ISO Rules
Part 200 Markets
Division 206 Capacity Market
Section 206.3 Uniform Capacity Value Determination

Draft Version

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Applicability

1 Section 206.3 applies to:

(a) a **capacity market participant**; and

(b) the **ISO**.

Requirements

Uniform Capacity Value Calculation

2(1) The **ISO** must, in accordance with the timelines specified in the *Capacity Market Auction Guidelines,* calculate a **uniform capacity value** for an asset associated with a **capacity market participant** in accordance with this section 206.3 for each **base auction** and **rebalancing auction**.

(2) The **ISO** must, when calculating **uniform capacity values** and **uniform capacity value** ranges in accordance with this section 206.3:

(a) round **uniform capacity values** above 1 MW to the nearest positive integer;

(b) round the upper and lower limits of the **uniform capacity value** ranges to the nearest positive integer, as applicable; and

(c) not round **uniform capacity values** below 1 MW.

Selection of Tightest Supply Cushion Hours

3(1) The **ISO** must select 250 **settlement intervals** from each of the previous 5 consecutive periods dating November 1 to October 31 as follows:

(a) calculate the supply cushion for each **settlement interval** in accordance with the following formula:

$$supply\ cushion = \sum_{i=1}^{n} (time\ weighted\ available\ volume_t - time\ weighted\ dispatched\ volume_t - time\ weighted\ \ dispatched\ TMR_t)$$

where:

(i) *n* is the number of **operating blocks** in the energy market **merit order** during settlement interval *t*;

(ii) *time weighted available volume*$_t$ is the amount of MW of an **operating block** in the **energy market** merit order during hour *t* with the weight being proportional to the duration of the available volume within **settlement interval** *t*;

(iii) *time weighted dispatched volume*$_t$ is the amount of MW of an **operating block** in the energy market **merit order** that was subject to a **dispatch** in **settlement interval** *t* with the weight being proportional to the time the **dispatch** was in effect within **settlement interval** *t*; and

(iv) *time weighted dispatched TMR*$_t$ is the amount of MW of an out-of-merit **operating**

block subject to a **dispatch** for **transmission must-run** in **settlement interval** *t* with the weight being proportional to the time the **dispatch** was in effect within **settlement interval** *t*.

(b) rank all **settlement intervals** based on the supply cushion calculated in subsection 3(1)(a) in ascending order;

(c) within the order referred to in subsection 3(1)(b), rank **settlement intervals** with equivalent supply cushion in ascending order from the most recent to the most distant in time;

(d) remove any **settlement intervals** in which there was a state of markets suspension or limited markets operations; and

(e) select the first 250 **settlement intervals** after ranking and removing hours in accordance with subsections 3(1)(b) through 3(1)(d).

(2) The **ISO** must establish the hours for the calculation of **uniform capacity value** as follows:

(a) the 250 **settlement intervals** selected in accordance with subsection 3(1)(e) from the most recent 12 **month** consecutive period dating November 1 to October 31, for a load asset providing a **firm consumption level**; and

(b) the **settlement intervals** selected in accordance with subsection 3(1)(e), in all other cases.

Creation of Historical Data Set for an Asset

4(1) The **ISO** must create a historical data set for an asset by identifying and removing the following hours from the hours referred to in subsection 3(2), as applicable, on an asset-specific basis:

(a) an hour in which an asset was not energized and commissioned;

(b) an hour in which the **ISO** determines the asset was affected by:

(i) war, invasion, armed conflict, blockade, act of public enemy, riot, revolution, insurrection, act of terrorism, sabotage, act of vandalism, fire or explosion that did not originate at the asset, lightning, earthquake or flooding; or

(ii) a **mothball outage**, or **delist outage** for economic reasons;

(c) an hour in which the asset was **commissioning**;

(d) in the case of an import asset, an hour in which the applicable transfer path was out of service with an **available transfer capability** of 0 MW as a result of an issue on the **transmission system** in Alberta;

