

ISO Rules

Part 200 Markets

Division 205 Ancillary Services

Section 205.4 Regulating Reserve Technical Requirements and Performance Standards



Applicability

- 1 Section 205.4 applies to:
 - (a) a **pool participant**; and
 - (b) the **ISO**,

in relation to qualifying for, providing and utilizing **regulating reserve**.

Requirements

General

- 2 A **pool participant** that provides or anticipates providing **regulating reserve** must satisfy the technical requirements set out in this section 205.4 and must continue to satisfy such technical requirements while providing **regulating reserve**.

Minimum Requirements

- 3(1) A **pool participant** must ensure that its **generating unit** is capable of providing a minimum of fifteen (15) MW of **regulating reserve**.

- (2) A **pool participant** must ensure that its **generating unit** is capable of providing the amount of **real power** the **ISO** qualifies the **generating unit** to provide under subsection 4(1), at either the high limit or the low limit of the **regulating reserve** range, for sixty (60) minutes after receiving a **dispatch** to provide **regulating reserve**.

- (3) A **pool participant** must ensure that each **generating unit** is equipped with a **governor system** that:

- (a) is responsive to both over frequency and under frequency events;
- (b) has a total deadband of equal to or less than zero point zero three six (0.036) Hertz;
- (c) has a droop setting equal to or greater than three percent (3%) but less than or equal to five percent (5%);
- (d) has no intentional time delays added to the control system;
- (e) is responsive to **regulating reserve** set point signals during frequency deviations between fifty-eight point nine (58.9) and sixty-one (61) Hz; and
- (f) while the **pool asset** is under a **dispatch** to provide **regulating reserve** is:
 - (i) in service at all times; and
 - (ii) without **governor** load limiters.

- (4) A **pool participant** must ensure that the **governor system** of its **generating unit** has priority over any control system, including the **regulating reserve** set point signal the **ISO** issues, for a minimum of twenty (20) minutes after responding to a frequency deviation, even if this positions the **generating unit** outside of the **regulating reserve** range.

- (5) A **pool participant** may, notwithstanding subsection 3(4), override the **generating unit** frequency responsive control system if:

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- (a) the change in **real power** output assists the **interconnected electric system** in recovering from the frequency deviation; or
 - (b) the action of the **governor system** positions the **generating unit** such that the **operator** of the **generating unit** believes the **generating unit** is at risk of malfunction.
- (6)** A **pool participant** must ensure that its **generating unit** is capable of a minimum **ramp rate** in MW/Minute of ten percent (10%) of the total **regulating reserve** range the **ISO** qualifies the **generating unit** to provide.
- (7)** A **pool participant** must ensure that, without manual intervention, its **generating unit** is capable of:
- (a) responding to any **regulating reserve** set point signal within no more than twenty-eight (28) seconds of receiving the set point signal; and
 - (b) responding to any **regulating reserve** set point signal reversal within no more than forty (40) seconds of receiving the set point signal.
- (8)** A **pool participant** must, in the case of a generating **pool asset** that is comprised of one (1) or more **generating units**, ensure that the **pool asset** complies with subsections 3(1), (2), (3), (4), (6) and (7) as measured at the stator winding terminals of each qualified **generating unit**.
- (9)** A **pool participant** must only provide **regulating reserve** from a **pool asset** that is:
- (a) located in the **balancing authority area** of the **ISO**; and
 - (b) connected to the **interconnected electric system**.

ISO Qualifying a Generating unit

- 4(1)** The **ISO** must, prior to any **generating unit** providing **regulating reserve**, assess the eligibility of such **generating unit** and determine the **real power** in MW it is qualified to provide.
- (2)** The **ISO** must, in determining the **real power** quantity a **generating unit** is qualified to provide, consider the following:
- (a) whether the **generating unit** participates in a **remedial action scheme**;
 - (b) the total **operating reserve** that could be lost during a single **contingency**; and
 - (c) the maximum **real power** capability and minimum **real power** capability of the **generating unit**.
- (3)** The **ISO** must advise a **pool participant** of the eligibility of the **generating unit** within sixty (60) **days** of the **ISO** receiving an application for **regulating reserve**.

