Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00396			
Subject:	Generation Cost Guarantees			
Title:	HE1 Day-Ahead Production Costs Guarantees Triggered by Ramping Limitations			
Nature of Proposal:	☒ Alteration	☐ Deletion	☐ Addition	
Chapter:	Chapter 9	Appendix:	N/A	
Sections:	4.7D			
Sub-sections proposed for amending:	4.7D.6, 4.7D.7 (new), 4.8.2			

PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Draft for Technical Panel Review	September 11, 2012
2.0	Publish for Stakeholder Review and Comment	September 20, 2012
3.0	Submitted for Technical Panel Vote	October 9, 2012
4.0	Recommended by Technical Panel; Submitted for IESO Board Approval	October 16, 2012

Approved Amendment Publication Date:	
Approved Amendment Effective Date:	

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IESO-administered markets* if the amendment is not made.
- Alternative solutions considered.
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IESO-administered markets*.

Summary

It is proposed to amend the market rules to limit unintended Variant 3 day-ahead production cost guarantee (DA-PCG) payments which are triggered when the calculation engine (DACE) of the day-ahead commitment process (DACP) attempts to bring a unit offline beginning in HE1of the next day from an online status in HE24 of the current day as established by the pre-dispatch schedule. The payments are triggered when the DACE cannot bring the unit offline due to ramp rate limitations in the offer of the generation unit.

Background

Refer to MR-00396-Q00

Discussion

Chapter 9, section 4.7D.2 obligates the IESO to determine the type of schedule and which components described in section 4.7.D.1 are included in the day-ahead production costs guarantee. Section 4.7D.3 obligates the IESO to calculate the day-ahead production costs guarantee components for each interval in the schedule of record where the generator is injecting into the IESO-controlled grid. In situations where the Day 0, HE1 Variant 3 schedule defined in section 4.7D.2 is attributable to the DACP calculation engine committing the unit to respect the technical ramping limitations of a generation unit, it is proposed to:

- amend section 4.7D.6 of Chapter 9 and add a new section 4.7D.7 such that the Variant 3 DA-PCG is not eligible when the Day 0 HE1 schedule is triggered by online status in Day-1 HE24 due to any pre-dispatch schedule other than a schedule of record; and
- add new section 4.8.2.16 of Chapter 9 to redistribute any payments recovered under section 4.7D.6, and make grammatical corrections to sections 4.8.2.14 and 4.8.2.15.

As a matter of clean-up, it is also proposed to:

- correct the cross reference in section 4.7D.4 from “4.7D.2.1” to “4.7D.2”.

PART 4 – PROPOSED AMENDMENT

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4.7D Day-Ahead Production Cost Guarantee Payments

4.7D.1 The *IESO* shall determine on a *per-start* basis, for each *generation unit* that has met the criteria set out in chapter 7, sections 5.8.4, a day-ahead production costs guarantee consisting of the following components:

a. Component 1 is any shortfall in payment on the delivered real-time *dispatch* of the *schedule of record* and will be based upon the real-time revenue received for that amount of *energy* in comparison with the value as represented in the *generator's* day-ahead *offer* for incremental *energy* and *speed-no-load costs*;

b. Component 2 is the value of arranging the delivery (where the real-time *offer* is less than the day-ahead *offer*), or any gain (where the real-time *offer* is greater than the day-ahead *offer*)[1] for the portion of *schedule of record* quantity that is not implemented in the real-time *dispatch* schedule;

c. Component 3 is any income from real-time *energy* congestion management settlement credit (CMSC) included in a *generator's schedule of record* delivered in real-time and will be used to reduce the day-ahead production cost guarantee payment;

d. Component 4 is any income from real-time *operating reserve* in a *generator's schedule of record* that was not dispatched in real-time and will be used to reduce the day-ahead production cost guarantee payment; and

e. Component 5 is the as-offered *start-up cost* (as-offered value of bringing an off-line *generator* on-line to *minimum loading point*).

4.7D.2 The *IESO* shall determine the type of schedule and which components described in Section 4.7D.1 are included in the day-ahead production cost guarantee, for each *generation unit,* as follows:

a. Variant 1: If the *generation unit* is not operating from the previous *dispatch day* into the current *dispatch day*, the day-ahead production costs guarantee calculation for the current *dispatch day* includes Components 1 through 5. Variant 1 occurs when:

- the *generation unit* is not operating at the end of the previous DACP dispatch day (Day-1 HE 24 indicates off-line status); or

[1] Where the real-time *offer* is equal to the day-ahead *offer*, the value/gain is equal to zero (0).

