Terms and definitions to be added for use in the Capacity Market ISO rules:

"avoidable costs" means the costs that are not incurred if an asset was temporarily delisted for the **obligation period** or a portion of the **obligation period**.

"**base auction**" means the first auction for **capacity** for an **obligation period**.

"**capacity**" as defined in the **Act**, with respect to the capacity market means the ability to supply electric energy or reduce electric energy consumption as measured in MW.

"**capacity block**" means one of the price and quantity pairs the **ISO** allocates to an asset for a **base auction** or **rebalancing auction** for the purposes of submitting an **offer** or **bid** in the capacity market.

"**capacity commitment**" means an obligation to deliver, during an **obligation period**, a volume of electric energy expressed as a positive integer, corresponding to the volume of **capacity** that cleared in a **base auction** or a **rebalancing auction** net of a **bid** that cleared in a **rebalancing auction**.

"**capacity market participant**" means a **person** registered with the **ISO** to transact **capacity** in the capacity market in accordance with Section 201.10 of the **ISO rules**, *Capacity Market Participant Registration*.

"delist outage" means a derate or an outage for a **source asset** or load **sink asset** associated with a temporary delist referred to in Section 206.9 of the **ISO rules**, *Delisting*.

[Note, the defined term "delist outage" was posted with the EAS definitions as well]

"**electricity market participant**" as defined in the **Act**, means

(i) any person that supplies, generates, transmits, distributes, trades, exchanges, purchases or sells electricity, electric energy, electricity services or ancillary services, or

(ii) any broker, brokerage or forward exchange that trades or facilitates the trading of electricity, electric energy, electricity services or ancillary services.

"**firm consumption level**" means a reduction in consumption of electric energy to a maximum volume that is provided by a load asset during an **obligation period**. "**guaranteed load reduction**" means a reduction in consumption of electric energy by a volume that is provided by a load asset during an **obligation period**.

"**new capacity**" means **capacity** from an asset:

(i) that has not completed energization or **commissioning** prior to a **base auction** or **rebalancing auction** and has not cleared a previous **base auction** or **rebalancing auction**;

(ii) in the case of a **generating unit** or **aggregated generating facility**, that has completed energization and **commissioning** after November 1, 2019 and has not cleared a **base auction** or **rebalancing auction**;

(iii) in the case of an asset that was permanently delisted and re-entered the market, has been designated by the **ISO** in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*;

(iv) in the case of an import asset, that has not cleared in a previous **base auction** or **rebalancing auction**.

"**obligation period**" means a 12-month period running continuously from November 1 to October 31 of the following year.

"**rebalancing auction**" means an auction for **capacity** conducted after a **base auction** for the same **obligation period**.

"**resource adequacy standard**" means the minimum level of expected unserved energy established by Government of Alberta in regulation.

"**transmission market constraint**" means an exceedance of a reliability limit on 1 or more elements of the **transmission system**, where:

(i) the **ISO** must take action to prevent or mitigate the exceedance; and

(ii) the action results in an impact to the normal economic merit operation of generation, load, or **interchange transactions**,

excluding a circumstance where the capability limits referenced in Section 303.2 of the **ISO rules**, *Available Transfer Capability* are exceeded.

[Note, the defined term "transmission market constraint" was posted with the EAS definitions as well]

"**uniform capacity value**" means a fungible measure in MW, expressed as a positive integer, of an asset's ability to provide **capacity** calculated in accordance with Section 206.3 of the **ISO rules**, *Uniform Capacity Value Determination*.

External Consultation Draft
October 22, 2018

Applicability

1 Section 103.9 applies to:

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

(b) the **ISO**.

Requirements

Currency

2 The **ISO** must determine all payments, charges, amounts and calculations under this section 103.9 in Canadian dollars.

Monthly Capacity Payment for an Asset with a Positive Capacity Award

3(1) The **ISO** must, for an asset with a positive capacity award calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*, pay to the **capacity market participant** a capacity payment for each **settlement period** as follows:

(a) where the asset is subject to a **capacity commitment**:

(i) $0, if the capacity payment calculated in subsection 5 is less than or equal to $0;

(ii) the capacity payment calculated in subsection 5 if such amount is:

(A) greater than $0; and

(B) less than the applicable payment cap in subsection 3(2); or

(iii) the applicable payment cap in subsection 3(2), if the capacity payment calculated in accordance with subsection 5 exceeds the applicable payment cap;

and

(b) where the asset is not subject to a **capacity commitment**, the capacity award.

(2) The **ISO** must set the payment cap as the greater of:

(a) $2,771/MW multiplied by the **capacity commitment** associated with the asset, if the clearing price of the **base auction** was less than $33/kW-year; or

(b) 2 times the capacity award for the asset, in all other cases.

Monthly Capacity Payment for an Asset with a Negative Capacity Award

4(1) A **capacity market participant** must, for an asset that is subject to a **capacity commitment** with a negative capacity award calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*, pay the **ISO** the capacity payment determined in accordance with subsection 5 for each **settlement period**, if such amount is negative.

(2) A **capacity market participant** must, for an asset that is not subject to a **capacity commitment** with a negative capacity award calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*, pay the **ISO** the capacity award for each **settlement period**.

(3) The **ISO** must, for an asset subject to a **capacity commitment** with a negative capacity award calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*, pay the **capacity market participant** for each **settlement period** the capacity payment determined in accordance with subsection 5, if such amount is positive.

Monthly Capacity Payment

5 The **ISO** must, for each asset subject to a **capacity commitment**, calculate a monthly capacity payment for each **settlement period**, in accordance with the following formula:

$$monthly\ capacity\ payment =$$

$$capacity\ award + uplift + statement\ adjustments + payment\ adjustment\ balance$$

$$+\ under\ delivery\ adjustment\ charge + over\ delivery\ adjustment\ payment$$

$$+\ under\ availability\ adjustment\ charge + over\ availability\ adjustment\ payment$$

where:

(a) *capacity award* is the award in dollars calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*;

(b) *uplift* is the monthly uplift payment in dollars determined in accordance with Section 201.13 of the **ISO rules**, *Capacity Market Clearing*;

(c) *statement adjustments* is all amounts in dollars for the resolution of any disputes referenced in subsections 17 or 19;

(d) *payment adjustment balance* is the amount in dollars calculated at the end of the prior **settlement period** in accordance with subsection 7;

(e) *under-delivery adjustment charge* is the amount of under-delivery adjustments in dollars determined in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*;

(f) *over-delivery adjustment payment* is the amount of over-delivery adjustments in dollars determined in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*, subject to the limits in subsections 6(1) and 6(2);

(g) *under-availability adjustment charge* is the amount of under-availability adjustments in dollars determined in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*; and

(h) *over-availability adjustment payment* is the amount of over-availability adjustment in dollars determined in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*, subject to the limits in subsections 6(1) and 6(3).

Funding Over-Delivery and Over-Availability Adjustments

6(1) The **ISO** must, for an asset subject to a **capacity commitment**, determine the over-delivery adjustment payment of the asset for each **settlement period** as the lesser of:

(a) any over-delivery adjustments determined in accordance to Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*; or

(b) the amount allocated to an asset based on the sum of all under-delivery adjustments collected in a **settlement period** prorated across all assets entitled to an over-delivery adjustment in the same **settlement period**.

(2) The **ISO** must, for an asset subject to a **capacity commitment**, determine the over-availability adjustment payment of the asset for each **settlement period** as the lesser of:

(a) any over-availability adjustments determined in accordance to Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*; or

(b) the amount allocated to an asset based on the sum of all under-availability adjustments collected in a **settlement period** prorated across all assets entitled to an over-availability adjustment in the same **settlement period**.

Payment Adjustment Balance

7(1) The **ISO** must at the end of each **settlement period** allocate to the payment adjustment balance for an asset an amount as follows:

(a) an asset with a positive capacity award calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation* allocate:

(i) for delivery in accordance with the following formula:

$$delivery\ payment\ adjustment\ balance\ =$$

$$\begin{aligned}&delivery\ payment\ adjustment\ balance\ from\ previous\ settlement\ period\\&+\ over\ delivery\ adjustment\ +\ under\ delivery\ adjustment\\&+\ under\ delivery\ adjustment\ collected\ -\ over\ delivery\ adjustment\ payment\end{aligned}$$

where:

(A) *over-delivery adjustment* is the amount of over-delivery adjustments in dollars determined in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments;*

(B) *under-delivery adjustment* is the amount of under-delivery adjustments in dollars determined in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments;*

(C) *under-delivery adjustment collected* is the amount of under-delivery adjustments that the **ISO** collect from the asset subject to the payment floor as specified in subsection 3(1)(a)(i); and

(D) *over-delivery adjustment payment* is the amount of over-delivery adjustment allocated to the asset for over-delivery adjustment subject to funding provision as specified in subsection 6(1).

(ii) for availability in accordance with the following formula:

$$availability\ payment\ adjustment\ balance\ =$$

$$\begin{aligned}&availability\ payment\ adjustment\ balance\ from\ previous\ settlement\ period\\&+\ over\ availability\ adjustment\ +\ under\ availability\ adjustment\\&+\ under\ availability\ adjustment\ collected\ -\ over\ availability\ adjustment\ payment\end{aligned}$$

where:

(A) *over-availability adjustment* is the amount of over-availability adjustments in dollars determined in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*;

(B) *under-availability adjustment* is the amount of under-availability adjustments in dollars determined in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*;

(C) *under-availability adjustment collected* is the amount of under-availability adjustment that the ISO collected from the asset subject to the payment floor as specified in subsection 3(1)(a)(i); and

(D) *over-availability adjustment payment* is the amount of over-availability adjustment allocated to the asset for over-availability adjustment subject to funding provision as specified in subsection 6(2)

and

(b) if the asset subject to a negative capacity award calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*, the difference between the amount calculated in subsection 5 and subsections 4(1) or 4(3), as applicable.

(2) The **ISO** must adjust the payment adjustment balance for an asset by the following amounts:

(a) by the amounts in subsection 7(3) settled in each **settlement interval**;

(b) a payment adjustment balance reduction reflected in a financial statement in accordance with subsection 7(6); and

(c) a payment made by a **capacity market participant** towards the payment adjustment balance for an associated asset, if such amount was not invoiced by the **ISO**.

(3) The **ISO** must, if an asset has a positive payment adjustment balance at the end of an **obligation period** and is not subject to a **capacity commitment** for the next **obligation period**, settle the payment adjustment balance such that the payment for each **settlement period** is the lesser of:

(a) the payment cap established in subsection 3(2); or

(b) the limits in subsection 6.

(4) The **ISO** must, if an asset has a negative payment adjustment balance and the capacity award for the next **obligation period** is lower than the capacity award for the current **obligation period**, calculate a payment adjustment balance reduction in accordance with the following formula:

$$payment\ adjustment\ balance\ reduction =$$
$$reduction\ ratio \times\ payment\ adjustment\ balance$$

where:

(a) *reduction ratio* is the lesser of:

(i) the capacity award ratio calculated in subsection 7(5); or

(ii) 1.

(b) *payment adjustment balance* is the payment adjustment balance in dollars at the end of the **settlement period** determined in subsection 7, expressed as an absolute value.

(5) The **ISO** must, in calculating the payment adjustment balance reduction in subsection 7(4) calculate the capacity award ratio in accordance with the following formula:

$$capacity\ award\ ratio =$$
$$(current\ award - future\ award) \div current\ award$$

where:

(a) *current award* is the capacity award in dollars calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation* for the current **obligation period**; and

(b) *future award* is the capacity award in dollars calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation* for the next **obligation period**.

(6) The **capacity market participant** must pay to the **ISO** the amount referred to in subsection 7(4), upon receiving a financial statement for such amount from the **ISO**.

Residual Funds to Offset Costs to Procure Capacity

8 The **ISO** must, when the under-delivery adjustments and under-availability adjustments exceed the over-delivery adjustments and over-availability adjustments in a **settlement period**, as calculated in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*, use the residual funds to offset costs incurred by the **ISO** to procure **capacity**.

Failure to Achieve Energization and Commissioning

9 The **ISO** must, for an asset subject to a **capacity commitment** that has not completed energization and **commissioning** before the start of the **obligation period**, withhold all capacity payments for **settlement periods** prior to and including the **settlement period** during which energization and **commissioning** is achieved until any over-availability adjustments or under-availability adjustments have been determined in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*.

Post Final Adjustments

10 The **ISO** must not make post final adjustments to any capacity market statement or calculation in relation to any post final adjustments made pursuant to Section 103.4 of the **ISO rules**, *Power Pool Financial Settlement*.

Preliminary Capacity Market Statement

11(1) The **ISO** must, no later than the close of business on the 5th **business day** after the last day of each **settlement period**, issue a preliminary capacity market statement to each **capacity market participant**, in respect of all associated assets determined on:

(a) an initial basis for that **settlement period**;

(b) an interim basis for that **settlement period** which is 2 **months** prior to that **settlement period**; and

(c) a final basis for that **settlement period** which is 4 **months** prior to that **settlement period**.

(2) The **ISO** must include in the preliminary capacity market statement:

(a) the capacity payment determined in accordance with subsections 3, 4 and 5, as applicable;

(b) line items reflecting the values used to calculate the capacity payment in subsection 5; and

(c) any interest, late payment or other costs or charges, as applicable, under Section 103.7 of the **ISO rules**, *Financial Default and Remedies*.

(3) The **ISO** must, subject to Section 103.1 of the **ISO rules**, *Confidentiality*, provide to a **capacity market participant** supporting records used in determining the line items and net amounts contained in the **capacity market participant**'s capacity market statement, upon a reasonable written request.

Final Capacity Market Statement

12(1) The **ISO** must, no later than the close of business on the 15th **business day** after the end of each **settlement period**, issue a final capacity market statement to a **capacity market participant** in respect of all associated assets, determined on:

(a) an initial basis for that **settlement period**;

(b) an interim basis for that **settlement period** which is 2 **months** prior to that **settlement period**; and

(c) a final basis for that **settlement period** which is 4 **months** prior to that **settlement period**.

(2) The **ISO** must include in the final capacity market statement:

(a) the amounts set out in the preliminary capacity market statement;

(b) any updated items; and

(c) information not previously appearing on the preliminary capacity market statement.

Settlement Dates and Payment Obligations

13(1) The **ISO** must use the 20th **business day** following the last day of a **settlement period** as the settlement date for that **settlement period.**

(2) The **ISO** must, publish on the AESO website each January the settlement dates for the current and next calendar year.

(3) The **ISO** must, if the **ISO** owes an amount to the **capacity market participant** pursuant to subsection 4, pay that amount by the settlement date.

Method of Payment

14 A **capacity market participant** must pay an amount the **capacity market participant** owes, as set out in its final capacity market statement, to the **ISO** by the method the **ISO** specifies.

Interest and Other Late Payment Costs and Charges

15 A **capacity market participant** must, if it fails to pay on or before a settlement date any outstanding **financial obligation** dollar amount owing to the **ISO** as set out in any of the **capacity market participant's** final capacity market statements, pay interest, a late payment charge and any other costs and charges in accordance with the provisions of Section 103.7 of the **ISO rules**, *Financial Default and Remedies*.

Informal Disputes

16 A **capacity market participant** and the **ISO** must make reasonable efforts to informally resolve a dispute in accordance with subsection 2 of Section 103.2 of the **ISO rules**, *Dispute Resolution,* if a **capacity market participant** has a dispute with the **ISO** about the content of a final capacity market statement of the **capacity market participant** prior to the **ISO** issuing that final capacity market statement on a final basis in accordance with subsection 12.

Formal Dispute Periods

17 The **ISO** must publish on the AESO website each January the formal dispute submission periods for each of the **settlement periods** for that calendar year.

Capacity Market Statement Formal Disputes After Final Capacity Market Statement

18(1) A **capacity market participant** must not, subject to subsection 17, formally dispute a final capacity market statement for a **settlement period** until the **ISO** has issued the final capacity market statement on a final basis for that **settlement period** in accordance with subsection 12.

(2) The **capacity market participant** must, if a **capacity market participant** proceeds with a formal dispute, submit a written dispute notice to the **ISO** in accordance with subsection 3 of Section 103.2 of the **ISO rules**, *Dispute Resolution*, prior to the expiry of the formal dispute submission period for the **settlement period**.

(3) The **ISO** must not make adjustments to any amounts of any final capacity market statement issued on a final basis unless the adjustments result from a formal dispute resolution written agreement between the **ISO** and the **capacity market participant** or from a determination under subsection 5(3) of Section 103.2 of the **ISO rules**, *Dispute Resolution.*

(4) The **ISO** must, if the terms of a formal dispute have been agreed to in principle between the **ISO** and the **capacity market participant**, deliver a written agreement to the **capacity market participant** detailing the dispute resolution terms, the subject **settlement period**, a summary of adjustments, and the requirement that the **capacity market participant** confirms and agrees to the formal dispute resolution by signing and returning the written agreement to the **ISO**.

(5) A **capacity market participant** must, no later than the close of business on the 30th **business day** from the receipt of the written agreement from the **ISO**, reply by signing and accepting the written agreement and once signed and accepted and redelivered to the **ISO**, the **capacity market participant** will not have further recourse under Section 103.2 of the **ISO rules**, *Dispute Resolution*.

(6) The **ISO** may deem that the **capacity market participant** has accepted the written agreement if the **capacity market participant** fails to respond by the 30th **business day**.

(7) The **capacity market participant** must not have further recourse under Section 103.2 of the **ISO rules**, *Dispute Resolution* with respect to the formal dispute if the written agreement is accepted or deemed to be accepted pursuant to subsection 18(6).

(8) A **capacity market participant** may, if the **capacity market participant** rejects the written agreement by delivering a rejection notice to the **ISO** by the 30th **business day**, seek to have the formal dispute resolved by a determination under Section 103.2 of the **ISO rules**, *Dispute Resolution*.

Capacity Market Statement Adjustments for Resolved Disputes

19(1) The **ISO** must, if an informal dispute is resolved under subsection 16, adjust the final capacity market statement for that **settlement period** to include any resolved line item adjustments and the adjusted net amount payable by or to the **capacity market participant**.

(2) The **ISO** must, if a formal dispute is resolved under subsection 18, adjust the next final capacity market statement after the resolution to include any resolved line item adjustments and the adjusted net amount payable by or to the **capacity market participant**.