Applying to Provide Regulating Reserve

5 A **pool participant** may apply to provide **regulating reserve** by completing and providing to the **ISO** the documents the **ISO** specifies and posts on the AESO website.

Performance Requirements to a Dispatch

6(1) A **pool participant** will not be paid for **regulating reserve** unless the **pool participant** ensures that:

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- (a) upon receipt of a **dispatch** to provide **regulating reserve**, if the time stated in the **dispatch** for the **pool asset** to be in position to provide the **real power** quantity indicated in the **dispatch** is:
 - (i) more than fifteen (15) minutes from the time the **pool participant** receives the **dispatch**, the **pool asset** is positioned within the **regulating reserve** range indicated in the **offer** at the time stated in the **dispatch**; or
 - (ii) fifteen (15) minutes or less from the time the **pool participant** receives the **dispatch**, the **pool asset** is positioned within the **regulating reserve** range indicated in the **offer** at the time stated in the **dispatch** or as soon as possible thereafter but in any event, not more than fifteen (15) minutes after receiving the **dispatch**;
- (b) after positioning the **pool asset** as set out in subsection 6(1)(a):
 - (i) the **regulating reserve** control statuses is sent to the **ISO** indicating:
 - (A) that the **pool asset** is enabled to provide **regulating reserve**; and
 - (B) the high and low limits of the **regulating reserve** range;and
 - (ii) the **regulating reserve** set point signal from the **ISO** is allowed to move the **pool asset** within the **regulating reserve** range;
- (c) while under a **dispatch** to provide **regulating reserve** the output level of the **pool asset** is maintained at the level of the **regulating reserve** set point indicated in the latest set point, as measured in accordance with subsection 3(8), within a tolerance of:
 - (i) plus or minus one (+/-1) MW of the **regulating reserve** range for a **regulating reserve** range of less than or equal to twenty (20) MW; or
 - (ii) plus or minus five percent (+/-5%) of the **regulating reserve** range for a **regulating reserve** range of greater than twenty (20) MW; and
- (d) the **pool asset** responds to a set point change with a minimum **ramp rate** in MW/minute of ten percent (10%) of the maximum **regulating reserve** range indicated in the **offer**,

for as long as the dispatch is in effect.

(2) The **ISO** may, at any time after the **pool asset** has met the requirements of subsection 6(1)(b), issue a set point signal.

(3) A **pool participant** must, ensure that the **pool asset** remains connected to the **interconnected electric system** and remains frequency responsive, as described in subsection 3(3), while under a **dispatch** to provide **regulating reserve**.

Test Requirements

7 The **ISO** may request that a **pool participant** test its **pool asset**'s responses to **dispatches**:

- (a) prior to allowing the **pool asset** to provide **regulating reserve**; or
- (b) if **ISO** provides evidence that the **regulating reserve** exhibits behaviour that is inconsistent with the requirements of this section 205.4.

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Maintaining Eligibility

8(1) The **ISO** may, if a **pool participant** refuses to comply with:

- (a) a testing request pursuant to subsection 7;
- (b) any other provision of this section 205.4; or
- (c) any other section of the **ISO rules** that affects the provision of **regulating reserve**;

provide notice to the **pool participant** that it cannot participate in the **regulating reserve** market until the **pool participant** is compliant with this section 205.4 and all other **ISO rules** that affect the provision of **regulating reserve**.

(2) A **pool participant** that has received a notice pursuant to subsection 8(1) must not submit an **offer** for **regulating reserve** until the **ISO** confirms that the **pool participant** is compliant with this section 205.4 and all other **ISO rules** that affect the provision of **regulating reserve**..

Revision History

Effective	Description
2014-12-23	Initial release