(e) an hour:

(i) that the **capacity market participant** identifies to the **ISO**, in accordance with the timelines prescribed in the *Capacity Market Auction Guidelines*, in which:

(A) a **long lead time asset** was in a long lead time configuration and was synchronized but had varying start up times for distinct portions of its generating capability, and required more than 1 hour to deliver such additional portions of the generating capability of the asset; or

(B) an asset was in a long lead time configuration and was able to become synchronized within 1 hour, but had varying start up times for distinct portions of its generating capability, and required more than 1 hour to deliver such additional portions of the generating capability of the asset;

and

(ii) in which the **ISO** determines that the simplified short-run marginal costs of the asset calculated in accordance with Section 203.5 of the **ISO rules**, *Energy Market Mitigation* exceeded the **pool price** for that hour.

(f) notwithstanding subsection 4(1)(e), for the first 3 **obligations periods**, an hour:

(i) that the **capacity market participant** identifies to the **ISO**, in accordance with the timelines prescribed in the *Capacity Market Auction Guidelines*, in which:

(A) a **long lead time asset** was in a long lead time configuration and was synchronized but had varying start up times for distinct portions of its generating capability, and required more than 1 hour to deliver such additional portions of the generating capability of the asset; or

(B) an asset was in a long lead time configuration and was able to become synchronized within 1 hour, but had varying start up times for distinct portions of its generating capability, and required more than 1 hour to deliver such additional portions of the generating capability of the asset;

and

(ii) the **ISO** determines that the short-run marginal costs based on the following information submitted by the **capacity market participant**, in accordance with the *Capacity Market Auction Guidelines* exceeded the **pool price** for the hour:

(A) the heat rate in GJ/MWh;

(B) the fuel price in $/GJ;

(C) carbon intensity in tonnes of CO_2/MWh;

(D) variable operations and maintenance costs in $/MWh; and

(E) costs associated with the asset-specific **loss factor** published on the AESO website for the hour.

(2) The **ISO** must remove subsections 4(1)(f) and 4(2) on or about the day the last **rebalancing auction** for the third **obligation period** is concluded.

Application of Uniform Capacity Value Methodologies Based on Hours in Historical Data Set

5(1) The **ISO** must, subject to subsection 5(2), apply the methodologies in subsections 6 and 7 to calculate a **uniform capacity value** for an asset as follows:

(a) if the number of hours in the asset's historical data set determined in accordance with subsection 4(1) is greater than or equal to 300 hours and less than or equal to 1250 hours, use the applicable methodology in subsection 6;

(b) if the number of hours in the asset's historical data set determined in accordance with subsection 4(1) is greater than or equal to 1 hour and less than 300 hours:

(i) use the applicable methodology in subsection 6 for the hours in the asset's historical data set; and

(ii) use the applicable methodology in subsection 7 for the number of hours that is 300 hours less the hours in the asset's historical data set;

or

(c) if the number of hours in the asset's historical data set determined in accordance with subsection 4(1) is 0 hours, use the applicable methodology in subsection 7.

(2) The **ISO** must apply the methodologies in subsections 6 and 7 to calculate a **uniform capacity value** for a load asset providing a **firm consumption level** as follows:

(a) use the methodology in subsection 6(5) or 6(8), as applicable, for the hours in the asset's historical data set determined in accordance with subsection 4(1); and

(b) use the methodology in subsection 7 for the number of hours that is 250 hours less the number of hours in the asset's historical data set determined in accordance with subsection 4(1).

(3) The **ISO** must, where the **ISO** applies the methodologies in both subsections 6 and 7 in accordance with subsections 5(1)(b) or 5(2) for an asset, weigh the **uniform capacity values** derived from each methodology by the number of hours used for each methodology to determine a single **uniform capacity value** for the asset.

