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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

<b>Identification No.:</b> MR-00208-R00	
<b>Subject:</b> Data, Scheduling, Dispatch, Prices	
<b>Title:</b> Remove Deferred Preliminary/Final Pricing Requirements from the Rules	
<b>Nature of proposal</b> (please indicate with X): <input checked="" type="checkbox"/> Alteration <input type="checkbox"/> Deletion <input type="checkbox"/> Addition	
<b>Chapter:</b> 7	<b>Appendix:</b>
<b>Sections:</b> 8	
<b>Sub-sections proposed for amending:</b> 8.1, 8.2 and 8.3	

### PART 2 – PROPOSAL HISTORY

Issue	Reason for Issue	Issue Date
	Amendment submission (IMOTP 110-6br) reviewed by Technical Panel.	September 10, 2002
1	Amendment proposal submitted to Technical Panel	September 19, 2002
2	Recommended by Technical Panel and submitted for IMO-Board approval.	September 24, 2002

**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 the *IMO-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 *IMO-administered markets*.

It is proposed to remove the market rule provisions requiring the IMO to calculate preliminary and final market prices and to replace provisional market prices with those preliminary and final prices for the following reasons:

- Replacing provisional prices with preliminary and final prices would not necessarily assure more accurate prices given the timelines and processes associated with revenue metering;
- It would almost certainly result in all prices changing two days and six days after the fact, leading to confusion among market participants and the broader public;
- It would delay the benefit of price certainty, which would likely complicate the activities of market participants (e.g. hedging arrangements); and
- It would be complex and expensive to implement.

The Market Rules (section 8.1 of Chapter 7) include the provisions for the calculation of preliminary and final prices subsequent to the calculation of provisional prices. The functionality entailed in these provisions is currently required to be implemented ten months after the market commencement date. The functionality of calculating preliminary and final prices was deferred via a rule amendment approved prior to market start (see section 8.1.3 of Chapter 7). As described in the Market Rules, the IMO would be required to calculate and publish a preliminary price for each dispatch interval within two days of the end of the dispatch day and to calculate and publish a final price within six days. The final price would be the price used in settlement calculations.

With the removal of the requirement to publish preliminary and final prices, it is also appropriate to remove the term “provisional” with respect to market prices and market schedules. This reference was necessary to distinguish between the prices and schedules published immediately after each dispatch interval and the preliminary and final prices and schedules published on the timelines noted above. This proposal, therefore, amends the market rules to refer only to “market prices and market schedules” i.e. the prices and schedules that are published immediately after each dispatch interval.

Under this amendment (MR-00202-R00) the requirement to replace provisional prices with preliminary and final prices is removed from section 8.1 of Chapter 7, Purpose and Timing of Determining Market Prices.

Consequential changes are required to the following sections of the market rules:

- Chapter 7 section 8.2 Ex-post Prices for Each Dispatch Interval (refer to MR-00202-R00)
- Chapter 7 section 8.4 Administrative Pricing and Corresponding Schedules (refer to MR-00202-R00)
- Chapter 7 section 4.4 Inputs to the Dispatch Algorithm, (refer to MR-00202-R01)
- Chapter 7 section 6.4 Provisional Market Schedules and Market Prices, (refer to MR-00202-

**PART 3 – EXPLANATION FOR PROPOSED AMENDMENT**

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- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IMO-administered markets*.

R02)

- Chapter 7 section 6.5 Publication of Real-Time Schedule Information, (refer to MR-00202-R02)
- Chapter 7 section 7.2 Information Used to Determine Dispatch Instructions (refer to MR-00202-R03)
- Chapter 7 section 7.8 Publication of Real-Time Dispatch Information (refer to MR-00202-R03)
- Appendix 7.5 section 3.1 Modes of Operation (refer to MR-00202-R04)
- Appendix 7.5 section 3.2 Inputs to and Form of the Market Scheduling and pricing Process (refer to MR-00202-R04)
- Appendix 7.5 section 3.3 Outputs (refer to MR-00202-R04)
- Chapter 9 section 3.8A Hourly Settlement Amounts for Intertie Offer Guarantees (refer to MR-00202-R05)

Changes to section 8.4.7 of Chapter 7 (MR-00208-R00) include the correction of some defined terms that were not italicized.

