

#### PART 1 – MARKET RULE INFORMATION

Identificatio	on No.: MR-00348-R00					
Subject:	Enhanced	Enhanced Day-Ahead Commitment Process (EDAC)				
Title:	Facility Registration					
Nature of Pr	oposal:			Deletion		Addition
Chapter:	7	<u>'</u>		Appendix:		
Sections:	2.2					
Sub-sections proposed for amending:				.2.6B.1, (new), 2.2.6D, 2.2.6G (	,	ew). 2.2.6B.3 (new), 6H (new)

#### PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date	
1.0	Working Draft for Discus	ssion Purposes	March 23, 2009
2.0	Working Draft for Discus	ssion Purposes	May 19, 2009
3.0	For Technical Panel Revi	iew	June 16, 2009
4.0	Submitted for Technical Panel Review and Vote		August 11, 2009
5.0	Recommended by Technical Panel. Submitted for IESO Board Approval.		August 18, 2009
6.0	Approved by IESO Board	d	September 15, 2009
7.0	Effective Date approved by IESO Board		September 09, 2011
Approved Amendment Publication Date:		Section 1.7, Chapter 7 to be effective on October 03, 201	
Approved Amer	ndment Effective Date:	All other sections to be effective on or after October 12, 2011	

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**

MR-00348-R00 proposes to modify the market rules in section 2.2 of Chapter 7 by identifying the information that registered market participants are required to submit during the facility registration process for the Enhanced Day-Ahead Commitment process (EDAC). This information is important because it is necessary for the operation of the EDAC calculation engine when that engine is solving the optimization of unit commitment over the entire 24 hours of the next day.

#### **Background**

EDAC represents a modification to the existing Day-Ahead Commitment Process (DACP). EDAC proposes to introduce the following elements to the day-ahead commitment processes:

- Optimization of commitment over the entire 24 hours of the next day;
- Use of multiple passes of the constrained algorithm to determine commitment and resource scheduling; and
- Three-part offers, i.e., the use of offers for energy supported by submitted fixed costs and technical data.

For further information on the market rules please refer to MR-00348-Q00 http://www.ieso.ca/imoweb/pubs/mr2009/MR-00348-Q00.pdf.

For further information on the EDAC design please refer to: <a href="http://www.ieso.ca/imoweb/consult/consult\_se21.asp">http://www.ieso.ca/imoweb/consult/consult\_se21.asp</a>.

Additionally, for further information on the development of the EDAC detailed design please refer to: <a href="http://www.ieso.ca/imoweb/consult/consult\_se73.asp">http://www.ieso.ca/imoweb/consult/consult\_se73.asp</a>.

#### Discussion

MR-00348-R00 specifies the obligation for registered market participants to submit to the IESO technical data for non-quick start generation facilities. Additionally, the option is being proposed to permit registered market participants to also register with the IESO additional technical information if the registered market participant would like to have a combined-cycle generation facility considered for modeling as a pseudo-unit model by the EDAC calculation engine.

It is proposed to modify the market rules in section 2.2 of Chapter 7 in the following manner:

#### **Section 2.2 Registered Facilities**

• Insert a new sub-section 2.2.6B.1 to specify that a registered market participant for a

dispatchable generation facility that is not a quick-start facility may modify, on a daily basis, the following: the minimum loading point; the minimum generation block run-time, the maximum number of starts per day, the minimum generation block down time, and the combustion turbine single cycle mode for facilities that were designated as such in accordance with section 2.2.6G. If the registered market participant modifies that information the IESO shall be obligated to use it during the day-ahead commitment process set out in section 5.8.

The EDAC Market Design states that dispatchable generators eligible for a DA-PCG will submit fixed costs (referring only to start-up and speed no-load costs) and technical data (generator parameters) to the IESO. Technical data as described in the Market Design is now referred to as daily generator data and includes; minimum loading point, minimum generation block run time, minimum generation block down time, maximum number of starts per day and single cycle mode (CT of PSUs). The IESO feels that quick start generation units traditionally do not possess the operating characteristics applicable to the technical data submitted by PCG eligible resources. Allowing quick start generation units to submit daily generator data would result in a fundamental change in market design.

- Insert a new sub-section 2.2.6B.2 to specify that a registered market participant for a dispatchable generation facility shall submit to the IESO the elapsed time to dispatch. This is the minimum amount of time, in minutes, between the time at which a startup sequence is initiated for a generation unit and the time at which it becomes dispatchable by reaching its Minimum Loading Point. This will require the introduction of a new defined term, elapsed time to dispatch, which will be specified in MR-00348-R05.
- Insert a new sub-section a new sub-section 2.2.6B.3 to specify that a registered market participant that operates a combined cycle facility shall submit to the IESO the physical characteristics associated with the combined cycle facility.
- Delete section 2.2.6C. The information referred to in this section is being provided in accordance with section 2.2.6B.1.
- Modify section 2.2.6D by removing the maximum number of starts per day. The option to submit this information is being converted into an obligation under section 2.2.6B.
- Modify section 2.2.6E be deleting the reference to section 2.2.6C.
- Insert a new subsection 2.2.6G to permit registered market participants for dispatchable generation facilities that wish to be considered in the enhanced day-ahead commitment process as a pseudo-unit to submit to the IESO the following information: the steam percentage share of each pseudo-unit; and the steam turbine minimum loading point for each combustion turbine/steam turbine configuration. If this information is provided to the IESO, the IESO would then be obligated to use this information during the operation of the enhanced day-ahead calculation engine.
- Insert a new sub-section 2.2.6H to specify that a registered market participant for a dispatchable hydroelectric generation facility shall, where applicable, submit to the IESO the daily cascading hydroelectric dependency. This will require the introduction of a new defined term "daily cascading hydroelectric dependency".