Methodologies for Hours in an Asset's Historical Data Set

6(1) The **ISO** must, subject to subsections 6(2) through 6(9), calculate a **uniform capacity value** for an asset as follows:

(a) calculate the hourly availability factor for each hour in the asset's historical data set in accordance with the following formula:

$$hourly\ availability\ factor_{it} = \frac{time\ weighted\ available\ capability_{it}}{maximum\ capability_{it}}$$

where:

(i) *time weighted available capability*$_{it}$ is the **available capability** of asset *i* for hour *t* with the weight being proportional to the time the **available capability** was in effect within hour *t*; and

(ii) *maximum capability*$_{it}$ is the **maximum capability** of asset *i* in hour *t*;

(b) calculate the average availability factor for the asset in accordance with the following formula:

$$average\ availability\ factor_i = \frac{\sum hourly\ availability\ factor_{it}}{observed\ hours_i}$$

where:

(i) *hourly availability factor*$_{it}$ is the sum of the hourly availability factors calculated in subsection 6(1)(a) for asset *i* for hour *t*; and

(ii) *observed hours*$_i$ is the numbers of hours in the historical data set for asset *i*;

(c) calculate the **uniform capacity value** for an asset by multiplying the average availability factor in subsection 6(1)(b) by the **maximum capability** of the asset; and

(d) in the case of an energy storage facility, cap the **uniform capacity value** at the maximum continuous 4-hour rating of the asset if the **uniform capacity value** calculated in 6(1)(c) exceeds the maximum continuous 4-hour rating.

(2) The **ISO** must calculate a **uniform capacity value** for a wind, solar, or run of river hydroelectric **generating unit** or an **aggregated generating facility**, an aggregated asset containing a wind, solar or run of river **generating unit** or **aggregated generating facility**, an asset that does not receive **dispatches**, or an asset that cannot change generation levels in response to a **dispatch** as follows:

(a) calculate the hourly capacity factor for each hour in the asset's historical data set in accordance with the following formula:

$$hourly\ capacity\ factor_t =$$

$$(metered\ energy_{it} + spinning\ reserve_{it} + supplemental\ reserve_{it} + regulating\ reserve_{it} + curtailed\ volume_{it} + DDS\ volume_{it}) \div maximum\ capability_{it}$$

where:

(i) *metered energy*$_{it}$ is the **metered energy** for asset *i* in hour *t*;

(ii) *spinning reserve*$_{it}$ is the volume of **dispatches** for **spinning reserve** issued pursuant to Section 205.5 of the **ISO rules**, *Spinning Reserve Technical Requirements and Performance Standards*, less volumes provided in response to a **directive** for **spinning reserve** issued pursuant to Section 205.5 of the **ISO rules**, *Spinning Reserve Technical Requirements and Performance Standards*, for asset *i* in hour *t*;

(iii) *supplemental reserve*$_{it}$ is the volume of **dispatches** for **supplemental reserve** issued pursuant to Section 205.6 of the **ISO rules**, *Supplemental Reserve Technical Requirements and Performance Standards*, less volumes provided in response to **directive** for **supplemental reserve** issued pursuant to Section 205.6 of the **ISO rules**, *Supplemental Reserve Technical Requirements and Performance Standards*, for asset *i* in hour *t;*

(iv) *regulating reserve*$_{it}$ is the volume of **dispatches** for **regulating reserve** issued pursuant to Section 205.4 of the **ISO rules**, *Regulating Reserve Technical Requirements and Performance Standards* that is not captured as **metered energy** for asset *i* in hour *t;*

(v) *curtailed* volume$_{it}$ is the volume that was curtailed as a result of a **transmission market constraint** for asset *i* in hour *t*; and

(vi) *DDS volume*$_{it}$ is the volume that was reduced in response to a **dispatch** for **dispatch down service** for asset *i* in hour *t*;

(b) calculate the average capacity factor for the asset in accordance with the following formula:

$$average\ capacity\ factor_i = \frac{\sum hourly\ capacity\ factor_{it}}{observed\ hours_i}$$

where:

(i) *hourly capacity factor*$_{it}$ is the sum of the hourly capacity factors calculated in subsection 6(2)(a) for asset *i* in hour *t* and;

(ii) *observed hours*$_i$ is the numbers of hours in the historical data set for asset *i*;

and

(c) calculate the **uniform capacity value** for the asset by multiplying the average capacity factor in subsection 6(2)(b) by the **maximum capability** of the asset.