**PART 4 – PROPOSED AMENDMENT**

## 8. Determining Market Prices

### 8.1 Purpose and Timing of Determining Market Prices

- 8.1.1 The *IMO* shall use the procedures in this section 8 to determine the uniform *market prices* in the *IMO control area* and the *intertie zone* prices for *energy* and *operating reserve* that are used for the *market settlement process* pursuant to the provisions of Chapter 9.

- 8.1.1A The *IMO* shall determine the *intertie congestion price* associated with each *intertie zone* for each *dispatch hour* based on the *pre-dispatch schedule* referred to in section 6.1.3.
- 8.1.2 Subject to section 8.4, the *IMO* shall determine and *publish market prices* for *energy* and *operating reserve* in accordance with sections 8.2 and 8.3 within five minutes after the end of each *dispatch interval*, as provided in section 6.4. ~~according to the following schedule:~~
- 8.1.2.1 [Intentionally left blank] ~~provisional market prices for each *dispatch interval*, within five minutes after the end of that *dispatch interval*, as provided in section 6.4. Such provisional market prices shall be based on system data that may not at that time meet revenue quality standards required for determining payments due pursuant to the settlement and billing procedures specified in Chapter 9;~~
- 8.1.2.2 [Intentionally left blank] ~~subject to section 8.1.3, preliminary market prices for each *dispatch interval* and for each *dispatch hour* of each *dispatch day*, within two days after the end of such *dispatch day*. Such preliminary market prices shall be based on preliminary metering data that may not yet be fully processed by the *VEE process*; and~~
- 8.1.2.3 [Intentionally left blank] ~~subject to section 8.1.3, final market prices for each *dispatch interval* and for each *dispatch hour* of each *dispatch day*, within six days after the end of such *dispatch day*. Such final market prices shall be based on metering data that has been fully processed by the *VEE process*.~~
- 8.1.3 [Intentionally left blank] ~~Until the date that is the first day of the tenth calendar month following the *market commencement date*, calculated from the first day of the calendar month immediately following the month in which the *market commencement date* occurs, the *IMO* shall not determine or publish the preliminary market prices referred to in section 8.1.2.2 or the final market prices referred to in section 8.1.2.3.~~

## 8.2 Ex-post Prices for Each Dispatch Interval

- 8.2.1 The *IMO* shall determine *market prices* for *energy* and *operating reserve* for each *dispatch interval* ~~at several different times after the *dispatch interval*~~, using the *dispatch algorithm* as follows:
- 8.2.1.1 the data and information described in section 4.4 shall be used as inputs, using the most recent valid *dispatch data* submitted by *registered market participants* and the most accurate system data and *metering data* for that *dispatch interval* that is available at the time the *market prices* are being determined;

- 8.2.1.2 the unconstrained *IMO-controlled grid* model shall be used;
- 8.2.1.3 the operating status of each *registered facility*, in the *dispatch algorithm* at the start of each *dispatch interval* shall be set equal to the operating status in the *market schedule* determined for the end of the preceding *dispatch interval* for that *registered facility* and, subject to section 8.2.3, recognizing by the adjustment to the input data any *registered facility* in respect of which a *forced outage* has occurred or of which the *interchange schedule* has been curtailed due to constraints external to the *IMO control area* during that *dispatch interval*;
- 8.2.1.4 the *dispatch algorithm* shall be run to determine *the market schedules* that maximise the economic gains from trade under the assumptions made pursuant to this section 8.2.1; and
- 8.2.1.5 subject to section 8.2.2, the marginal costs from the *dispatch algorithm* for *energy* and each class of *operating reserve*, in the *IMO control area* and in each *intertie zone*, shall be the *market prices* for that *dispatch interval*.
- 8.2.2 The prices produced as part of the output of the market scheduling and pricing process described in Appendix 7.5 for a ~~provisional, preliminary or final~~ pricing run shall not necessarily be the prices that are used for *settlement* purposes. Without limiting the generality of the foregoing, the following prices shall be used for *settlement* purposes:
- 8.2.2.1 the *energy price* for an *intertie zone* adjoining the *IMO control area* shall for *settlement* purposes, and subject to sections 8.2.2.4 to 8.2.2.7, equal the uniform Ontario *energy price* modified by the difference between the *intertie zone energy price* and the uniform Ontario *energy price* determined in the projected *market schedule*;
- 8.2.2.2 the *operating reserve price* for each class of *operating reserve* supplied from within the *IMO control area* shall for *settlement* purposes, and subject to sections 8.2.2.4 to 8.2.2.7, be formed:
- a) from the shadow prices associated with the *operating reserve* requirements within the *IMO control area* during *dispatch intervals* when such requirements can be met; or
  - b) from the greater of the highest priced *offer* associated with the scheduled *operating reserve* or the *energy prices* for the *dispatch interval* during which the *operating reserve* requirements within the *IMO control area* cannot be met;
- 8.2.2.3 the *operating reserve price* for each class of *operating reserve* in an *intertie zone* adjoining the *IMO control area* shall for *settlement*

