NERC EOP-002-2	Alberta EOP-002-AB-2	Reason for Difference <sup>1</sup>
<b>Purpose</b>	To ensure Reliability Coordinators and Balancing Authorities are prepared for capacity and energy emergencies.	<del>To</del> <u>The purpose of this reliability standard is to ensure Reliability Coordinators and Balancing Authorities</u> <del>the ISO are</del> <u>is</u> prepared for <u>a capacity and energy emergencies</u> <del>shortage of energy supply shortfall event</del> .	
<b>Applicability</b>	<b>4.1.</b> Balancing Authorities <b>4.2.</b> Reliability Coordinators	<del>4.1. Balancing Authorities</del> <del>4.2. Reliability Coordinators</del> <u>This reliability standard applies to the ISO.</u>	
<b>Effective Date</b>	January 1, 2007	<del>January 1, 2007</del> <u>10 calendar days after the date of approval by the Commission.</u>	
<b>Definitions</b>		<u>Italicized terms used in this reliability standard have the same meanings as set out in the Alberta Reliability</u>	

<sup>1</sup> The following revisions have been made throughout this proposed reliability standard:

- Identified the responsible entities in Alberta.
- Applied a consistent writing style and added clarity.
- Changed passive terms such as “shall” to “must”.

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		<u>Standards Glossary of Terms and Part 1 of the ISO Rules.</u> <sup>2</sup>	
<b>Requirement</b>	<b>R1.</b> Each Balancing Authority and Reliability Coordinator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its respective area and shall exercise specific authority to alleviate capacity and energy emergencies.	<b>R1.</b> <u>The ISO must exercise its authority to alleviate a supply shortfall event in the AIES. by Each Balancing Authority and Reliability Coordinator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its respective area and shall exercise specific authority to alleviate capacity and energy emergencies and taking whatever actions are needed.</u>	Identified the AIES as the respective area.  <b>Alberta Variance<sup>3</sup>:</b> The Alberta requirement excludes the portion of the NERC requirement that states: “to take whatever actions are needed to ensure the reliability of its respective area” as this is beyond the purpose of the standard, to be prepared for supply shortfall events.
<b>Measure</b>	<b>M1.</b> Each Reliability Coordinator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, job descriptions, signed agreements, authority letter signed by an appropriate officer of the company, or other equivalent evidence that will be used to confirm that it meets Requirement 1.	<b>MR1.</b> <u>The following must exist:</u> <ul style="list-style-type: none"> <li><u>-An authorization letter signed by an officer of the company/ISO stating that the persons in the position of System Controller have the authority to carry out actions and exercise the authority in the requirement.</u></li> </ul>	Developed measures specific to the requirement.

<sup>2</sup>Defined terms are not italicized in this document, but will appear in the Alberta Reliability Standards document.

<sup>3</sup> An Alberta variance is a change from the US Reliability Standard that the AESO has determined is material.

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		<ul style="list-style-type: none"> <li>• <u>Job descriptions for system controllers identify the responsibilities of the system controller to operate to ISO rules and reliability standards</u> <del>—t; and carry out the actions and to exercise the authority identified in the requirement. authorized actions.</del></li> </ul> <p><del>Each Reliability Coordinator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, job descriptions, signed agreements, authority letter signed by an appropriate officer of the company, or other equivalent evidence that will be used to confirm that it meets Requirement 1.</del></p>	
<b>Requirement</b>	<p><b>R2.</b> Each Balancing Authority shall implement its capacity and energy emergency plan, when required and as appropriate, to reduce risks to the interconnected system.</p>	<p><del><b>R2. Each Balancing Authority shall</b></del><b>The ISO must</b> implement its capacity and energy emergency plan <u>by following ISO rules. for managing a shortage of energy supply shortfall event.</u> <del>implement its capacity and energy emergency plan when required and as appropriate, to reduce risks to the</del></p>	<p>Identified the ISO rules are to be followed by the ISO for managing a supply shortfall event.</p>