ISO Recourse to Section 103.7 of the ISO Rules, *Financial Default and Remedies*

20 The **ISO** may, in the event that the **capacity market participant** fails to pay an invoice or any dollar amount under this section 103.9, deem such failure to be a **financial obligation** default event which will allow the **ISO** to have recourse to the rights and remedies of the **ISO** under Section 103.7 of the **ISO rules**, *Financial Default and Remedies*.

Revision History

Date	Description
yyyy-mm-dd	Initial release

External Consultation Draft
October 22, 2018

Applicability

1 Section 103.10 applies to

(a) the **ISO**.

Requirements

Capacity Award Calculation

2 The **ISO** must calculate the monthly capacity award, in Canadian dollars, for an asset subject to a **capacity commitment** as follows:

$$capacity\ award =$$
$$\{[commitment_b \times price_b \times 1000]$$
$$-[(commitment_b - commitment_{r1}) \times price_{r1} \times 1000]$$
$$-[(commitment_{r1} - commitment_{r2}) \times price_{r2} \times 1000]\}$$
$$\div 12$$

where:

(a) *Commitment* $_b$ equals the **capacity commitment** in MW after the **base auction**;

(b) *Price* $_b$ equals the clearing price in $/kW-year of the **base auction**;

(c) *Commitment* $_{r1}$ equals the **capacity commitment** in MW after the first **rebalancing auction**, which is also the last **rebalancing auction** for the first 3 **obligation periods**;

(d) *Price* $_{r1}$ equals the clearing price in $/kW-year of the first **rebalancing auction**, which is also the last **rebalancing auction** for the first 3 **obligation periods**;

(e) *Commitment* $_{r2}$ equals the **capacity commitment** in MW after the second **rebalancing auction**, in all other cases; and

(f) *Price* $_{r2}$ equals:

(i) 0 $/kW-year, in the case of the first 3 **obligation periods**; and

(ii) the clearing price in $/kW-year of the second **rebalancing auction**, in all other cases.

Transition variable

3 The **ISO** must:

(a) notwithstanding subsection 2(e), set *Commitment* $_{r2}$ as 0 MW when calculating the monthly capacity award in subsection 2 for the first 3 **obligation periods**; and

(b) remove subsection 3 on or about the day the settlement for the third **obligation period** is concluded.

Revision History

Date	Description
yyyy-mm-dd	Initial release

External Consultation Draft
October 22, 2018

Applicability

1 Section 103.11 applies to:

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

(b) the **ISO**.

Requirements

Provision of Financial Security

2 A **capacity market participant** must provide to the **ISO**, or cause its guarantor to provide to the **ISO**, any **financial security** which the **capacity market participant** is required to provide, or is requested by the **ISO** to provide, pursuant to this section 103.11.

Financial Security for the Payment Adjustment Balance Limit

3(1) The **ISO** must calculate the security for the payment adjustment balance limit for an asset subject to a **capacity commitment** as follows:

$$payment\ adjustment\ balance\ security =$$
$$payment\ adjustment\ balance\ limit - forecast\ payment\ adjustment\ balance$$

where:

(a) *payment adjustment balance limit* is the limit calculated in subsection 3(2);

(b) *forecast payment adjustment balance* is the amount in dollars determined by the **ISO**.

(2) The **ISO** must, in calculating the payment adjustment balance security in subsection 3(1), calculate the payment adjustment balance limit in accordance with the following formula:

$$payment\ adjustment\ balance\ limit =$$
$$capacity\ award \times negative\ factor \times 12 \times 1.3$$

where:

(a) *capacity award* is the capacity award calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation* for the next **obligation period**; and

(b) *negative factor* is:

(i) -1, if the capacity award is positive; or

(ii) +1, if the capacity award is negative.

(3) The **ISO** may, if the payment adjustment balance security calculated in subsection 3(1) is positive at any time prior to or during an **obligation period**, request the **capacity market participant** to provide **financial security** to the **ISO** in the amount of the payment adjustment balance security.

(4) A **capacity market participant** that has been issued a request in accordance with subsection 3(3) must provide **financial security** in the amount of the payment adjustment balance security to the **ISO** prior to or on the date specified in the **ISO**'s request.

(5) The **ISO** may reduce the amount of **financial security** provided by a **capacity market participant** in accordance with subsection 3(4) if:

(a) the capacity award for the next **obligation period** is greater than the capacity award for the current **obligation period**; and

(b) requested by the **capacity market participant**.

(6) The **ISO** may, at the start of an **obligation period**, request a **capacity market participant** to provide **financial security** to the **ISO** in the amount of the capacity award multiplied by 12 for an asset:

(a) subject to a **capacity commitment** and with a capacity award of $0 calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*; or

(b) with a negative capacity award calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*.

(7) The **ISO** may, during an **obligation period** and upon capacity payments made by the **capacity market participant** to the **ISO** in respect to the asset referred to in subsection 3(5), reduce the amount of financial security required by the amount of any payments made by the **capacity market participant** in respect to such asset.

Financial Security for New Capacity, Refurbished Capacity and Incremental Capacity Prior to a Base Auction or Rebalancing Auction

4(1) The **ISO** may, within the timelines prescribed in the *Capacity Market Auction Guidelines*, request a **capacity market participant** to provide **financial security** to the **ISO** for the security requirement amounts determined in subsections 4(3), 4(5) and 4(6) in respect of an asset with **new capacity**, refurbished **capacity** or incremental **capacity** that is not energized and **commissioned** at the time of the **base auction** or **rebalancing auction**.

(2) A **capacity market participant** that has been issued a request in accordance with subsection 4(1) must provide **financial security** in the amounts determined in subsections 4(3), 4(5) and 4(6), as applicable prior to or on the date specified in the **ISO**'s request.

(3) The **ISO** must calculate the security requirement from an asset with **new capacity** in accordance with the following formula:

$$security\ requirement\ =$$

$$\frac{gross\text{-}CONE}{capital\ recovery\ factor} \times uniform\ capacity\ value \times 0.05$$

where:

(a) *gross-CONE* is from the demand curve for the applicable **base auction** or **rebalancing auction** as established in accordance with Section 207.3 of the **ISO rules**, *Shape of Demand Curve;*

(b) *capital recovery factor* is the value calculated in subsection 4(4); and

(c) *uniform capacity value* is the volume of **uniform capacity value** assigned to the **capacity market participant** for an asset.

(4) The **ISO** must, in calculating the security requirement in subsection 4(3), calculate the capital recovery factor in accordance with the following formula:

$$capital\ recovery\ factor = \frac{\{discount\ rate \times (1 + discount\ rate)^{plant\ life}\}}{\{(1 + discount\ rate)^{plant\ life} - 1\}}$$

where:

(a) *discount rate* is the value used in the determination of gross-CONE *;* and

(b) *plant life* is 20 years.

(5) The **ISO** must calculate the security requirement from an asset with refurbished **capacity** in accordance with the following formula:

$$security\ requirement\ =$$

$$unit\ rate \times escalation\ rate \times uniform\ capacity\ value$$

where:

(a) *unit rate* is $200/kW;

(b) *escalation rate* is the value calculated in subsection 4(7); and

(c) *uniform capacity value* is the volume of **uniform capacity value** assigned to the **capacity market participant** for an asset.

(6) The **ISO** must calculate the security requirement from incremental **capacity** in accordance with the following formula:

$$security\ requirement\ =$$

$$unit\ rate \times escalation\ rate \times incremental\ capacity \times 0.05$$

where:

(a) *unit rate* is $100/kW;

(b) *escalation rate* is the value calculated in subsection 4(7); and

(c) *incremental capacity* is the volume of incremental **capacity** provided in accordance with Section 206.1, Qualification of Capacity .

(7) The **ISO** must calculate the escalation rate in accordance with the following formula:

$$escalation\ rate =$$

$$\frac{0.25 \times labour\ index}{60.7} + \frac{0.35 \times\ materials\ index}{118.5} + \frac{0.40 \times turbine\ index \times exchange\ rate}{268.7}$$

where:

(a) *labour index* is the most recent 12 month average of published Statistics Canada Construction Union Wage Rates (Electrician), Monthly for Edmonton Alberta, Table 18 10-0046-01;

(b) *materials index* is the most recently published Statistics Canada Gross National and Gross Domestic Income, Indexes and Related Statistics, Annual, Table 36-10-0105-01;

(c) *turbine index* is the most recent 12 month average of published Federal Reserve Economic Data (St. Louis) Producer Price Index by Industry: Turbine and Turbine Generator Set Units Manufacturing (PCU333611333611); and

(d) *exchange rate* is the most recent 12 month average of published Statistics Canada Monthly Average Exchange Rates in Canadian Dollars, U.S. Dollar monthly average, Table 33-10-0163-01.

Adjusted Financial Security Following a Base Auction or Rebalancing Auction

5(1) The **ISO** must, if a **capacity market participant** provided the **financial security** in accordance with subsection 4(2), determine the adjusted security requirement following a **base auction** or a **rebalancing auction** as follows:

(a) $0, if the **capacity market participant** elected to permanently delist the entire volume of **new capacity** or refurbished **capacity** for the asset in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*;

(b) $0, if the **capacity market participant** elected to permanently delist the incremental **capacity** for the asset in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*;

(c) notwithstanding subsection 3(6), $0, if the **capacity market participant** did not receive a **capacity commitment** in the last **rebalancing auction** ;

(d) $0, if the **capacity market participant** achieved energization and **commissioning** for an asset;

(e) the amount of security calculated in accordance to subsection 4(3), 4(5) and 4(6), if the **uniform capacity value** for the asset changes from the prior **base auction** or **rebalancing auction**; or

(f) the amount of security required for the volume of **capacity commitment** calculated in accordance with subsection 5(2), if applicable.

(2) The **ISO** must, if a **capacity market participant** was determined to meet applicable milestones in accordance with Section 206.5 of the **ISO rules**, *Forward Period Milestone Assessment* before a **rebalancing auction**, calculate the reduced security requirement for an asset with **new capacity**, refurbished **capacity** or incremental **capacity** that cleared a prior **base auction** or **rebalancing auction** in accordance with the following formula:

$$reduced\ security\ requirement =$$

$$security\ rate \times capacity\ commitment \times \left(\frac{remaining\ auctions}{total\ auctions}\right)$$

where:

(a) *security rate* is the rate calculated in subsection 5(3);

(b) *capacity commitment* is the **capacity commitment** of the asset for the **obligation period**;

(c) *total auctions* is the count of all **base auctions** and **rebalancing auctions**, regardless of the respective **obligation period**, from the **base auction** or **rebalancing auction** which the initial security requirement was provided pursuant to subsection 4, to the start of the **obligation period** for which the initial security requirement was provided; and

(d) *remaining auctions* is the greater of:

(i) the count of all **base auctions** and **rebalancing auctions**, regardless of the respective **obligation period**, from the **rebalancing auction** which the reduced security requirement is being calculated, to the start of the **obligation period** for which the reduced security requirement is being calculated; or

(ii) 1.

(3) The **ISO** must, when calculating the security rate in subsection 5(2), calculate the security rate in accordance with the following formula:

(a) for an asset with **new capacity** subject to a **capacity commitment**:

$$security\ rate = \frac{gross\text{-}CONE}{capital\ recovery\ factor} \times 0.05$$

where:

(i) *gross-CONE* is from the demand curve for the applicable **base auction** or **rebalancing auction** as established in accordance with Section 207.3 of the **ISO rules**, *Shape of Demand Curve*; and

(ii) *capital recovery factor* is the value calculated in subsection 4(3);

(b) for an asset with refurbished **capacity** subject to a **capacity commitment**:

$$security\ rate =$$

$$unit\ rate \times escalation\ rate \times 0.05$$

where:

(i) *unit rate* is $200/kW; and

(ii) *escalation rate* is the value calculated in subsection 4(7);

or

(c) for an asset with incremental **capacity** subject to a **capacity commitment**:

$$security\ rate =$$

$$unit\ rate \times escalation\ rate \times 0.05$$

where:

(i) *unit rate* is $100/kW; and

(ii) *escalation rate* is the value calculated in subsection 4(7)**;**

(4) The **ISO** may, following a **rebalancing auction**, adjust the amount of **financial security** a **capacity market participant** provided to the **ISO** for an asset in accordance with the amount determined in subsection 5(1), as applicable.

(5) The **ISO** may, if an asset does not achieve energization and **commissioning** prior to the start of the **obligation period**, hold the **financial security** provided to the **ISO** in respect of such asset until after any under-delivery adjustment or over-delivery adjustment is determined for the **obligation period** in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessments*.

Revision History

Date	Description
yyyy-mm-dd	Initial release

External Consultation Draft
October 30, 2018

Applicability

1 Section 103.13 applies to:

(a) a **person** who has received an **ISO** decision on the following grounds:

i. An eligibility decision relating to participation in the capacity market;

ii. A decision requiring participation in a **base auction** or **rebalancing auction**;

iii. A decision relating to the obligations of a specific **capacity market participant** in regards to a **base auction** or **rebalancing auction**; or

iv. Any other decision made prior to a **base auction** or **rebalancing auction** relating to participation by a specific **capacity market participant** with respect to that auction.

(an "**ISO** reviewable decision")

(b) the **Market Surveillance Administrator**, where the decision enumerated in Section 1(a)(i-iv) relates to fair, efficient, and open competition in the capacity market; and

(c) the **ISO**.

Requirements

Submission of Request for Reconsideration

2 A **person** or the **Market Surveillance Administrator** seeking reconsideration of an **ISO** reviewable decision must, in the manner the **ISO** specifies, submit to the **ISO** a request for reconsideration within 5 **business days** of receiving the **ISO** reviewable decision.

Content of Request for Reconsideration

3(1) The **person** or the **Market Surveillance Administrator** must ensure that the request for reconsideration referred to in subsection 2:

(a) is signed by:

(i) if the **person** is a corporation, an officer of the corporation;

(ii) if the **person** is a partnership, one of its partners;

(iii) if the **person** is an individual, the individual in their personal capacity; or

(iv) the **Market Surveillance Administrator**;

(b) contains an attestation that the request for reconsideration is complete and accurate; and

(c) includes a concise statement identifying the following:

(i) the relevant part of the **ISO** reviewable decision being reconsidered;

(ii) the facts on which the person or the **Market Surveillance Administrator** relies;

(iii) the grounds for disputing the **ISO** reviewable decision;

(iv) the arguments supporting each of the grounds for the request for reconsideration;

(v) the relief requested; and

(vi) a schedule listing any supplemental documentation submitted with the request for reconsideration.

(2) The **ISO** may request that the **person** or the **Market Surveillance Administrator** provide additional information as it pertains to the request for reconsideration submitted in accordance with subsection 3(1).

Request Notification

4 The **ISO** must, if a request for reconsideration is received from the **Market Surveillance Administrator**, within 1 **business day** of receiving the request for reconsideration, provide a copy of the request to a directly affected **person**.

5 The **ISO** must, if a request for reconsideration is received from a **person**, within 1 **business day** of receiving the request for reconsideration, provide a copy of the request to the **Market Surveillance Administrator** if, in the opinion of the **ISO**, the request for reconsideration relates to fair, efficient, and open competition in the capacity market.

Reconsideration Decision

6 The **ISO** must review the request for reconsideration and issue a written decision to the **person** or the **Market Surveillance Administrator** making the request for reconsideration within 5 **business days** of receiving the request referred to in subsection 2.

7 The **ISO** must, as soon as reasonably practicable, upon making a decision regarding a request for reconsideration received from the **Market Surveillance Administrator**, provide a copy of the reconsideration decision to the **Market Surveillance Administrator** and any directly affected **person**.

8 The **ISO** must, as soon as reasonably practicable, upon making a decision regarding a request for reconsideration received from a **person**, provide a copy of the reconsideration decision to:

(a) the **person** who submitted the request; and

(b) the **Market Surveillance Administrator** if, in the opinion of the **ISO**, the request for reconsideration relates to fair, efficient, and open competition in the capacity market.

Revision History

Date	Description
xxxx-xx-xx	Initial release

Section 201.10 Capacity Market Participant Registration

External Consultation Draft
October 22, 2018

Applicability

1 Section 201.10 applies to:

(a) a **person** with an asset that the **ISO** has qualified pursuant to Section 206.1 of the **ISO rules**, *Qualification of Capacity*;

(b) a **pool participant** with a **generating unit** or **aggregated generating facility** with a **maximum capability** equal to or greater than 1 MW, unless such **generating unit** or **aggregated generating facility** is the subject of a renewable electricity support agreement in connection with rounds 1, 2 or 3 of the Renewable Electricity Program;

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

(d) a **legal owner** of an asset that is on an **ISO** list referred to in subsection 3; and

(e) the **ISO**.

Requirements

Capacity Market Participant

2 A **person** or **pool participant** must register a **capacity market participant** with the **ISO** within the timelines specified by the *Capacity Market Auction Guidelines*.

ISO Requirement to Maintain Lists

3 The **ISO** must maintain and make available on the AESO website, one or more lists containing up to date information on the **capacity market participant**, any **agents** and associated assets.

Capacity Market Participant Updates

4 A **capacity market participant** must, provide updated information to the **ISO**, as soon as reasonably practicable, regarding its **capacity market participant** registration, **agents** and associated assets.

Timely Information

5(1) A **legal owner** of an asset that is on the **ISO** list referred to in subsection 3 must, if the **legal owner** is not the **capacity market participant** for that asset, provide timely and complete information to the **capacity market participant** for such asset to enable the **capacity market participant** to comply with its obligations under the **ISO rules**.

(2) A **pool participant** of an asset that is on the **ISO** list referred to in subsection 3 must, if the **pool participant** is not the **capacity market participant** for that asset, provide timely and complete information to the **capacity market participant** for such asset to enable the **capacity market participant** to comply with its obligations under the **ISO rules**.

Termination of Capacity Market Participant

6 The **ISO** may terminate a **capacity market participant** registration if there are no assets associated with the **capacity market participant**.

Liability of Capacity Market Participant

7 A **capacity market participant** that is or may become liable under the **ISO rules** in connection with its activities as a **capacity market participant** remains liable after the date of retirement of its associated asset despite ceasing to be a **capacity market participant**.