- the *generation unit* is operating at the end of the previous DACP dispatch day (Day-1, HE 24 indicates on-line status) but it is not operating into the current DACP dispatch day (Day 0, HE 1 indicates off-line status); or
- the *generation unit* is scheduled to start later in the current DACP dispatch day.

b. Variant 2: If the *generation unit* is operating from the previous *dispatch day* into the current *dispatch day*, to complete its *minimum generation block run-time* the day-ahead production costs guarantee calculation for the current *dispatch day* includes Components 1 through 4 but does not include Component 5. The day-ahead production costs guarantee calculation also includes a clawback for Component 1 and Component 3

c. Variant 3: If a *generation unit* is operating from the previous *dispatch day* into the current *dispatch day* and has completed its *minimum generation block run-time* in the previous *dispatch day*, the day-ahead production costs guarantee calculation for the current *dispatch day* includes Components 1 through 4 but does not include Component 5. Variant 3 occurs when:

- the *generation unit* is operating from the previous DACP *dispatch day* (Day-1, HE 24 indicates on-line status) into the current DACP *dispatch day* (Day 0, HE 1 indicates on-line status) and has completed its *MGBRT* in the previous DACP *dispatch day*; or
- the *generation unit* is operating from the previous DACP *dispatch day* (Day-1, HE 24 indicates on-line status) into the current DACP *dispatch day*, (Day 0, HE 1 indicates on-line status) and has not completed its *MGBRT* and is scheduled in the current DACP *dispatch day* for hours in excess of completing its *MGBRT* from the previous DACP *dispatch day*. Variant 3 in the current DACP *dispatch day* is only for the hours in excess of completing the *MGBRT* hours for the start from the previous DACP *dispatch day*.

4.7D.3 The IESO shall calculate the day-ahead production cost guarantee components 1 through 4 for each interval in the *schedule of record* where the *generator* is injecting into the *IESO-controlled grid*.

4.7D.4 The IESO shall calculate the day-ahead production cost guarantee components based on the type of schedule described in Section 4.7D.2~~.1~~ as follows:

Component 1 – Variants 1, 2 and 3

Component 1 includes any shortfall in payment for the minimum of the *generator's schedule of record*, real-time constrained schedule and the allocated quantity of *energy* injected based

upon the real-time revenue received for that amount of *energy* in comparison with the costs as represented in the *generator's* day-ahead *offer*. Component 1 is calculated as follows:

$PCG\_COMP1_{k,h}^{m,t}$ = All day-ahead costs excluding as-offered *start-up costs* for the minimum of the *generator's schedule of record*, real-time constrained scheduled and the allocated quantity of *energy* injected over the interval minus all real-time revenue received over the interval for that amount of *energy*

$$PCG\_COMP1_{k,h}^{m,t} = (-1)\times OP\left(EMP_{h}^{m,t}, MIN\left(DA\_DQSI_{k,h}^{m,t}, DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t}\right), DA\_BE_{k,h}^{m,t}\right) + \frac{DA\_SNLC_{k,h}^{m}}{12}$$

Component 1 Clawback – Variant 2

Component 1 Clawback recovers the day-ahead production cost guarantee Component 1 paid up to the *minimum loading point* for the remaining hours of *MGBRT*. Component 1 Clawback– Variant 2 is calculated as follows:

$PCG\_COMP1\_CB_{k,h}^{m,t}$ = All day-ahead costs excluding as-offered *start-up costs* up to the minimum of the *generation facility's minimum loading point* and the allocated quantity of energy injected over the interval minus all real-time revenue received over the interval for that amount of *energy*

$$PCG\_COMP1\_CB_{k,h}^{m,t} = (-1)\times OP\left(EMP_{h}^{m,t}, MIN\left(AQEI_{k,h}^{m,t}, MLP_{k,h}^{m,t}\right), DA\_BE^{m,t}\right) + \frac{DA\_SNLC_{k,h}^{m}}{12}$$

Component 2 – Variants 1, 2 and 3

If, as a result of economic selection, a portion of the *schedule of record* is not implemented in the real-time *dispatch* schedule, the day-ahead production cost guarantee:

- Guarantees the cost of arranging the delivery if the real-time *offer price* is less than the day-ahead *offer price*; or
- Subtracts any gain where the real-time *offer price* is greater than the day-ahead *offer price*.