purposes, and subject to section 8.2.2.4 to 8.2.2.7, equal the corresponding uniform *operating reserve* price for the *IMO control area* for that class of *operating reserve* modified by the difference between the corresponding *operating reserve* price for the *intertie zone* and the uniform *operating reserve* price for the *IMO control area* determined in the projected *market schedule*;

- 8.2.2.4 any *energy* price produced which exceeds *MMCP* shall be set equal to *MMCP* for *settlement* purposes;
- 8.2.2.5 any *energy* price produced which is less than negative *MMCP* shall be set equal to negative *MMCP* for *settlement* purposes;
- 8.2.2.6 any price for *operating reserve* produced which exceeds *MORP* shall be set equal to *MORP* for *settlement* purposes; and
- 8.2.2.7 any price for *operating reserve* produced which is negative will be set equal to zero for *settlement* purposes.

8.2.3 In the ~~case of the~~ calculation of ~~provisional~~ *market prices*, the *IMO* shall:

- 8.2.3.1 in the manner specified in section 8.2.1.3, adjust the input data at the start of a *dispatch interval* of a *registered facility* in respect of which a *forced outage* or *interchange schedule* curtailment due to constraints external to the *IMO control area* has occurred during the preceding or an earlier *dispatch interval*; and
- 8.2.3.2 make the adjustment referred to in section 8.2.1.3 in respect of such *registered facility* only to the extent that the input data can be adjusted having regard to the timing of the *forced outage* or *interchange schedule* curtailment due to constraints external to the *IMO control area* and the *IMO's* procedures for updating input data.

### 8.3 Uniform Ex-post Prices for Each Hour

- 8.3.1 The *IMO* shall determine, for each *dispatch hour*, a uniform *hourly Ontario energy price* (HOEP) in accordance with the formulation described as HOEP<sub>h</sub> in section 3.1.3 of Chapter 9.

### 8.4 Administrative Pricing and Corresponding Schedules

- 8.4.1 This section 8.4 applies only in respect of the establishment of *administrative prices* for the real-time *energy market* and the *operating reserve market*.
- 8.4.2 *Administrative prices* and corresponding *market schedules* shall be established by the *IMO* where:

- 8.4.2.1 the real-time *energy market* or the *operating reserve market* has been suspended in accordance with section 13;
- 8.4.2.2 the *IMO* is unable to *publish a ~~n~~-provisional energy market price* or *operating reserve market price* in accordance with section 8.1.2.1 due to a failure in or *planned outage* of the software, hardware or communications systems that supports the operation of the *dispatch algorithm*, provided that in such case *administrative prices* and corresponding *market schedules* may be established only where the requirements of section 8.4.3 are met; or
- 8.4.2.3 the *IMO* determines, pursuant to guidelines approved by the *IMO Board* relating to price error materiality and acceptable causal events, that a *published ~~provisional~~-energy market price* or *operating reserve market price* is incorrect due to incorrect inputs which affected the outcome of the *dispatch algorithm*, provided that in such case *administrative prices* and corresponding *market schedules* may be established only where the requirements of section 8.4.3 are met;

and all such *administrative prices* shall be the *energy market price* and the *operating reserve market price* for the applicable *dispatch interval* for all purposes under these rules.