Revision History

Date	Description
yyyy-mm-dd	Initial release

ISO Rules
Part 200 Market
Division 201 General
Section 201.11 Appointment of Agent for the Capacity Market

External Consultation Draft
October 22, 2018

Applicability

1 Section 201.11 applies to:

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

(b) the **ISO**.

Requirements

Appointment of Agent

2(1) A **capacity market participant** may apply to the **ISO**, in the manner the **ISO** specifies, to appoint an **agent** to act on behalf of the **capacity market participant**.

(2) The **ISO** must approve the appointment of the **agent** if the **ISO** is satisfied that the **capacity market participant** has duly appointed and authorized the **agent** to act on behalf of and bind the **capacity market participant** with regard to obligations and other activities in the capacity market.

(3) The **ISO** must not, notwithstanding subsection 2(2), approve the appointment of an **agent** if the subject matter of the agency extends, in whole or in part, to the preferential sharing of records in violation of or noncompliance with the provisions of the *Fair, Efficient and Open Competition Regulation*, unless there is an exception to the prohibition against the sharing of records as specified in that regulation.

(4) The **ISO** must post on the AESO website a list of all **agents** appointed under this section 201.11.

Revision History

Date	**Description**
yyyy-mm-dd	Initial release

Section 201.12 Capacity Market Block Allocation

External Consultation Draft
October 22, 2018

Applicability

1 Section 201.12 applies to:

(a) the **ISO**.

Requirements

Capacity Block Allocation

2(1) The **ISO** must allocate to each **capacity market participant** one unique identifier for each associated asset.

(2) The **ISO** must, subject to subsection 2(3), allocate to a **capacity market participant** for each asset with a **uniform capacity value** equal to or greater than 1 MW:

(a) 7 **capacity blocks** to submit an **offer**; and

(b) 7 **capacity blocks** to submit a **bid**.

(3) The **ISO** must, in the case of an asset with refurbished **capacity** that declares to submit 2 **offers** in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*, allocate:

(a) 1 **capacity block** for the first **offer** referred to in Section 206.4 of the **ISO rules**, *Offers and Bids for Capacity*; and

(b) 7 **capacity blocks** for the second **offer** referred to in Section 206.4 of the **ISO rules**, *Offers and Bids for Capacity*.

Revision History

Date	Description
yyyy-mm-dd	Initial release

External Consultation Draft
October 22, 2018

Applicability

1 Section 201.13 applies to:

(a) the **ISO**.

Requirements

Auction Clearing

2(1) The **ISO** must, subject to subsection 4, use a clearing process for a **base auction** or **rebalancing auction** that clears **offers** and **bids** in a manner that maximizes social surplus.

(2) The **ISO** must, subject to subsection 4, clear:

(a) a lower priced **capacity block** in an **offer** before a higher priced **capacity block** in an **offer**; and

(b) a higher priced **capacity block** in a **bid** before a lower priced **capacity block** in a **bid**

if such clearing maximizes social surplus.

(3) The **ISO** must, when multiple **capacity blocks** are submitted at the clearing price and result in the same social surplus, clear such **capacity blocks** based on the following in order of priority:

(a) clear volumes from the **flexible blocks** over volumes from the **inflexible blocks**;

(b) clear the **flexible blocks** on a pro-rata basis and randomize rounding of the **flexible blocks** to a positive integer;

(c) clear the smaller **inflexible blocks** before the larger **inflexible blocks**;

(d) randomly clear the equivalent **inflexible blocks**.

(4) The **ISO** must, in the case where a **capacity market participant** submits 2 offers for an asset with refurbished **capacity** in accordance with Section 206.4 of the **ISO rules**, *Offers and Bids for Capacity* and the first offer does not clear the **base auction**, replace the first **offer** with the second **offer**, before establishing the clearing price.

Transfer Path Limits Calculation

3(1) The **ISO** must select the 250 tightest supply cushion hours from each 12 **month** consecutive period dating November 1 to October 31 in the previous 5 years as follows:

(a) calculate the supply cushion for every hour;

(b) rank all hours based on supply cushion in ascending order;

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

(d) remove any hours in which there was a state of market suspension; and

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

(2) The **ISO** must, for a **base auction** or **rebalancing auction**, determine the limits on the British Columbia transfer path, Montana transfer path, Saskatchewan transfer path, and the combined British Columbia and Montana transfer paths by averaging the following hourly limits for each of the 250 tightest supply cushion hours identified in subsection 3(1) prior to the **base auction** or **rebalancing auction**, as applicable:

(a) for the British Columbia transfer path, by assigning an hourly limit based on the minimum of:

(i) the hourly import **available transfer capability** for the British Columbia transfer path; or

(ii) the hourly long-term firm transmission service on the British Columbia transfer path;

(b) for the Montana transfer path, by assigning an hourly limit based on the minimum of:

(i) the hourly import **available transfer capability** for the Montana transfer path; or

(ii) the hourly long-term firm transmission service on the Montana transfer path;

(c) for the Saskatchewan transfer path, by assigning an hourly limit based on the minimum of:

(i) the hourly import **available transfer capability** for the Saskatchewan transfer path; or

(ii) the hourly long-term firm transmission service on the Saskatchewan transfer path;

and

(d) for the combined British Columbia and Montana transfer path, by assigning an hourly limit based on the minimum of:

(i) the hourly import **available transfer capability** for the combined British Columbia and Montana transfer path prior to LSSi arming; or

(ii) combined hourly long-term firm transmission for the British Columbia and Montana transfer paths.

(3) The **ISO** may, in the event that the **ISO** determines that the methodology for determining the transfer path limits in subsection 3(2) is no longer representative, apply an alternative methodology.

Consideration of Transmission Market Constraint and Transfer Path Limits in Clearing Process

4(1) The **ISO** may, in the event that the **ISO** determines that the electric energy associated with an **offer** may not be delivered to the **interconnected electric system** during the **obligation period** due to either a limit on the **transmission system**, or a limit on an Alberta **intertie** determined in accordance with subsections 3(2) or 3(3) clear the offers behind the limit in a manner that maximizes social surplus, without clearing **capacity** from assets behind the limit over the amount of the limit.

(2) The **ISO** must, when multiple assets are affected by the same limit on the **transmission system** or Alberta transfer path and the **capacity blocks** associated with such assets result in the same social surplus, clear such **capacity blocks** in the following order of priority:

(a) clear volumes from the **flexible blocks** over volumes from the **inflexible blocks**;

(b) clear the **flexible blocks** on a pro-rata basis and randomize rounding of the **flexible blocks** to a positive integer;

(c) clear the smaller **inflexible blocks** before the larger **inflexible blocks**; and

(d) randomly clear the equivalent **inflexible blocks**.

(3) The **ISO** must, in the event that an asset within an aggregated asset is affected by a limit on the **transmission system**, consider the entire aggregated asset to be affected by the limit on the **transmission system**.

(4) Notwithstanding subsections 4(1) through 4(3), the **ISO** may clear **capacity blocks** associated with assets affected by a limit on the **transmission system** or a limit on an Alberta **intertie** in order to maximize social surplus or minimize uplift payments.

(5) The **ISO** must, in the event that **offers** did not clear pursuant to subsections 4(1), 4(2) or 4(3), or for the portion of offers cleared pursuant to 4(4), clear additional **offers** from regions not affected by a limit on the **transmission system**, or a limit on an Alberta **intertie**, to ensure that the total volume of **capacity commitments** meets the volume on the final demand curve associated with price determined pursuant to subsection 5(1).

(6) The **ISO** must, in respect of an additional **offer** cleared in accordance with subsection 4(4), provide to the **capacity market participant** an uplift payment for the difference between the **offer** price and the clearing price, if the **offer** price is higher than the clearing price.

Setting Auction Clearing Price

5(1) The **ISO** must establish the clearing price for a **base auction** or **rebalancing auction**, without consideration of the limits on the **transmission system** or a limit on an Alberta **intertie** in subsection 4, at the point on the final demand curve that:

(a) intersects with the supply curve; or

(b) when all the **offers** are below the final demand curve, corresponds to the price above the volume of the last **offer** on the supply curve.

(2) The **ISO** must ensure the supply curve referred to in subsection 5(1) for a **rebalancing auction** reflects:

(a) all previously cleared **capacity commitments** for that **obligation period** at $0; and

(b) all **bids** and **offers** submitted in the **rebalancing auction**.

Revision History

Date	Description
yyyy-mm-dd	Initial release

Section 201.14 Capacity Market Offer Control Information

External Consultation Draft
October 22, 2018

Applicability

1 Section 201.14 applies to:

(a) a **capacity market participant**.

Requirements

Offer Control Information

2 A **capacity market participant** must, prior to each **base auction** and within the timelines established in the *Capacity Market Auction Guidelines*, submit to the **ISO** the **offer control information** for an asset that has been assigned a **uniform capacity value** for the **base auction**, including the quantity in MW of **uniform capacity value** associated with a **person** identified in the **offer control information**.

Offer Control of Capacity Blocks

3(1) A **capacity market participant** must submit to the **ISO**:

(a) **offer control information** for any **capacity block** in an **offer** or **bid** submitted for a **base auction** and the **rebalancing auction** with a quantity of **uniform capacity value** greater than 0 MW; and

(b) the quantity of **uniform capacity value** associated with a **person** identified in the **offer control information**in a **capacity block**, submitted in accordance with subsection 3(1)(a).

(2) A **capacity market participant** must ensure that the **offer control information** submitted in subsection 3(1) aligns with the **offer control information** submitted in subsection 2.

Associates of a Person

4(1) A **capacity market participant** must submit any and all associates of a **person** identified in **offer control information**, where associates of a **person** is calculated in the manner set out in subsection 5(1)(a) of the *Fair, Efficient, and Open Competition Regulation*, in the manner the **ISO** specifies.

(2) A **capacity market participant** must submit an attestation by a corporate officer of the **person** referred to in subsection 2 that the information provided pursuant to subsection 2 is complete and accurate.

Changes to Associates of a Person

5 A **capacity market participant** must provide the **ISO** with updated information, as soon as reasonably practicable, regarding changes to the associates of a **person** referred to in subsection 2(1) and include an attestation as described in subsection 4(2).

Timely Information from a Person

6 A **person** identified in **offer control information**, if such **person** is not the **capacity market participant**, must:

(a) provide such timely and complete information to the **capacity market participant** to enable the **capacity market participant** to comply with the **capacity market participant**’s obligations under subsections 2, 3 and 4; and

(b) provide an attestation to the **capacity market participant** from a corporate officer of the **person** identified in the **offer control information** to enable the **capacity market participant** to comply with the **capacity market participant**’s obligations under subsections 4(2) and 5.

Revision History

Date	Description
xxxx-xx-xx	Initial release

External Consultation Draft
October 22, 2018

Applicability

1 Section 201.15 applies to:

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

(b) a **pool participant**;

(c) the **legal owner** of a **generating unit** or **aggregated generating facility** where such **generating unit** or **aggregated generating facility** is the subject of a permanent delist notification; and

(d) the **ISO**.

Requirements

Request to Temporarily Delist for Economic Reasons

2(1) A **capacity market participant** may, within the timelines specified in the *Capacity Market Auction Guidelines* for the last **rebalancing auction** and in the manner the **ISO** specifies, submit to the **ISO** a request to temporarily delist an asset or portion of such asset for the **obligation period** for economic reasons.

(2) A **capacity market participant** must, in the request referred to in subsection 2(1), submit:

(a) an attestation from a corporate officer of the **pool participant**:

(i) that the **pool participant** confirms that if the request is approved by the **ISO**, the **delist outage** in the energy market in the **obligation period** will total greater than 210 **days** such that participation in the energy market is for a continuous period of 155 **days** or less;

(ii) the MW volume of the asset that will be subject to a **delist outage** in the energy market; and

(iii) the start date and the end date of the **delist outage** referred to in 2(2)(b)(i);

(b) the **avoidable costs** associated with the **delist outage** referred to in subsection 2(2)(a);

(c) any information necessary for the **ISO** to calculate the energy and ancillary services offset in accordance with subsection 3(3);

(d) an attestation from a corporate officer of the **legal owner** of the asset that the **avoidable costs** and information referred to in subsections 2(2)(b) and 2(2)(c), respectively, are accurate; and

(e) any other information the **ISO** specifies as it relates to the request to temporarily delist an asset for economic reasons.

ISO Review and Approval of Request to Temporarily Delist for Economic Reasons

3(1) The **ISO** must request additional information from the **capacity market participant** concerning the information provided in accordance with subsection 2(2)(d) where the **ISO** determines such information appears unreasonable.

(2) The **ISO** must exclude all or a portion of the **avoidable costs** submitted pursuant to subsection 2(2)(b) where the **ISO** determines such costs are unreasonable, after requesting additional information in accordance with subsection 3(1).

(3) The **ISO** must calculate the energy and ancillary services offset, as applicable, for the asset during the **obligation period** using the methodology set out in Section 206.11 of **ISO rules**, *Energy and Ancillary Services Offset for Assets*.

(4) The **ISO** must, if it approves a request pursuant to subsection 2(1), provide the **capacity market participant**, within the timelines specified in the *Capacity Market Auction Guidelines* for the last **rebalancing auction**, with a price based on the remaining **avoidable costs** submitted in accordance with subsection 2(2)(b) that have not been excluded in accordance with subsection 3(2), net of the energy and ancillary services offset calculated in accordance with Section 206.11 of **ISO rules**, *Energy and Ancillary Services Offset for Assets*.

Request to Temporarily Delist due to Physical Limitation, Operational Limitation or Delay in Commercial Operation

5(1) A **capacity market participant** may, within the timelines specified in the *Capacity Market Auction Guidelines* and in the manner the **ISO** specifies, submit to the **ISO** a request to temporarily delist an asset or portion of such asset from the capacity market for the **obligation period** if the asset will be subject to a derate or an outage for a period greater than or equal to 150 continuous **days** in the **obligation period** due to a physical limitation, operational limitation or a delay in **commercial operation** of the asset.

(2) A **capacity market participant** must submit the following information to the **ISO** in the request referred to in subsection 5(1):

(a) a description of the physical or operational limitation;

(b) a description of any major repairs required to rectify the physical or operational limitation;

(c) if applicable, an order, decision, final rule, opinion or final directive from a regulatory authority specifically mandating the derating of the asset; and

(d) an attestation from a corporate officer of the **legal owner**:

(i) certifying that the **new capacity**, refurbished **capacity** or incremental **capacity** will not be in **commercial operation** prior to the **obligation period**; or

(ii) confirming the physical limitation of an existing asset.

(3) A **capacity market participant** must, in the request referred to in subsection 5(1), submit:

(a) confirmation from a corporate officer of the **pool participant**:

(i) that the **pool participant** confirms that if the request is approved by the **ISO**, the **delist outage** in the energy market will be for a continuous period in the **obligation period** which must be greater than 150 days;

(ii) the MW volume of the asset that will be subject to a **delist outage** in the energy market;

(iii) a description of the physical or operational limitation of the asset; and

(iv) the start date and the end date of the **delist outage** referred to in 5(2)(c)(i);

and

(b) any other information the **ISO** specifies as it relates to the request to temporarily delist the asset.

ISO Approval of Request to Temporarily Delist due to a Physical or Operational Limitation

6(1) The **ISO** must approve a request to temporarily delist an asset due to a physical or operational limitation if:

(a) the **ISO** is satisfied that the request referred to in subsection 5(1) is complete; and

(b) the **delist outage** referred in subsection 5(2)(a) is greater than 150 continuous days in the **obligation period**.

Delist Outage

7(1) A **pool participant** must submit a **delist outage** that corresponds to the outage declared in accordance with subsection 2(2)(a) if the **offer** referred to in subsection 4 does not clear in the last **rebalancing auction**.

(2) A **pool participant** must not submit a **delist outage** that corresponds to the outage declared in accordance with subsection 2(2)(a) if the **offer** referred to in subsection 4 clears in the last **rebalancing auction**.

(3) A **pool participant** must, if the **ISO** approves a request pursuant to subsection 6**,** submit a **delist outage** that corresponds to the outage declared in accordance with subsection 5(2)(a).

Request to Change Delist Outage

8 A **pool participant** must submit a request to the **ISO** to change the **delist outage** submitted in accordance with subsection 7(3).

Restriction on Ability to Temporarily Delist

9 A **capacity market participant** must not temporarily delist an asset:

(a) for economic reasons for more than 2 consecutive **obligation periods**; or

(b) for physical limitation, operational limitation or delay in commercial operation for more than 2 consecutive **obligation periods**.

Permanent Delist Notification

10(1) A **capacity market participant** may, in accordance with the timelines established in the *Capacity Market Auction Guidelines* for the **base auction** or the first **rebalancing auction** for an **obligation period**, and in the manner the **ISO** specifies, submit to the **ISO** a notification to permanently delist an asset or portion of such asset.

(2) A **capacity market participant** must, in the notification referred to in subsection 10(1), submit:

(a) the MW volume from the asset that the **capacity market participant** is permanently delisting; and

(b) in the case of a **generating unit**, **aggregated generating facility** or **energy storage facility**:

(i) an attestation from a corporate officer of the **pool participant**:

(A) that the **pool participant** confirms that the MW volume referred to in subsection 10(2)(a) will be removed from the energy market on or before the first **day** of June in the **obligation period**; and

(B) the date that the MW volume from the asset will be removed from the energy market.

(ii) an attestation from a corporate officer of the **legal owner**:

(A) that the **legal owner** confirms that the MW volume referred to in subsection 10(2)(a) will be removed from the energy market on or before the first **day** of June in the **obligation period**; and

(B) the date that the MW volume from the asset will be removed from the energy market.

(3) A **capacity market participant** may not revoke a notification to permanently delist after it has been submitted to the **ISO** in accordance with subsections 10(1) and 10(2), unless otherwise agreed to by the **ISO**.

Publication Requirement

11 The **ISO** must publish on the AESO website in accordance with the timelines established in the *Capacity Market Auction Guidelines* for a **base auction** or **rebalancing auction**, as applicable, the volume of approved temporary delist requests and permanent delist notifications on an aggregate basis in categories the **ISO** specifies in the *Capacity Market Auction Guidelines*.