In the absence of a forced de-rating or a scheduled de-rating, if there are no real-time *energy offers* for any portion of the day-ahead constrained schedule, the real-time *energy offers* for that portion of *energy* will be set to MMCP (*Maximum Market Clearing Price*) for the purposes of calculating Component 2.

If the real-time *energy offers* for any portion of the day-ahead constrained schedule is below $0.00 $/MWh (i.e. negative), the real-time *energy offers* for that portion of *energy* will be set to $0.00 $/MWh for the purposes of calculating Component 2.

Component 2 is calculated as follows:

$PCG\_COMP2_{k,h}^{m,t}$ = As-offered day-ahead costs excluding as-offered *start-up costs* for the difference between:

- the minimum of the *generator's schedule of record*, the de-rated value of the *generation facility* or the maximum of the real-time constrained schedule and the allocated quantity of *energy* injected; and
- the minimum of the *generator's schedule of record* and the de-rated value of the *generation facility*

over the interval minus all real-time *energy offers* (with a minimum limit of zero) over the interval for that amount of *energy*

$$PCG\_COMP2_{k,h}^{m,t} = XDA\_BE_{k,h}^{m,t} - MAX\left(0, XBE_{k,h}^{m,t}\right)$$

Where:

Let $XBE_{k,h}^{m,t}$ be the function which calculates the area under the curve created by an n x 2 matrix (B) of offered *price-quantity pairs*:

$$\left[\sum_{n=p}^{s^*} P_n \times (Q_n - Q_{n-1})\right] + (Q - Q_{s^*}) \times P_{s^*+1}$$

where matrix (B) is *energy offers* submitted in real-time, represented as an N by 2 matrix of *price-quantity pairs* for each *market participant* 'k' at m*etering point* 'm' during *metering interval* 't' of *settlement hour* 'h' arranged in ascending order by the offered price in each *price quantity pair* where offered prices 'P' are in column 1 and offered quantities 'Q' are in column 2

Let $XDA\_BE_{k,h}^{m,t}$ be the function which calculates the area under the curve created by an n x 2 matrix (B) of offered *price-quantity pairs*:

$$\left[\sum_{n=c^*}^{d^*} P_n \times (Q_n - Q_{n-1})\right] + (Q - Q_{d^*}) \times P_{d^*+1}$$

where matrix (B) is *energy offers* submitted in pre-dispatch, represented as an N by 2 matrix of *price-quantity pairs* for each *market participant* 'k' at *metering point* 'm' during *metering interval* 't' of *settlement hour* 'h' arranged in ascending order by the offered price in each *price quantity pair* where offered prices 'P' are in column 1 and offered quantities 'Q' are in column 2

c^* = the highest indexed row of matrix $XDA\_BE_{k,h}^{m,t}$ such that $Q_{c^*} \leq \min[DA\_DQSI_{k,h}^{m,t}, OPCAP_{k,h}^{m,t}, \max(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t})] \leq Q_n$ and where $Q_{c^*-1} = \min[DA\_DQSI_{k,h}^{m,t}, OPCAP_{k,h}^{m,t}, \max(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t})]$ and where if $Q_{c^*} < Q_{c^*-1}$, let $Q_{c^*} = Q_{c^*-1}$

d^* = the highest indexed row of matrix $XDA\_BE_{k,h}^{m,t}$ such that $Q_{d^*} \leq \min[DA\_DQSI_{k,h}^{m,t}, OPCAP_{k,h}^{m,t}] \leq Q_n$

p^* = the highest indexed row of matrix $XBE_{k,h}^{m,t}$ such that $Q_{p^*} \leq \min[DA\_DQSI_{k,h}^{m,t}, OPCAP_{k,h}^{m,t}, \max(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t})] \leq Q_n$ and where $Q_{p^*-1} = \min[DA\_DQSI_{k,h}^{m,t}, OPCAP_{k,h}^{m,t}, \max(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t})]$ and where if $Q_{p^*} < Q_{p^*-1}$, let $Q_{p^*} = Q_{p^*-1}$

s^* = the highest indexed row of matrix $XBE_{k,h}^{m,t}$ such that $Q_{s^*} \leq \min[DA\_DQSI_{k,h}^{m,t}, OPCAP_{k,h}^{m,t}] \leq Q_n$

Component 3 – Variants 1, 2 and 3

- The day-ahead production cost guarantee payment for a *generator* will be reduced by the income received from real time congestion management settlement credits (CMSC) for the *generator's schedule of record* delivered in real-time.