PART 3 –	EXPLANATION FOR PROPOSED AMENDMENT
PART 4 – 1	PROPOSED AMENDMENT
2.2	Registered Facilities
•••••	•••••••••••••••••••••••••••••••••••••••
2.2.6A	A registered market participant for a generation facility may submit the following facility specific information: forbidden regions; and period of period of steady operation. If the information regarding forbidden regions is submitted, the market participant shall respect such information when submitting dispatch data for the real-time market. If the dispatch data submitted does not respect such information the IESO shall reject the dispatch data submission for the affected resource and for the corresponding dispatch hour or dispatch hours and shall advise the submitting registered market participant accordingly.
2.2.6B	A registered market participant for a dispatchable generation facility shall submit to the IESO the minimum loading point, minimum generation block run-time, the minimum run-time for the generation facility if the minimum loading point for the facility is greater than zero MW and if the minimum generation block run-time and minimum run-time for the facility are greater than one hour.
	2.2.6B.1 A registered market participant for a dispatchable generation facility

- 2.2.6B.1 A registered market participant for a dispatchable generation facility that is not a quick-start facility may submit on a daily basis the minimum loading point, the minimum generation block run-time, the maximum number of starts per day and the minimum generation block down time, and for facilities designated as a pseudo-unit in accordance with section 2.2.6G the combustion turbine single cycle mode, and the IESO shall use this information in the day-ahead commitment process set out in section 5.8.
- 2.2.6B.2 A registered market participant for a dispatchable generation facility shall submit to the *IESO* the elapsed time to dispatch for the generation facility.
- 2.2.6B.3 A registered market participant that operates a combined cycle facility shall submit to the IESO in accordance with the applicable market manual the physical characteristics associated with the combined cycle

facility and the steam turbine minimum loading point for each combustion turbine/steam turbine configuration.

- 2.2.6C [Intentionally left blank section deleted] A registered market participant for a dispatchable generation facility may submit the minimum loading point if it did not do so in accordance with section 2.2.6B.
- 2.2.6D The *IESO* may request, and the *registered market participant* for a dispatchable *generation facility* shall submit to the *IESO*, the following information for the *generation facility*:
  - start-up time; and
  - minimum shut-down time.

#### ; and

#### maximum number of starts per day.

- 2.2.6E If no *facility* specific data is submitted to the *IESO* for the *facility's minimum* loading point, forbidden regions, or period of steady operation in accordance with sections 2.2.6A, and 2.2.6B, and 2.2.6C, the *IESO* shall assign default values of zero for that data.
- 2.2.6F If *facility* specific data is submitted to the *IESO* in accordance with sections 2.2.6A, and 2.2.6B, and 2.2.6C, the *IESO* shall respect the data as submitted in its determination of the *real-time schedule* in accordance with section 4 and dayahead commitments in accordance with section 5.
- 2.2.6G A registered market participant that wishes to have a dispatchable generation facility included as a pseudo-unit in the day-ahead commitment process set out in section 5.8, shall, in addition to the information submitted in accordance with section 2.2.6B, submit to the IESO the following information: the steam turbine percentage share of each pseudo-unit; and steam turbine duct firing capacity.
- 2.2.6H A registered market participant for a dispatchable hydroelectric generation facility shall submit to the *IESO* where applicable the daily cascading hydroelectric dependency.

#### PART 5 – IESO BOARD DECISION RATIONALE

This amendment represents the first set of market rule amendments required to implement the enhanced day-ahead commitment (EDAC) process design approved by the IESO Board in February 2009.

The Board approved the effective dates on September 09, 2011 in line with the expected go-live date for EDAC.



PART 1 – MARKET RULE INFORMATION							
Identificatio	on No.:	MR-00348-R01					
Subject:	Enhance	nced Day-Ahead Commitment Process (EDAC)					
Title:	Generati	on Facility Eligibili	ty for the l	Day-Ahead Pro	duction Cos	st Guarantee	
Nature of Pr	roposal:	oposal: Alteration Deletion Addition				Addition	
Chapter:	7			Appendix:			
Sections:	2.2C						
Sub-section	s proposed	l for amending:	2.2C.1.4	, 2.2C.2			
PART 2 – PI	PART 2 – PROPOSAL HISTORY – PLEASE REFER TO MR-00348-R00						
Version	Reas	son for Issuing			Versio	on Date	

Approved Amendment Publication Date:

Approved Amendment Effective Date:

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**

MR-00348-R01 proposes to modify the market rules in section 2.2C of Chapter 7 by specifying the eligibility requirements for the Day-Ahead Production Cost Guarantee.

#### **Background**

Please refer to MR-00348-R00.