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		<del>interconnected system.</del>	
<b>Measure</b>	<p><b>M2.</b> If a Reliability Coordinator or Balancing Authority implements its Capacity and Energy Emergency plan, that entity shall have and provide upon request evidence that could include but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications, computer printouts or other equivalent evidence that will be used to determine if the actions it took to relieve emergency conditions were in conformance with its Capacity and Energy Emergency Plan. (Requirement 2)</p>	<p><del>M2. If a Reliability Coordinator or Balancing Authority implements its Capacity and Energy Emergency plan, that entity shall have and provide upon request evidence that could include but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications, computer printouts or other equivalent evidence that will be used to determine if the actions it took to relieve emergency conditions were in conformance with its Capacity and Energy Emergency Plan. (Requirement 2)</del>  <u>MR2. Procedures to manage a Shortage of energy supply shortfall event. Procedures, ie Supply Shortfall procedures, exist in ISO rules.</u></p> <p><u>Disturbance reports, operator logs, voice recordings and/or other data exist that demonstrate the ISO managed a supply shortfall event in accordance with its procedures.</u></p>	Developed measures specific to the requirement.

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<b>Requirement</b>	<p><b>R3.</b> A Balancing Authority that is experiencing an operating capacity or energy emergency shall communicate its current and future system conditions to its Reliability Coordinator and neighboring Balancing Authorities.</p>	<p><u><b>R3.</b> The</u><del>During a supply shortfall event, A Balancing Authority that is experiencing an operating capacity or energy emergency shall. The ISO must operate to the supply shortfall</del> <u>procedures</u> communicate its current and its forecast of future system conditions to <u>the VRC its Reliability Coordinator</u> and <u>neighboring adjacent Balancing authorities</u> during a supply shortfall event. <u>in accordance with its procedures in OPP 801 for managing a supply shortfall event.</u></p>	<p>Identified the specific reliability coordinator.</p>
<b>Measure</b>	<p><b>M3.</b> If a Balancing Authority experiences an operating Capacity or Energy Emergency it shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence that will be used to determine if it met Requirement 3.</p>	<p><u><b>MR3.</b> ISO rules must include the required communications as identified in R3. Operator logs, voice recordings, electronic communications and/or other data exist to show that required communications occurred in accordance with ISO rules.</u></p> <p><del><b>M43.</b> If a Balancing Authority experiences an operating Capacity or Energy Emergency it shall have and</del></p>	<p>Developed measure specific to the requirement.</p>

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		<p><del>provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications exist to show that, or other equivalent evidence that will be used to determine if it met Requirement requirement R43 was met.</del></p>	
<b>Requirement</b>	<p><b>R4.</b> A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load.</p>	<p><b>R4.</b> <u>The ISO must follow plans in ISO rules A Balancing Authority</u><del>When the ISO is</del> <u>anticipating anticipates a shortage of energy supply shortfall event may occur.</u> <del>an operating capacity or energy emergency it must follow its</del> <u>the procedures in OPP 801 in for planning for such an event, which may include all or some of the following: The ISO plans must include any one of or combination of the following:</u></p> <ul style="list-style-type: none"> <li>• <del>issuing directives shall perform all actions as</del> <u>necessary,</u> including bringing on all available generation;</li> <li>• <del>Postponing equipment maintenance;</del></li> </ul>	<p>Added reference to the ISO rules.</p>

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		<ul style="list-style-type: none"> <li><del>Posting interconnection TTC to include maximum reliability based capacity enabled through arming of ILRAS loads scheduling interchange purchases in advance, and being prepared to reduce firm load.</del></li> </ul>	
Measure		<p><b>MR4.</b> <u>ISO rules must include the planning as identified in R3. Operator logs, voice recordings, electronic communications exist to show that procedures infor planning for such an event were met.</u></p>	Developed measure specific to the requirement.
Requirement	<p><b>R5.</b> A deficient Balancing Authority shall only use the assistance provided by the Interconnection’s frequency bias for the time needed to implement corrective actions. The Balancing Authority shall not unilaterally adjust generation in an attempt to return Interconnection frequency to normal beyond that supplied through frequency bias action and Interchange Schedule changes. Such unilateral adjustment may overload transmission facilities.</p>	<p><b>R5.</b> <del>When</del><u>The ISO must, during a supply shortfall event exists, A deficient Balancing Authority shall:</u></p> <ul style="list-style-type: none"> <li>Only use the assistance provided by the Interconnection’s frequency bias for the time needed to <u>manage the event.</u>; <del>and</del></li> <li><del>Not unilaterally adjust</del><u>direct generating units</u> in an attempt to return <u>the</u> Interconnection frequency to normal beyond that supplied through frequency bias</li> </ul>	<p>Added reference to the ISO rules.</p> <p>Last sentence in NERC requirement R5 is not a requirement.</p>

