Applicability

1 Section 304.3 applies to:

(a) the **legal owner** of any **wind aggregated generating facilities**; and

(b) the **ISO**.

Requirements

Exemption for Certain Wind Aggregated Generating Facilities

2 This section 304.3 does not apply to the following exempt wind **aggregated generating facilities**, as represented by their **pool asset** descriptions: Castle River, Cowley Ridge, Kettles Hill, Magrath, McBride Lake, and Summerview #1.

Use of the Energy Market Merit Order

3(1) Prior to issuing any **directive** curtailing **real power** output from any of the non-exempt wind **aggregated generating facilities** under subsection 4(3), the **ISO** must first implement the **energy market merit order** provisions of the **ISO rules** for energy balance to manage the ramp up of the total **real power** output from all exempt and non-exempt wind **aggregated generating facilities**.

(2) If the **energy market merit order** provisions of the **ISO rules** are insufficient to manage the ramp up of the total **real power** output from all exempt and non-exempt wind **aggregated generating facilities**, then the **ISO** must limit that total Alberta **real power** output, and specify a wind power limit pro rata share for each of the non exempt wind **aggregated generating facilities**.

Calculation of Alberta System Wind Power Limit

4(1) The **ISO** must calculate, at a minimum wind monitoring interval of every twenty (20) minutes, an Alberta system wind power limit.

(2) The Alberta system wind power limit in MW for all non-exempt wind **aggregated generating facilities** for a wind monitoring interval will be the greater of (a) and (b), calculated as follows:

(a) (i) the total Alberta **real power** output from all non-exempt wind **aggregated generating facilities**;

plus

(ii) the **ISO** estimates in MW of:

(A) the **ramp rate**-down capability, in MW per minute, of all **pool assets** in the **energy market merit order** for the wind monitoring interval;

plus

(B) any increases or decreases in the **Alberta internal load** for the wind monitoring interval;

plus

(C) any increases or decreases in any **interchange schedule** quantities at the ME 01 to ME10 **10 minute clock period** for the wind monitoring interval*;*

(b) (i) the total Alberta **real power** output from all non-exempt wind **aggregated generating facilities**;

plus

(ii) six point five (6.5) MW per minute for the wind monitoring interval.

(3) If during a wind monitoring interval the **ISO** determines that the total Alberta **real power** output from all non-exempt wind **aggregated generating facilities** is either at:

(a) ninety (90) percent or more of the Alberta system wind power limit; or

(b) the Alberta system wind power limit minus an amount up to, but not in excess of, sixty five (65) MW;

and if the **ISO** further determines that within the wind monitoring interval the total **real power** output will exceed the Alberta system wind power limit, then the **ISO** must issue **directives** by means of Supervisory Control and Data Acquisition signals to each **operator** of each of the non-exempt wind **aggregated generating facilities,** which **directives** will set the wind power limit pro rata share for each of the non-exempt wind **aggregated generating facilities**.

Calculation of Wind Power Limit Pro Rata Share

5(1) The wind power limit pro rata share for each of the non-exempt wind **aggregated generating facilities** as may be required for a wind monitoring interval is equal to:

(a) the potential **real power** capability of the wind **aggregated generating facility** as provided to the **ISO** under subsection 24(b) of section 502.1 of the **ISO rules**, *Wind Aggregated Generating Facilities Technical Requirements*;

divided by

(b) the sum of all potential **real power** capabilities provided to the **ISO** under that subsection 24(b) for all non-exempt wind **aggregated generating facilities**, but excluding those capabilities which are already limited by any curtailment **directive** other than a wind power management **directive**;

multiplied by

(c) the difference for the wind monitoring interval between:

(i) the Alberta system wind power limit calculated under subsection 4; and

(ii) the total **real power** output from all non-exempt wind **aggregated generating facilities**.

(2) If the wind power limit pro rata share for any of the non-exempt wind **aggregated generating facilities** causes the wind **aggregated generating facilities** to exceed its **maximum capability**, then the **ISO** must reallocate the excess difference in MW on a pro rata basis to all other non-exempt wind **aggregated generating facilities**.

(3) If a non-exempt wind **aggregated generating facility** receives:

(a) a pro rata share Supervisory Control and Data Acquisition **directive** signal under subsection 4(3); and

(b) a curtailment **directive** for any other reason;

then the **operator** must comply with the subsection 5(3) (b) curtailment **directive** and the **ISO** must reallocate any excess difference in MW between the pro rata share **directive** and the

subsection 5(3) (b) curtailment **directive** to all other non-exempt wind **aggregated generating facilities**.

(4) Subject to the tolerances set out in subsection 18 of section 502.1 of the **ISO rules**, *Wind Aggregated Generating Facilities Technical Requirements,* a non-exempt wind **aggregated generating facility** must, by means of a Supervisory Control and Data Acquisition signal sent to the **ISO**, comply with a wind power limit pro rata share **directive** signal no later than ten (10) minutes after the **ISO** has sent the signal.

(5) The **ISO** must cancel, by means of Supervisory Control and Data Acquisition signals, the wind power limit pro rata share **directives** when they no longer are required under the conditions set out in subsection 4(3).

(6) If the **ISO** issues a **directive** to the **operator** of any wind **aggregated generating facility** which results in a net increase in the **real power** input, then the **ramp rate**, in MWs per minute, must not exceed ten percent (10%) of the **maximum authorized real power**.

Revision History

Effective	Description
2011/12/01	Initial Release