(3) The **ISO** must calculate a **uniform capacity value** for an import asset as follows:

(a) calculate the hourly availability factor for each hour in the asset's historical data set in

accordance with the following formula:

$$hourly\ availability\ factor_t = \frac{min\{available\ capability_{it}, long\ term\ firm\ transmission_{it}\}_t}{long\ term\ firm\ transmission_{it}}$$

where:

(i) *long term firm transmission*$_{it}$ is the **long-term firm transmission** in MW of import asset *i* over the applicable transfer path for hour *t*; and

(ii) *min{available capability*$_{it}$*, long term firm transmission*$_{it}$*}* is the lesser of the **available capability** of import asset *i* in hour *t* and the **long-term firm transmission** over the applicable transfer path for asset *i* in hour *t*;

(b) calculate the average availability factor for the asset in accordance with the following formula:

$$average\ availability\ factor_i = \frac{\sum hourly\ availability\ factor_{it}}{observed\ hours_i}$$

where:

(i) *hourly availability factor*$_{it}$ is the sum of the hourly availability factors calculated in subsection 6(3)(a) for import asset *i* in hour *t*; and

(ii) *observed hours*$_i$ is the numbers of hours in the historical data set for import asset *i*;

and

(c) multiply the average availability factor calculated in subsection 6(3)(b) by the amount of **capacity** declared in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity* for the import asset.

(4) The **ISO** must calculate a **uniform capacity value** for a site with 1 or more onsite **generating units** or **aggregated generating facilities** that supplies electric energy for 1 or more onsite load assets and receives an energy market **dispatch** on a gross-to-grid basis as follows:

(a) calculate a gross **uniform capacity value** for the onsite **generating unit** or **aggregated generating facilities** in accordance with the availability factor formula in subsection 6(1);

(b) perform a linear regression of net-to-grid energy as a function of the energy market **dispatches** issued to the site; and

(c) translate the gross **uniform capacity value** calculated in subsection 6(4)(a) to a net **uniform capacity value** using the linear regression in subsection 6(4)(b).

(5) The **ISO** must, subject to subsection 8, calculate a **uniform capacity value** for a load asset providing a **firm consumption level** as follows:

(a) for each hour in the asset's historical data set, identify the **days** in:

(i) the 15 most recent **business days** prior to the day with the hour in the asset's historical data set that are not **days** identified in subsection 6(5)(b), if the hour falls on a **business day**;

(ii) the 10 most recent weekend **days** or holidays prior to the **day** with the hour in the asset's historical data set that are not **days** identified in subsection 6(5)(b), if the hour falls on a weekend **day** or a holiday; or

(iii) the **days** the **ISO** specifies if, in the 45 **day** period prior to the **day** with the hour in the asset's historical data set, there are fewer than 15 **business days** or 10 weekend **days** that are not **days** identified in subsection 6(5)(b);

(b) identify if any of the **days** in the 45 **day** period prior to the **day** with the hour in the asset's historical data set are **days** in which the following occurred:

(i) an availability hour established in Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessment*;

(ii) a delivery hour established in Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessment*; or

(iii) an hour identified in subsection 4(1);

(c) identify the **settlement intervals** with the same **hour ending** as the hour in the asset's historical data set in each of the **days** identified in subsections 6(5)(a);

(d) calculate the qualified baseline for the load asset in accordance with the following formula:

$$qualified\ baseline_i =$$

$$(total\ metered\ energy_i + spinning\ reserve_i + supplemental\ reserve_i + LSSi\ volumes_i + energy\ dispatched_i) \div settlement\ intervals$$

where:

(i) *total metered energy*$_i$ is the sum of the **metered energy** in the **settlement intervals** referred to in subsection 6(5)(c) for asset *i;*

(ii) *spinning reserve*$_i$ is the sum of the volumes provided in response to **directives** for **spinning reserve** issued pursuant to Section 205.5 of the **ISO rules**, *Spinning Reserve Technical Requirements and Performance Standards* in the **settlement intervals** referred to in subsection 6(5)(c) for asset *i;*

(iii) *supplemental reserve*$_i$ is the sum of the volumes provided in response to **directives** for **supplemental reserve** issued pursuant to Section 205.6 of the **ISO rules**, *Supplemental Reserve Technical Requirements and Performance Standards* in the **settlement intervals** referred to in subsection 6(5)(c) for asset *i*;

(iv) *LSSi volumes*$_i$ is the sum of the volumes provided in response to a trip signal from the **ISO** for **load shed service** in the **settlement intervals** referred to in subsection 6(5)(c) for asset *i*;

(v) *energy dispatched*$_i$ is the sum of the volumes provided in response to **dispatches** in the energy market in the **settlement intervals** referred to in subsection 6(5)(c) for asset *i*; and

(v) *settlement intervals* is the number of **settlement intervals** identified in subsection 6(5)(c);

(e) calculate a **uniform capacity value** by subtracting the **firm consumption level** declared in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity* from the qualified baseline calculated in accordance with subsection 6(5)(d).

(6) The **ISO** must calculate a **uniform capacity value** for a load asset providing **guaranteed load reduction** that has been subject to a **capacity commitment** in a prior **obligation period** as follows:

(a) calculate the average availability factor for each hour in the load asset's historical data set in accordance with subsection 6(1); and

(b) multiply the **guaranteed load reduction** declared in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity* by the availability factor in subsection 6(6)(a).

(7) The **ISO** must, subject to subsection 8, calculate a **uniform capacity value** for an asset with incremental **capacity** in accordance with the following formula:

$$uniform\ capacity\ value =$$

$$(performance\ factor_i \times maximum\ capability_{it}) +$$

$$(performance\ factor_i\ i \times ncremental\ capacity_i)$$

where:

(a) *performance factor*$_i$ is the average availability factor or average capacity factor calculated in accordance with this subsection 6, as applicable, for asset *i*;

(b) *maximum capability*$_{it}$ is the **maximum capability** of asset *i* for **obligation period** *t,* without considering the incremental **capacity**; and

(c) *incremental capacity*$_i$ is the volume of incremental **capacity** in MW qualified by the **ISO** pursuant to Section 206.1 of the **ISO rules**, *Qualification of Capacity* for asset *i*.

(8) The **ISO** must, calculate a **uniform capacity value** for a load asset providing a **firm consumption level** with incremental **capacity** in accordance with the following formula:

$$uniform\ capacity\ value = UCAP_i + (incremental\ capacity_i\ \times\ performance\ factor$$

where:

(a) *UCAP*$_i$ is the **uniform capacity value** of load asset *i* without considering the incremental **capacity**, calculated in accordance with subsections 6(5) or 7(3), as applicable;

(b) *incremental capacity*$_i$ is the volume of incremental **capacity** in MW qualified by the **ISO** pursuant to Section 206.1 of the **ISO rules**, *Qualification of Capacity*; and

(c) *performance factor* is:

(i) 91%*;* or

(ii) in the case where the **ISO** publishes a class average performance factor based on load assets in Alberta, the class average performance factor published by the **ISO**.

(9) The **ISO** must, where the **uniform capacity value** for at least 1 asset in an aggregated asset would be calculated in accordance with subsection 6(2), calculate the **uniform capacity value** of the aggregated asset in accordance with subsection 6(2).