Revision History

Date	Description
yyyy-mm-dd	Initial release

External Consultation Draft
October 22, 2018

Applicability

1 Section 206.1 applies to:

(a) a **person** seeking to have the **ISO** qualify **new capacity** for the capacity market;

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

(c) the **ISO**.

Requirements

Application for Qualification of Capacity

2 A **person** or **capacity market participant** seeking to qualify an asset for the capacity market must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, provide the **ISO** with:

(a) a completed application, where such application is available on the AESO website; and

(b) the application fee set out in the *Schedule of ISO Fees*, as applicable.

Declarations for New Capacity, Incremental Capacity and Refurbished Capacity

3(1) A **person** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, submit to the **ISO** a verification from a corporate officer as to whether an asset with **new capacity**, in the event that the **capacity market participant** fails to receive a **capacity commitment** for such asset in a **base auction** or **rebalancing auction**, will:

(a) permanently delist in accordance with Section 201.15 of the **ISO rules**, *Delisting*; or

(b) continue to participate in the energy and capacity markets.

(2) A **capacity market participant** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, submit to the **ISO** a verification from a corporate officer as to whether the anticipated **maximum capability** of the asset with incremental **capacity**, in the event that the **capacity market participant** fails to receive a **capacity commitment** for such asset in the **base auction** or **rebalancing auction** for all or a portion of the incremental **capacity**, will be either:

(a) the **maximum capability** of the asset without the addition of the incremental **capacity**; or

(b) the anticipated **maximum capability** with the addition of the incremental **capacity**.

(3) A **capacity market participant** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, submit to the **ISO** a verification from a corporate officer as to whether an asset with refurbished **capacity**, in the event that the **capacity market participant** fails to receive a **capacity commitment** for such asset in the **base auction** or **rebalancing auction**, will:

(a) permanently delist in accordance with Section 201.15 of the **ISO rules**, *Delisting*; or

(b) continue to participate in the energy and capacity markets.

(4) A **person** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, declare to the **ISO** the intended interconnection location for an asset with **new capacity**.

Declaration for a Load Asset

4(1) A **person** seeking to have the **ISO** qualify **new capacity** or incremental **capacity** from a load asset providing a **firm consumption level** must, within the timelines prescribed by the *Capacity Market Auction Guidelines* and in the manner the **ISO** specifies, declare to the **ISO**:

(a) the **firm consumption level** for the asset; and

(b) the qualified baseline reflecting the expected average consumption of a load asset during the **obligation period**.

(2) A **person** seeking to have the **ISO** qualify **new capacity** or incremental **capacity** from a load asset providing a **guaranteed load reduction** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, declare to the **ISO** a **guaranteed load reduction** reflecting the volume of electric energy in MW that the load asset will reduce consumption by when subject to a **dispatch** .

Declaration for an Import Asset

5 A **person** seeking to have the **ISO** qualify an import asset must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, declare to the **ISO** a volume in MW of **new capacity** or incremental **capacity** from an import asset , which must be less than or equal to the amount of firm transmission held by such **person**.

Qualification of an Asset for the Capacity Market

6(1) The **ISO** must, based on the application provided pursuant to subsection 2, be satisfied that:

(a) the asset will be capable of providing electric energy to or reducing consumption from the **interconnected electric system**;

(b) the asset has a **uniform capacity value** greater than or equal to 1 MW prior to any rounding;

(c) the asset will be:

(i) developed in accordance with a project plan and timeline that aligns with the milestones established by the **ISO**; and

(ii) energized and commissioned prior to the **obligation period**; and

(iii) capable to connecting to the existing **transmission system** if the proposed interconnection location provided in subsection 3(4) is to the **transmission system**.

(d) the asset is not a **source asset** that is the subject of a renewable electricity support agreement in connection with rounds 1, 2 or 3 of the Renewable Electricity Program;

(e) the asset is not energy efficiency;

(f) in the case of a load asset:

(i) can or will be able to reduce consumption during the **obligation period** in a way that is measureable by the **ISO**; and

(ii) is or will be a retail or self-retail asset;

(g) in the case of a load asset providing **guaranteed load reduction** is or will be capable of responding to a **dispatch** in the energy market;

(h) in the case of an **energy storage facility**, is or will be capable of maintaining energy production at the estimated **uniform capacity value** for the **energy storage facility** for a minimum of 4 hours;

(i) in the case of an import asset:

(i) the **person** has firm transmission to Alberta for the estimated uniform capacity value for the import asset for the duration of the **obligation period**;

(ii) the import asset is not participating as non-recallable **capacity** in a resource adequacy program of another jurisdiction; and

(iii) the import asset will only be curtailed on a pro-rata basis by the **balancing authority** of the jurisdiction in which the import asset is located in when firm load is curtailed;

(j) in the case of an aggregation of assets:

(i) has a **uniform capacity value** less than or equal to the **maximum capability** of the largest **generating unit** in Alberta multiplied by 0.85;

(ii) has or will have revenue quality interval metering for each site associated with the asset in the aggregation;

(iii) is comprised of pool assets located within Alberta that are either exclusively:

(A) **generating units** or **aggregated generating facilities**;

(B) load assets providing a **firm consumption level**; or

(C) load assets providing a **guaranteed load reduction**;

and

(iv) is not comprised of any asset that will contribute **capacity** individually, or as part of another aggregated asset;

(k) in the case of incremental **capacity**, will be modified in a manner that will, in the opinion of the **ISO**, increase the **maximum capability** of the asset by an amount in MW that is:

(i) greater than or equal to 1 MW; and

(ii) less than or equal to the greater of:

(A) 15% of the asset's **maximum capability**; or

(B) 40 MW above the asset's **maximum capability**;

(l) in the case of refurbished **capacity**, will be modified in a manner that will, in the opinion of the **ISO**, result in either:

(i) an increase in the asset's **maximum capability** by an amount exceeding the greater of:

(A) 15% of the asset's **maximum capability**; or

(B) 40 MW above the asset's **maximum capability**; or

(ii) a capital investment of greater than or equal to $200/kW of the asset's current **maximum capability** multiplied by the composite index calculated in accordance with the following formula:

$$composite\ index = \frac{0.25 \times labour\ index}{60.7} + \frac{0.35 \times materials\ index}{118.5} + \frac{0.40 \times turbine\ index \times exchange\ rate}{268.7}$$

where:

(A) *labour index* is the most recent 12 month average of published Statistics Canada Construction Union Wage Rates (Electrician), Monthly for Edmonton Alberta, Table 18 10-0046-01;

(B) *materials index* is the most recently published Statistics Canada Gross National and Gross Domestic Income, Indexes and Related Statistics, Annual, Table 36-10-0105-01;

(C) *turbine index* is the most recent 12 month average of published Federal Reserve Economic Data (St. Louis) Producer Price Index by Industry: Turbine and Turbine Generator Set Units Manufacturing (PCU333611333611); and

(D) *exchange rate* is the most recent 12 month average of published Statistics Canada Monthly Average Exchange Rates in Canadian Dollars, U.S. Dollar monthly average, Table 33-10-0163-01.

ISO Review of Refurbishment Costs

7(1) The **ISO** must request additional information from the **capacity market participant** concerning the cost information provided in accordance with subsection 6(1)(l)(ii) where the **ISO** determines such cost information appears unreasonable.

(2) The **ISO** must, exclude all or a portion of the cost information submitted in accordance with subsection 6(1)(l)(ii) where the ISO determines that such costs are unreasonable, after requesting additional information in accordance with subsection 7(1).

Review and Approval of Qualification Application

8(1) The **ISO** must qualify an asset for the capacity market if:

(a) the application provided pursuant to subsection 2 is complete; and

(b) the **ISO** is satisfied pursuant to subsection 6(1) after taking into account the exclusion of cost information referred to in subsection 7(2).

(2) The **ISO** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, notify each **person** or **capacity market participant** as to whether the asset is qualified for the capacity market.

Re-entry of Permanently Delisted Assets

9(1) The **ISO** must, in the case of a generating **source asset** that was permanently delisted from the energy and capacity markets within the previous 5 years in accordance with Section 201.15 of the **ISO rules**, *Delisting*, designate the generating **source asset** as **new capacity** if the generating **source asset** meets the following criteria:

(a) has undergone a material change including:

(A) a change to the primary fuel type;

(B) the addition of generation equipment;

(C) a change to the **maximum capability**; or

(D) the generating **source asset** was sold to a **person**, other than an associate of the **market participant** as defined in subsection 5 of the *Fair, Efficient and Openly Competitive Regulation*;

and

(b) a capital investment of greater than or equal to $200 multiplied by the escalation rate calculated in subsection 9(2) per kW of the asset's current **maximum capability**.

(2) The **ISO** must, in calculating the capital investment in subsection 9(1)(b), calculate the escalation rate in accordance with the following formula:

$$escalation\ rate = \frac{0.25 \times labour\ index}{60.7} + \frac{0.35 \times\ materials\ index}{118.5} + \frac{0.40 \times turbine\ index \times exchange\ rate}{268.7}$$

where:

(a) *labour index* is the most recent 12 month average of published Statistics Canada Construction Union Wage Rates (Electrician), Monthly for Edmonton Alberta, Table 18 10-0046-01;

(b) *materials index* is the most recently published Statistics Canada Gross National and Gross Domestic Income, Indexes and Related Statistics, Annual, Table 36-10-0105-01;

(c) *turbine index* is the most recent 12 month average of published Federal Reserve Economic Data (St. Louis) Producer Price Index by Industry: Turbine and Turbine Generator Set Units Manufacturing (PCU333611333611); and

(d) *exchange rate* is the most recent 12 month average of published Statistics Canada Monthly Average Exchange Rates in Canadian Dollars, U.S. Dollar monthly average, Table 33-10-0163-01.

Revision History

Date	Description
yyyy-mm-dd	Initial release

ISO Rules
Part 200 Markets
Division 206 Capacity Market
Section 206.2 Self-Supply Configurations for the Capacity Market

External Consultation Draft
October 22, 2018

Applicability

1 Section 206.2 applies to:

(a) the **legal owner** of a load asset that is connected to the **interconnected electric system** and is served by one or more onsite **generating units** or **aggregated generating facilities**, excluding sites where the load is exclusively station service for the **generating unit** or **aggregated generating facility**;

(b) the **legal owner** of a **generating unit** or an **aggregated generating facility** connected to the **interconnected electric system** that self-supplies capacity for one or more onsite load assets;

(c) the City of Medicine Hat; and

(d) the **ISO**.

Requirements

Requirements to Self-supply Capacity

2(1) The **legal owner** of a load asset must self-supply **capacity** if the electric energy produced by an onsite **generating unit** or an **aggregated generating facility** can flow to the load asset without being measured and recorded at a measurement point.

(2) The City of Medicine Hat must self-supply **capacity**.

Application to Self-supply Capacity

3 The **legal owner** of a load asset and the City of Medicine Hat must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, provide the **ISO** with a completed application, available on the AESO website, to self-supply **capacity**.

Approval to Self-supply Capacity

4(1) The **ISO** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, approve an application to self-supply **capacity** if the site meets the criteria set out in subsection 2.

(2) The **ISO** must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, notify a **capacity market participant** as to whether the site is approved to self-supply **capacity**.

Self-supply Configuration Updates

5 The **legal owner** of a load asset in a self-supply configuration pursuant to subsection 2(1) must, within the timelines prescribed by the *Capacity Market Auction Guidelines*, notify the **ISO** if:

(a) the volume of electric energy produced by the onsite **generating unit** or **aggregated generating facility** is expected to change for the upcoming **obligation period**; or

(b) the metering of the load asset changes such that the electric energy produced by the onsite **generating unit** or an **aggregated generating facility** cannot flow to the load asset without being measured and recorded at a measurement point.

Capacity from a Self-supply Configuration

6(1) The **legal owner** of a **generating unit** or an **aggregated generating facility** in a self-supply configuration pursuant to subsection 2(1) must participate in the capacity market with the excess **capacity** that is not serving the onsite load, in the event that:

(a) the **generating unit** or **aggregated generating facility** has excess **capacity** that is not serving the onsite load; and

(b) the excess **capacity** that is not serving the onsite load has a **uniform capacity value** greater than or equal to 1 MW.

(2) The **legal owner** of a load asset in a self-supply configuration pursuant to subsection 2(1) may provide **capacity** in the capacity market with the portion of the load that is not supplied by onsite generation if the load asset is qualified by the **ISO** to participate in the capacity market in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*.

Revision History

Date	Description
yyyy-mm-dd	Initial release

Section 206.3 Uniform Capacity Value Determination

External Consultation Draft
October 22, 2018

Applicability

1 Section 206.3 applies to:

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

(b) the **ISO**.

Requirements

Calculating Uniform Capacity Value for Associated Assets

2 The **ISO** must calculate a **uniform capacity value** in accordance with this section 206.3 for an asset associated with a **capacity market participant** in accordance with the timelines specified in the *Capacity Market Auction Guidelines*.

Selection of Tightest Supply Cushion Hours

3(1) The **ISO** must, subject to subsection 3(2), select 250 hours from each of the previous 5 consecutive periods dating November 1 to October 31 in as follows:

(a) calculate the supply cushion for every hour;

(b) rank all hours based on supply cushion in ascending order;

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

(d) remove any hours in which there was a state of market suspension; and

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

(2) The **ISO** must select the 250 hours from the most recent 12 **month** consecutive period dating November 1 to October 31 using the methodology in subsection 3(1) for a load asset providing a **firm consumption level**.

Asset Specific Hours for Uniform Capacity Value Calculation

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(1) or 3(2), as applicable, on an asset-specific basis:

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

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

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

(ii) a **mothball outage** or temporary economic **delist outage**;

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

(d) in the case of an import asset, an hour in which the relevant transfer path was unavailable as a result of an issue on the **transmission system** in Alberta;

(e) in the case of a **long lead time asset**, an hour in which:

(i) the **capacity market participant** submits to the **ISO**, in accordance with the timelines prescribed in the *Capacity Market Auction Guidelines*, that the asset was in a long lead time configuration and is synchronized or is able to become synchronized within 1 hour but has varying start up times for distinct portions of its generating capability, and requires more than 1 hour to deliver such additional portions of the asset's generating capability; and

(ii) the **ISO** determines that the short-run marginal costs of the asset, using the methodology outlined in Section 203.5 of the **ISO rules**, *Energy Market Mitigation*, exceed the **pool price**.

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

(i) the **capacity market participant** submits to the **ISO**, in accordance with the timelines prescribed in the *Capacity Market Auction Guidelines*, that the asset was in a long lead time configuration and is synchronized or is able to become synchronized within 1 hour but has varying start up times for distinct portions of its generating capability, and requires more than 1 hour to deliver such additional portions of the asset's generating capability; and

(ii) the **capacity market participant** submits to the **ISO**, in accordance with the timelines prescribed in the *Capacity Market Auction Guidelines*, the short run marginal costs that exceed the **pool price** for the hour including:

(A) the heat rate in GJ/MWh;

(B) the fuel price in $/GJ;

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

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

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

Application of Methodologies for Uniform Capacity Value Calculation

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

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

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

(a) use the methodology in subsection 6(5) for the hours in the asset's historical data set determined in accordance with subsection 3; and

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

(3) The **ISO** must, where the **ISO** applies the methodologies in both subsections 6 and 7, weight the values identified in subsection 5(2)(a) and 5(2)(b) by the hours observed for each of those approaches when calculating the **uniform capacity value** for an asset.

Methodologies for Hours in an Asset's Historical Data Set

6(1) The **ISO** must, subject to subsections 6(2) through 6(8) 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:

$$hourly\ availability\ factor_t = \frac{time\ weighted\ available\ capability_t}{maximum\ capability_t}$$

where:

(i) *hourly availability factor* $_t$ is the availability factor for hour *t*;

(ii) *time weighted available capability* $_t$ is the asset's **available capability** with the weight being proportional to the time the **available capability** was in effect within hour *t*; and

(iii) *maximum capability* $_t$ is the **maximum capability** of the asset in hour *t*;

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

$$average\ availability\ factor = \frac{\sum hourly\ availability\ factor_t}{observed\ hours}$$

where:

(i) *hourly availability factor* $_t$ are the hourly availability factors calculated in subsection 6(1)(a); and

(ii) *observed hours* is the numbers of hours in the asset's historical data set;

and

(c) calculate the asset's **uniform capacity value** by multiplying the average availability factor in subsection 6(1)(b) by the asset's **maximum capability**.

(2) The **ISO** must calculate a **uniform capacity value** for a wind, solar, or run of river hydroelectric **generating units** or an **aggregated generating facility**, an aggregated asset containing a wind or solar **aggregated generating facility**, 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 historical data set in accordance with the following formula:

$$hourly\ capacity\ factor_t = \frac{metered\ volume_t + curtailed\ volume_t + applicable\ ancillary\ service\ volume_t}{maximum\ capability_t}$$

where:

(i) *hourly capacity factor* $_t$ is the capacity factor for hour *t*;

(ii) *metered volume* $_t$ is the **metered volume** that was delivered to the interconnected electric system during hour *t*; and

(iii) applicable *ancillary service volumes* $_t$ is the volume of electric energy that was subject to a **dispatch** for ancillary services during hour *t*; and

(A) in the case of an asset that was subject to a **dispatch** for **spinning reserve** or **supplemental reserve**, the volume that was provided pursuant to Section 205.5 of the **ISO rules**, *Spinning Reserve Technical Requirements and Performance Standards* or Section 205.6 of the **ISO rules**, *Supplemental Reserve Technical Requirements and Performance Standards*; and

(B) in the case of an asset that was subject to a **dispatch** for **regulating reserve**, the volume that was provided pursuant to Section 205.4 of the **ISO rules**, *Regulating Reserve Technical Requirements and Performance Standards* that is not captured as **metered energy**;

(iv) *curtailed* volume $_t$ is a volume that was curtailed as a result of a **transmission market constraint** during hour *t*;

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

$$average\ capacity\ factor = \frac{\sum hourly\ capacity\ factor_t}{observed\ hours}$$

where:

(i) *hourly capacity factor* $_t$ are the hourly capacity factors calculated in subsection 6(2)(a); and

(ii) *observed hours* is the numbers of hours in the asset's historical data set;

and

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

(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:

$$hourly\ availability\ factor_t = \frac{min\{available\ capability, long\ term\ firm\ transmission\}_t}{long\ term\ firm\ transmission}$$

where:

(i) *hourly availability factor* $_t$ is the availability factor for hour *t;*

(ii) *min{availability factor ,long term firm transmission}* $_t$ is the lesser of the sum of the import asset's **available capability** and the import asset's long term firm transmission capacity over the applicable transfer path in hour *t*; and

(iii) *long term firm transmission* is the import asset's long term firm transmission capacity over the applicable transfer path to the Alberta border;

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

$$average\ availability\ factor = \frac{\sum hourly\ availability\ factor_t}{observed\ hours}$$

where:

(i) *hourly availability factor* $_t$ are the hourly availability factors calculated in subsection 6(3)(a); and

(ii) *observed hours* is the numbers of hours in the import asset's historical data set;

and

(c) multiply the average availability factor calculated in subsection 6(3)(b) by the import asset's long term firm transmission over the applicable transfer path.