- 8.4.3 The *IMO* shall only establish *administrative prices* and corresponding *market schedules* pursuant to sections 8.4.2.2 and 8.4.2.3 when:
  - 8.4.3.1 the *IMO* has access to *dispatch data* for *energy* or *operating reserve*, as the case may be, pertaining to the *dispatch interval* to which the *administrative price* is to be applied;
  - 8.4.3.2 it has been possible for *market participants* to submit to the *IMO*, in accordance with section 3.3, revised *dispatch data* until 2 hours prior to the beginning of the *dispatch hour* to which the *dispatch interval* referred to in section 8.4.3.1 relates where the *IMO* is unable to *publish a ~~n~~-provisional energy market price* or *operating reserve market price* in accordance with section 8.1.2.1 due to a failure in the software, hardware or communications systems that supports the operation of the *dispatch algorithm*;
  - 8.4.3.2A it has been possible for *market participants* to submit to the *IMO*, in accordance with section 3.3, revised *dispatch data* until 4 hours prior to the beginning of the *dispatch hour* to which the *dispatch interval* referred to in section 8.4.3.1 relates where the *IMO* is unable to *publish a ~~n~~-provisional energy market price* or *operating reserve market price* in accordance with section 8.1.2.1 due to a *planned outage* of the software, hardware or communications systems that supports the operation of the *dispatch algorithm*; and

8.4.3.3 the *IMO* is able to issue *dispatch instructions* based on the *dispatch data* referred to in section 8.4.3.1 and is able to record these *dispatch instructions* for *settlement* purposes.

8.4.4 Subject to section 8.4.5A, where the *IMO* intends to apply *administrative prices* pursuant to sections 8.4.2.2 or 8.4.2.3 in respect of a given *dispatch interval*:

8.4.4.1 the ~~provisional~~ *market price* and corresponding *market schedule* for that *dispatch interval*, subject to section 8.4.4.1A, shall be the ~~provisional~~ *market price* and corresponding *market schedule* for the preceding *dispatch interval*;

8.4.4.1A where it has been determined pursuant to section 8.4.2.3 that the *energy market price* or the *operating reserve market price* for the preceding *dispatch interval* was incorrect, the ~~provisional~~ *market price* and corresponding *market schedule* shall be the ~~provisional~~ *market price* and corresponding *market schedule* for the last correct *dispatch interval*; and

8.4.4.2 [Intentionally left blank] ~~if it is not possible to establish the preliminary market price in accordance with section 8.1.2, then the preliminary market price and corresponding market schedule for that dispatch interval shall be the preliminary market price and corresponding market schedule for the preceding dispatch interval;~~

8.4.4.3 [Intentionally left blank] ~~if it is not possible to establish the final market price in accordance with section 8.1.2, then the final market price and corresponding market schedule for that dispatch interval shall be the final market price and corresponding market schedule for the preceding dispatch interval; and~~

8.4.4.4 the *IMO* shall inform *market participants* as soon as practicable whenever a *published market price* is an *administrative price*.

...

8.4.7 The *IMO* shall not establish *administrative prices* pursuant to sections 8.4.2.3 if more than two *business days* have passed since the *dispatch day* in respect of which the incorrect ~~provisional~~ *energy market price* or *operating reserve market price* was *published*.

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**PART 5 – IMO BOARD COMMENTS**




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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

<b>Identification No.: MR-00208-R01</b>	
<b>Subject:</b> Data, Scheduling, Dispatch, Prices	
<b>Title:</b> Remove Deferred Preliminary/Final Pricing Requirements from the Rules	
<b>Nature of proposal</b> (please indicate with X): <input checked="" type="checkbox"/> <b>Alteration</b> <input type="checkbox"/> <b>Deletion</b> <input type="checkbox"/> <b>Addition</b>	
<b>Chapter:</b> 7	<b>Appendix:</b>
<b>Sections:</b> 4	
<b>Sub-sections proposed for amending:</b> 4.4	

### PART 2 – PROPOSAL HISTORY: REFER TO MR-00208-R00

Issue	Reason for Issue	Issue Date

**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 the *IMO-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 *IMO-administered markets*.

These changes are consequential to the amendments of MR-00208-R00. The second sentence of section 4.4.1 has been removed as unnecessary since it for the most part introduces concepts relating to provisional and final pricing that are no longer in use and since in the case of provisional prices (which are now simply market prices), it would be misleading to refer to them as “estimations”.