Methodologies for Hours not in an Asset's Historical Data Set

7(1) The **ISO** must, subject to subsections 7(2) through 7(4), calculate a **uniform capacity value** for an asset by multiplying the **maximum capability** of the asset by:

(a) the applicable class average performance factor published by the **ISO**; or

(b) if a class average performance factor is, in the **ISO**'s determination, not available or not appropriate, a performance factor derived from:

(i) engineering studies or equivalent engineering documents;

(ii) production or load estimates of the asset; or

(iii) a review of similar assets in other jurisdictions.

(2) The **ISO** must calculate a **uniform capacity value** for an import asset in accordance with the following formula:

$$uniform\ capacity\ value\ = declared\ capacity_i\ \times (\frac{observed\ hours_i -\ hours\ with\ zero\ ATC_i}{observed\ hours_i})$$

where:

(a) *declared capacity* is amount of **capacity** declared in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity* for import asset *i*;

(b) *observed hours* is the numbers of hours in the historical data set for import asset *i*; and

(c) *hours with zero ATC* is the number of hours in the historical data set for import asset *i* where the applicable transfer path was out of service with an **available transfer capability** of 0 MW.

(3) The **ISO** must calculate a **uniform capacity value** for a load asset providing a **firm consumption level** in accordance with the following formula:

$$uniform\ capacity\ value =$$

$$(declared\ qualified\ baseline_i - declared\ FCL_i) \times performance\ factor$$

where:

(a) *declared qualified baseline*$_i$ is the qualified baseline declared in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity* for asset *i*;

(b) *declared FCL*$_i$ is the **firm consumption level** declared in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity* for asset *i*; and

(c) *performance factor* is:

(i) 91%; or

(ii) in the case where the **ISO** publishes a class average performance factor based on load assets in Alberta, the class average performance factor published by the **ISO**.

(4) The **ISO** must calculate a **uniform capacity value** for a load asset providing **guaranteed load reduction** in accordance with the following formula:

$$uniform\ capacity\ value = guaranteed\ load\ reduction_i \times\ performance\ factor$$

where:

(a) *guaranteed load reduction* is the **guaranteed load reduction** declared in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*; and

(b) *performance factor* is:

(i) 91%; or

(ii) in the case where the **ISO** publishes a class average performance factor based on load assets in Alberta, the class average performance factor published by the **ISO**.

Test Requirement for Load Assets

8(1) A **capacity market participant** for a load asset must demonstrate to the **ISO** the ability of the load asset to reduce consumption of electric energy by the **uniform capacity value** for the load asset and maintain the reduction for 1 hour if:

(a) the load asset was subject to a **capacity commitment** in the immediately preceding **obligation period**;

(b) there were no delivery hours in the immediately preceding **obligation period**, as determined by the **ISO** in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessment*; and

(c) the load asset did not reduce consumption by a volume equal to or greater than the **uniform capacity value** for the load asset in response to an energy market **dispatch** or **directive** for **ancillary services**.

(2) A **capacity market participant** must, at least 5 days prior to the demonstration referred to in subsection 8(1), notify the **ISO** of the time that the demonstration will occur.

(3) The **ISO** must, in the event that the load asset fails the demonstration in subsection 8(1), reduce the **uniform capacity value** for the **asset** to reflect the observed load reduction from the demonstration.

Calculation of Ranges for a Uniform Capacity Value

9(1) The **ISO** must, subject to subsections 9(2) and 9(3), determine **uniform capacity value** ranges for an asset as follows:

(a) determine the 5% range as follows:

(i) calculate the upper limit by:

(A) removing 5% of the hours identified in the asset's historical data set, in which the availability factor for the asset calculated in accordance with subsection 6(1) or capacity factor calculated in accordance with subsection 6(2), as applicable, was the lowest;

(B) averaging the asset's remaining hourly availability factors or hourly capacity factors, as applicable; and