(4) The **ISO** must calculate a **uniform capacity value** for a site with one or more onsite **generating units** or **aggregated generating facilities** that self-supplies **capacity** and receives a **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); and

(b) perform a linear regression of net-to-grid energy as a function of the energy market **dispatches** issued to the onsite **generating unit** on the self-supply 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 formula established in subsection 6(4)(b).

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

(a) identify the **metered energy** for the **settlement intervals** with the same **hour ending** as the hour in the historical data set which must be either:

(i) the 15 most recent **business days** prior to the day with the hour in the historical data **set** 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 historical data **set** 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 historical data set, there are fewer than 15 **business days** and 10 weekend **days** when **days** containing **settlement intervals** identified in subsection 6(b) are excluded;

(b) determine if any **settlement intervals** referred to in subsection 6(5)(a):

(i) occurred on days containing availability hours referred to in Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessment*;

(ii) occurred on days containing delivery hours referred to in Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessment*;

(iii) occurred on days containing hours identified in subsection 4(1); or

(iv) occurred on days containing hours in which the asset was subject to a **directive** for **ancillary services** or the asset received **dispatch** for an amount greater than 0 MW;

(c) calculate the average hourly **metered energy** where hourly metered energy is the **metered energy** for the **settlement intervals** referred to in subsection 6(5)(a):

(i) excluding the **metered energy** for the **settlement intervals** identified in subsections 6(5)(b)(i), 6(5)(b)(ii) and 6(5)(b)(iii); and

(ii) including the addition to the **metered energy** the volume of the **directive** for **ancillary services** or the volume for **dispatch** in the **settlement intervals** identified in accordance with subsection 6(b)(iv);

and

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

$$qualified\ baseline = \frac{total\ metered\ energy}{settlement\ intervals}$$

where:

(i) *total metered energy* is the average of all the hourly **metered energy** values from subsection 6(5)(c) for each of the hours in the historical data set; and

(ii) *settlement intervals* is the number of hours in the historical data set determined in subsection 6(5)(a).

(6) The **ISO** must calculate a **uniform capacity value** for a load asset providing **guaranteed load reduction** if the load asset has been subject to a **capacity commitment** in a prior **obligation period**, multiply the **guaranteed load reduction** declared in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*, by the load asset's availability factor calculated in accordance with subsection 6(1).

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

$$uniform\ capacity\ value =$$

$$performance\ factor \times (maximum\ capability + incremental\ capacity)$$

where:

(a) *performance factor* is:

(i) the average availability factor or average capacity factor calculated in accordance with subsection 6, as applicable;

(ii) in the case of an import asset, the average availability factor calculated according to subsection 6(3)(b) derating the value declared, in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*, to reflect the hours in the 1250 hours determined in accordance with subsection 3 where the British Columbia transfer path, Montana transfer path or Saskatchewan transfer path, as applicable, was out of service with an **available transfer capability** of 0 MW.

and

(iii) in the case of a load asset, 91%, unless the **ISO** publishes a class average performance factor based on load data from Alberta.

(b) *maximum capability* is the **maximum capability** of the asset without considering the incremental capacity; and

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

(8) The **ISO** must, in the event an asset undergoes a derate in **maximum capability**, calculate a **uniform capacity value** for such asset in accordance with the applicable methodology in subsection 6, substituting the **maximum capability** of the asset for the derated **maximum capability**.

(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 as follows:

(a) multiply the asset's **maximum capability** by the applicable class average performance factor published by the **ISO**;

(b) if a class average performance factor is not available, multiply the asset's **maximum capability** by a performance factor derived from engineering studies or equivalent engineering documents, or production or load estimates of the asset; or

(c) if a class average performance factor and production or load estimates are not available, multiply the asset's **maximum capability** by a performance factor derived from a review of similar assets in other jurisdictions.

(2) The **ISO** must calculate a **uniform capacity value** for an import asset by multiplying the value declared in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity* by a derate factor that reflects number of hours in the asset's historical data set 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 **firm consumption level** in accordance with the following formula:

$$uniform\ capacity\ value =$$
$$(declared\ qualified\ baseline - declared\ firm\ consumption\ level) \times performance\ factor$$

where:

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

(b) *declared firm consumption level* is the **firm consumption level** declared in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*; and

(c) *performance factor* is 91%, unless the **ISO** publishes a class average performance factor based on load data in Alberta.

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

$$uniform\ capacity\ value = guaranteed\ load\ reduction\ x\ performance\ factor$$

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 91%, unless the **ISO** publishes a class average performance factor based on load data in Alberta.

Test Requirement for Load Assets

8(1) A **capacity market participant** must demonstrate to the **ISO** the ability of a load asset that was subject to a **capacity commitment** in the immediately preceding **obligation period** to reduce consumption of electric energy reflecting the **uniform capacity value** and maintain the reduction for 1 hour if, in the **obligation period** prior to **obligation period** for which the **ISO** is calculating a **uniform capacity value** in accordance with subsection 7(5), the following was not observed:

(a) there were no delivery hours as referred to in Section 206.8 of the **ISO rules**, *Obligation Period Performance Assessment*; and

(b) the asset did not reduce consumption in response to an energy market **dispatch** or **ancillary services** market **directive** to reflect the **uniform capacity value** for the load asset.

(2) 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 in 8(1).

Calculation of Ranges for a Uniform Capacity Value

9(1) The **ISO** must, subject to subsection 9(2), calculate ranges for a **uniform capacity value** on an asset-specific basis as follows:

(a) determine the 5% range rounded to the nearest positive integer, as follows:

(i) calculate the upper limit, as follows:

(A) remove 5% of the hours identified in the historical data set, in which the asset's availability factor or capacity factor, as applicable, was the lowest;

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

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

(ii) calculate the lower limit, as follows:

(A) remove 5% of the hours identified in the historical data set, in which the asset's availability factor or capacity factor, as applicable, was the highest;

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

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

(b) determine the +/- 2% range rounded to the nearest positive integer, as follows:

(i) calculate the upper limit, as follows:

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

(B) added to the **uniform capacity value**;

(ii) calculate the lower limit, as follows:

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

(B) subtracted from the **uniform capacity value**;

and

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

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

(ii) calculate the lower limit by subtracting 1 MW to the **uniform capacity value**.

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

(a) assets with **new capacity** or refurbished capacity;

(b) incremental capacity;

(c) a load asset; and

(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 tightest supply cushion hours identified in accordance with subsection 3(1); 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 historical data set, referred to in subsection 4;

(b) the **uniform capacity value** calculated in accordance with subsections 5, 6 and 7, as applicable;

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

(d) the greatest of the upper limits calculated in accordance with subsections 9(1)(a)(i), 9(1)(b)(i) and 9(1)(c)(i) to a maximum of the asset's **maximum capability**; and

(e) the lowest of the lower limits calculated in accordance with subsection 9(1)(a)(ii), 9(1)(b)(ii) and 9(1)(c)(ii) to a minimum of 1 MW.

Uniform Capacity Value Variances

11(1) A **capacity market participant** may, within the timelines prescribed by the *Capacity Market Auction Guidelines*, request 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)(a)(ii), 7(1)(b) or 7(1)(c), 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 9(1), submit to the **ISO** detailed information in support of the request, including, as applicable:

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

(b) information supporting why the characteristics, selection criteria and rationale for comparable assets, for class average and jurisdictional assessment requests, are not valid for the asset due to:

(i) **maximum capability**; and

(ii) available production and load data;

and

(c) 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 notify the **capacity market participant** of its decision on whether to vary the **uniform capacity value** within the timelines prescribed by the *Capacity Market Auction Guidelines*.

Declaration and Assignment of Final Uniform Capacity Value

12(1) A **capacity market participant** must, in accordance with the timelines prescribed by the *Capacity Market Auction Guidelines*, declare to the **ISO**, as applicable, the **uniform capacity value** within the range identified in subsection 9(1) that it will use for the applicable **base auction** or **rebalancing auction**.

(2) The **ISO** must assign to a **capacity market participant** the **uniform capacity value** for each associated asset in the following order of priority:

(a) the **uniform capacity value** from the dispute resolution process described in the *Capacity Market Regulation*;

(b) the **uniform capacity value** from the variance process in subsection 11(2);

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

(d) the **uniform capacity value** calculated by the **ISO** in accordance with subsections 6 and 7, as applicable.

(3) The **ISO** must, in accordance with the timelines prescribed by the *Capacity Market Auction Guidelines*, publish the assigned **uniform capacity values** for all assets qualified for the **obligation period**.

Revision History

Date	Description
xxxx-xx-xx	Initial release

Section 206.4 Offers and Bids for Capacity

External Consultation Draft
October 22, 2018

Applicability

1 Section 206.4 applies to:

(a) a **capacity market participant** with an asset that has a **uniform capacity value** assigned pursuant to Section 206.3 of the **ISO rules**, *Uniform Capacity Value Determination*; and

(b) the **ISO**.

Requirements

Obligation to Offer and Offer Content for a Base Auction

2(1) A **capacity market participant** must:

(a) submit an **offer** for a **base auction** in respect of an asset; and

(b) ensure the volume of the **offer** in subsection 2(1)(a) is equal to the asset's assigned **uniform capacity value**.

(2) A **capacity market participant** must include in each **capacity block** in an **offer** for a **base auction**:

(a) a price in $/kW-year to the nearest cent per kW-year which, subject to Section 206.7 of the **ISO rules**, *Capacity Market Mitigation*, is:

(i) greater than or equal to $0/kW-year; and

(ii) less than or equal to the maximum price established by the final demand curve for the **base auction**;

and

(b) a quantity in MW that is a positive integer greater than or equal to 1 MW.

(3) The **ISO** must, if a **capacity market participant** does not submit an **offer** in accordance with subsections 2(1) or 2(2), assign an **offer** price of $0/kW-year for the **offer** volume equal to the asset's assigned **uniform capacity value** at the close of the offering window.

(4) A **capacity market participant** must, for a **person** that has been provided an offer price cap or has in accordance with Section 206.7 of the **ISO rules**, *Capacity Market Mitigation*, submit an **offer** in the **base auction** for the quantity of the asset's **uniform capacity value** that the **person** has offer control over at a price equal to or below:

(a) the offer price cap referred to in Section 206.7 of the **ISO rules**, *Capacity Market Mitigation*; or

(b) if an asset-specific offer price cap has been provided in accordance with Section 206.7 of the **ISO rules**, *Capacity Market Mitigation*, the asset-specific **offer** price cap.

Obligation to Offer and Offer Content for a Rebalancing Auction

3(1) A **capacity market participant** must, if the assigned **uniform capacity value** of the **capacity market participant**'s associated asset is greater than the **capacity commitment**:

(a) submit an **offer** for a **rebalancing auction** for that asset; and

(b) ensure the volume of the **offer** in subsection 3(1)(a) is equal to the difference between the asset's assigned **uniform capacity value** and the **capacity commitment**.

(2) A **capacity market participant** must, if the **capacity market participant**'s asset is not subject to a **capacity commitment**:

(a) submit an **offer** for a **rebalancing auction** for that asset; and

(b) ensure the volume of the **offer** in subsection 3(2)(a) is equal to the asset's assigned **uniform capacity value**.

(3) A **capacity market participant** must, subject to subsection 3(4), include in each **capacity block** in an **offer** for a **rebalancing auction**:

(a) a price in $/kW-year to the nearest cent per kW-year which is:

(i) greater than or equal to $0/kW-year; and

(ii) less than or equal to the maximum price established by the final demand curve for the **rebalancing auction**;

and

(b) a quantity in MW that is a positive integer equal to or greater than 1 MW.

(4) A **capacity market participant** that requested to temporarily delist for economic reasons and has been provided a price based on the remaining **avoidable costs** in accordance with Section 201.15 of the **ISO rules**, *Delisting* must submit an **offer** or **bid** in the last **rebalancing auction** as follows:

(a) for an asset where the volume submitted in the delist request is less than or equal to the assigned **uniform capacity value** minus the **capacity commitment** submit an **offer** comprised of 1 **capacity block** as follows:

(i) a price based on the remaining **avoidable costs** provided in accordance with Section 201.15 of the **ISO rules**, *Delisting*; and

(ii) a quantity in MW submitted in the delist request;

and

(b) for an asset where the volume submitted in the delist request is greater than the assigned **uniform capacity value** minus the **capacity commitment** submit the following:

(i) an **offer** comprised of 1 **capacity block**:

(A) at a price based on the remaining **avoidable costs** provided in accordance with Section 201.15 of the **ISO rules**, *Delisting*; and

(B) a quantity in MW that is equal to the assigned **uniform capacity value** minus the **capacity commitment**;

and

(ii) a bid comprised of 1 **capacity block**:

(A) at a price based on the remaining **avoidable costs** provided in accordance with Section 201.15 of the **ISO rules**, *Delisting* less $0.01; and

(B) the quantity calculated in accordance with subsection 5.

(5) A **capacity market participant** must calculate the quality referred to in subsection 3(4)(ii)(B) in accordance with the following formula:

$$quantity = delist\ volume - (uniform\ capacity\ value - capacity\ commitment\ )$$

where:

(a) *delist volume* is the volume submitted in the delist request;

(b) *uniform capacity value* is the assigned **uniform capacity value**; and

(c) *capacity commitment* is the **capacity commitment** for the asset.

(6) The **ISO** must, if a **capacity market participant** does not submit an **offer**:

(a) in accordance with subsections 3(1), 3(2) or 3(3), assign an **offer** price of $0/kW-year for the **offer** volume equal to the difference between the asset's **uniform capacity value** and its **capacity commitment** at the close of the offering window; or

(b) in accordance with subsection 3(4), assign the **offer** price and **offer** volume referred to in subsection 3(4) and 3(5).

(7) A **capacity market participant** must, notwithstanding subsection 3(2), not submit an **offer** in a **rebalancing auction** for an asset with **new capacity** or incremental **capacity** if the **ISO** determines that the **capacity market participant** has failed the milestone assessment in accordance with Section 206.5 of the **ISO rules**, *Forward Period Milestone Requirements*.

Designation of Flexible Blocks or Inflexible Blocks for Offers

4(1) A **capacity market participant** must, except for an asset with incremental **capacity**, designate in an **offer**:

(a) the lowest priced **capacity block** as a **flexible block** or **inflexible block**; and

(b) all other **capacity blocks** as **flexible blocks**.

(2) A **capacity market participant** must, for an asset with incremental **capacity**, designate each **capacity block** in an **offer** as a **flexible block** except:

(a) the lowest priced **capacity block** may be designated as an **inflexible block**; or

(b) a **capacity block** that is not the lowest priced **capacity block** may be designated as an **inflexible block** if:

(i) such **capacity block** contains only incremental capacity and there is no lower priced **capacity block** which contains incremental **capacity**; or

(ii) such **capacity block** contains only non-incremental **capacity** and there is no lower priced **capacity block** which contains non-incremental **capacity**.

Additional Offer Content for Incremental Capacity

5 A **capacity market participant** must, for an asset with incremental **capacity**, include in each **capacity block** in an **offer** a declaration of the quantity in MW within a **capacity block** that is incremental **capacity**.

Additional Offer Content for Refurbished Capacity

6(1) A **capacity market participant** that has failed the market power screen in accordance with Section 206.7 of the **ISO rules**, *Capacity Market Mitigation* must, for an asset with refurbished **capacity**

for which the **capacity market participant** declared to continue to participate in the energy and capacity markets the in event that the **capacity market participant** fails to receive a **capacity commitment** for such asset in a **base auction** or **rebalancing auction** in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*, submit 2 **offers** as follows:

(a) a first **offer** comprised of one **capacity block** that is an **inflexible block** at the price referred to in subsection 2(4); and

(b) a second **offer** based on the **offer** the **capacity market participant** would have submitted had the **ISO** not qualified the refurbished **capacity** at the price referred to in subsection 3(3)(b).

(2) A **capacity market participant** that has failed the market power screen in accordance with Section 206.7 of the **ISO rules**, *Capacity Market Mitigation* must, for an asset with refurbished **capacity** for which the **capacity market participant** declared to permanently delist in the event that the **capacity market participant** fails to receive a **capacity commitment** for such asset in a **base auction** or **rebalancing auction** in accordance with Section 206.1 of the **ISO rules**, *Qualification of Capacity*, submit an **offer** comprised of one **capacity block** that is an **inflexible block**.

(3) A **capacity market participant** may, if it has submitted an **offer** in accordance with subsection 6(1)(a) and the **offer** does not clear, submit in subsequent **base auctions**:

(a) an **offer** comprised of one **capacity block** that is an **inflexible block** at the price referred to in subsection 2(4); or

(b) an **offer** based on the **offer** the **capacity market participant** would have submitted had the **ISO** not qualified the refurbished **capacity** at the price referred to in subsection 3(3)(b).

(3) A **capacity market participant** must, in the event that the **capacity market participant** submitted an **offer** for refurbished **capacity** in accordance with subsection 6(3)(a) and the **offer** did not clear, permanently delist the asset in accordance with Section 201.15 of the **ISO rules**, *Delisting*.

(4) A **capacity market participant** must ensure that an **offer** has not been submitted in a previous **base auction** or **rebalancing auction** for the asset with refurbished **capacity** in the manner described in subsection 6(1) prior to submitting an **offer** in accordance with subsection 6(1).