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		action and <del>Interchange-interchange Schedule-schedule</del> changes. <del>Such unilateral-adjustment may overload transmission facilities.</del>	
Measure		<u>MR5. Operator logs, voice recordings, electronic communications and/or other data exist to show that the requirement was met.</u>	Developed measure specific to the requirement.
Requirement	<p><b>R6.</b> If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to:</p> <p><b>R6.1.</b> Loading all available generating capacity.  <b>R6.2.</b> Deploying all available operating reserve.  <b>R6.3.</b> Interrupting interruptible load and exports.  <b>R6.4.</b> Requesting emergency assistance from other Balancing Authorities.  <b>R6.5.</b> Declaring an Energy Emergency through its Reliability Coordinator; and  <b>R6.6.</b> Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads.</p>	<p><b>R6.</b> <u>The ISO must comply with When experiencing a shortage of energy supply shortfall event exists, if the Balancing Authority/ISO cannot comply with the cControl pPerformance and dDisturbance cControl sstandards during a supply shortfall event. If necessary to do so, the ISO must implement remedies, then it shall must immediately take steps to implement remedies to do so. These remedies including without limitation, but are not limited to any one of or combination of the following:</u></p> <ul style="list-style-type: none"> <li><u>Loading all available generating capacity.</u></li> <li><u>Deploying all available operating</u></li> </ul>	<p>R6.5 - A Balancing Authority cannot declare an EEA, they request the RC to do so.</p> <p>R6.6 - Removed "firm loads from this requirement. Curtailment of firm loads is documented in R7.</p>

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		<p><u>reserves.</u></p> <ul style="list-style-type: none"> <li>• <u>Interrupting interruptible load and exports.</u></li> <li>• <u>Requesting emergency assistance from other Balancing Authorities.</u></li> <li>• <u>Requesting, in accordance with ISO rules, the VRC to declare an Energy Emergency Alert(s); and</u></li> <li>• <u>Reducing load, through procedures such as public appeals, voltage reductions, and curtailing interruptible loads.</u></li> </ul>	
Measure		<p><u>MR6. ISO rules includes the remedies identified in the requirement. Operator logs, voice recordings, electronic communications and/or other data exist to show that the requirement was met.</u></p> <p><u>OPP 801 includes the remedies identified in the requirement.</u></p>	Developed measures specific to the requirement.
Requirement	<b>R7.</b> Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall:	<b>R7.</b> <u>The ISO must comply with the control performance and disturbance control reliability standards during a supply shortfall event. The ISO must</u>	Referenced the ISO rules for the method to make requests of the VRC to declare Energy Emergency Alerts.

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	<p><b>R7.1.</b> Manually shed firm load without delay to return its ACE to zero; and</p> <p><b>R7.2.</b> Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.”</p>	<p><del>If perform the following if all the remedies listed in requirement R6 have been implemented and when managing a supply shortfall event, the control performance and disturbance control standards are not being met:</del></p> <ul style="list-style-type: none"> <li><del>R7.1. Issue directives for the Mmanually shedding of</del> firm load without delay to return its ACE to zero; and</li> <li><del>R7.2. Request, in accordance with the ISO rules, the Reliability Coordinator VRC to declare an Energy Emergency Alert, in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.”</del></li> </ul>	<p>Identified specific reliability coordinator.</p>
<b>Measure</b>		<p><u>MR7. Operator logs, voice recordings, electronic communications exist to show that requirement was met.</u></p>	<p>Developed measure specific to the requirement.</p>
<b>Measure</b>			
<b>Requirement</b>	<p><b>R8.</b> A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed</p>	<p><del>R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual</del></p>	<p>Applies to the Reliability Coordinator and does not apply to an Alberta entity.</p>