#### Discussion

It is proposed to modify the market rules in section 2.2C of Chapter 7 in the following manner:

#### Section 2.2C Generation Facility Eligibility for the Day-Ahead Generation Cost Guarantee

- Modify the section title to reflect the change from Generator Cost Guarantee to Production Cost Guarantee.
- Modify section 2.2C.1.2 to include the qualification that the dispatchable facility must have an elapsed time to dispatch of greater than one hour.
- Modify section 2.2C.1.3 to reflect that this section is being deleted and left intentionally blank as a result of MR-00357 Minor Omnibus which is pending IESO Board approval in June 2009.
- Modify section 2.2C.1.4 to specify the information that registered market participants must provide to the IESO in order to be eligible to receive the Day-Ahead Production Cost Guarantee. The combined guaranteed costs would be eliminated and replaced by as-offered start-up costs and as-offered speed no-load cost. Additionally it is proposed to carve out a section 2.2C.1.5 in order to split up the information requirements in section 2.2C.1.4 into two different sub-sections. The reference to minimum run-time in section 2.2C.1.5 will be deleted since this is not an eligibility requirement for the production cost guarantee.
- Delete section 2.2C.2. The provision of information prior to the operation of the enhanced day-ahead commitment calculation engine results in a competitive outcome therefore the need to audit cost information which is currently submitted after the current DACP process is completed is no longer required.

For further information on the new defined terms included below please refer to MR-00348-R05.

#### PART 4 – PROPOSED AMENDMENT

# 2.2C Generation Facility Eligibility for the Day-Ahead Production Generation Cost Guarantee

- 2.2C.1 A registered market participant for a generation facility shall be eligible for the guarantee of certain elements of the facility's costs, calculated in accordance with section 4.7D of Chapter 9, provided the following criteria are met:
  - 2.2C.1.1 the facility is not a quick-start facility;
  - 2.2C.1.2 the *facility* is a dispatchable *generation facility* with a *elapsed time to dispatch* greater than one hour;
  - 2.2C.1.3 the *facility* is located within Ontario; and Intentionally left blank section deleted]
  - 2.2C.1.4 the *registered market participant* has, according to the timelines and in the form specified in the applicable *market manual*, submitted to the *IESO* the following information for the *generation facility*: the *combined guaranteed costs start-up costs*; and the *speed no-load costs*; and
  - 2.2C.1.5 the registered market participant has, according to the timelines and in the form specified in the applicable market manual, submitted to the IESO the following information for the generation facility: the minimum run-time; the minimum loading point; and the minimum generation block run-time and any incremental operating and maintenance costs associated with the facility start up and minimum run time for that facility as determined in the pre dispatch of record and the IESO accepts all such information as reasonable.
- 2.2C.2 The *IESO* may, at any time, audit the data submitted in accordance with section 2.2C.1.4 if the *market participant* receives a day ahead generation cost guarantee payment under section 4.7D of Chapter 9 on the basis of that data. If, as a result of such an audit, the *IESO* determines that the actual costs differed from the submitted data, the *IESO* shall recover any resulting over-payments made to the *market participant*. [Intentionally left blank section deleted]

PART 5_	IESO BOARD	DECISION I	ATIONAL F
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Refer to MR-00348-R00			



#### PART 1 – MARKET RULE INFORMATION

Identification	on No.: MR-00348-R02					
Subject:	Enhanced Day-Ahead Commitment Process (EDAC)					
Title:	Dispatch Data Submissions for the Day-Ahead Commitment Process					
Nature of Pr	oposal:			Deletion		Addition
Chapter:	7	•		Appendix:		
Sections:	1.7, 3.3A, 3.7, 3.8, 3.8A					
Sub-sections proposed for amending: 1.7.1, 1.7.2, 1.7.3, 1.7.4, 3.3A.1, 3.3A.2, 3. 3.3.A.8, 3.3A.10, 3.7.3, 3.8.2, 3.8A.2						

#### PART 2 - PROPOSAL HISTORY - PLEASE REFER TO MR-00348-R00

Version	Reason for Issuing	Version Date
Approved Amendment Publication Date:		
Approved Amer	ndment Effective Date:	

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**

MR-00348-R02 proposes to modify the market rules in sections 3.3A, 3.7, 3.8, and 3.8A of Chapter 7 to specify the dispatch data submission requirements for EDAC. Please note that section 1.7 of Chapter 7 is provided for reference purposes only. In MR-00348-Q00 it was noted that this section of the market rules will require additional detailed design work to be completed before market rule modifications can be identified for section 1.7.

#### **Background**

Please refer to MR-00348-R00.

#### **Discussion**

Consequential to the market rule amendments associated with section 3.3A (described below) it is proposed to modify section 1.7 of Chapter 7. This is because section 3.3A is triggered into effect through the mechanisms provided in section 1.7. Section 1.7 is the means by which the IESO can put into effect all the market rules associated with the enhanced day-ahead commitment process.