**PART 4 – PROPOSED AMENDMENT****4.4 Inputs to the Dispatch Algorithm**

4.4.1 The *IMO* shall use as inputs to the *dispatch algorithm* the data and information outlined in section 4.4 and described in more detail in Appendix 7.5. ~~Subject to section 4.4.1A, information concerning real-time events shall be based on projections when determining pre-dispatch schedules and projected prices, estimations when determining real-time schedules and provisional prices, and validated metering data when determining final settlement prices.~~

~~4.4.1A — Until the date that is the first day of the tenth calendar month following the market commencement date, calculated from the first day of the calendar month immediately following the month in which the market commencement date occurs, the *IMO* shall, in lieu of determining the final settlement prices referred to in section 4.4.1, use provisional prices.~~

**PART 5 – IMO BOARD COMMENTS**




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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

<b>Identification No.:</b> MR-00208-R02	
<b>Subject:</b> Data, Scheduling, Dispatch, Prices	
<b>Title:</b> Remove Deferred Preliminary/Final Pricing Requirements from the Rules	
<b>Nature of proposal</b> (please indicate with X): <input checked="" type="checkbox"/> Alteration <input type="checkbox"/> Deletion <input type="checkbox"/> Addition	
<b>Chapter:</b> 7	<b>Appendix:</b>
<b>Sections:</b> 6	
<b>Sub-sections proposed for amending:</b> 6.4 and 6.5	

### PART 2 – PROPOSAL HISTORY: REFER TO MR-00208-R00

Issue	Reason for Issue	Issue Date

**Approved Amendment *Publication* Date:**

**Approved Amendment *Effective* Date:**

**PART 3 – EXPLANATION FOR PROPOSED AMENDMENT**

Provide a brief description of the following:

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- Alternative solutions considered
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These changes are consequential to the amendments of MR-00208-R00.

**PART 4 – PROPOSED AMENDMENT**

## **6.4 Provisional Market Schedules and Market Prices**

- 6.4.1 Subject to section 8.4 the *IMO* shall, within five minutes after the end of each *dispatch interval*, use the *dispatch algorithm* to determine a **provisional** *market schedule* and **provisional** *market prices* for that *dispatch interval* based on the most recent *real-time schedule* for such *dispatch interval*.
- 6.4.2 Subject to section 8.4 for the purpose of determining the **provisional** *market schedule* and **provisional** *market prices* for any *dispatch interval*, the *IMO* shall use the same information and data used for determining the *real-time schedule* for that *dispatch interval*, except that:
- 6.4.2.1 the *unconstrained IMO-controlled grid model* shall be used;
- 6.4.2.2 subject to section 3.1.2 of Appendix 7.5, the initial conditions to be used for any *dispatch interval* in the **provisional** *market schedule* shall be the final conditions of the **provisional** *market schedule* for the preceding *dispatch interval*;
- 6.4.2.3 the total demand (including losses) to be satisfied within a *dispatch interval* in the **provisional** *market schedule* shall be set at the *IMO's* best estimate of its actual value, as determined from real-time system data;
- 6.4.2.4 total system *energy losses* determined in the *real-time schedule* shall be represented as an increase in *non-dispatchable load* within the *IMO control area*;
- 6.4.2.5 any *registered facility* in respect of which a *forced outage* has been detected during a *dispatch interval* shall be recognized by an adjustment to the input data;

- 6.4.2.6 subject to section 6.4.2A, the estimated deviations between scheduled quantities and actual quantities shall be represented as a change in *non-dispatchable load* in the *IMO control area*;
  - 6.4.2.7 subject to section 6.4.2A, the *market schedule* shall reflect dispatch adjustments computed using scheduled injections from the *constrained schedule*, outlined in Appendix 7.5;
  - 6.4.2.8 in accordance with section 4.13.1 of Appendix 7.5, the *market schedule* may use different trading period length to that of the *real-time schedule*; and
  - 6.4.2.9 in accordance with section 2.11.2 of Appendix 7.5, the *market schedule* may use a different ramp rate for *operating reserve* to that of the *real-time schedule*.
- 6.4.2A Until the date that is the first day of the seventh calendar month following the *market commencement date*, calculated from the first day of the calendar month immediately following the month in which the *market commencement date* occurs, in determining the *provisional market schedule* and *provisional market prices* for any *dispatch interval*, the *IMO* shall not have regard to the estimated deviations referred to in section 6.4.2.6 or to the dispatch adjustments referred to in section 6.4.2.7.

## 6.5 Publication of Real-Time Schedule Information

...