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	<p>in Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.</p>	<p><del>Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.</del></p>	
<b>Measure</b>	<p><b>M4.</b> If a Reliability Coordinator has any Balancing Authority within its Reliability Coordinator Area that has notified the Reliability Coordinator of a potential or actual Energy Emergency, the Reliability Coordinator involved in the event shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence to determine if it initiated an Energy Emergency Alert as specified in Requirement 8 and as detailed in Attachment 1-EOP-002 Energy Emergency Alert Levels.</p>	<p><del>M4. If a Reliability Coordinator has any Balancing Authority within its Reliability Coordinator Area that has notified the Reliability Coordinator of a potential or actual Energy Emergency, the Reliability Coordinator involved in the event shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence to determine if it initiated an Energy Emergency Alert as specified in Requirement 8 and as detailed in Attachment 1-EOP-002 Energy Emergency Alert Levels.</del></p>	

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<b>Requirement</b>	<b>R9.</b> When a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources) as permitted in its transmission tariff (See Attachment 1-IRO-006-0 “Transmission Loading Relief Procedure” for explanation of Transmission Service Priorities):	<del><b>R9.</b> When a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources) as permitted in its transmission tariff (See Attachment 1-IRO-006-0 “Transmission Loading Relief Procedure” for explanation of Transmission Service Priorities):</del>	<b>Alberta Variance<sup>4</sup>:</b> NERC Requirement R9 does not apply in Alberta. Transmission services in Alberta do not contain comparable priority services as identified in the requirement.
<b>Requirement</b>	<b>R9.1.</b> The deficient Load-Serving Entity shall request its Reliability Coordinator to initiate an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0.	<del><b>R9.1.</b> The deficient Load-Serving Entity shall request its Reliability Coordinator to initiate an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0.</del>	
<b>Measure</b>			
<b>Requirement</b>	<b>R9.2.</b> The Reliability Coordinator shall submit the report to NERC for posting on the NERC Website, noting the expected total MW that may have its transmission service priority changed.	<del><b>R9.2.</b> The Reliability Coordinator shall submit the report to NERC for posting on the NERC Website, noting the expected total MW that may have its</del>	Applies to the Reliability Coordinator and does not apply to an Alberta entity.

<sup>4</sup> An Alberta variance is a change from the US Reliability Standard that the AESO has determined is material.

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<b>Requirement</b>	<b>R9.3.</b> The Reliability Coordinator shall use EEA 1 to forecast the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.	<del>transmission service priority changed.</del> <del><b>R9.3.</b> The Reliability Coordinator shall use EEA 1 to forecast the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.</del>	Applies to the Reliability Coordinator and does not apply to an Alberta entity.
<b>Requirement</b>	<b>R9.4.</b> The Reliability Coordinator shall use EEA 2 to announce the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.	<del><b>R9.4.</b> The Reliability Coordinator shall use EEA 2 to announce the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.</del>	Applies to the Reliability Coordinator and does not apply to an Alberta entity.