(C) multiplying the average availability factor or average capacity factor in subsection 9(1)(a)(i)(B), as applicable, by the **maximum capability** of the asset;

and

(ii) calculate the lower limit by:

(A) removing 5% of the hours identified in the asset's historical data set, in which the asset's availability factor calculated in accordance with subsection 6(1) or capacity factor calculated in accordance with subsection 6(2), as applicable, was the highest;

(B) averaging the asset's remaining availability factor or capacity factor, as applicable; and

(C) multiplying the average remaining availability factor or capacity factor, as applicable, by the asset's **maximum capability**;

(b) determine the +/- 2% range as follows:

(i) calculate the upper limit by:

(A) multiplying the **maximum capability** of the asset by 2%; and

(B) adding the value in subsection 9(1)(b)(i)(A) to the **uniform capacity value** of the asset;

and

(ii) calculate the lower limit by:

(A) multiplying the **maximum capability** by 2%; and

(B) subtracting the value in subsection 9(1)(b)(ii)(A) from the **uniform capacity value** of the asset;

and

(c) determine the +/- 1 MW range by:

(i) calculating the upper limit by adding 1 MW to the **uniform capacity value** of the asset; and

(ii) calculating the lower limit by subtracting 1 MW from the **uniform capacity value** of the asset.

(2) The **ISO** must, for asset as described in subsection 6(4), determine **uniform capacity value** ranges for the asset as follows:

(a) determine the 5% range as follows:

(i) calculate the upper limit by:

(A) removing 5% of the hours identified in the asset's historical data set, in which the availability factor calculated in accordance with subsection 6(1)(a) for the asset, was the lowest;

(B) averaging the hourly availability factors remaining after removing hours in subsection 9(2)(a)(i)(A);

(C) multiplying the average availability factor in subsection 9(2)(a)(i)(B) by the **maximum capability** of the asset; and

(D) translating the value in subsection 9(2)(a)(i)(C) to a net upper limit using the linear regression formula in subsection 6(4)(b);

and

(ii) calculate the lower limit by:

(A) removing 5% of the hours identified in the asset's historical data set, in which the availability factor calculated in accordance with subsection 6(1)(a) for the asset, was the highest;

(B) averaging the hourly availability factors remaining after removing hours in subsection 9(2)(a)(ii)(A);

(C) multiplying the average availability factor in subsection 9(2)(a)(ii)(B) by the **maximum capability** of the asset; and

(D) translating the value in subsection 9(2)(a)(ii)(C) to a net lower limit using the

linear regression formula in subsection 6(4)(b);

(b) determine the +/- 2% range as follows:

(i) calculate the upper limit by:

(A) multiplying the **maximum capability** of the asset by 2%;

(B) adding the value in subsection 9(2)(b)(i)(A) to the gross **uniform capacity value** calculated in subsection 6(4)(a) for the asset; and

(C) translating the value in subsection 9(2)(b)(i)(B) to a net upper limit using the linear regression formula established in subsection 6(4)(b);

and

(ii) calculating the lower limit by:

(A) multiplying the **maximum capability** of the asset by 2%;

(B) subtracting the value in subsection 9(2)(b)(ii)(A) from the gross **uniform capacity value** calculated in subsection 6(4)(a) for the asset; and

(C) translating the value in subsection 9(2)(b)(ii)(B) to a net lower limit using the linear regression formula established in subsection 6(4)(b);

and

(c) determine the +/- 1 MW range as follows:

(i) calculate the upper limit by adding 1 MW to the net **uniform capacity value** determined in accordance with subsection 6(4)(c) for the asset; and

(ii) calculate the lower limit by subtracting 1 MW from the net **uniform capacity value** determined in accordance with subsection 6(4)(c) for the asset.

(3) The **ISO** must not calculate the **uniform capacity value** ranges in subsection 9(1) for:

(a) an asset with **new capacity** or refurbished **capacity**;

(b) the portion of an asset with incremental **capacity** that is incremental **capacity**;

(c) a load asset; or

(d) an import asset.