- 6.5.1A Subject to section 8.4, for each *registered facility* that is a *dispatchable load facility* or a *dispatchable generation facility* in respect of which a valid *bid* or *offer* has been submitted for the applicable *dispatch hour*, the *IMO* shall, within one hour after each *dispatch hour*, release to each *registered market participant* the *provisional market schedule* for their *registered facilities* for each *dispatch interval* of that *dispatch hour*.
- 6.5.2 Subject to section 8.4 the *IMO* shall, in the five minute period after the end of each *dispatch interval*, release to all *market participants* the *provisional uniform market prices* of energy and *operating reserves* related to that *dispatch interval*.
- 6.5.3 The *IMO* shall, within one hour after each *dispatch hour*, release to all *market participants* the following information for each *dispatch interval* of that *dispatch hour*:
  - 6.5.3.1 total system load and total system losses;
  - 6.5.3.2 area *operating reserve* requirements;

- | 6.5.3.3 for information purposes only, **provisional** energy prices at each set of transmission nodes identified by the *IMO* for this purpose, decomposed as far as practical into an *energy* component, a loss component and a component for all other transmission and system constraints and, subject to section 6.5.3A, the prices of each class of *operating reserve* in each reserve area identified by the *IMO* for this purpose;
- 6.5.3.4 [Intentionally left blank]
- 6.5.3.5 [Intentionally left blank]
- 6.5.3.6 any area *operating reserve* shortfalls; and
- 6.5.3.7 a list of network and *security* constraints that affected the *real-time schedule*.

**PART 5 – IMO BOARD COMMENTS**




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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

<b>Identification No.:</b> MR-00208-R03	
<b>Subject:</b> Data, Scheduling, Dispatch, Prices	
<b>Title:</b> Remove Deferred Preliminary/Final Pricing Requirements from the Rules	
<b>Nature of proposal</b> (please indicate with X): <input checked="" type="checkbox"/> Alteration <input type="checkbox"/> Deletion <input type="checkbox"/> Addition	
<b>Chapter:</b> 7	<b>Appendix:</b>
<b>Sections:</b> 7	
<b>Sub-sections proposed for amending:</b> 7.2 and 7.8	

### PART 2 – PROPOSAL HISTORY: REFER TO MR-00208-R00

Issue	Reason for Issue	Issue Date

**Approved Amendment *Publication* Date:**

**Approved Amendment *Effective* Date:**



**PART 3 – EXPLANATION FOR PROPOSED AMENDMENT**

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These changes are consequential to the amendments of MR-00208-R00.

**PART 4 – PROPOSED AMENDMENT****7.2 Information Used to Determine Dispatch Instructions**

...

7.2.2 If the *IMO* anticipates that an over-generation or an under-generation condition may occur, it shall issue system advisory notices in accordance with section 12.1 but shall continue using the procedures described in sections 5 and 6 to determine *pre-dispatch schedules, real-time schedules* and the associated projected and *provisional market prices and market schedules*.

7.2.3 If the *IMO* determines prior to issuing *dispatch instructions* that the market responses to the projected or *provisional market prices* will be sufficient to eliminate the over-generation or under-generation condition, the *IMO* shall take no *emergency* action and shall issue system advisory notices so indicating.

...

**7.8 Publication of Real-Time Dispatch Information**

7.8.1 The *IMO* shall, within one hour after each *dispatch hour*, *publish* information concerning system results and events during that *dispatch hour*. This information shall include, but is not limited to:

7.8.1.1 total load met;

7.8.1.2 transmission capacity between the *IMO-controlled grid* and each *intertie zone*;

7.8.1.3 subject to section 7.8.2, any *outages of transmission facilities*;

- 7.8.1.4 total *operating reserve* scheduled, and total *energy* called from such *operating reserve*, by area;
- 7.8.1.5 the *provisional* market prices for each *dispatch interval*; and
- 7.8.1.6 the *provisional* uniform *hourly Ontario energy price* (HOEP) determined in accordance with section 8.3.1.

**PART 5 – IMO BOARD COMMENTS**




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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

<b>Identification No.:</b> MR-00208-R04	
<b>Subject:</b> Data, Scheduling, Dispatch, Prices	
<b>Title:</b> Remove Deferred Preliminary/Final Pricing Requirements from the Rules	
<b>Nature of proposal</b> (please indicate with X): <input checked="" type="checkbox"/> Alteration <input type="checkbox"/> Deletion <input type="checkbox"/> Addition	
<b>Chapter:</b> 7	<b>Appendix:</b> 7.5
<b>Sections:</b> 3	
<b>Sub-sections proposed for amending:</b> 3.1, 3.2 and 3.3	

### PART 2 – PROPOSAL HISTORY: REFER TO MR-00208-R00

Issue	Reason for Issue	Issue Date

**Approved Amendment *Publication* Date:**

**Approved Amendment *Effective* Date:**

**PART 3 – EXPLANATION FOR PROPOSED AMENDMENT**

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These changes are consequential to the amendments of MR-00208-R00.