It is proposed therefore to modify section 1.7 in the following manner:

# <u>IESO Authorities and Obligations Regarding the Operation of the Day-Ahead Commitment Process:</u>

- Modify section 1.7.1 to specify the CEO of the IESO shall determine when the day-ahead
  commitment process shall first be used. It is also necessary to delete the reference to
  adjustments to the time periods in which the process operates because the process is intended
  to function within set time periods as established in the market rules. Please refer to MR00348-R03.
- Modify section 1.7.2 by deleting the sunset clause.
- Modify section 1.7.3 by deleting reference to adjustments to the time periods in which the dayahead commitment process shall operate. This modification is consequential to the proposed modifications to section 1.7.1.
- Modify section 1.7.4 to specify the conditions by which the IESO would determine that the day-ahead commitment process for a given dispatch day was deemed to have failed.

It is proposed to modify the market rules in section 3.3A of Chapter 7 in the following manner:

#### Section 3.3A Dispatch Data Submission for the Day-Ahead Commitment Process

• Modify section 3.3A.1, as required, to link section 3.3A to section 1.7 of Chapter 7. This is necessary to ensure that when it is determined to put EDAC in-service that determination will

trigger the submission of dispatch data to support EDAC.

- Modify section 3.3A.2 to specify the timelines for dispatch data submissions. There is also a
  need to specify facilities which registered market participants would like to operate in
  segregated mode in real-time would be required to submit dispatch data.
- Modify section 3.3A.5 to specify the timelines for dispatch data submissions for import offers and export bids. There will also be a need to modify this section to reflect the guarantees that would apply to those import offers that were scheduled as a result of the submitted dispatch data. Finally, it is necessary to remove the clause "constrained schedule from the" in section 3.3A.5, the correct reference is the schedule of record.
- Modify section 3.3A.6 to specify the permissions and timing for the submission of dispatch data from registered market participants for energy limited resources which have submitted a daily cascading hydroelectric dependency in accordance with section 2.2. and for physical generation units associated with designated pseudo-units. Finally, it is necessary to remove the clause "constrained schedule from the" in section 3.3A.6, the correct reference is the "schedule of record".
- Modify section 3.3A.7 to specify the information the IESO shall use to determine and publish the initial pre-dispatch schedule.
- Modify section 3.3A.8 to reflect the EDAC equivalent of the existing pre-dispatch of record.
   Modify section 3.3A.8 to specify that the registered market participant may not increase the
   hours in the submitted dispatch data after the schedule of record has been published without the
   approval of the IESO.
- Modify section 3.3A.9 by making it subject to section 3.3A.10.
- Modify section 3.3A.10 first, by removing the reference to the Hour Ahead Dispatchable Load program because that program has been eliminated and second, to specify the offer prices associated with the minimum loading point may not be increased for generation facilities that were deemed to have accepted the production cost guarantee set out in section 5.8.4. This is necessary to prevent the market participant from receiving inappropriate CMSC payments.
- Delete section 3.3A.10 because the Hour Ahead Dispatchable Load program has been eliminated.

#### **Section 3.7Self-Scheduling Generators**

It is proposed to modify section 3.7.3 to specify the timelines for the submission of dispatch data from self-scheduling generators and to link section 3.7 to section 1.7 of Chapter 7. This is necessary to ensure that when it is determined to put EDAC in-service that determination will trigger the submission of dispatch data to support EDAC.

#### **Section 3.8 Intermittent Generators**

It is proposed to modify section 3.8.2 to specify the timelines for the submission of dispatch data from intermittent generators and to link section 3.8 to section 1.7 of Chapter 7. This is necessary to ensure that when it is determined to put EDAC in-service that determination will trigger the submission of dispatch data to support EDAC.

#### **Section 3.8A Transitional Scheduling Generators**

It is proposed to modify section 3.8A.2 to specify the timelines for the submission of dispatch data from transitional scheduling generators and to link section 3.8A to section 1.7 of Chapter 7. This is necessary to ensure that when it is determined to put EDAC in-service that determination will trigger the submission of dispatch data to support EDAC.

#### PART 4 – PROPOSED AMENDMENT

# 1.7 IESO Authorities and Obligations Regarding the Operation of Time Period During Which the Day-Ahead Commitment Process Functions

- 1.7.1 The Chief Executive Officer of the *IESO* shall determine when may adjust the time periods during which the day-ahead commitment process shall <u>first</u> be used. In adjusting the time period for the use of the day ahead commitment process, the Chief Executive Officer of the *IESO* shall consider the impact of the day ahead commitment process on the *IESO* administered markets and the *IESO* controlled grid. In adjusting these time periods, the Chief Executive Officer of the *IESO* may specify dispatch hours and dispatch days during which the day ahead commitment process shall be used.
- 1.7.2 [Intentionally left blank section deleted] The day ahead commitment process shall not be used beyond November 30, 2006 unless the *IESO Board* passes a resolution to authorize its use beyond that date.
- 1.7.3 The *IESO* shall notify *market participants* at least five *business days* in advance of the day the day-ahead commitment process will first be used.

- the day the day ahead commitment process will first be used; and
- the day that any adjustments to the time periods specified by the Chief Executive Officer of the IESO will come into effect.
- 1.7.4 The *IESO* shall cancel the day-ahead commitment process for a given *dispatch* day when process or software failures prevent <u>onetwo</u> or more hourly day-ahead commitment process <u>pre-dispatch cycles runs</u> from meeting the minimum criteria for a minimum acceptable DACP <u>pre-dispatch</u> run, as defined in the applicable *market manual*.
- 1.7.5 In accordance with the applicable *market manual*, if the *IESO* cancels the dayahead commitment process for a given *dispatch day*, the *IESO* shall:
  - inform *market participants* of the cancellation;
  - inform *market participants* as to whether the day-ahead commitment process will resume for the subsequent *dispatch day*.