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<b>Measure</b>	<p><b>M5.</b> If a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources), the Reliability Coordinator involved in the event shall have and provide upon request evidence that could include, but is not limited to, NERC reports, EEA reports, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence that will be used to determine if that Reliability Coordinator met Requirements 9.2, 9.3 and 9.4</p>	<p><del><b>M5.</b> If a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources), the Reliability Coordinator involved in the event shall have and provide upon request evidence that could include, but is not limited to, NERC reports, EEA reports, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence that will be used to determine if that Reliability Coordinator met Requirements 9.2, 9.3 and 9.4.</del></p>	<p><a href="#">Not applicable in Alberta</a></p>
<b>Requirement</b>	<p>The following are minimum requirements that must be met before SOLs or IROLs are revised: The deficient Balancing Authority or Load Serving Entity must agree that, upon notification from its Reliability Coordinator of the situation, it will immediately take whatever actions are necessary to mitigate any undue risk to the Interconnection. These actions may include load shedding.</p>	<p><del><b>R8.</b> The following are minimum requirements that must be met before SOLs or IROLs are revised: The deficient Balancing Authority or Load Serving Entity must agree that, upon notification from its Reliability Coordinator of the situation, it will immediately take whatever actions are</del></p>	<p>This requirement was extracted from section 3.4 and 3.4.1 in NERC Attachment 1-EOP-002-0 and adapted to the Alberta reliability framework.</p>

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		<del>necessary to mitigate any undue risk to the Interconnection. These actions may include load shedding. The</del> <u>When a supply shortfall event exists, the ISO must notify the VRC and advise each adjacent balancing authority in the WECC that a supply shortfall event exists</u> before revising system operating limits.	
Measure		<u>MR8. Operator logs, voice recordings, electronic communications, electronic data or other equivalent evidence exists to show that the ISO notified the VRC and each adjacent balancing authority that a supply shortfall event exists.</u>	
Requirement		<b>R9.</b> The ISO must complete an “Energy Emergency Alert 3 Report” ( <u>refer to template in Appendix 1</u> ) and submit it to the VRC for review within two business days of downgrading or termination of an Energy Emergency Alert 3.	This requirement was extracted from section 3.6 in NERC Attachment 1-EOP-002-0 and adapted to the Alberta reliability framework.
Measure		<u>MR9. An “Energy Emergency Alert 3 Report”s exist for each events where an Energy Emergency Alert 3 was declared.</u>	
Procedures			
Compliance	To view the compliance section D of the NERC		There is no compliance section

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	reliability standard follow this link: <a href="http://www.nerc.com/files/EOP-002-2_1.pdf">http://www.nerc.com/files/EOP-002-2_1.pdf</a>		currently proposed in the Alberta Reliability Standards.  A compliance program will be developed at a later date for Alberta Reliability Standards that recognizes the compliance monitoring and enforcement structure in Alberta.  This approach is deemed consistent with the existing ISO rules.
<b>Regional Differences</b>	None identified.	None identified.	Not applicable in Alberta

## **Attachment 1-EOP-002-0<sup>5</sup>** **Energy Emergency Alerts**

### **Introduction**

This Attachment provides the procedures by which a Load Serving Entity can obtain capacity and energy when it has exhausted all other options and can no longer provide its customers' expected energy requirements. NERC defines this situation as an "Energy Emergency." NERC assumes that a capacity deficiency will manifest itself as an energy emergency.

The Energy Emergency Alert Procedure is initiated by the Load Serving Entity's Reliability Coordinator, who declares various Energy Emergency Alert levels as defined in Section B, "Energy Emergency Alert Levels," to provide assistance to the Load Serving Entity. The Load Serving Entity who requests this assistance is referred to as an "Energy Deficient Entity."

NERC recognizes that Transmission Providers are subject to obligations under FERCaproved tariffs and other agreements, and nothing in these procedures should be interpreted as changing those obligations.

### **A. General Requirements**

**1. Initiation by Reliability Coordinator.** An Energy Emergency Alert may be initiated only by a Reliability Coordinator at 1) the Reliability Coordinator's own request, or 2) upon the request of a Balancing Authority, or 3) upon the request of a Load Serving Entity.

**1.1. Situations for initiating alert.** An Energy Emergency Alert may be initiated for the following reasons:

- When the Load Serving Entity is, or expects to be, unable to provide its customers' energy requirements, and has been unsuccessful in locating other systems with available resources from which to purchase, or
- The Load Serving Entity cannot schedule the resources due to, for example, Available Transfer Capability (ATC) limitations or transmission loading relief limitations.

