



Market Rule Amendment Submission

This form is used to request an amendment to, or clarification of, the *Market Rules*. Please complete the first four parts of this form and submit the completed form by email or fax to the following:

Email Address: Rule.Amendments@ieso.ca
 Fax No.: (416) 506-2847 Attention: Market Rules Group
Subject: Market Rule Amendment Submission

All information submitted in this process will be used by the *IESO* solely in support of its obligations under the *Electricity Act, 1998*, the *Ontario Energy Board Act, 1998*, the *Market Rules* and associated policies, standards and procedures and its licence. All submitted information will be assigned the *confidentiality classification* of “Public” upon receipt. You should be aware that the *IESO* will *publish this amendment submission* if the *Technical Panel* determines it warrants consideration and may invite public comment.

Terms and acronyms used in this Form that are italicized have the meanings ascribed thereto in Chapter 11 of the *Market Rules*.

PART 1 – SUBMITTER’S INFORMATION

Please enter contact information in full.

Name: IESO Staff

(if applicable) *Market Participant /
 Metering Service Provider No.*¹: N/A

Market Participant Class:
N/A

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PART 2 – MARKET RULE AMENDMENT SUBMISSION INFORMATION

Subject: Generation Cost Guarantees

Title: HE1Day-Ahead Production Cost Guarantees Triggered by Ramping Limitations

Nature of Request (please indicate with x)

Alteration Deletion Addition Clarification

Chapter: 9 Appendix: _____ Sections: 4.7D, 4.8

Sub-sections proposed for amending/clarifying: various

¹ This number is a maximum of 12 characters and does not include any spaces or underscore.

PART 3 – DESCRIPTION OF THE ISSUE

Provide a brief description of the issue and reason for the proposed amendment. If possible, provide a qualitative and quantitative assessment of the impacts of the issue on you and the *IESO-administered markets*. Include the Chapter and Section number of the relevant *market rules*.

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 HE1 of 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

The enhanced day-ahead commitment (EDAC) process was implemented on October 12, 2011 through market rule amendments MR-00348, MR-00349, MR-00375 and MR-00382. As part of this DACP, the DA-PCG allows guaranteed cost recovery for generators when the real-time revenue does not cover the generator's as-offered costs for the schedule of record. The applicable costs are divided into five components, including incremental energy costs and fixed costs such as start-up and speed-no-load provided by the generator through their three part offers.

There are three variants of DA-PCG which are determined based on the generation unit's status from the previous dispatch day. This rule amendment will address payments associated with Variant 3 DA-PCG which occurs when a generation unit has an online status for HE24 of the previous dispatch day and, if a unit has a DA-PCG for that day has completed its minimum generation block run-time (MGBRT) in the previous dispatch day. If a unit is scheduled in HE24 of the previous dispatch day for any reason other than a DA-PCG, DACE assumes its MGBRT has already been satisfied. A Variant 3 DA-PCG payment does not include the start-up cost component, but does include all other cost components associated with this payment. Refer to the market rules Chapter 9, sections 4.7D.1 and 4.7D.2 for further information on the DA-PCG variants and cost components.

Identified Issue

During the scheduling process of DACP, the intent of the market rules is to respect the technical ramping limitations offered by a generation unit. A consequence of this aspect of the design is that a combination of low real-time offers for HE24, high day-ahead offers for HE1, and a ramp rate that prohibits the unit from ramping down in one hour or less may result in inappropriate Variant 3 DA-PCG payments beginning in HE1. High incremental energy and speed-no-load offers for HE1 can lead to substantial DA-PCG payments for that hour.

DACE determines the schedule of record for the following day. In order to establish a reference point for HE1 of the next day (Day 0), DACE evaluates a generation unit's online status in HE24 of the current day (Day-1) as determined by the most recent pre-dispatch schedule results. These results could include online status resulting either from a day-ahead commitment schedule for HE24, or from an economic pre-dispatch schedule in HE24. If the DACE run for Day 0 indicates that the unit has not been economically selected for Day 0 HE1, DACE will attempt to bring the unit offline by ramping down from the scheduled quantity in Day-1 HE24, while respecting the generation unit's hourly ramp rate for Day 0 HE1.

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The ramping limitations for each pass of DACE are detailed in sections 4.10.2, 5.11.2 and 6.10.1 of appendix 7.5A of the market rules. In this identified issue, DACE uses the submitted ramp rate for HE1 to determine if the unit can ramp down from the Day-1 HE24 scheduled quantity by the end of Day 0, HE1. If ramp down is not possible by the end of HE1, the unit will receive a day-ahead commitment for HE1, to at least its minimum loading point (MLP). DACE assumes that in one hour a unit is capable of ramping down a quantity equal to its MLP plus the amount it is capable of ramping in 30 minutes. For example, MLP = 75, ramp rate for HE1 = 3 MW/min: in Day 0, HE1 DACE will assume the unit is capable of ramping down by $75 + (3 \times 30) = 165$ MW. If this quantity does not enable the generator to come offline by the end of HE1 then the unit will receive a schedule of record for that hour to at least its MLP. This situation could continue beyond HE1 as DACE continues to ramp the unit down.