- The *generator's schedule of record* will be measured against both the real-time constrained schedule and the real-time unconstrained schedule to determine the amount of revenue from congestion management settlement credits that should be included in the day-ahead production cost guarantee calculation.

- For any interval, there are six possible orderings of the amount of a *generation facility's* capacity that may be included in the *schedule of record*, the real-time constrained schedule and the real-time unconstrained schedule. The table below summarizes the six possible orderings and the inclusion of Component 3 in the day-ahead production cost guarantee calculation.

For the purposes of determining the applicable CMSC in Component 3, the o*ffer price* is subject to Section 3.5.6.

Table: Ordering of Generator's Capacity and Day-Ahead Production Cost Guarantee Component 3

Scenario	Ordering	Component 3 - CMSC Included?
1	DQSI >= MQSI >= DA_DQSI	N
2	MQSI >= DQSI >= DA_DQSI	N
3	DQSI > DA_DQSI > MQSI	Y (Partial CMSC)
4	MQSI > DA_DQSI > DQSI	Y (Partial CMSC)
5	DA_DQSI >= DQSI > MQSI	Y (All CMSC)
6	DA_DQSI >= MQSI > DQSI	Y (All CMSC)

Component 3 is calculated as follows :

$PCG\_COMP3_{k,h}^{m,t}$ = Income received from real time congestion management settlement credits (CMSC) for the *generator's schedule of record* delivered in real-time over the interval

Component 3 is only calculated when:

- the real-time CMSC ($TD_{k,h,105}^{m,t}$) for the same interval is a value other than zero; and

- the mathematical sign of (DQSI-MQSI) is equal to the mathematical sign of (AQEI-MQSI).

Scenario 1

$$PCG\_COMP3_{k,h}^{m,t} = 0$$

Scenario 2

$$PCG\_COMP3_{k,h}^{m,t} = 0$$

Scenario 3

$$PCG\_COMP3_{k,h}^{m,t} = OP\left(EMP_h^{m,t}, MQSI_{k,h}^{m,t}, BE_{k,h}^{m,t}\right) - MAX\left(OP\left(EMP_h^{m,t}, DA\_DQSI_{k,h}^{m,t}, BE_{k,h}^{m,t}\right), OP\left(EMP_h^{m,t}, AQEI_{k,h}^{m,t}, BE_{k,h}^{m,t}\right)\right)$$

Scenario 4

$$PCG\_COMP3_{k,h}^{m,t} = OP\left(EMP_h^{m,t}, DA\_DQSI_{k,h}^{m,t}, BE_{k,h}^{m,t}\right) - MAX\left(OP\left(EMP_h^{m,t}, DQSI_{k,h}^{m,t}, BE_{k,h}^{m,t}\right), OP\left(EMP_h^{m,t}, AQEI_{k,h}^{m,t}, BE_{k,h}^{m,t}\right)\right)$$

Scenario 5

$PCG\_COMP3_{k,h}^{m,t}$ = Congestion management settlement credit calculated as per Section 3.5.

Scenario 6

$PCG\_COMP3_{k,h}^{m,t}$ = Congestion management settlement credit calculated as per Section 3.5.

Component 3 Clawback – Variant 2

- Component 3 Clawback – Variant 2 recovers the congestion management settlement credits (CMSC) paid up to the *minimum loading point* for the remaining hours of MGBRT. Component 3 Clawback – Variant 2 is calculated as follows :

$PCG\_COMP3\_CB_{k,h}^{m,t}$ = Income received from real time congestion management settlement credits (CMSC) from the minimum of *generation units minimum loading point* and the allocated quantity of energy injected to the real-time unconstrained schedule over the interval

Component 3 Clawback - Variant 2 is only calculated when:

- the *schedule of record* is not less than both the real-time constrained schedule and the real-time unconstrained schedule and the event is a constrained-on event (i.e. Scenarios 3 and 5);
- the *minimum loading point* is greater than the real-time unconstrained schedule; and
- Component 3 ($PCG\_COMP3_{k,h}^{m,t}$) for the same interval is a value other than zero.