# 3.3A Dispatch Data Submissions for the Day-Ahead Commitment Process

- 3.3A.1 <u>Subject to For the time periods specified in accordance with section 1.7</u>, defining when the day-ahead commitment process shall function, this section 3.3A shall be in effect.
- 3.3A.2 Subject to the standing *dispatch data* provisions of section 3.3.9, each *registered market participant* that intends its dispatchable *generation facility*, including those a *generation facilitiesy* that intends to operate in *segregated mode of operation* in real-time, or *dispatchable load facility* to be eligible for *dispatch* by the *IESO* for a given *dispatch hour* of a *dispatch day* shall, after 06:00 EST but before 1±0:00 EST of the *pre-dispatch day*, submit *dispatch data* for those *dispatch hours* of the *dispatch* day including, where applicable, the daily *energy* limit for the *facility* for the *dispatch day*. The *registered market participant* may then only revise such initial *dispatch data* as permitted by this section 3.3A.
- 3.3A.3 If a *registered market participant* for a dispatchable *generation facility* does not provide *dispatch data* in accordance with section 3.3A.2 the *facility* shall not operate in real-time without the approval of the *IESO* under section 3.3A.12.
- 3.3A.4 A registered market participant for a dispatchable load facility may, in the dispatch data submitted under section 3.3A.2, identify all or a portion of the consumption at such registered facility as non-dispatchable load in accordance with the applicable market manual.
- 3.3A.5 A registered market participant for a boundary entity may submit, between 6:00 EST and 104:00 EST of the pre-dispatch day, an import offer or export bid for the next dispatch day with a valid NERC tag identifier. If the import offer is included in the constrained schedule from the schedule of record pre-dispatch of record

- determined under section 5.8, the *registered market participant* will receive the day-ahead *intertie* offer guarantee determined under section 3.8A of Chapter 9.
- 3.3A.6 Except for energy-limited resources and physical generation units associated with a pseudo-unit designated in accordance with section 2.2.6G, all registered market participants for all boundary entities and generation facilities that submitted offers in accordance with either section 3.3A.2 or section 3.3A.5 shall not modify those offers between 101:00 EST and the release of the constrained schedule from the schedule of recordpre dispatch of record. An Ooffers from a registered market participants for an energy-limited resources which submitted a daily cascading hydroelectric dependency in accordance with section 2.2.6H or physical generation units associated with a pseudo-unit designated in accordance with section 2.2.6G may be modified between 11:00 EST to 13:00 EST in accordance with the applicable market manual.
- 3.3A.7 The *IESO* shall use the initial *dispatch data* submitted by *registered market* participants under sections 3.3A.2 and 3.3A.5 to determine and *publish* the initial *pre-dispatch schedule* in accordance with section 5.

#### **Market Participant Revisions to Dispatch Data**

- 3.3A.8 Subject to sections 3.3A.9 and 3.3A.104, after the *IESO* releases the <u>schedule of record constrained schedules from the pre-dispatch of record</u> a registered market participant may submit revised dispatch data with respect to any dispatch hour without restriction until 2 hours prior to the beginning of that dispatch hour.
- 3.3A.9 Subject to section 3.3A.10 A a registered market participant for a dispatchable generation facility that did submit dispatch data under section 3.3A.2 may revise its offer in real-time provided the revised dispatch data does not increase the hours or the offered quantity in any hour relative to the dispatch data submitted under section 3.3A.2. Registered market participants may revise prices offered. Revised offers which represent increases to the hours, or increases to the offered quantity relative to the dispatch data submitted under section 3.3A.2 will require IESO approval. Changes to daily energy limits will not require IESO approval.
- 3.3A.10 A registered market participant may submit revised dispatch data for an hourahead dispatchable load with respect to any dispatch hour, without restriction, until 3 hours prior to that dispatch hour. A registered market participant for a dispatchable generation facility that was deemed to have accepted the production cost guarantee in accordance with section 5.8.4 shall not increase the offer price associated with the minimum loading point of the facility.
- 3.3A.11 A registered market participant for a dispatchable load facility that declared its intent for all or a portion of its consumption to be non-dispatchable under sections 3.3A.2 and 3.3A.4 will require IESO approval to increase its declared bid quantity and bid that consumption in real-time as dispatchable load.
- 3.3A.12 The *IESO* shall approve increases to declared availability of a dispatchable *facility* if that *generation facility* or *dispatchable load facility* returns from outage earlier

than planned, or if the *IESO* has solicited additional *offers* and *bids*, or if such increases will avoid an *emergency operating state* or *high-risk operating state*, or as permitted under section 3.3.6.3.