**2. Notification.** A Reliability Coordinator who declares an Energy Emergency Alert shall notify all Balancing Authorities and Transmission Providers in its Reliability Area. The

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<sup>5</sup> **Alberta Variance:** Did not include the procedure included in Attachment 1 EOP-002-0 as Alberta participants follow procedures in OPP 801 for managing supply shortfall events and OPP 802 for requesting energy emergency alerts. Requirements embedded in this attachment were added to the Alberta reliability standard.

~~Reliability Coordinator shall also notify all other Reliability Coordinators of the situation via the Reliability Coordinator Information System (RCIS).~~

~~Additionally, conference calls between Reliability Coordinators shall be held as necessary to communicate system conditions. The Reliability Coordinator shall also notify the other Reliability Coordinators when the alert has ended.~~

## **B. Energy Emergency Alert Levels**

### **Introduction**

~~To ensure that all Reliability Coordinators clearly understand potential and actual energy emergencies in the Interconnection, NERC has established three levels of Energy Emergency Alerts. The Reliability Coordinators will use these terms when explaining energy emergencies to each other. An Energy Emergency Alert is an emergency procedure, not a daily operating practice, and is not intended as an alternative to compliance with NERC reliability standards or power supply contracts. The Reliability Coordinator may declare whatever alert level is necessary, and need not proceed through the alerts sequentially.~~

#### **1. Alert 1 — All available resources in use.**

##### **Circumstances:**

- ~~• Balancing Authority, Reserve Sharing Group, or Load Serving Entity foresees or is experiencing conditions where all available resources are committed to meet firm load, firm transactions, and reserve commitments, and is concerned about sustaining its required Operating Reserves, and~~
- ~~• Non-firm wholesale energy sales (other than those that are recallable to meet reserve requirements) have been curtailed.~~

#### **2. Alert 2 — Load management procedures in effect.**

##### **Circumstances:**

- ~~• Balancing Authority, Reserve Sharing Group, or Load Serving Entity is no longer able to provide its customers' expected energy requirements, and is designated an Energy Deficient Entity.~~
- ~~• Energy Deficient Entity foresees or has implemented procedures up to, but excluding, interruption of firm load commitments. When time permits, these procedures may include, but are not limited to:
 
  - ~~○ Public appeals to reduce demand.~~
  - ~~○ Voltage reduction.~~
  - ~~○ Interruption of non-firm end use loads in accordance with applicable contracts.~~~~

- ~~o Demand side management.~~
- ~~o Utility load conservation measures.~~

~~During Alert 2, Reliability Coordinators, Balancing Authorities, and Energy Deficient Entities have the following responsibilities:~~

~~**2.1 Notifying other Balancing Authorities and market participants.** The Energy Deficient Entity shall communicate its needs to other Balancing Authorities and market participants. Upon request from the Energy Deficient Entity, the respective Reliability Coordinator shall post the declaration of the alert level along with the name of the Energy Deficient Entity and, if applicable, its Balancing Authority on the NERC website.~~

~~**2.2 Declaration period.** The Energy Deficient Entity shall update its Reliability Coordinator of the situation at a minimum of every hour until the Alert 2 is terminated. The Reliability Coordinator shall update the energy deficiency information posted on the NERC website as changes occur and pass this information on to the affected Reliability Coordinators, Balancing Authority, and Transmission Providers.~~

~~**2.3 Sharing information on resource availability.** A Balancing Authority and market participants with available resources shall immediately contact the Energy Deficient Entity. This should include the possibility of selling non-firm (recallable) energy out of available Operating Reserves. The Energy Deficient Entity shall notify the Reliability Coordinators of the results.~~

~~**2.4 Evaluating and mitigating transmission limitations.** The Reliability Coordinators shall review all System Operating Limits (SOLs) and Interconnection Reliability Operating Limits (IROLs) and transmission loading relief procedures in effect that may limit the Energy Deficient Entity's scheduling capabilities. Where appropriate, the Reliability Coordinators shall inform the Transmission Providers under their purview of the pending Energy Emergency and request that they increase their ATC by actions such as restoring transmission elements that are out of service, reconfiguring their transmission system, adjusting phase angle regulator tap positions, implementing emergency operating procedures, and reviewing generation redispatch options.~~