Currently, a generation unit scheduled in Day-1 HE24, either as a result of a day-ahead commitment for that day or through pre-dispatch, may be eligible for a DA-PCG for the day-ahead schedule of record beginning in Day 0 HE1 where the schedule of record is due entirely to the hourly ramping limitations of the unit and not economics.

If the start-up and shut-down occurs within the commitment timeframe of a single day, the day-ahead commitment process schedules the ramp profile above MLP economically. However, when the ramp down is required in HE1 due to initialization (based on the pre-dispatch schedule or previous day's schedule of record), the generation unit is scheduled to respect the ramp rate without taking economics into account.

There are two scenarios in which online status in HE24 can trigger an HE1 DA-PCG for the next day's commitment:

Scenario #1

A generation unit receives a day-ahead schedule for Day-1 which continues through to HE24. If the day-ahead offer for Day 0 HE1 is uneconomic, then DACE will attempt to bring the unit offline. However, if the HE1 ramp rate is such that DACE cannot ramp the unit offline within one hour, then DACE will commit the unit for at least HE1, resulting in a schedule of record eligible for a Variant 3 type DA-PCG, until the unit reaches a loading point at which it can be ramped off in one hour. The intent of the market rules is to respect the technical limitations of the unit while ramping down from a day-ahead schedule of record; however, an unintended consequence may occur such that the resulting Variant 3 DA-PCG is based on the day-ahead offer for HE1 (and subsequent hours if scheduled) which may be as high as \$2000, the maximum market clearing price (MMCP). The IESO will not pursue a rule amendment at this time since the frequency and materiality of this scenario has not been significant at this point to justify the tool changes which would be required to implement a solution. Instead, the IESO will examine this issue under its review of the generator guarantee programs expected to commence in Q4 2012. The IESO has informed stakeholders that an urgent market rule amendment is possible if the IESO begins to see generators taking advantage of this scenario.

Scenario #2

A generation unit does not have a day-ahead schedule for Day-1 HE24, but DACE initializes based on an economic pre-dispatch schedule for the unit. If the unit is scheduled in pre-dispatch for HE24 of Day-1 but is uneconomic in the day-ahead commitment process for Day 0 HE1, DACE will attempt to bring the unit offline. Similar to scenario #1, DACE will commit the unit for at least HE1 if the unit cannot be ramped offline within one hour, resulting in a Variant 3 DA-PCG payment for at least HE1. As in Scenario #1, the intent of the market rules is to respect the technical limitations of the unit during ramp down, and alternatively to allow for a Variant 3 DA-PCG payment to a generator that is economic beginning in HE1. An unintended consequence of the market rules is the ability for the generator to

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receive Variant 3 DA-PCG payments based on uneconomic offers when DACE is attempting to ramp the unit down beginning in HE1 from a non-PCG eligible event. In real-time these generators often remain online, and receive a DA-PCG payment for ramp down which is considered inappropriate. The materiality of this scenario is such that the IESO feels it is necessary to implement market rule amendments.

On June 11, 2012 the IESO held a conference call with the dispatchable generator community to discuss these situations where ramping down over hour ending one is causing unintended DA-PCG payments. The IESO has established [stakeholder engagement initiative SE-102](#) and is working with stakeholders to develop market rule amendments to address this issue. In the meantime, the IESO has asked market participants to operate in such a way that would prevent these large payments who have been cooperative to date.

PART 4 – PROPOSAL (BY SUBMITTER)

Provide your proposed amendment. If possible, provide suggested wording of proposed amendment.

Amend the market rules such that a generation unit is not eligible for a Variant 3 DA-PCG payment where the generation unit's online status in Day-1, HE24 is attributed to a pre-dispatch schedule and not a day-ahead schedule of record; and the Variant 3 schedule is due to ramping limitations to bring the unit offline beginning in HE1. In this situation it is proposed that the IESO may withhold or recover such payments and redistribute as appropriate.

PART 5 – FOR IESO USE ONLY

Technical Panel Decision on Rule Amendment Submission: Warrants consideration

MR Number: MR-00396

Date Submitted to *Technical Panel*: September 11, 2012

Accepted by *Technical Panel* as: (please indicate with x)

Date:

General

Urgent

Minor

September 18, 2012

Criteria for Acceptance: The amendment submission identifies the need for market rule amendments to limit unintended Variant 3 production cost guarantee (DA-PCG) payments. These payments are triggered by offered ramp rate limitations of a generation unit when the calculation engine (DACE) of the day-ahead commitment process (DACP) attempts to bring an uneconomic generation unit offline beginning in HE1 of the next day from an online status in HE24 of the current day as established by the pre-dispatch schedule.

Priority: Regular

Criteria for Assigning Priority: The intent of the market rules is to respect the technical limitations of a generation unit, i.e. it's offered ramp rate, and an unintended outcome of this intent is that uneconomic offers are causing inappropriate DA-PCG payments in HE1. The amendment submission identifies this error.

Not Accepted (please indicate with x):

Clarification/Interpretation Required (please indicate with x):

Technical Panel Minutes Reference: IESOTP 265-1

Technical Panel Comments: _____