3.3A.13 A registered market participant for a boundary entity who is eligible to receive a day-ahead intertie offer guarantee for an import transaction in accordance with section 3.3A.5 shall not revise the submitted dispatch data to link that import transaction to an export transaction as described in section 3.5.8.2 of Chapter 7. If the IESO determines that the dispatch data was revised by the registered market participant in the manner described above, the IESO shall recover from the registered market participant any day-ahead intertie offer guarantee payment for that import transaction and shall redistribute the payment in accordance with chapter 9, section 4.8.2.11.

### 3.7 Self-Scheduling Generators

3.7.3 <u>Subject to For the time periods specified in accordance with</u> section 1.7 defining when the day-ahead commitment process shall function, a *registered market* participant for a *registered facility* that is a *self-scheduling generation facility* shall submit *dispatch data* after 6:00 EST but before 104:00 EST of the *pre-dispatch day* in accordance with section 3.7.1.

#### 3.8 Intermittent Generators

3.8.2 Subject to For the time periods specified in accordance with section 1.7 defining when the day-ahead commitment process shall function, a registered market participant for a registered facility that is an intermittent generator shall submit dispatch data after 6:00 EST but before 104:00 EST of the pre-dispatch day indicating its best forecast of the amount of energy that the intermittent generator will inject in each dispatch hour of the next dispatch day in accordance with section 3.8.1.

### 3.8A Transitional Scheduling Generators

3.8A.2 Subject to For the time periods specified in accordance with section 1.7 defining when the day-ahead commitment process shall function, a registered market participant for a registered facility that is a transitional scheduling generator shall submit dispatch data after 6:00 EST but before 104:00 EST of the predispatch day indicating its forecast of the amount of energy that the transitional scheduling generator will inject in each dispatch hour of the next dispatch day in accordance with section 3.8A.1.

#### PART 5 – IESO BOARD DECISION RATIONALE

Refer to MR-00348-R00

PART 5 – IESO BOARD DECISION RATIONALE				



#### PART 1 – MARKET RULE INFORMATION

Identificatio	cation No.: MR-00348-R03						
Subject:	Enhanced	nanced Day-Ahead Commitment Process (EDAC)					
Title:	Day-Ahead Commitment Scheduling Process						
Nature of Proposal:  Alteration			Deletion		Addition		
Chapter:	7			Appendix:			
Sections:	5.8						
Sub-sections proposed for amending:			5.8.1, 5.8	3.2, 5.8.3, 5.8.4,	5.8.5, 5.8.6	5, 5.8.7, 5.8.8	

#### PART 2 - PROPOSAL HISTORY - PLEASE REFER TO MR-00348-R00

Version	Reason for Issuing	Version Date
Approved Amendment Publication Date:		
Approved Amer	ndment Effective Date:	

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**

MR-00348-R03 proposes to modify the market rules in sections 5.8 of Chapter 7 to specify the Day-Ahead Commitment Scheduling Process.

#### **Background**

Please refer to MR-00348-R00.

#### **Discussion**

It is proposed to modify the market rules in section 5.8 of Chapter 7 in the following manner:

#### Section 5.8 The Day-Ahead Commitment Pre-Dispatch Scheduling Process

- Modify the section title to reflect that pre-dispatch is no longer used in determining the Day-Ahead Scheduling Process.
- Modify section 5.8.1 to identify when the enhanced process starts and to delete reference to those bids or offers which were previously excluded from the DACP process. There will also be a need to clarify that the enhanced process shall use the new EDAC calculation engine set out in a new Appendix 7.5A. There will be no pre-dispatch schedules for the next dispatch day determined by the IESO so the IESO's obligation to determine them is eliminated. It is possible that in future there may be a use/need for such schedules and so it is proposed to retain a permission for the IESO to do so. For further information on Appendix 7.5A please refer to MR-00348-R06.
- Modify section 5.8.2 to identify the timing of the release of the results of the enhanced process and to identify what information the IESO shall be releasing.
- Delete section 5.8.3 because the EDAC design clearly states that the IESO would only constrain for reliability after the enhanced process was completed.
- Modify section 5.8.4 to specify that the registered market participant for a facility which was scheduled by the enhanced process will be deemed to have accepted the guarantees associated with that scheduling.
- Modify section 5.8.5 to specify the IESO's obligations in regard to the scheduling of a facility that has been selected by the enhanced process.

- Modify section 5.8.6 to reflect the enhanced design.
- Modify section 5.8.7 to clarify whether or not the IESO may disregard the net intertie scheduling limit during the cross-over from the day-ahead to real-time. Additionally, it is necessary to identify that it is the schedule of record that is being determined not pre-dispatch schedules as currently exists in section 5.8.7.
- Delete section 5.8.8 to reflect the fact that section 5.8.3 is being deleted. Since there are no are
  no constraining actions being undertaken by the IESO during the enhanced process the need to
  notify the market of such constraint activity is no longer necessary.