~~**2.4.1 Notification of ATC adjustments.** Resulting increases in ATCs shall be simultaneously communicated to the Energy Deficient Entity and the market via posting on the appropriate OASIS websites by the Transmission Providers.~~

~~**2.4.2 Availability of generation redispatch options.** Available generation redispatch options shall be immediately communicated to the Energy Deficient Entity by its Reliability Coordinator.~~

~~**2.4.3 Evaluating impact of current transmission loading relief events.** The Reliability Coordinators shall evaluate the impact of any current transmission loading relief events on the ability to supply emergency assistance to the Energy Deficient~~

~~Entity. This evaluation shall include analysis of system reliability and involve close communication among Reliability Coordinators and the Energy Deficient Entity.~~

~~**2.4.4 Initiating inquiries on reevaluating SOLs and IROLs.** The Reliability Coordinators shall consult with the Balancing Authorities and Transmission Providers in their Reliability Areas about the possibility of reevaluating and revising SOLs or IROLs.~~

~~**2.5 Coordination of emergency responses.** The Reliability Coordinator shall communicate and coordinate the implementation of emergency operating responses.~~

~~**2.6 Energy Deficient Entity actions.** Before declaring an Alert 3, the Energy Deficient Entity must make use of all available resources. This includes but is not limited to:~~

~~**2.6.1 All available generation units are on line.** All generation capable of being on line in the time frame of the emergency is on line including quick start and peaking units, regardless of cost.~~

~~**2.6.2 Purchases made regardless of cost.** All firm and non firm purchases have been made, regardless of cost.~~

~~**2.6.3 Non-firm sales recalled and contractually interruptible loads and demandside management curtailed.** All non firm sales have been recalled, contractually interruptible retail loads curtailed, and demand side management activated within provisions of the agreements.~~

~~**2.6.4 Operating Reserves.** Operating reserves are being utilized such that the Energy Deficient Entity is carrying reserves below the required minimum or has initiated emergency assistance through its operating reserve sharing program.~~

~~**3. Alert 3 — Firm load interruption imminent or in progress.**~~

~~**Circumstances:**~~

- ~~• Balancing Authority or Load Serving Entity foresees or has implemented firm load obligation interruption. The available energy to the Energy Deficient Entity, as determined from Alert 2, is only accessible with actions taken to increase transmission transfer capabilities.~~

~~**3.1 Continue actions from Alert 2.** The Reliability Coordinators and the Energy Deficient Entity shall continue to take all actions initiated during Alert 2. If the emergency has not already been posted on the NERC website (see paragraph 2.1), the respective Reliability~~

~~Coordinators will, at this time, post on the website information concerning the emergency.~~

~~**3.2 Declaration Period.** The Energy Deficient Entity shall update its Reliability Coordinator of the situation at a minimum of every hour until the Alert 3 is terminated. The Reliability Coordinator shall update the energy deficiency information posted on the NERC website as changes occur and pass this information on to the affected Reliability Coordinators (via the RCIS), Balancing Authorities, and Transmission Providers.~~

~~**3.3 Use of Transmission short-time limits.** The Reliability Coordinators shall request the appropriate Transmission Providers within their Reliability Area to utilize available short-time transmission limits or other emergency operating procedures in order to increase transfer capabilities into the Energy Deficient Entity.~~

~~**3.4 Reevaluating and revising SOLs and IROLs.** The Reliability Coordinator of the Energy Deficient Entity shall evaluate the risks of revising SOLs and IROLs on the reliability of the overall transmission system. Reevaluation of SOLs and IROLs shall be coordinated with other Reliability Coordinators and only with the agreement of the Balancing Authority or Transmission Operator whose equipment would be affected. The resulting increases in transfer capabilities shall only be made available to the Energy Deficient Entity who has requested an Energy Emergency Alert 3 condition. SOLs and IROLs shall only be revised as long as an Alert 3 condition exists or as allowed by the Balancing Authority or Transmission Operator whose equipment is at risk. The following are minimum requirements that must be met before SOLs or IROLs are revised:~~