Notification of Tightest Supply Cushion Hours and Preliminary Uniform Capacity Values

10(1) The **ISO** must, within the timelines prescribed by the *Capacity Market Auction Guidelines,* publish on the AESO website:

(a) the 1250 hours established in accordance with subsection 3(2)(b); and

(b) the class averages referred to in subsection 7(1)(a).

(2) The **ISO** must, within the timelines prescribed by the *Capacity Market Auction Guidelines,* provide the following information to a **capacity market participant** on an asset-specific basis:

(a) the hours in the asset's historical data set determined in accordance with subsection 4;

(b) the **uniform capacity value**;

(c) the methodology used to calculate the **uniform capacity value**;

(d) the greatest of the upper limits calculated in subsections 9(1) or 9(2), as applicable, to a maximum of the **maximum capability** of the asset, if ranges were calculated for the asset in accordance with subsections 9(1) or 9(2); and

(e) the lowest of the lower limits calculated in subsection 9(1) or 9(2), as applicable, to a minimum of 1 MW, if ranges were calculated for the asset in accordance with subsections 9(1) or 9(2).

Uniform Capacity Value Variances

11(1) A **capacity market participant** may, within the timelines prescribed by the *Capacity Market Auction Guidelines*, request the **ISO** to vary the **uniform capacity value** of an asset if:

(a) the asset has or will undergo a physical change before the start of the **obligation period** that will increase or decrease the **uniform capacity value** of the asset by at least 1 MW; or

(b) where the class average data, production or load estimates, or jurisdictional assessment used in calculating the **uniform capacity value** in accordance with subsections 7(1), does not create a comparable representation of the asset's future performance.

(2) The **capacity market participant** must, in the request referred to in subsection 11(1), submit to the **ISO** detailed information in support of the request, including, as applicable:

(a) information regarding:

(i) the planned or completed physical change to the asset demonstrating that the **uniform capacity value** will increase or decrease by at least 1 MW; or

(ii) why the class average data, production or load estimates, or jurisdictional assessment used in calculating the **uniform capacity value** are not valid for the asset.

and

(b) engineering studies or equivalent engineering documents, or production or load estimates which are specific to the asset at its location, completed by a qualified professional engineer.

(3) The **ISO** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, notify the **capacity market participant** of its decision whether to vary the **uniform capacity value**.

Declaration and Assignment of Final Uniform Capacity Value

12(1) A **capacity market participant** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, declare to the **ISO** the **uniform capacity value** within and inclusive of the range limits provided by the **ISO** in accordance with subsections 10(2)(d) and 10(2)(e) that the **capacity market participant** will use for the **base auction** or **rebalancing auction**, if the **capacity market participant** was provided a range in accordance with subsection 10(2).

(2) The **ISO** must determine the final **uniform capacity value** for each asset according to the following order of priority:

(a) the **uniform capacity value** resulting from the complaint process set out in the *Capacity Market Regulation*;

(b) the **uniform capacity value** resulting from the variance process in subsection 11;

(c) the **uniform capacity value** declared in accordance with subsection 12(1); or

(d) the **uniform capacity value** calculated by the **ISO** through the application of the applicable methodologies in subsections 6 and 7, in accordance with subsection 5.

(3) The **ISO** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, assign to an asset:

(a) the final **uniform capacity value** determined in accordance with subsection 12(2), less delist volumes in the case of an asset that temporarily delisted for physical reasons or permanently delisted for the **obligation period**; and

(b) the final **uniform capacity value** determined in accordance with subsection 12(2), if the **uniform capacity value** is greater than or equal to 1 MW, in all other cases.

(4) The **ISO** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, publish the final **uniform capacity values** determined in accordance with subsection 12(2) for the assets that have a **uniform capacity value** greater than or equal to 1 MW.

Revision History

Date	Description
xxxx-xx-xx	Initial release