

Proposed Changes to Market Rules and Market Manuals

Market Rule Changes:

MR Chapter 5, Section 2: IESO-Controlled Grid and Operating States

2.5 Conservative Operating State

2.5.1 The IESO-controlled grid shall be considered to be in a conservative operating state when:

extreme weather has been forecasted or is present and security limits are being observed as under a normal operating state;

the IESO expects to or currently has all resources in use;

strong or severe geomagnetic disturbance have been forecasted or are present;

an unplanned evacuation of the IESO primary control centre; or

malfunctioning software systems or infrastructure problems which impair IESO markets, communication systems, system applications or tools that impact system security.

2.5.2 The IESO shall not take any action or refrain from taking any action that will, in the opinion of the IESO, be reasonably likely to lead to a conservative operating state.

2.5.3 The IESO shall promptly inform market participants when a conservative operating state is anticipated or has been declared, and when it ceases to exist or to be anticipated. During a conservative operating state, the IESO shall have the authority to request market participants or neighbouring control area operators monitor the IESO-controlled grid or interties, respectively, on the IESO's behalf and take such other actions or refrain from taking such other actions consistent with good utility practice as may be required and with as little disruption to electric service or adverse impact on the operation of the IESO-administered markets as is reasonably practicable in the circumstances.

MR Chapter 5, Section 6: Outage Coordination

Revoke Advance Approvals

6.4.9 The IESO may, where necessary to maintain the reliability of the IESO-controlled grid, or as provided in section 6.4.9.3, revoke an advance approval of a planned outage. Without limiting the generality of the foregoing, the IESO may revoke an advance approval if:

6.4.9.1 the IESO determines that either a conservative operating state, an emergency operating state or a high-risk operating state is occurring or is reasonably likely to occur at the time at which the planned outage would otherwise take place;

MR Chapter 7, Section 12: Status Reports, Advisories, and Protocols

- 12.1.2 ~~[[Intentionally left blank — section deleted]]~~ If required, the *IESO* shall *publish, in accordance with the applicable market manual, advisory notices in the forms that follow:*
- 12.1.3A.1 an alert notice which shall provide situational awareness and provide time for advanced preparations;
 - 12.1.3A.2 a warning notice which shall indicate the actions the *IESO* intends to take if the market does not or cannot respond sufficiently to eliminate an identified or potential problem; or
 - 12.1.3A.3 an action notice which shall indicate the actions the *IESO* and market participants must take in order to eliminate an identified or potential problem.
- 12.1.3 ~~If required, the~~ *The IESO shall publish, in accordance with the applicable market manual, advisory notices as follows for the following reasons:*
- ~~12.1.3.1 a major change advisory~~ if a major change in expected generation capacity, electricity storage capacity or transmission capacity has occurred since the last system status report was issued;
 - ~~12.1.3.2 a system advisory~~ if the *IESO* expects over-generation, under-generation or shortfalls in operating reserve or contracted ancillary services, or an advisory of the total MW of energy being directed to submit bids or offers from the aggregate of reliability must run resources under reliability must run contracts. ~~Any system advisory shall indicate the actions the *IESO* intends to take if the market does not or cannot respond sufficiently to eliminate the problem;~~
 - ~~12.1.3.3 a system emergency advisory~~ if the *IESO* expects an emergency operating state, ~~or a high-risk operating state, or a conservative operating state.~~ ~~Any such system emergency advisory shall indicate the actions the *IESO* intends to take if the market does not or cannot respond sufficiently to eliminate the problem; and~~
 - ~~12.1.3.4 a market suspension advisory or market resumption notice~~ if the *IESO* is suspending or resuming operation of all or part of the *IESO-administered markets*;
- 12.1.3A for any additional reason identified by the *IESO* in which the *IESO* believes that the publication of an advisory notice would be in the interest of the market, market participants, or the *IESO*-controlled grid.

Market Manual Changes:

Market Manual 7.1, Section 2.3: Grid Operating States

2.3 Grid Operating States

In real-time operations, the IESO operates under a set of grid operating states that represent different system conditions. The IESO uses these grid operating states to inform market participants of the relevant system conditions and the possible actions to maintain the reliability of the ICG.

The IESO-controlled grid has four operating states. The ICG will be in one of three operating states. In (listed in descending order of security; the high-risk operating state comes first; next, the conservative and the normal operating states are in the same level; and then the emergency operating state. applications or, Forecasted extreme conditions (see Section 2.4.1) may require action(s) in advance of high risk, conservative, or emergency operating states. Policy information for grid operating states can be found in MM 7.4, Section 2.4.

The ICG can be in more than one operating state.- Examples include:

- High-risk operating state for a certain area of the ICG while normal operating state remains for rest of the ICG; and
- Conservative operating state for a certain area of the ICG while normal operating state remains for rest of the ICG.

The IESO will issue an advisory notice when transitioning from one operating state to another.

Certain actions are more likely to be taken during high-risk, conservative, or emergency operating states than during a normal operating state.

2.3.2 Conservative Operating State

Reference: MR Ch. 5, Sec. 2.5

A conservative operating state may be declared by the IESO in the presence of any of the following conditions:

- Extreme weather while observing normal conditions limits
- Tight supply conditions in which the IESO anticipates or has issued an Energy Emergency Alert 1 (EEA-1).
- Forecasted or actual strong or severe geomagnetic disturbance
- Situations requiring an unplanned evacuation of the IESO primary control centre
- Planned or unplanned IT-related outages that result in an impairment to IESO market or system applications or tools that impact the system security (e.g., Energy Management System (EMS), or Market Interface System (MIS)). The aforementioned disruptions can be triggered either by the IESO, external entities/providers, or reasons beyond the control of the IESO.