Bid Content

7(1) A **capacity market participant** with a **capacity commitment** may submit a **bid** in a **rebalancing auction** for an asset:

(a) that is priced at a price in $/kW-year to the nearest cent per kW-year which is greater than or equal to $0/kW-year;

(b) that is less than or equal to the price cap established by the final demand curve for the **rebalancing auction**; and

(c) for a quantity in MW that is a positive integer equal to or greater than 1 MW and less than or equal to the **capacity commitment**.

(2) A **capacity market participant** with a **capacity commitment** must submit a **bid**, priced at $0.01/kW-year above the price cap established by the final demand curve for the **rebalancing auction**, in accordance with the following:

(a) if the asset's assigned **uniform capacity value** for a **rebalancing auction** is lower than the **capacity commitment** due to a permanent or temporary physical **delist** request, the **capacity market participant** must submit a **bid** equal to the difference between the **capacity commitment** and the assigned **uniform capacity value**;

(b) if the asset's assigned **uniform capacity value** for the last **rebalancing auction** is lower than the **capacity commitment**, the **capacity market participant** must submit a **bid** equal to the difference between the **capacity commitment** and the assigned **uniform capacity value**; or

(c) if the **ISO** determines that the **capacity market participant** has not satisfied a critical milestone in accordance with Section 206.5 of the **ISO rules**, *Forward Period Milestone Requirements*, the **capacity market participant** must submit a **bid** equal to its entire **capacity commitment** in the applicable **rebalancing auction.**

(3) The **ISO** must, if a **capacity market participant** does not submit a **bid** in accordance with subsection 7(2), assign a **bid** price of $0.01/kW-year above the price cap established by the final demand curve for the **rebalancing auction** for the **bid** volume required in subsection 7(2) at the close of the offering window.

Designation of Flexible Blocks or Inflexible Blocks for Bids

8 A **capacity market participant** must designate in a **bid**:

(a) the lowest priced **capacity block** as a **flexible block** or **inflexible block**; and

(b) all other **capacity blocks** as **flexible blocks**.

Submission of Offer and Bid for the Same Asset in a Rebalancing Auction

9 A **capacity market participant** that submits an **offer** and **bid** for the same associated asset in a **rebalancing auction** must price the **capacity blocks** such that the highest priced **capacity block** for the **bid** is less than the lowest priced **capacity block** for the **offer**.

Offering Window

10(1) The **ISO** must, in the *Capacity Market Auction Guidelines*, establish an offering window of at least 5 **business days** for a **base auction** or **rebalancing auction**.

(2) A **capacity market participant** must submit an **offer** or **bid** during the offering window.

(3) The **ISO** may change or extend the offering window in the event of system unavailability if the **ISO** determines that such unavailability warrants a change or extension to the offering window.

(4) The **ISO** must publish on the AESO website any change or extension to an offering window made pursuant to subsection 10(2).

Offer Submission Methods

11 A **capacity market participant** must submit an **offer** or **bid** for a **base auction** or **rebalancing auction** in the manner the **ISO** specifies.

Revision History

Date	Description
xxxx-xx-xx	Initial release

External Consultation Draft
October 22, 2018

Applicability

1 Section 206.5 applies to:

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

(b) the **ISO**.

Requirements

Development of Milestones

2(1) The **ISO** must publish the class-specific target completion dates for the following milestones on the AESO website, on a class-specific basis:

(a) in the case of a **generating unit** or **aggregated generating facility**:

(i) regulatory permitting and licensing;

(ii) full notice to proceed;

(iii) major equipment procurement agreements;

(iv) delivery of major equipment to the site;

(v) commissioning and start-up; and

(vi) in-service date;

and

(b) in the case of a load asset, confirmation that the load asset will be able to provide a minimum 75% of the **capacity commitment**.

(2) The **ISO** must notify a **capacity market participant** for an asset with **new capacity**, incremental **capacity** or refurbished **capacity** of the asset-specific target completion dates for the milestones referred to in subsection 2(1), based on the class-specific target dates referred to in subsection 2(1).

(3) The **ISO** may, if the **ISO** determines that the milestones in subsection 2(1) are not appropriate for an asset with **new capacity**, incremental **capacity** or refurbished **capacity**, notify a **capacity market participant** for the asset of the alternative milestones and associated target completion dates.

Milestone Assessment

3(1) A **capacity market participant** must, prior to each **rebalancing auction** and within the timelines prescribed in the *Capacity Market Auction Guidelines*, submit to the **ISO** an updated project plan and information supporting whether a milestone has been achieved by the asset-specific target completion date.

(2) The **ISO** must identify a **capacity market participant** who, at the time of the **ISO**'s milestone assessment, failed to achieve the most recent milestone:

(a) in the case of the milestone assessment for the first **rebalancing auction**, within 8 **months** after the asset-specific target completion date; or

(b) in the case of the milestone assessment for the last **rebalancing auction**, within 5 **months** after the asset-specific target completion date.

(3) The **ISO** must notify a **capacity market participant** that has failed the milestone assessment in accordance with subsection 3(2).

Revision History

Date	Description
yyyy-mm-dd	Initial release

External Consultation Draft
October 22, 2018

Applicability

1 Section 206.6 applies to:

(a) the **ISO**.

Requirements

Base Auction Timeline

2(1) The **ISO** must conclude a **base auction** no later than 36 **months** prior to the start of the **obligation period**.

(2) The **ISO** must:

(a) notwithstanding subsection 2(1), conclude a **base auction** for the first 3 **obligation periods** in accordance with the timelines established in the *Capacity Market Auction Guidelines*; and

(b) remove subsection 2(2) on or about the **day** the **base auction** for the third **obligation period** is concluded.

Rebalancing Auction Timeline

3(1) The **ISO** must, subject to subsection 3(2), conclude 2 **rebalancing auctions** at no later than 18 **months** and 3 **months**, respectively, prior to the start of the **obligation period**.

(2) The **ISO** must:

(a) notwithstanding subsection 3(1), conclude one **rebalancing auction**, that is the last **rebalancing auction**, no later than 3 **months** prior to the start of the **obligation periods** for the first 3 **obligation periods**; and

(b) remove subsection 3(2) on or about the day the **rebalancing auction** for the third **obligation period** is concluded.

Publication of Capacity Market Auction Guidelines

4 The **ISO** must publish the *Capacity Market Auction Guidelines* no later than 8 months prior to the start of each **base auction** or **rebalancing auction** offering window.

Sealed-bid, Single-round Base Auction and Rebalancing Auction

5 The **ISO** must, for each **base auction** and **rebalancing auction**, use a sealed-bid, single-round auction design to establish a single clearing price.

Auction Results

6(1) The **ISO** must, as soon as practicable following a **base auction** and **rebalancing auction**, notify the **capacity market participant** of the **capacity market participant**'s **capacity commitments** by asset.

(2) The **ISO** must, as soon as practicable following a **base auction** and **rebalancing auction**, publish the following results of the **base auction** or **rebalancing auction**:

(a) the clearing price;

(b) the total **capacity** procured;

(c) the total **capacity** procured by technology type; and

(d) the total **capacity** procured from assets associated with an **offer** for **new capacity**, incremental capacity and refurbished capacity.

(3) The **ISO** must, as soon as practicable following the last **rebalancing auction**, publish the **capacity commitment** associated with each asset.

Revision History

Date	Description
yyyy-mm-dd	Initial release

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October 22, 2018

Applicability

1 Section 206.7 applies to:

(a) a **person** identified in **offer control information** associated with **capacity** from an asset that has been assigned a **uniform capacity value** for a **base auction**; and

(b) the **ISO**.

Market Power Screen

2(1) The **ISO** must, before a **base auction** and within the timelines prescribed by the *Capacity Market Auction Guidelines*, calculate the market screen as follows:

(a) calculate the slope above the inflection point of the final demand curve for the **base auction** in accordance with the following formula:

$$|slope_m| = \frac{price\ cap\ - inflection\ price}{minimum\ procurement\ volume - inflection\ volume}$$

where:

(i) $|slope_m|$ is the absolute value of the slope above the inflection point of the final demand curve for the **base auction**;

(ii) *price cap* is the price cap of the final demand curve for the **base auction**;

(iii) *inflection price* is the price corresponding to the inflection point on the final demand curve for the **base auction**;

(iv) *minimum procurement volume* is the minimum procurement volume for the **base auction**; and

(v) *inflection volume* is the volume of **capacity** corresponding to the inflection point on the final demand curve for the **base auction**;

(b) calculate the slope below the inflection point of the final demand curve for the **base auction** that is established in accordance with Section 207.3, *Shape of the Demand Curve* in accordance with the following formula, expressed as an absolute value:

$$|slope_n| = \frac{inflection\ price - foot\ price}{inflection\ volume - foot\ volume}$$

where:

(i) $|slope_n|$ is the absolute value of the slope below the inflection point of the final demand curve for the **base auction**;

(ii) *inflection price* is the price corresponding to the inflection point on the final demand curve for the **base auction**;

(iii) *foot price* is the price at the foot of the final demand curve for the **base auction** established in accordance with Section 207.3 of the **ISO rules**, *Shape of the Demand Curve;*

(iv) *inflection volume* is the volume of capacity corresponding to the inflection point on the final demand curve for the **base auction**; and

(v) *foot volume is* the volume of capacity corresponding to the foot of the final demand curve for the base auction established in accordance with Section 207.3 of the **ISO rules**, *Shape of the Demand Curve*;

(c) calculate the average of the **capacity** that, if withheld, would effect a 10% change in the clearing price in accordance with the following formula:

$$average\ capacity = \left(\frac{0.1}{|slope_m|} + \frac{0.1}{1.1\ \times\ |slope_n|}\right) \times inflection\ price\ \div\ 2$$

where:

(i) $|slope_m|$ is the slope calculated in subsection 2(1)(b);

(ii) $|slope_n|$ is the slope calculated in subsection 2(1)(c); and

(iii) *inflection price* is the price corresponding to the inflection point on the final demand curve for the **base auction**;

and

(d) calculate the minimum amount of **capacity** that a **person** must have under its offer control to withhold the average amount of **capacity** in subsection 2(1)(c) without sustaining any financial loss in accordance with the following formula:

$$portfolio\ capacity = 11\ \times average\ capacity$$

where:

(i) *average capacity* is the average capacity calculated in accordance with subsection 2(1)(c).

(2) The **ISO** must identify those **persons** that have offer control over an amount of **capacity** that is greater than or equal to the amount of **capacity** calculated in subsection 2(1)(d), where **capacity** is measured by **uniform capacity values**, excluding such **capacity** that is **new capacity** or incremental **capacity**.

(3) The **ISO** must, in accordance with the timelines established in the *Capacity Market Auction Guidelines*:

(a) publish the minimum amount of **capacity** identified in subsection 2(1)(d); and

(b) notify a **person** that has been identified in subsection 2(2) as having market power.

Offer Price Cap

3(1) The **ISO** must, for a **base auction**, establish an offer price cap that is:

(a) 80% of the net-CONE calculated in accordance with Section 207.3 of the ISO rules, *Shape of Demand Curve*, where the price cap for the **base auction** is set at a multiple of net-CONE; or

(b) an amount equal to gross-CONE multiplied by 80% of the ratio between the multiple of gross-CONE and the multiple of net-CONE established in Section 207.3 of the **ISO rules**, *Shape of Demand Curve*, where the price cap for the **base auction** is set at a multiple of gross-CONE.

(2) The **ISO** must provide the offer price cap referred to in subsection 3(1) to a **person** that has received notification in accordance with subsection 2(3)(b), for each asset or portion of such asset under the offer control of the **person**, excluding an asset or portion of such asset that contains **new capacity**, incremental **capacity** or refurbished **capacity**.

Asset-specific Offer Price Cap

4(1) A **person** that has received a notification in accordance with subsection 2(3)(b) may submit to the **ISO** a request for an asset-specific offer price cap.

(2) A **person** must submit to the **ISO** the following information in the request referred to in subsection 4(1):

(a) the **avoidable costs** of the asset for the **obligation period** and substantiating information;

(b) the information necessary for the **ISO** to calculate the energy and ancillary services offset in accordance with Section 206.11 of the **ISO rules**, *Energy and Ancillary Services Offset for Assets*; and

(c) an attestation from a corporate officer of the **legal owner** that has offer control over the asset that the information provided pursuant to subsections 4(2)(a) and 4(2)(b) is accurate.

(3) The **ISO** must request additional information from the **person** concerning the costs submitted in subsection 4(2)(a) where such costs, in the **ISO**'s determination, appear unreasonable.

(4) The **ISO** must exclude costs provided in accordance with subsection 4(2)(a) if the **ISO** determines, after requesting additional information pursuant to subsection 4(3), that such costs that are unreasonable.

(5) The **ISO** must, when a request is made for an asset-specific price cap under subsection 4(1):

(a) calculate the energy and ancillary services offset, using the methodology set out in Section 206.11 of the **ISO rules**, *Energy and Ancillary Services Offset for Assets* for the asset to which the request for the asset-specific offer price cap applies; and

(b) subtract the energy and ancillary services offset referred to in subsection 4(5)(a) from the **avoidable costs** submitted in subsection 4(2)(a) less any costs excluded by the **ISO** in accordance with subsection 4(4).

(6) The **ISO** must, if the **ISO** determines the amount calculated in subsection 4(5)(b) is greater than the offer price cap in subsection 3, provide to the **person** an asset-specific price cap equal to the amount determined in subsection 4(5)(b).

Revision History

Date	Description
xxxx-xx-xx	Initial release.

External Consultation Draft
October 22, 2018

Applicability

1 Section 206.8 applies to:

(a) the **ISO**.

Requirements

Availability Hours during an Obligation Period

2(1) The **ISO** must select 250 hours from each **obligation period** to assess availability as follows:

(a) calculate the supply cushion for every hour in an **obligation period**;

(b) rank all hours based on supply cushion in ascending order;

(c) remove hours in which there was a state of markets suspension;

(d) within the order referred to in subsection 2(1)(b) and 2(1)(c), rank hours with equivalent supply cushion in ascending order from the most recent to the most distant of time; and

(e) select the first 250 hours after ranking in accordance with subsection 2(1)(b) and 2(1)(d).

(2) The **ISO** must, in order to establish the availability hours for an asset, remove from the 250 hours identified in subsection 2(1) on an asset-specific basis, hours that the **ISO** determines that the asset is affected by an event of limited markets operations, war, invasion, armed conflict, blockade, act of public enemy, riot, revolution, insurrection, act of terrorism, sabotage, act of vandalism, fire or explosion that does not originate at the asset, lightning, earthquake or flooding.

Delivery Hours for a Settlement Period

3(1) The **ISO** must select hours to assess delivery for a **settlement period** by identifying any hours or portions thereof in which a supply shortfall has occurred and the **ISO** has declared an energy emergency event in accordance with Section 305.1 of the **ISO rules**, *Energy Emergency Alerts*.

(2) The **ISO** must, in order to establish the delivery hours for an asset, remove the following hours from the hours selected in subsection 3(1) on an asset-specific basis:

(a) hours in which there was a state of markets suspension; and

(b) hours that the **ISO** determines that the asset was affected by an event of limited markets operations, war, invasion, armed conflict, blockade, act of public enemy, riot, revolution, insurrection, act of terrorism, sabotage, act of vandalism, fire or explosion that does not originate at the asset, lightning, earthquake or flooding.

Look-back Baseline for a Load Asset Providing a Firm Consumption Level

4 The **ISO** must, for each of the availability hours established in subsection 2(2), calculate the look-back baseline as a volume in MW for a load asset as follows:

(a) identify the **metered energy** for the look-back baseline **settlement intervals** with the same **hour ending** as the availability hour in the **days** which must be either:

(i) the 15 most recent **business days** prior to the **day** with the availability hour if the availability hour falls on a **business day**;

(ii) the 10 most recent weekend **days** or holidays prior to the **day** with the availability hour if the availability 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 availability hour, there are fewer than 15 **business days** and 10 weekend **days** when **days** containing **settlement intervals** identified in subsection 4(b) are excluded;

(b) determine if any **settlement intervals** referred to in subsection 4(a):

(i) occurred on days containing availability hours established in subsection 2(2);

(ii) occurred on days containing delivery hours established in subsection 3(2); or

(iii) occurred on days containing hours in which the asset was subject to a **dispatch** in the energy market or responded to a **directive** for **ancillary services** for an amount greater than 0 MW;

and

(c) calculate the average **metered energy** in accordance with the following formula:

$$average\ metered\ energy = \frac{total\ metered\ energy}{settlement\ intervals}$$

where:

(i) *total metered energy* is the **metered energy** for the **settlement intervals** referred to in subsection 4(a):

(A) excluding the **metered energy** for the **settlement intervals** identified in subsections 4(b)(i) and 4(b)(ii); and

(B) including the addition of the volume of the **directive** for **ancillary services** or a **dispatch** in the **settlement intervals** identified in accordance with subsection 4(b)(iii);

and

(ii) *settlement intervals* is the number of **settlement intervals** referred to in subsection 4(a).

Delivery Baseline for a Load Asset Providing Guaranteed Load Reduction

5(1) The **ISO** must, for each of the delivery hours established in subsection 3(2), calculate the standard day baseline in MW as follows:

(a) identify the **days** for the calculation which must be either:

(i) the 10 most recent **business days** prior to the **day** with the delivery hour if the delivery hour falls on a **business day**;

(ii) the 5 most recent weekend **days** or holidays prior to the **day** with the delivery hour if the delivery hour falls on a weekend **day** or a holiday; or

(iii) the **days** the **ISO** specifies if, in the 35 **day** period prior to the **day** with the delivery hour, there are fewer than 10 **business days** and 5 weekend **days** when **days** identified in subsection 5(1)(b) are excluded or replaced;

(b) exclude or replace any of the **days** identified in subsection 5(1)(a) if the following occurred:

(i) the asset received a **dispatch** in the energy market, or responded to a **directive** for **ancillary services** for an amount greater than 0 MW;

(ii) delivery was assessed in accordance with subsection 9(1);

(iii) the load asset was subject to a **delayed forced outage** or **automatic forced outage**;

(iv) the load asset was subject to a **planned outage**; or

(v) the load asset was tripped for the provision of **load shed service**;

(c) for each of the **days** identified in accordance with subsections 5(1)(a) excluding or replacing the **days** as indicated in subsection 5(1)(b), identify the **metered energy** for the **settlement interval** with the same **hour ending** as the delivery hour; and

(d) calculate the average of the **metered energy** for the **settlement intervals** referred to in subsection 5(1)(c).