Scenario 1

$PCG\_COMP3\_CB_{k,h}^{m,t} = 0$

Scenario 2

$PCG\_COMP3\_CB_{k,h}^{m,t} = 0$

Scenario 3

In Scenario 3, the clawback ($PCG\_COMP3\_CB_{k,h}^{m,t}$) is only calculated when the *minimum loading point* is greater than the real-time unconstrained schedule.

$$PCG\_COMP3\_CB_{k,h}^{m,t} = \begin{aligned} &MAX\left(OP\left(EMP_h^{m,t}, MLP_{k,h}^{m,t}, BE_{k,h}^{m,t}\right), OP\left(EMP_h^{m,t}, AQEI_{k,h}^{m,t}, BE_{k,h}^{m,t}\right)\right) \\ &- OP\left(EMP_h^{m,t}, MQSI_{k,h}^{m,t}, BE_{k,h}^{m,t}\right) \end{aligned}$$

Scenario 4

$PCG\_COMP3\_CB_{k,h}^{m,t} = 0$

Scenario 5

In Scenario 5, the clawback ($PCG\_COMP3\_CB_{k,h}^{m,t}$) is only calculated when the *minimum loading point* is greater than the real-time unconstrained schedule.

$$PCG\_COMP3\_CB_{k,h}^{m,t} = \begin{aligned} &MAX\left(OP\left(EMP_h^{m,t}, MLP_{k,h}^{m,t}, BE_{k,h}^{m,t}\right), OP\left(EMP_h^{m,t}, AQEI_{k,h}^{m,t}, BE_{k,h}^{m,t}\right)\right) \\ &- OP\left(EMP_h^{m,t}, MQSI_{k,h}^{m,t}, BE_{k,h}^{m,t}\right) \end{aligned}$$

Scenario 6

$PCG\_COMP3\_CB_{k,h}^{m,t} = 0$

Component 4 – Variants 1, 2 and 3

The day-ahead production cost guarantee payment for a *generator* will be reduced by the income received from real-time *operating reserve* for the *generator's schedule of record* not dispatched in real-time.

Component 4 is calculated as follows:

$PCG\_COMP4_{k,h}^{m,t}$ = net income received from real-time *operating reserve* over the interval for the *generator's schedule of record* not dispatched in real-time

$$PCG\_COMP4_{k,h}^{m,t} = \begin{aligned} &OP\left(PROR_{r1,h}^{m,t}, 30R\_SQROR_{r1,k,h}^{m,t}, BR_{k,h}^{m,t}\right) + OP\left(PROR_{r2,h}^{m,t}, 10NS\_SQROR_{r2,k,h}^{m,t}, BR_{k,h}^{m,t}\right) \\ &+ OP\left(PROR_{r3,h}^{m,t}, 10S\_SQROR_{r3,k,h}^{m,t}, BR_{k,h}^{m,t}\right) \end{aligned}$$

Where:

r1 = *30-minute operating reserve*

r2 = 10-minute non-spinning *operating reserve*

r3 = 10-minute spinning *operating reserve*

$$30R\_SQROR_{r1,k,h}^{m,t} = MAX\left[0,MIN\left(DA\_DQSI_{k,h}^{m,t}-MQSI_{k,h}^{m,t},SQROR_{r1,k,h}^{m,t}\right)\right]$$

$$10NS\_SQROR_{r2,k,h}^{m,t} = MAX\left[0,MIN\left(DA\_DQSI_{k,h}^{m,t}-MQSI_{k,h}^{m,t}-30R\_SQROR_{r1,k,h}^{m,t},SQROR_{r2,k,h}^{m,t}\right)\right]$$

$$10S\_SQROR_{r3,k,h}^{m,t} = MAX\left[0,MIN\left(DA\_DQSI_{k,h}^{m,t}-MQSI_{k,h}^{m,t}-30R\_SQROR_{r1,k,h}^{m,t} -10NS\_SQROR_{r2,k,h}^{m,t},SQROR_{r3,k,h}^{m,t}\right)\right]$$