**PART 4 – PROPOSED AMENDMENT**

## 3. The Market Scheduling and Pricing Process

### 3.1 Modes of Operation

3.1.1 The market scheduling and pricing software may be operated to determine either a projected *market schedule* or a ~~provisional, preliminary and final~~ *market schedule*. While different numerical values may be used in each mode, the mathematical formulation shall be the same in both modes except that:

3.1.1.1 the projected *market schedule* shall represent between 1 and 24 individual periods each of a duration of 1 hour. The projected *market schedule* so produced represents the state of the *IMO-controlled grid* at the end of the *dispatch hour*. Unless otherwise provided in these *market rules*, this process shall use the same information and data used for determining the *pre-dispatch schedule* for the corresponding *dispatch hour*;

3.1.1.2 the ~~provisional, preliminary and final~~ *market schedules* shall represent individual *dispatch intervals*. Each schedule so produced represents the state of the *IMO-controlled grid* at the end of a *dispatch interval*. Unless otherwise provided in these *market rules*, this process shall use the same information and data used for determining the *real-time schedule* for the corresponding *dispatch interval*;

3.1.1.3 the projected *market schedule* shall include daily *energy* limits where specified pursuant to section 3.5.7 of this Chapter; and

- 3.1.1.4 subject to section 3.1.2, the *market schedule* process shall take, as inputs, the output levels of *generation facilities* and *dispatchable load facilities* from the preceding period of the corresponding *market schedule* and pricing solution.

...

## 3.2 Inputs to and Form of the Market Scheduling and Pricing Process

- 3.2.1 The form of and inputs to the market scheduling and pricing process shall differ from the *dispatch* scheduling and pricing process described in section 2 only as follows:
- 3.2.1.1 all constraints that limit the ability of *energy* to flow from one node to another node within the *IMO control area* shall be removed. The market scheduling and pricing process shall assume that all *physical services* are provided and consumed in the *IMO control area* at a single, undesignated location connected to each *intertie zone* only by a single notional *intertie*. Any link between *intertie zones* that lie outside the *IMO control area* shall be removed;
- 3.2.1.1A all area constraints on *ten-minute operating reserve* shall be removed;
- 3.2.1.1B the market model shall produce a uniform price for *energy* and for each class of *operating reserve* in the *IMO control area*. The projected *market schedule* shall also produce prices for *energy* and for each class of *operating reserve* in each of the *intertie zones* adjoining the *IMO control area*. No *intertie zone* prices are required to be produced by the ~~provisional, preliminary and final~~ *market schedules* as these values are subsequently derived from the uniform Ontario prices produced by ~~the those~~ *market schedules* and the projected *market schedule intertie congestion prices*;
- 3.2.1.2 *security* constraints shall be ignored except for those that impact on *intertie* flows;
- 3.2.1.2A constraints imposed on *offers* and *bids* that relate to transmission loading relief shall be ignored. Constraints relating to *generation facility outage* schedules and *contracted ancillary services* shall remain;
- 3.2.1.3 except for flows across *interties*, transmission losses shall not be associated with transmission line flows. Transmission losses other than in respect of flows across *interties* shall be represented as an increase in *non-dispatchable load*;