(2) The **ISO** must, for each delivery hour established in subsection 3(2), calculate an adjustment factor as follows:

$$adjustment\ factor = \frac{delivery\ consumption}{historical\ consumption}$$

where:

(a) *delivery consumption* is the average consumption in MWh during the 3 hour window occurring 1 hour before the delivery hour; and

(b) *historical consumption* is the average consumption in MWh during all of the 3 hour windows occurring 1 hour before the same **hour ending** as the delivery hour on the **days** identified in accordance with subsections 5(1)(a) and excluding or replacing the **days** as indicated in subsection 5(1)(b).

(3) The **ISO** must establish the adjustment factor as:

(a) 1.2 if the adjustment factor calculated in accordance with subsection 5(2) is greater than 1.2;

(b) 0.8 if the adjustment factor calculated in accordance with subsection 5(2) is less than 0.8; or

(c) the value calculated in accordance with subsection 5(2) in all other cases.

(4) The **ISO** must calculate the delivery baseline in MW as follows:

$$delivery\ baseline = standard\ day\ baseline \times adjustment\ factor$$

where:

(a) *standard day baseline* is the standard day baseline calculated in accordance with subsection 5(1); and

(b) *adjustment factor* is the adjustment factor established in accordance with subsection 5(3).

Asset-specific Penalty Rate for Availability Assessment

6(1) The **ISO** must calculate the asset-specific penalty rate in \$/MWh to be applied during the availability assessment, as follows:

$$asset\text{-}specific\ penalty\ rate = \frac{capacity\ award \times 12}{capacity\ commitment\ \times availability\ hours}$$

where:

(a) *capacity award* in \$/month is calculated for the asset in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*;

(b) *capacity commitment* is the **capacity commitment** associated with the asset; and

(c) *availability hours* is the number of availability hours established in accordance with subsection 2(2).

(2) The **ISO** must establish the asset-specific penalty rate in \$/MWh as:

(a) \$133/MWh, if the rate calculated in accordance with subsection 6(1) is less than \$133/MWh and the clearing price of the **base auction** was greater than \$33/kW-year;

(b) \$0/MWh, if the rate calculated in accordance with subsection 6(1) is less than \$0/MWh and the clearing price of the **base auction** was less than or equal to \$33/kW-year; or

(c) the rate calculated in accordance with subsection 6(1) in all other cases.

Availability Assessment

7(1) The **ISO** must, as soon as practicable after an **obligation period**, identify the asset's availability volume in MWh during each of the availability hours identified in subsection 2 as follows:

(a) for an asset with a **uniform capacity value** based on a capacity factor as determined in Section 206.3 of the **ISO rules**, *Uniform Capacity Value Determination*, availability volume is the sum of the following for each **settlement interval**, as applicable:

(i) **metered energy**;

(ii) in the case of an asset that was subject to a **dispatch** for **spinning reserve** or **supplemental reserve**, the volume that was provided according to Section 205.5 of the **ISO rules**, *Spinning Reserve Technical Requirements and Performance Standards* or Section 205.6 of the **ISO rules**, *Supplemental Reserve Technical Requirements and Performance Standards*;

(iii) in the case of an asset that provides **regulating reserve**, the volume based on the **regulating reserve** provided pursuant to Section 205.4 of the **ISO rules**, *Regulating Reserve Technical Requirements and Performance Standards* that is not captured as **metered energy**; and

(iv) in the case of an asset that was impacted by a **transmission market constraint**, the volume that was curtailed;

(b) for an asset with a **uniform capacity value** based on availability factor as determined in Section 206.3 of the **ISO rules**, *Uniform Capacity Value Determination*, availability volume is equal to:

(i) the **available capability** submitted into the Energy Trading System where the electric energy was available for **dispatch** for that **settlement interval**; or

(ii) 0 MW when there was no electric energy from the asset available for dispatch for that **settlement interval**;

(c) for a load asset providing **guaranteed load reduction**, availability volume is the **available capability** for that **settlement interval**;

(d) for a load asset providing **firm consumption level**, availability volume is based on the difference between the look-back baseline calculated in accordance with subsection 4 and the asset's **firm consumption level** as declared for the **obligation period**;

(e) for self-supply assets that are dispatched gross to grid, availability volume is based on the linear regression approach set out in Section 206.3 of the **ISO rules**, *Determination of Uniform Capacity Value*; and

(f) for an import asset, availability volume is the **available capability** for that **settlement interval** capped at the volume of long term firm transmission **capacity** for the asset subject to a **capacity commitment**.

(2) The **ISO** must calculate the assessment volume in MWh for an asset in accordance with the following formula:

$$assessment\ volume =$$

$$\left[\sum availability\ volume\right] - capacity\ commitment \times availability\ hours$$

where:

(a) *availability volume* is the availability volume in MWh identified in subsection 7(1), as applicable;

(b) *capacity commitment* is the **capacity commitment** associated with the asset; and

(c) *availability hours* is the number of availability hours established in accordance with subsection 2.

Under-availability Adjustment

8(1) The **ISO** must, when the assessment volume calculated in accordance with subsection 7(2) is negative, calculate the under-availability adjustment in dollars for an asset subject to a **capacity commitment** in accordance with the following formula:

$$under\text{-}availability\ adjustment\ =\ adjustment\ rate\ \times\ assessment\ volume$$

where:

(a) *adjustment* is the adjustment rate in $/MWh calculated in accordance with subsection 8(2); and

(b) *assessment volume* is the assessment volume in MWh calculated in accordance with subsection 7(2).

(2) The **ISO** must, in calculating the under-availability adjustment under subsection 8(1), calculate the adjustment rate for each asset in accordance with the following formula:

$$adjustment\ rate = 0.4 \times 1.3 \times asset\text{-}specific\ penalty\ rate$$

where:

(a) *asset-specific penalty rate* is the asset-specific penalty rate in $/MWh determined in accordance with subsection 6(2).

(3) The **ISO** must, for each asset, limit the under-availability adjustment amount for an **obligation period** to:

(a) an amount in dollars equal to the annual cap determined in accordance with subsection 14(2) or 14(3), as applicable, minus the sum of all under-delivery adjustments determined in accordance with subsection 12(3) for the **obligation period**, if the sum of the under-availability adjustment determined in accordance with subsection 8(1) and under-delivery adjustments for the **obligation period** is greater than the annual cap; or

(b) the amount in dollars calculated in accordance with subsection 8(1), in all other cases.

Over-availability Adjustment

9(1) The **ISO** must, when the assessment volume calculated in accordance with subsection 7(2) is positive, calculate the over-availability adjustment in dollars for an asset subject to a **capacity commitment** in accordance with the following formula:

$$over\text{-}availability\ adjustment = adjustment\ rate \times assessment\ volume$$

where:

(a) *adjustment rate* is the adjustment rate calculated in accordance with subsection 9(2); and

(b) *assessment volume* is the volume in MWh calculated in accordance with subsection 7(2).

(2) The **ISO** must, in calculating the over-availability adjustment in subsection 9(1), calculate the adjustment rate in $/MWh in accordance with the following formula:

$$|adjustment\ rate| = \frac{\sum under\text{-}availability\ adjustments}{\sum positive\ assessment\ volumes}$$

where:

(a) *under-availability adjustments* is the sum of all under-availability adjustments determined in accordance with 8(3) for all assets subject to a **capacity commitment** in an **obligation period**; and

(b) *positive assessment volumes* is the sum of all positive assessment volumes calculated in accordance with subsection 7(2) for all assets subject to a **capacity commitment** in an **obligation period**.

(3) The **ISO** must, for each asset, limit the over-availability adjustment amount for an **obligation period** to an amount in dollars equal to the annual cap determined in accordance with subsection 15 minus the sum of all over-delivery adjustments determined in accordance with subsection 13(3) for the **obligation period**.

Asset-specific Penalty Rate for Delivery Assessments

10(1) The **ISO** must calculate the asset-specific penalty rate in $/MWh for an asset, to be applied during the delivery assessments in accordance with the following formula:

$$asset\text{-}specific\ penalty\ rate = \frac{capacity\ award \times 12}{capacity\ commitment \times delivery\ hours}$$

where:

(a) *capacity award* is the capacity award in $/month calculated for the asset in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*;

(b) *capacity commitment* is the **capacity commitment** associated with an asset; and

(c) *delivery hours* is the greater of:

(i) 20; or

(ii) the forecasted number of energy supply shortfall hours for the **obligation period** as given in the *Capacity Market Auction Guidelines* published for the last **rebalancing auction** of the **obligation period**.

(2) The **ISO** must establish the asset-specific penalty rate as:

(a) $1,667/MWh, if the rate calculated in accordance with subsection 10(1) is less than $1,667/MWh and the clearing price of the **base auction** was greater than $33/kW-year;

(b) $0/MWh, if the rate calculated in accordance with subsection 10(1) is less than $0/MWh and the clearing price of the **base auction** was less than or equal to $33/kW-year; or

(c) the rate calculated in accordance with subsection 10(1), in all other cases.

Delivery Assessments

11(1) The **ISO** must, as soon as practicable in the **settlement period** following each delivery hour established in subsection 3(2), identify an asset's delivery volume in MWh during each of the delivery hours as follows:

(a) for an asset with a **uniform capacity value** based on a capacity factor or availability factor, delivery volume is based on the sum of the following for each **settlement interval**, as applicable:

(i) **metered energy**;

(ii) in the case of an asset that was subject to a **dispatch** for **spinning reserve** or **supplemental reserve**, the volume that was provided in accordance with Section 205.5 of the **ISO rules**, *Spinning Reserve Technical Requirements and Performance Standards* or Section 205.6 of the **ISO rules**, *Supplemental Reserve Technical Requirements and Performance Standards*; and

(iii) in the case of an asset that was subject to a **dispatch** for **regulating reserve**, the volume that was provided in accordance with Section 205.4 of the **ISO rules**, *Regulating Reserve Technical Requirements and Performance Standards* that is not captured as **metered energy**;

(b) for a load asset that provides a **guaranteed load reduction**, the delivery volume is equal to the delivery baseline calculated in accordance with subsection 5(4) minus the following for each **settlement interval**, as applicable:

(i) **metered energy**;

(ii) in the case of an asset that was subject to a **dispatch** for **spinning reserve** or **supplemental reserve**, the volume that the volume that was provided in accordance with Section 205.5 of the **ISO rules**, *Spinning Reserve Technical Requirements and Performance Standards* or Section 205.6 of the **ISO rules**, *Supplemental Reserve Technical Requirements and Performance Standards*; and

(iii) if the delivery hour occurred on a **day** in which the load asset was subject to a **planned outage**, **delayed forced outage** or **automatic forced outage**,excluding the first **day** of that **planned outage**, **delayed forced outage** or **automatic forced outage**, the volume equal to the delivery baseline calculated in accordance with subsection 5(4);

(c) for a load asset that provides a **firm consumption level**, delivery volume is equal to the qualified baseline as calculated in accordance with Section 206.3 of the **ISO rules**, *Determination of Uniform Capacity Value* minus the following for each **settlement interval**, as applicable:

(i) **metered energy**;

(ii) in the case of an asset that provided **spinning reserve** or **supplemental reserve**, the volume that was dispatched; and

(iii) if the delivery hour occurred on a **day** in which the load asset was subject to a **planned outage**, **delayed forced outage** or **automatic forced outage**, excluding the first **day** of that **planned outage**, **delayed forced outage** or **automatic forced outage**, the volume equal to the qualified baseline calculated in accordance with Section 206.3 of the **ISO rules**, *Determination of Uniform Capacity Value*;

(d) for self-supply configurations with excess generation, delivery volume is based on **metered energy**; and

(e) for an import asset, delivery volume is the lesser of:

(i) the long term firm transmission capacity associated with the import asset; or

(ii) the sum of:

(A) the volume in a validated **e-tag**; and

(B) where the **offer** price is greater than or equal to $0.01/ MWh and the asset is subject to the limits referenced in Section 303.2 of the **ISO rules**, *Available Transfer Capability*, the volume in the **offer** during the first 2 delivery hours where the asset is subject to the limits.

(2) The **ISO** must adjust the delivery volumes identified in subsection 11(1) as follows:

(a) in the case of delivery volume substitutions approved in accordance with Section 206.9 of the **ISO rules**, *Asset Substitution* add or subtract the applicable volume;

(b) in the case of an asset that was impacted by a **transmission market constraint**, add the volume that was curtailed to the delivery volume;

(c) in the case of a load asset that was subject to a **dispatch** and armed for the provision of **load shed service**, add the **dispatch** volume that was armed to the delivery volume; or

(d) in the case of volume reallocations in accordance with Section 206.10 of the **ISO rules**, *Volume Reallocation* add or subtract the applicable volume.

(3) The **ISO** must calculate the assessment volume in MWh for an asset subject to a **capacity commitment** during each delivery hour established in subsection 3(2) as follows:

$$assessment\ volume =$$

$$delivery\ volume - (capacity\ commitment \times supply\ shortfall\ duration \times balancing\ ratio)$$

where:

(a) *delivery volume* is the delivery volume in identified in subsections 11(1) and 11(2);

(b) *capacity commitment* is the **capacity commitment** associated with the asset;

(c) supply shortfall duration is the minutes of the supply shortfall event in the settlement interval divided by 60 minutes; and

(d) *balancing ratio* is the balancing ratio calculated in subsection 11(4).

(4) The **ISO** must, in calculating the assessment volume in subsection 11(3), calculate for each delivery hour established in subsection 3(2), the balancing ratio in accordance with the following formula:

$$balancing\ ratio = min\left\{\frac{\sum delivery\ volume}{\sum capacity\ commitment}, 1\right\}$$

where:

(a) *delivery volume* is the sum of the delivery volumes calculated in subsection 11(2) for all assets subject to a **capacity commitment**; and

(b) *capacity commitment* is the sum of the **capacity commitments** associated with all assets.

Under-delivery Adjustment

12(1) The **ISO** must, if the assessment volume determined in accordance with subsection 11(3) is negative, calculate the under-delivery adjustment in dollars for an asset subject to a **capacity commitment** in accordance with the following formula:

$$under\text{-}delivery\ adjustment = adjustment\ rate \times assessment\ volume$$

where:

(a) *adjustment rate* is the adjustment rate calculated in subsection 12(2); and

(b) *assessment volume* is the assessment volume determined in subsection 11(3).

(2) The **ISO** must, in calculating the under-delivery adjustment rate in subsection 12(1), calculate the adjustment rate in $/MWh in accordance with the following formula:

$$adjustment\ rate = 0.6 \times 1.3 \times asset\text{-}specific\ penalty\ rate$$

where:

(a) *asset-specific penalty rate* is the asset-specific penalty rate determined in subsection 10.

(3) The **ISO** must, for each asset, cap the under-delivery adjustment amount for each **settlement period** at the lesser of:

(a) the monthly cap determined in accordance with subsection 14(1), as applicable; or

(b) an amount equal to the annual cap determined in accordance with subsection 14(2) or 14(3), as applicable, minus the sum of all under-delivery adjustments calculated in accordance with this subsection 12(3) for the prior **settlement periods** of the **obligation period**.

Over-delivery Adjustment

13(1) The **ISO** must, when the assessment volume determined in accordance with subsection 11(3) is positive, calculate the over-delivery adjustment in dollars for an asset subject to a **capacity commitment** in accordance with the following formula:

$$over\text{-}delivery\ adjustment = adjustment\ rate \times assessment\ volume$$

where:

(a) *adjustment rate* is the adjustment rate calculated in subsection 13(2); and

(b) *assessment volume* is the assessment volume determined in subsection 11(3).

(2) The **ISO** must, in calculating the over-delivery adjustment in subsection 13(1), calculate the adjustment rate in \$/MWh in accordance with the following formula:

$$|adjustment\ rate| = \frac{\sum under\text{-}delivery\ adjustments}{\sum positive\ assessment\ volumes}$$

where:

(a) *under-delivery adjustments* is sum of the under-delivery adjustments in dollars determined in accordance with 12(3) for all assets subject to a **capacity commitment** in an **obligation period**; and

(b) *positive assessment volumes* is the sum of all positive assessment volumes calculated in accordance with subsection 11(3) for all assets subject to a **capacity commitment** in an **obligation period**.

(3) The **ISO** must, for each asset, limit the over-delivery adjustment amount in dollars for a **settlement period** to an amount equal to the annual cap determined in accordance with subsection 15 minus the sum of all over-delivery adjustments determined in accordance with this subsection 13(3) for the prior **settlement periods** of the **obligation period**.

Maximum Payment Adjustments for Under-availability and Under-delivery

14(1) The **ISO** must cap under-delivery adjustments for an asset during a **settlement period** at:

(a) 3 times the capacity award calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*; or

(b) an amount calculated in accordance with the following formula, if the asset-specific penalty rate for an asset's delivery assessments is established at \$1,667/MWh in accordance with subsection 10(2)(a):

$$monthly\ under\ delivery\ payment\ adjustment\ cap = default\ rate \times capacity\ commitment\ / \ 12 \times 3$$

where:

(i) *default rate* is $33/kW-year * 1000; and

(ii) *capacity commitment* is the **capacity commitment** associated with the asset.

(2) The **ISO** must, subject to subsection 14(3), cap the sum of any under-availability adjustment and under-delivery adjustments for an asset in an **obligation period** at an amount in dollars calculated in accordance with the following formula:

$$annual\ under\ performance\ cap = capacity\ award \times 12 \times 1.3$$

where:

(a) *capacity award* is the asset's monthly capacity award calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*.

(3) The **ISO** must, if the asset-specific penalty rate for an asset's availability assessment is established at $133/MWh in accordance with subsection 6(2)(a), or if the asset-specific penalty rate for an asset's delivery assessments is established at $1,667/MWh in accordance with subsection 10(2)(a), cap the sum of any under-availability adjustment and under-delivery adjustments for such asset in an **obligation period** at an amount in dollars equal to:

$$annual\ under\ performance\ cap = default\ rate \times capacity\ commitment \times 1.3$$

where:

(a) *default rate* is $33/kw-year x 1000; and

(b) *capacity commitment* is the **capacity commitment** associated with an asset.