x* = the highest indexed row of matrix $BR_{r1,k,h}^{m,t}$, such that $QR_{x^*} \leq \max[0,\min(DA\_DQSI_{k,h}^{m,t} - MQSI_{k,h}^{m,t}, SQROR_{r1,k,h}^{m,t})] \leq QR_n$ and where $QR_0 = 0$

y* = the highest indexed row of matrix $BR_{r2,k,h}^{m,t}$ such that $QR_{y^*} \leq \max[0,\min(DA\_DQSI_{k,h}^{m,t} - MQSI_{k,h}^{m,t} - 30R\_SQROR_{r1,k,h}^{m,t}, SQROR_{r2,k,h}^{m,t})] \leq QR_n$ and where $QR_0 = 0$

z* = the highest indexed row of matrix $BR_{r3,k,h}^{m,t}$, such that $QR_{z^*} \leq \max[0,\min(DA\_DQSI_{k,h}^{m,t} - MQSI_{k,h}^{m,t} - 30R\_SQROR_{r1,k,h}^{m,t} - 10NS\_SQROR_{r1,k,h}^{m,t}, SQROR_{r3,k,h}^{m,t})] \leq QR_n$ and where $QR_0 = 0$

Component 5 – Variant 1

Component 5 is the as-offered *start-up cost* incurred to bring an off-line *generation unit* through all the unit specific start-up procedures, including synchronization and ramp up to *minimum loading point*. Component 5 is calculated as follows:

$PCG\_COMP5_{k,h}^{m,t}$ = As-offered *start-up cost* submitted by the *market participant* for the DACP start event.

The rules for calculating Component 5 are as follows:

- **Scenario 1:** If the *market participant* achieves *minimum loading point* within the first 6 intervals[2] of the start of the DACP scheduled period, the full as-offered start-up cost is considered.

- **Scenario 2:** If the *generation unit* achieves *minimum loading point* between the start of the 7th interval and before the start of the 18th interval of the start of the EDAC scheduled period, the as-offered start-up cost is calculated on a fractional basis. The as-offered start-up cost is calculated based on the number of 5-minute intervals the resource takes to achieve *minimum loading point* between the start of the 7th interval and before the start of the 18th interval.

- **Scenario 3:** If the *generation unit* achieves *minimum loading point* after the 17th interval of the start of the DACP scheduled period (i.e. 18th interval and onwards), the as-offered *start-up cost* is not considered.

Scenario 1

$$PCG\_COMP5_{k,h}^{m,t} = DA\_SUC_{k,h}^{m}$$

Scenario 2

$$PCG\_COMP5_{k,h}^{m,t} = DA\_SUC_{k,h}^{m} - \left(DA\_SUC_{k,h}^{m} \times \frac{1}{DA\_INT} \times SUC\_INT\right)$$

Where

DA_INT = 12

SUC_INT = number of 5-minute intervals between Interval 7 and 18 the *market participant* takes to achieve *minimum loading point*.

Scenario 3

[2] The duration of an interval is 5 minutes.

$PCG\_COMP5_{k,h}^{m,t} = 0$

Component 5 – Variants 2 and 3

Component 5 is not calculated for Variants 2 and 3.

4.7D.5 If for each DACP start event for each eligible *generation unit* the sum of the revenues referred to in section 4.7D.4 is greater than or equal to the sum of the costs referred to in section 4.7D.4, then the IESO shall make no additional payments in respect of the eligible *generation facility*.

4.7D.6 Subject to section 4.7D.7, i~~I~~f for each DACP start event for each eligible *generation unit* the sum of the revenues referred to in section 4.7D.4 is less than the sum of the costs referred to in section 4.7D.4, then the *IESO* shall include that amount in the form of additional payments made in respect of the eligible *generation facility*.

4.7D.7 A *generation unit* shall not be eligible for additional payments determined in accordance with section 4.7D.6 when:

- the *generation unit's* online status in Day-1, HE24 is attributed to any *pre-dispatch schedule* other than a *schedule of record;* and
- the *generation unit* receives a Variant 3 type *schedule of record* beginning in Day0, HE1 pursuant to section 4.7D.2.c for the purpose of ramping down the *generation unit* to offline status; and
- the *generation unit* would have otherwise not been economic in HE1 of Day 0.

The *IESO* may withhold or recover such payments made in respect of the *generation unit* and shall redistribute any recovered payments in accordance with section 4.8.2.