~~**3.4.1 Energy Deficient Entity obligations.** The deficient Balancing Authority or Load~~

~~Serving Entity must agree that, upon notification from its Reliability Coordinator of the situation, it will immediately take whatever actions are necessary to mitigate any undue risk to the Interconnection. These actions may include load shedding.~~

~~**3.4.2 Mitigation of cascading failures.** The Reliability Coordinator shall use its best efforts to ensure that revising SOLs or IROLs would not result in any cascading failures within the Interconnection.~~

~~**3.5 Returning to pre-emergency Operating Security Limits.** Whenever energy is made available to an Energy Deficient Entity such that the transmission systems can be returned to their pre-emergency SOLs or IROLs, the Energy Deficient Entity shall notify its respective Reliability Coordinator and downgrade the alert.~~

~~**3.5.1 Notification of other parties.** Upon notification from the Energy Deficient Entity that an alert has been downgraded, the Reliability Coordinator shall notify the affected Reliability Coordinators (via the RCIS), Balancing Authorities, and Transmission Providers that their systems can be returned to their normal limits.~~



~~**3.6 Reporting.** Any time an Alert 3 is declared, the Energy Deficient Entity shall submit the report enclosed in this Attachment to its respective Reliability Coordinator within two business days of downgrading or termination of the alert. Upon receiving the report, the Reliability Coordinator shall review it for completeness and immediately forward it to the NERC staff for posting on the NERC website. The Reliability Coordinator shall present this report to the Reliability Coordinator Working Group at its next scheduled meeting.~~

~~**4. Alert 0 – Termination.** When the Energy Deficient Entity believes it will be able to supply its customers’ energy requirements, it shall request of its Reliability Coordinator that the EEA be terminated.~~

~~**4.1. Notification.** The Reliability Coordinator shall notify all other Reliability Coordinators via the RCIS of the termination. The Reliability Coordinator shall also notify the affected Balancing Authorities and Transmission Operators. The Alert 0 shall also be posted on the NERC website if the original alert was so posted.~~

~~C.~~

**Appendix 1 - Energy Emergency Alert 3 Report**

A deficient balancing authority or load serving entity declaring an Energy Emergency Alert 3 must complete the following report. Upon completion of this report, it is to be sent to the reliability coordinator for review within two business days of the incident.

**Requesting balancing authority:**

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**Entity experiencing energy deficiency (if different from balancing authority):**

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**Date/Time Implemented:**

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**Date/Time Released:**

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**Declared Deficiency Amount (MW):**

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**Total energy supplied by other balancing authority during the Alert 3 period:**

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**Conditions that precipitated call for “Energy Deficiency Alert 3”:**

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**If “Energy Deficiency Alert 3” had not been called, would firm load be cut? If no, explain:**

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**Explain what action was taken in each step to avoid calling for “Energy Deficiency Alert 3”:**

**1. All generation capable of being on line in the time frame of the energy deficiency was on line (including quick start and peaking units) without regard to cost.**

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**2. All firm and nonfirm purchases were made regardless of cost.**

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**3. All nonfirm sales were recalled within provisions of the sale agreement.**

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**4. Interruptible load was curtailed where either advance notice restrictions were met or the interruptible load was considered part of spinning reserve.**

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**5. Available load reduction programs were exercised (public appeals, voltage reductions, etc.).**

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**6. Operating Reserves being utilized.**



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**Comments:**

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**Reported By:** \_\_\_\_\_

**Organization:** \_\_\_\_\_

**Title:** \_\_\_\_\_



**Proposed Terms for the Alberta Reliability Standards Glossary:**

None

**Existing Defined Terms Used in this Standard:**

(As included in the ISO Rules Definitions or Alberta Reliability Standards Glossary)

- reliability standard
- Commission
- ISO
- day
- adjacent balancing authority
- balancing authority
- system controller
- total transfer capability (TTC)
- VRC
- load
- frequency bias
- system operating limit
- interchange schedule
- operating reserve
- area control error (ACE)
- AIES