Maximum Payment Adjustments for Over-availability and Over-delivery

15(1) The **ISO** must, notwithstanding subsection 15(2), cap the sum of any over-availability adjustment and over-delivery adjustments for an **obligation period** at an amount in dollars for an asset in accordance with the following formula:

$$annual\ over\ performamce\ cap = capacity\ award \times 12$$

where:

(a) *capacity award* is the asset's monthly capacity award in $/month calculated in accordance with Section 103.10 of the **ISO rules**, *Capacity Award Calculation*.

(2) The **ISO** must, if the asset-specific penalty rate for an asset's availability assessment is established at $133/MWh in accordance with subsection 6(2)(a) or if the asset-specific penalty rate for an asset's delivery assessments is established at $1,667/MWh in accordance with subsection 10(2)(a), cap the sum of any over-availability adjustment and over-delivery adjustments for each **obligation period** at an amount in dollars for such asset in accordance with the following formula:

$$annual\ over\ performance\ cap = default\ rate \times capacity\ commitment$$

where:

(a) *default rate* is $33/kw-year x 1000; and

(b) *capacity commitment* is the **capacity commitment** associated with an asset.

Revision History

Date	Description
xxxx-xx-xx	Initial release

External Consultation Draft
October 22, 2018

Applicability

1 Section 206.10 applies to:

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

(b) the **ISO**.

Requirements

Notification of Reallocation Volumes

2 The **ISO** must, if an asset was assessed an over-delivery adjustment or under-delivery adjustment on a preliminary capacity market statement issued in accordance with Section 103.9 of the **ISO rules**, *Capacity Market Financial Settlement*, inform a **capacity market participant** no later than 1 **business day** following the issuance of the preliminary capacity market statement of the following for each delivery hour determined in accordance with Section 206.8 of the **ISO rules**, *Forward Period Obligation Performance Assessment*:

(a) the asset's delivery volume in MWh;

(b) the balancing ratio; and

(c) the asset's over-delivery or under-delivery assessment volume, as applicable, determined in accordance with Section 206.8 of the **ISO rules**, *Obligation Performance Period Assessments* which was included on the preliminary capacity market statement.

Volume Reallocation Request

3(1) A **capacity market participant** must, in order to reallocate an over-delivery assessment volume or under-delivery assessment volume between different assets, submit a complete application, available on the AESO website, to the **ISO** no later than 5 **business days** following receipt of the information provided in accordance with subsection 2.

(2) A **capacity market participant** must include in the application referred to in subsection 3(1) the following:

(a) the unique identifier of the asset with the over-delivery assessment volume;

(b) the unique identifier of the asset with the under-delivery assessment volume;

(c) verification that all capacity market participants agree to the reallocation;

(d) the delivery hour for which the reallocation applies; and

(e) the proposed reallocation volume in MWh.

(3) The **ISO** may request additional clarification or information regarding a volume reallocation application or supporting documents from the **capacity market participant**.

Volume Reallocation Approval

4(1) The **ISO** must, based on the information in the application provided in accordance with subsection 3(1), be satisfied that:

(a) for the asset with an over-delivery assessment volume:

(i) the proposed reallocation volume is less than or equal to the over-delivery assessment

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Applicability

1 Section 206.9 applies to:

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

(b) the **ISO**.

Requirements

Delivery Volume Substitution Request

2(1) A **capacity market participant** for an asset subject to a **capacity commitment** must, in order to substitute delivery volumes from another asset, submit a complete application, available on the AESO website, to the **ISO** following the last **rebalancing auction**, prior to the effective time of the substitution.

(2) A **capacity market participant** must, include in the application referred to in subsection 2(1) the following:

(a) the unique identifiers of the assets receiving and providing the substitute delivery volume referred to in subsection 2(1);

(b) verification that the **capacity market participant** providing the substitute delivery volumes agrees with the substitution;

(c) the effective time and duration of the delivery volume substitution; and

(d) the amount of delivery volume subject to the substitution.

(3) The **ISO** may request additional clarification or information regarding a delivery volume substitution request or supporting documents from the **capacity market participant.**

Delivery Volume Substitution Approval

3(1) The **ISO** must, based on the information in the application provided in accordance with subsection 2, be satisfied that:

(a) the asset providing the substitute delivery volume:

(i) has an assigned **uniform capacity value** and is not subject to a **capacity commitment** for the **obligation period**; or

(ii) is subject to a **capacity commitment** less than the **uniform capacity value** of the asset for the **obligation period**;

(b) where the substitute delivery volume is provided from an asset with **new capacity**, refurbished **capacity** or incremental **capacity** such asset will be energized and commissioned by the effective date of the substitution;

(c) the duration of the substitution is:

(i) a minimum of one **settlement interval**; and

(ii) up to a maximum of an entire **obligation period**;

(d) the amount of the substitution is:

(i) a minimum of 1 MW; and

(ii) equal to or less than the **capacity commitment** associated with the asset receiving the substitute delivery volumes;

(e) the substitution has been agreed to by the **capacity market participant** providing the substitute delivery volume;

(f) where multiple substitutions are in effect or proposed for the asset receiving the substitute delivery volumes over the same duration, the total substitute delivery volume must be less than or equal to the **capacity commitment** of that asset; and

(g) the substitute delivery volume is not committed to a different asset for all or a portion of the duration in subsection 2(2)(c).

(2) The **ISO** must approve the application referred to in subsection 2(1) if:

(a) the application is complete; and

(b) the **ISO** is satisfied pursuant to subsection 3(1).

Excess Delivery Volumes from an Asset

4(1) The **ISO** must, following a delivery hour, calculate the excess delivery volumes for an asset providing substitute delivery volumes pursuant to a substitution approved by the **ISO** in subsection 3(2) in accordance with the following formula:

$$excess\ delivery\ volume = delivery\ volume - (capacity\ commitment\ \times supply\ shortfall\ duration \times\ balancing\ ratio)$$

where:

(a) *delivery volume* is the delivery volume identified in accordance with subsection 11(1) of Section 206.8 of the **ISO rules**, *Obligation Period Performance;*

(b) *capacity commitment* is:

(i) the **capacity commitment** associated with the asset; or

(ii) 0, in the case that the asset is not subject to a **capacity commitment**;

(c) *supply shortfall duration* is the minutes of the supply shortfall event in the **settlement interval** divided by 60 minutes; and

(d) *balancing ratio* is the balancing ratio calculated for the delivery hour in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance*.

(2) The **ISO** must, following a delivery hour, calculate the delivery assessment volume in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance*, for an asset approved to receive substitute delivery volumes from the asset referred to in subsection 4(1) without adjusting for any substitutions.

(3) The **ISO** must, if the excess delivery volume calculated in subsection 4(1) is positive, allocate the excess delivery volume to the assets that have a negative delivery assessment volume calculated in subsection 4(2) based on the order of priority that the requests for substitution from the asset referred to in subsection 4(1) were received by the **ISO**.

(4) The **ISO** must, when allocating the excess delivery volume in subsection 4(3), allocate an amount of excess delivery volume up to the absolute value of such assets negative delivery assessment volume.

(5) The **ISO** must, if any excess delivery volumes remain after allocating in accordance with subsections 4(3) and 4(4), allocate the remaining excess delivery volume to the asset providing substitute delivery volumes.

Revision History

Date	Description
xxxx-xx-xx	Initial release

volume of the asset; and

(ii) if the asset is participating in volume reallocation with multiple other assets, the sum of any proposed or approved reallocation volumes from the asset must be less than or equal to the over-delivery assessment volume of the asset;

(b) for the asset with a under-delivery assessment volume:

(i) the proposed reallocation volume is less than or equal to the under-delivery assessment volume of the asset; and

(ii) if the asset is participating in volume reallocation with multiple other assets, the sum of any proposed or approved reallocation volumes from the asset must be less than or equal the under-delivery assessment volume of the asset;

and

(c) the proposed volume reallocation is in respect of the same delivery hour.

(2) The **ISO** must approve the application referred to in subsection 3 if:

(a) the application is complete; and

(b) the **ISO** is satisfied pursuant to subsection 4(1).

Adjustments of Approved Reallocated Volumes

5 The **ISO** must adjust approved reallocation volumes to reflect energy specified on the final capacity market statement issued on a final basis in accordance with Section 103.9 of the **ISO rules**, *Capacity Market Financial Settlement*.

Allocation of Approved Reallocation Volumes

6(1) The **ISO** must apportion the over delivery volume to any assets with under delivery volume approved for reallocation in the order that the request for reallocation was received.

Revision History

Date	Description
xxxx-xx-xx	Initial release

External Consultation Draft
October 22, 2018

Applicability

1 Section 206.11 applies to:

(a) the **ISO**; and

(b) a **capacity market participant** requiring an energy and ancillary services offset for an asset.

Requirements

Information for Energy and Ancillary Services Offset Calculation

2 The **capacity market participant** must, in accordance with the timelines prescribed in the *Capacity Market Auction Guidelines*, provide the following information to the **ISO** for the **obligation period** or a portion of the **obligation period**, as applicable:

(a) the fuel consumption efficiency of an asset in GJ/MWh for the **obligation period** *t*;

(b) for a thermal **generating unit**'s or thermal **aggregated generating facility**'s that is not fueled by natural gas, the expected variable cost of fuel for the asset in $/GJ, including variable transportation charges for the **obligation period** *t*;

(c) the variable operations and maintenance costs of an asset in $/MWh for **obligation period** *t*, excluding fuel related costs and amortized or capitalized costs;

(d) the tonnes of CO_2/MWh emitted by the asset when producing electricity;

(e) for a wind or solar **aggregated generating facility**, hydro **generating unit**, **energy storage facility**, or a thermal **generating unit** or an **aggregated generating facility**:

(i) anticipated **forced outages** and derating values in percentages; and

(ii) expected forward product energy production in MWh and substantiating evidence;

(f) for all other assets not specified in subsection 3(e):

(i) seasonal ambient derates; and

(ii) anticipated **planned outages** and **forced outages**;

(g) the revenues in dollars received from other sources outside of the electricity market that are directly related to production in the **obligation period**; and

(h) expected **ancillary services** revenues in dollars for products other than **spinning reserve**, **supplemental reserve** and **regulating reserve**.

Calculation of Energy and Ancillary Services Offset for Assets

3(1) The **ISO** must, when required under Section 201.15 of the **ISO rules**, *Delisting* and Section 206.7 of the **ISO rules**, *Capacity Market Mitigation,* for every **obligation period** or portion of an **obligation period**, calculate the energy and ancillary services offset value in accordance with the following formula:

$$Energy\ and\ ancillary\ services\ offset_t = \frac{(forward\ power\ price_t - energy\ market\ expense_t) \times forward\ product\ energy_t + other\ revenues}{maximum\ capability \times 1000}$$

where:

(a) *t* equals the **obligation period** or portion of an **obligation period**, for which the energy and ancillary services offset is being determined;

(c) *forward power price* $_t$ is the forward power price for an asset for **obligation period** *t* calculated in accordance with subsection 3(4);

(d) *energy market expense* $_t$ is the energy market expense for the asset for **obligation period** *t* calculated in accordance with subsection 3(3);

(e) *forward product energy* $_t$ is the forward product energy value in MWh for **obligation period** *t* as follows:

(i) for a wind or solar **aggregated generating facility**, hydro **generating unit**, **energy storage facility**, or a thermal **generating unit** or an **aggregated generating facility** with expected production hours less than 50% of the hours in **obligation period** *t*, the expected forward product energy production provided in accordance with 2(e); or

(ii) for all other assets, calculated in accordance with subsection 3(2);

(f) *other revenues* is the revenues received from other sources outside of the electricity market and expected **ancillary services** revenues, provided in accordance with subsections 2(g) and 2(h); and

(g) *maximum capability* is the **maximum capability** of the asset.

(2) The **ISO** must, in calculating the energy and ancillary services offset $_t$ under subsection 3(1), calculate the *forward product energy* $_t$ in subsection 3(1)(e)(ii) in accordance with the following formula:

$$forward\ product\ energy_t = maximum\ capability \times (1 - forced\ outage\ and\ derating\ values) \times forward\ power\ product\ hours$$

where:

(a) *maximum capability* is the **maximum capability** of the asset;

(b) *forced outage and derating values* are the percentages provided in subsection 2(e)(i); and

(c) *forward power product hours* are the number of hours in the forward power product determined in subsection 3(4)(b)(i).

(3) The **ISO** must, in calculating the energy and ancillary services offset $_t$ under subsection 3(1) above, calculate the energy market expense $_t$ in accordance with the following formula:

$$energy\ market\ expense_t =$$

$$[forward\ fuel\ price_t \times (1 + commodity\ fuel\ charge_t)] \times heat\ rate_t + variable\ operations\ and\ maintenance_t + (emission\ intensity - established\ benchmark_t) \times carbon\ price_t + transmission\ losses_t + trading\ charge_t$$

where:

(a) *t* equals the **obligation period**, or the portion of an **obligation period**, for which the energy and ancillary services offset is being determined;

(b) *forward fuel price$_t$* in \$/GJ is:

(i) if the thermal **generating unit**'s or **aggregated generating facility**'s fuel is natural gas, the weighted average of the settlement corresponding to **obligation period** *t*, where such settlement are selected by the **ISO** from either:

(A) the published NGX Phys, FP (CA/GJ), AB-NIT; or

(B) if the NGX forward Phys, FP is unavailable or not applicable for use in the calculation of the forward fuel price, another comparable industry standard natural gas benchmark for **obligation period** *t*;

(ii) if the thermal **generating unit**'s or thermal **aggregated generating facility**'s fuel is not natural gas, the expected variable cost of fuel during the **obligation period** *t* provided in subsection 2(b); and

(iii) for non-thermal **generating unit** or **aggregated generating facilities**, is 0.

(c) *commodity fuel charge$_t$* is:

(i) if thermal **generating unit's** or **aggregated generating facility**'s fuel is natural gas, the most recent 12 **month** average of published NOVA Gas Transmission Ltd NGTL Fuel Usage and Measurement Variance expressed as a percentage; and

(ii) for all other assets, 0;

(d) *heat rate* is the heat rate provided in subsection 2(a);

(e) *variable operations and maintenance$_t$* are the costs provided in subsection 2(c);

(f) *emission intensity* is the tonnes of CO_2/MWh provided in subsection 2(d);

(g) *established benchmark$_t$* is the weighted average of the calendar year values matching **obligation period** *t* for an established benchmark for electricity published by a public authority;

(h) *carbon price$_t$* is the weighted average of the calendar year values matching **obligation period** *t* for the carbon price published by a public authority for carbon emissions in Alberta;

(i) *transmission losses* $_t$ is the transmission loss value for **obligation period** *t* in \$/MWh calculated as the loss factor of the asset multiplied by the forward power price $_t$ where:

(i) the loss factor is the most recent published loss factor for the asset published on the AESO website; and

(ii) forward power price $_t$ for **obligation period** $_t$ is the value in subsection 3(4), as applicable;

and

(j) *energy market trading charge* $_t$ is the most recent energy market trading charge in \$/MWh published on the AESO website.

(4) The **ISO** must in calculating the energy and ancillary services offset in subsection 3(1), calculate the forward power price $_t$ in \$/MWh as follows:

(a) for a wind or solar **aggregated generating facility**, hydro **generating unit**, **energy storage facility**, or a thermal **generating unit** or an **aggregated generating facility** with expected production hours less than 50% of the hours in **obligation period** *t*, the NGX FP Flat forward power price multiplied by a forward power price adjustment factor calculated in subsection 3(5); or

(b) for all other assets, is the weighted average of the settlements matching the **obligation period** *t*, where the settlements are the average over a period determined by the **ISO** from either:

(i) the published NGX forward power products in Appendix 1 that yields the highest energy and ancillary services offset $_t$ for **obligation period** *t*; or

(ii) if the NGX forward power product is unavailable or not applicable for use in the calculation of the energy and ancillary services offset, another comparable industry standard that yields the highest energy and ancillary services offset $_t$ for **obligation period** *t*;

(5) The **ISO** must, in calculating the forward power price $_t$ in subsection 3(4)(a), calculate the forward power price adjustment factor in accordance with the following formula:

$$forward\ power\ price\ adjustment\ factor =$$

$$\left(\frac{\sum\ (hourly\ production\ \times pool\ price)}{\sum hourly\ production}\right) \div annual\ average\ pool\ price$$

where:

(a) *hourly production* is the production of the asset in MWh in each hour from the **obligation period** or equivalent November 1 through October 31 period should an **obligation period** not yet have occurred, occurring most recently to the point in time at which the energy and ancillary services offset is calculated;

(b) *pool price* is the pool price for each hour for which production data is provided for in 3(5)(a) from the **obligation period** or equivalent November 1 through October 31 period should an **obligation period** not yet have occurred, occurring most recently to the point in time at which the energy and ancillary services offset is calculated; and

(c) *annual average pool price* is the average of all pool prices during the **obligation period** or equivalent November 1 through October 31 period should an **obligation period** not yet have occurred, occurring most recently to the point in time at which the energy and ancillary services offset is calculated.

Attestation and Assessment of Information

4(1) The **capacity market participant** must submit an attestation from a corporate officer of the **legal owner** that the information provided pursuant to subsection 2 is accurate.

(2) The **ISO** must request additional information from the **capacity market participant** concerning the information submitted in subsection 2 where the **ISO** determines such information appears unreasonable.

(3) The **ISO** must after requesting additional information pursuant to subsection 2:

(a) exclude costs provided in accordance with subsection 2 if the **ISO** determines that such costs are unreasonable; and

(b) adjust forward product energy production provided in accordance with subsection 2 if the **ISO** determines that such expected energy production is unreasonable.

Appendices

Appendix 1 – *List of Forward Power Products*

Revision History

Date	Description
yyyy-mm-dd	

Appendix 1 – List of Forward Power Products

Forward Power Product Names on NGX:

- NGX Fin FUT FF, FP for AESO Flat
- NGX Fin FUT FF, FP for AESO Ext Off Peak
- NGX Fin FUT FF, FP for AESO Ext Peak
- NGX Fin FUT FF, FP for AESO Off Peak
- NGX Fin FUT FF, FP for AESO On Peak
- NGX Fin FUT FF, FP for AESO Super Peak
- NGX Fin FUT FF, FP for AESO Hourly