#### PART 4 – PROPOSED AMENDMENT

# 5.8 The Day-Ahead Commitment Pre-Dispatch Scheduling Process

- 5.8.1 Starting from 101:00 EST and until the <u>schedule of record constrained schedules</u> from the <u>pre-dispatch of record are is</u> <u>published</u> under section 5.8.2, the <u>IESO shall may in accordance with appendix 7.5A</u> determine <u>pre-dispatch schedules</u> for the <u>dispatch hours</u> of the next <u>dispatch day, without considering</u>
  - offers for import transactions linked to export transactions through the process outlined in section 3.5.8.2 of Chapter 7; and
  - all export bids.
- 5.8.2 The *IESO* shall release the constrained schedules and associated projections of market schedules and publish market prices determined from the schedule of record pre-dispatch of record no later than 15:00 EST in accordance with section 5.5.
- With the registered market participant's consent, the IESO may, in order to maintain the reliable operation of the IESO controlled grid on the next dispatch day, during the time period from 11:00 EST to the release of the constrained schedules from the pre-dispatch of record, manually apply a constraint to a generation facility that submitted offers into the day ahead commitment process to ensure that the scheduled output from that facility in the constrained schedule resulting from the pre-dispatch of record will meet or exceed its minimum loading point for at least its minimum generation block run-time. Such constraints shall commence on the first scheduled hour of operation on the next dispatch day in which that facility is expected to achieve its minimum loading point. Subject to section 5.8.6, when the IESO manually applies these constraints to the pre-

dispatch of record, the identical constraints will be respected in future iterations of the pre-dispatch schedule and in the real-time schedule [Intentionally left blank – section deleted.]

- 5.8.4 A registered market participant whose facility is eligible under section 2.2C for the day-ahead productiongeneration cost guarantee and whose facility is included in the schedule of record constrained schedule from the pre-dispatch of record and is scheduled for at least its minimum generation block run-time at no less than its minimum loading point, is deemed to have accepted the guarantee for its facility, unless the registered market participant declines the guarantee by so notifying the IESO in accordance with the applicable market manual. The registered market participant shall provide this notification to the IESO by 15:15 EST of the pre-dispatch day
- 5.8.5 Subject to section 5.8.6, the *IESO* shall ensure that the scheduled output from a facility that was included in the <u>schedule of record</u> constrained schedule from the <u>pre-dispatch of record</u> for which the <u>registered market participant</u> has accepted the day-ahead cost guarantee under section 5.8.4, will meet or exceed its <u>minimum loading point</u> for the <u>minimum generation block run-time</u> in future iterations of the <u>pre-dispatch schedule</u> and in the <u>real-time schedule</u>.
- 5.8.6 The *IESO* may, to maintain the reliable operation of the *IESO-controlled grid*, require a *generation facility* that was included in the <u>schedule of record</u> constrained schedule from the <u>pre-dispatch of record</u> to either desynchronize from the *IESO-controlled grid* or to not synchronize to the *IESO-controlled grid*.
- 5.8.7 When determining the <u>pre-dispatch schedules schedule of record</u> between 1110:00 EST and 15:00 EST, for the <u>pre-dispatch schedule</u> applicable to the first hour of the next <u>dispatch day</u> for which <u>day-ahead reliability production cost</u> guarantees apply, the <u>IESO</u> may disregard the net <u>intertie</u> scheduling limit.
- 5.8.8 The *IESO* shall *publish*, in accordance with the applicable *market manual*, all actions taken by the *IESO* under section 5.8.3 and any other information as required by the applicable *market manual*. [Intentionally left blank section deleted.]

#### PART 5 – IESO BOARD DECISION RATIONALE

Refer to MR-00348-R00



#### PART 1 – MARKET RULE INFORMATION

Identificatio	ion No.: MR-00348-R04				
Subject:	Enhanced	hanced Day-Ahead Commitment Process (EDAC)			
Title:	Day-Ahead Commitment Scheduling Process				
Nature of Proposal:		Alteration	☐ Deletion	Addition	
Chapter:	6.3B		Appendix:		
Sections:	6.3B.1, 6.3B.2, 6.3B.3				
Sub-sections proposed for amending:					

#### PART 2 - PROPOSAL HISTORY - PLEASE REFER TO MR-00348-R00

Version	Reason for Issuing	Version Date
Approved Amer	ndment Publication Date:	
Approved Amer	ndment Effective Date:	

Provide a brief description of the following:

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- 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**

MR-00348-R04 proposes to modify the market rules in sections 6.3B of Chapter 7 to specify the Real-Time Scheduling of Generation Facilities Eligible for the Day-Ahead Production Cost Guarantee.

#### **Background**

Please refer to MR-00348-R00.

#### **Discussion**

It is proposed to modify the market rules in section 6.3B of Chapter 7 in the following manner:

# <u>Section 6.3B.1 Real-Time Scheduling of Generation Facilities Eligible for the Day-Ahead Generation Cost Guarantee</u>

- Modify the section title to reflect the change from Generator Cost Guarantee to Production Cost Guarantee
- Modify section 6.3B.1 by reflecting the change to a Generation Production Cost Guarantee and to specify that if the IESO has to de-synchronize for reliability reasons, a facility that received a day-ahead production cost guarantee, that facility will remain eligible to receive the guarantee. Additionally the registered market participant for that facility would also retain its permission to apply to the IESO for additional compensation. Also it is necessary to specify that the condition of the facility meeting its minimum run-time requirements is being replaced with the condition to meet its schedule of record requirements.
- Modify section 6.3B.2 by reflecting the change to a Generation Production Cost Guarantee and deleting the reference to the registered market participant accepting the guarantee. Also it is necessary to specify that the condition of the facility meeting its minimum run-time requirements is being replaced with the condition to close its breaker by the start of the first interval of the first hour of its schedule of record. Also it is proposed to insert the words "associated with that start determined in accordance with section 5.8" so that there is clarity in the rules that if the condition for eligibility is not met the facility is only ineligible for the production cost guarantee associated with that start.
- Insert a new section 6.3B.3 to specify that if a generation facility that was eligible for the production cost guarantee under section 2.2C does not meet its schedule of record requirements due to reasons specified in section 1.2.3 of Chapter 5 then the facility shall remain eligible for a

pro-rated production cost guarantee. Section 1.2.3 of Chapter 5 specifies that market participants are permitted to protect their assets from physical damage or to protect the safety of their employees, the public, or the environment.