- 3.2.1.3A subject to section 3.2.1.3B, the flow across each *intertie* for all *dispatch intervals* within a *dispatch hour* in the ~~provisional, preliminary and final~~ market schedules shall be equal to the flow on that *intertie* determined for that same *dispatch hour* in the *market schedule* corresponding to the last *pre-dispatch schedule* determined prior to solving the *real-time schedule*;
- 3.2.1.3B where the limits on flows between *control areas* change in real-time as a result of an unplanned *intertie outage*, it shall be possible to reduce those limits in the ~~provisional, preliminary and final~~ market schedules;
- 3.2.1.4 any imports or exports between the *IMO control area* and other control areas required by the *IMO* to meet its obligations under requirements established by all relevant standards authorities and which are outside the normal market *bids* and *offers* shall not be represented directly but shall be represented as an increase or a decrease in *non-dispatchable load*;
- 3.2.1.5 [Intentionally left blank]
- 3.2.1.6 [Intentionally left blank]
- 3.2.1.7 [Intentionally left blank]
- 3.2.1.8 [Intentionally left blank]
- 3.2.1.9 [Intentionally left blank]
- 3.2.1.10 in accordance with section 4.13.1 of Appendix 7.5, the *market schedule* may use different trading period length to that of the *real-time schedule*; and
- 3.2.1.11 in accordance with section 2.11.2 of Appendix 7.5, the *market schedule* may use a different ramp rate for *operating reserve* to that of the *real-time schedule*.

### 3.3 Outputs

- 3.3.1 The market scheduling and pricing process shall produce the following outputs:
- 3.3.1.1 the cost to the marketplace as a whole of the solution;
- 3.3.1.2 the schedule for each *energy offer* submitted by a *generation facility* for each *dispatch period*;
- 3.3.1.3 the schedule for each *offer* for each class of *operating reserve* for each *dispatch period*;

- 3.3.1.4 the schedule for each *energy bid* submitted by a *dispatchable load* for each *dispatch period*;
  - 3.3.1.5 the output of each transitional scheduling generator and self-scheduling generation facility for each dispatch period;
  - 3.3.1.6 the uniform Ontario *energy price*. The projected *market schedule* shall also produce *energy prices* for each *intertie zone*;
  - 3.3.1.7 the uniform Ontario price for each class of *operating reserve* for each *dispatch period*. The *pre-dispatch schedule* shall also produce corresponding prices for all *intertie zones*. The *real-time schedule* need not produce corresponding prices for all *intertie zones* as the *real-time schedule intertie zone* prices are subsequently derived from the *real-time schedule* uniform Ontario prices and the *pre-dispatch schedule intertie congestion prices*; and
  - 3.3.1.8 [Intentionally left blank]
  - 3.3.1.9 penalty function values that are greater than zero.
- 3.3.2 As described in section 8.2.2 of this Chapter, the prices produced as part of the output of the market scheduling and pricing process ~~for a provisional, preliminary or final pricing run~~ shall not necessarily be the prices that are used for *settlement* purposes.

## PART 5 – IMO BOARD COMMENTS




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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

<b>Identification No.: MR-00208-R05</b>	
<b>Subject:</b> Data, Scheduling, Dispatch, Prices	
<b>Title:</b> Remove Deferred Preliminary/Final Pricing Requirements from the Rules	
<b>Nature of proposal</b> (please indicate with X): <input checked="" type="checkbox"/> <b>Alteration</b> <input type="checkbox"/> <b>Deletion</b> <input type="checkbox"/> <b>Addition</b>	
<b>Chapter:</b> 9	<b>Appendix:</b>
<b>Sections:</b> 3.8A	
<b>Sub-sections proposed for amending:</b> 3.8A.1	

### PART 2 – PROPOSAL HISTORY: REFER TO MR-00208-R00

Issue	Reason for Issue	Issue Date

**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 the *IMO-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 *IMO-administered markets*.

These changes are consequential to the amendments of MR-00208-R00.

**PART 4 – PROPOSED AMENDMENT**

### 3.8A Hourly Settlement Amounts for Intertie Offer Guarantees

- 3.8A.1 The ~~provisional~~ *market prices* determined by the *real-time market schedule* provided by the *IMO* used for the *settlement* of a *boundary entity* associated with an *intertie metering point* will sometimes deviate from its accepted *offer prices* in the *pre-dispatch market schedule* (the “*projected market schedule*”) in ways that, based on the *real-time dispatch process*, imply a change to *market participant k*’s net operating profits relative to the operating profits implied by the *pre-dispatch market schedule* for that *boundary entity*. When this occurs, *market participant k* associated with that *boundary entity* for *settlement hour h* shall receive as compensation, an *intertie offer guarantee settlement credit* for his import of *energy* into the *IMO-administered markets* equal to the cumulative losses resulting from a negative change in implied operating profits over the course of each *settlement hour*, resulting from such *settlement*, calculated in accordance with section 3.8A.2.

**PART 5 – IMO BOARD COMMENTS**