During a conservative operating state, the IESO may reject, revoke or recall relevant outages; commit additional resources; or return equipment to service in accordance with MM 7.4.

A conservative operating state is characterized by the following:

- Equipment is operating within its normal ratings.
- Normal condition limits are being respected.
- Operations of the ICG are expected to be or are stressed such that contingencies could adversely impact system security
- During IT-related outages, monitoring of the ICG's system security by the IESO may be impacted or limited. The IESO may request MPs or neighbouring entities to monitor the ICG or the interties, respectively, on behalf of the IESO.

Market Manual 7.1, Appendix B: Emergency Operating State Control Actions

No.	Action	Description	References	A	B	C	D
13	Issue <i>NERC</i> Energy Emergency Alert 1 (EEA-1) <u>and declare conservative operating state</u>	The <i>IESO</i> control area has (or expects to have) all available resources in use. The <i>IESO</i> will issue an RCIS message and an Advisory Notice.	<i>NERC Reliability Standard</i> – EOP-011, Attachment 1	Y			
14	Issue <u>System Emergency Advisory</u> via advisory notice	The advisory notice will <u>include a System Emergency Advisory</u> indicating the <u>potential for the declaration</u> of an <i>emergency operating state</i> .	<i>Market Rules</i> - Chapter 7 Section 12.1.3.3	Y			

Market Manual 7.2, Section 3: Advisory Notices

Three levels ~~Four types~~ of advisory notices may be published to market participants and/or neighbouring jurisdictions as needed (C. 7, S. 12.1.3 of the *market rules*):

- An **Alert Advisory** to notify of changes or expected changes in system or market conditions to allow time for advanced preparations.
- A **Warning Advisory** to notify that potential future actions in the near term are more likely to be taken by the *IESO*, or market participants as directed by the *IESO* if the market does not or cannot respond sufficiently to eliminate a problem associated with either a system or market condition.
- An **Action Advisory** to notify that the *IESO* or market participants as directed by the *IESO* are taking actions to eliminate a problem associated with either a system or market condition.

Examples of system or market conditions that require publishing advisory notices are in C. 7, S. 12.1.3 of the *market rules*

Any advisory notice published by the *IESO* will clearly indicate the level of the notice, **Alert Advisory**, **Warning Advisory**, or **Action Advisory**.

Typically, the *IESO* will publish advisory notices in the following sequence: first an **Alert Advisory**, next a **Warning Advisory**, and then an **Action Advisory**. The *IESO* has the discretion to publish one level of advisory notice without issuing the preceding level.

Market Manual 7.4, Section 2.4: Grid Operating States

2.4 Grid Operating States

2.4.1 Principles

The *IESO-controlled grid* has four ~~common~~ operating states. ~~three common~~ They operating states can be ordered according to system security as follows, in order of system security are high-risk (including safe posture), normal and conservative at the same level, and emergency. There are other operating states, such as system restoration ([Section 4.5](#)), which occurs immediately following a contingency.

Under certain operating conditions (e.g., adverse weather or equipment-related problems), the probability of experiencing certain contingencies (or the severity of associated consequences) increases. The *IESO* shall temporarily and selectively increase the level of system security to improve reliability during these high risk operating states.

Under other conditions (e.g., extreme hot or cold temperatures, anticipating energy or capacity deficiencies, or outages to IESO market or system applications or tools that impact the system security), the IESO will seek to minimize potential risks to the ICG or enhance grid resiliency in anticipation of (and after the declaration of) a conservative operating state.

Under other conditions (e.g., ~~anticipating or~~ experiencing energy deficiencies or capacity deficiencies, or operating in an unstudied operating state), ~~non-dispatchable load~~ shedding may be required. The *IESO* strives to mitigate or avoid ~~non-dispatchable load~~ shedding when in these emergency operating states by publishing and maintaining a hierarchy of control actions to be taken in anticipation of (and after the declaration of) an emergency operating state. Refer to the Emergency Operating State Control Actions (EOSCA) list in [Market Manual 7.1: IESO-Controlled Grid Operations Procedures](#), Appendix B.

In high-risk, conservative, and emergency operating states, IESO control actions are more likely to be taken than during normal operating state. These actions are structured to:

1. Preserve system reliability.
2. Restore normal operation of *IESO-administered markets* as soon as practicable ([MR Ch 5, Sec. 7.7.2](#)).

The *IESO* will strive to mitigate adverse effects on *IESO-administered markets*, while at the same time observing the mutual protection and assistance provisions contained in agreements between the *IESO* and other reliability coordinators and balancing authorities.

2.4.3 Conservative Operating State

In a conservative operating state, the IESO will take actions such as rejection or revocation of equipment and facility outages to minimize any potential risks to the ICG that could occur from non-essential/routine work or switching of equipment. The IESO may also take actions to commit additional resources or recall equipment and facility outages to enhance grid resiliency. A normal level of system security and overall adequacy is to be maintained. Market participants may be required to alter their outage plans.

For IT-related outages that impact the IESO market and/or system applications or tools and that impact the system security, the IESO may take actions such as requesting MPs or neighbouring interconnected entities to monitor the ICG or the interties, respectively, on behalf of the IESO to maintain the normal level of system security. In addition, market participants may need to implement manual workarounds to fulfill their obligations (e.g., receive and execute verbal dispatch instructions).

The conditions under which a conservative operating state may be declared can be found in [Market Manual 7.1: IESO-Controlled Grid Operating Procedures](#).