#### PART 4 – PROPOSED AMENDMENT

# 6.3B Real-Time Scheduling of Generation Facilities Eligible for the Day-Ahead Production Generation Cost Guarantee

- 6.3B.1 If the *IESO*, for reasons of reliability, requires a *generation facility* that was eligible for the day-ahead-productiongeneration cost guarantee under section 2.2C and that has accepted the day-ahead generation cost guarantee to either desynchronize from the *IESO-controlled grid* or to not synchronize to the *IESO-controlled grid* such that the *generation facility* does not meet-comply with its minimum run-timeschedule of record-requirements, the *generation facility* shall remain eligible for the day-ahead generation production cost guarantee. The registered market participant for the generation facility may also apply to the *IESO* for additional compensation under section 4.7E.1 of Chapter 9.
- 6.3B.2 If a generation facility that was eligible for the day ahead production generation cost guarantee under section 2.2C and that has accepted the day ahead generation cost guarantee does not meet close its breaker by the start of the first interval of the first hour comply with of its minimum run timeschedule of record requirements due to reasons not specified in sections 6.3B.1or 6.3B.3 then the generation facility shall not remain eligible for the day ahead production generation cost guarantee associated with that start determined in accordance with section 5.8 nor shall the registered market participant for the generation facility be eligible to apply to the IESO for additional compensation under section 4.7E.1 of Chapter 9.
- 6.3B.3 If a generation facility that was eligible for the production cost guarantee under section 2.2C does not comply with its schedule of record due to reasons specified in section 1.2.3 of Chapter 5 then the facility shall remain eligible for a pro-rated production cost guarantee determined in accordance with section 4.7D of Chapter 9.

Refer to MR-00348-R00			



Identification No.: MR-00348-R05							
Subject:	Enhanc	hanced Day-Ahead Commitment Process (EDAC)					
Title:	Definit	ions					
Nature of P	Nature of Proposal:		ration	☐ Deletion		Addition	
Chapter:	11			Appendix:			
Sections:							
Sub-section	is propose	ed for amendi	ng:				
PART 2 – P	ROPOSA	L HISTORY –		EFER TO MR-00348-	R00		
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#### **Summary**

MR-00348-R05 proposes to modify defined terms in Chapter 11 of the market rules in order to facilitate version 1.0 of the EDAC design.

#### **Background**

For further information please refer to MR-00348-R00.

#### **Discussion**

It is proposed to modify Chapter 11 of the market rules by deleting an existing defined term "combined guaranteed costs", modifying the "pre-dispatch of record" and inserting seven new defined terms "minimum generation block down time", "start-up cost", "speed no-load cost, "maximum number of starts per day", "elapsed time to dispatch", "pseudo-unit, and "daily cascading hydroelectric dependency".

#### PART 4 – PROPOSED AMENDMENT

combined guaranteed costs means all fuel costs incurred by a generation facility up to and including its minimum loading point, as defined in the applicable market manual, including costs incurred by that generation facility to achieve synchronization and once synchronized with the IESO controlled grid to move to the generation facility's minimum loading point;

*pre-dispatchschedule* of record means a stage of the day-ahead commitment process where the resulting constrained schedule is used in the calculation of various day-ahead *settlement amounts*;

minimum generation block down time is the minimum time, in hours, between the time a generation facility was last at its minimum loading point before desynchronization and the time the generation facility reaches its minimum loading point again after synchronization;

start-up cost is the value offered by the registered market participant to bring an off-line resource to its minimum loading point;

<u>speed no-load cost</u> is the hourly-value offered by the <u>registered market</u> participant to maintain a <u>generation facility</u> synchronized with zero net <u>energy</u> injected into the <u>IESO-controlled grid</u>

maximum number of starts per day is the number of times that a unit can be started within a dispatch day.

<u>elapsed time to dispatch</u> is the minimum amount of time, in minutes, between the time at which a startup sequence is initiated for a *generation unit* and the time at which it becomes dispatchable by reaching its *minimum loading point*.

pseudo-unit means a generation facility consisting of a combined cycle facility comprised of one or more combustion turbines and a single steam turbine represented as a single generation unit for use in the day-ahead commitment process' 24 hour optimization.

daily cascading hydroelectric dependency means there is a minimum hydraulic time lag of less than 24 hours from a hydroelectric generation facility to one or more adjacent upstream and/or downstream hydroelectric generation facilities operated by the same registered market participant.

#### PART 5 - IESO BOARD DECISION RATIONALE

Refer to MR-00348-R00			