4.8 Additional Non-Hourly Settlement Amounts

4.8.1 The *IESO* shall, at the end of each *energy market billing period*, recover from *market participants*, on a pro-rata basis across all allocated quantities of *energy* withdrawn at all *RWMs* and *intertie metering points* during all *metering intervals* and *settlement hours* within that *energy market billing period*, the following amounts:

4.8.1.1 any compensation paid in that *energy market billing period* by the *IESO* pursuant to section 5.3.4 of Chapter 4;

4.8.1.2 any compensation paid in that *energy market billing period* by the *IESO* pursuant to section 5.3.4 of Chapter 5;

4.8.1.3 any out-of-pocket expenses paid in that *energy market billing period* by the *IESO* pursuant to section 6.7.4 of Chapter 5;

4.8.1.4 any compensation paid in that *energy market billing period* by the *IESO* pursuant to section 8.4A.9 of Chapter 7;

4.8.1.5 any costs incurred in that *energy market billing period* by the *IESO* to acquire *emergency energy* pursuant to section 2.3.3A of Chapter 5;

4.8.1.6 any reimbursement paid in that *energy market billing period* by the *IESO* pursuant to section 2.1A.12.2(a);

4.8.1.7 any funds borrowed by the *IESO* and any associated interest costs incurred by the *IESO* in the preceding *energy market billing period* pursuant to section 6.14.5.2;

4.8.1.8 [Intentionally left blank – section deleted]

4.8.1.9 any compensation paid in that *energy market billing period* by the *IESO* pursuant to section 4.7B.3;

4.8.1.10 any compensation paid in that *energy market billing period* by the *IESO* pursuant to section 4.7C;

4.8.1.11 any compensation paid in that *energy market billing period* by the *IESO* pursuant to section 8.2.6 of Chapter 5;

4.8.1.12 any compensation paid in that *energy market billing period* by the *IESO* under section 4.7D;

4.8.1.13 any compensation paid in that *energy market billing period* by the *IESO* under section 4.7E; and

4.8.1.14 [Intentionally left blank – section deleted]

4.8.1.15 [Intentionally left blank – section deleted]

4.8.1.16 any compensation paid in that *energy market billing period* by the *IESO* under section 4.7G.

4.8.2 The *IESO* shall, at the end of each *energy market billing period*, distribute to *market participants*, on a pro-rata basis across all allocated quantities of *energy*

withdrawn at all *RWMs* and *intertie metering points* during all *metering intervals* and *settlement hours* within that *energy market billing period*, the following amounts:

4.8.2.1 any compensation received by the *IESO* for the provision of *emergency energy* pursuant to section 4.4A.1 of Chapter 5;

4.8.2.2 any compensation received by the *IESO* as a result of a local market power investigation as set out in sections 1.7.1 and 1.7.2 of Appendix 7.6;

4.8.2.3 [Intentionally left blank – section deleted]

4.8.2.4 [Intentionally left blank – section deleted]

4.8.2.5 any payments recovered by the *IESO* in accordance with sections 3.5.1A and 3.5.6E;

4.8.2.6 any adjustments made by the *IESO* in accordance with section 3.5.7;

4.8.2.7 [Intentionally left blank – section deleted]

4.8.2.8 any proceeds from the day-ahead import failure charge that are not distributed as a component of *hourly uplift* under section 3.9.4;

4.8.2.9 any proceeds from the real-time import failure charge or the real- time export failure charge that in accordance with section 3.9.5 are not distributed as a component of *hourly uplift*;

4.8.2.10 any proceeds from the recovery of congestion management *settlement* credits or other *settlement amounts* in accordance with section 6.6.10A.2 of Chapter 3, excluding any payments recovered under section 4.18.1.6 of Chapter 8;

4.8.2.11 any recovery of day-ahead *intertie offer* guarantee payments pursuant to section 3.3A.13 of Chapter 7;

4.8.2.12 [Intentionally left blank – section deleted]

4.8.2.13 any recovery of payments made by the *IESO* under section 3.5.9;

4.8.2.14 any proceeds from the day-ahead *generator* withdrawal charge under section 3.8F;

4.8.2.15 any recovery of payments made by the *IESO* under section 3.5.10;~~.~~

and

4.8.2.16 any recovery of payments made by the IESO under section 4.7D.7.

PART 5 – IESO BOARD DECISION RATIONALE

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