

Minutes of Meeting EDAC - Project Advisory Group

| Date held: August 26, 2010 | Time held: 9:00 to 15:00 | Location: Clarkson Viewing Gallery |
|-----------------------------------|--|---|
| Invited/Attended | Company Name | Attendance Status (A)ttended; (R)egrets; (S)ubstitute |
| Cary, Rob | Sithe Global | A |
| Chang, Monica | OPGI | A |
| Cook, Michael | Emera Energy | A |
| Hossie, Scott | TransAlta | A |
| Jayapalan, Jennifer | Portlands Energy Centre | A |
| Kerr, Paul | Shell Energy | Telephone |
| Kuntz, Margaret | Trans Canada | A |
| MacKenzie, John | Ontario Power Authority | A |
| Maddix, Melanie | Sithe Global Canadian Power Services, Ltd. | A |
| Shah, Sushil | OPGI | A |
| Sikstrom, Matt | OPGI | A |
| Walker, Phil | OPGI | A |
| Windsor, John | Emera Energy | A |
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| Abid, Tibby | IESO | A |
| Doran, Pat | IESO | A |
| Kamstra, Pat | IESO | A |
| Misner, Brad | IESO | A |
| Murray, Patricia | IESO | A |
| Romeo, Rick | IESO | A |
| Singh, Navneet | IESO | A |
| Wright-Hilbig, Rhonda | IESO | A |

The meeting minutes when finalized will be posted on the IESO web site at:

http://ieso.ca/imoweb/consult/consult_se73-pag.asp

Summary of Meeting Discussion

Item 1 Introduction and Review of Agenda

Rhonda Wright-Hilbig welcomed the EDAC Project Advisory Group members and invited them to introduce themselves.

Rhonda pointed out that there was a full agenda and that she would endeavor to keep to the times specified on the agenda in order to finish the meeting on time.

Item 2 Review of Minutes and Action Items from July 15, 2010 meeting

Rhonda reviewed the draft minutes from the PAG meeting on July 15, 2010. There are a number of changes to be made to the minutes and comments will be accepted for another week before the minutes are declared final and posted on the IESO web site.

Action: PAG members to provide comments on the draft minutes of the July 15, 2010 meeting by September 2, 2010.

The open action items were discussed and the table of action items will be updated to show their current status.

Action Item #1: The revised Terms of Reference (ToR) for the PAG were posted on the website. PAG Members were given until July 30 to comment on the draft. No comments were received and the ToR were posted as final. This action item was closed.

Action Item #6: Comments were received from PAG members and responses were provided by the IESO. See agenda item #3 below. This action item was closed.

Action Item #10: Market Trials scenarios were discussed under agenda item #7 below. This action item was closed.

Item 3 Review of Comments Received on Draft Market Manuals 9.0 Through 9.4

Pat Doran reviewed the comments received on Market Manual 9, Parts 9.0 to 9.4. The Manual was provided to the PAG members at the last meeting and comments were accepted through July 30, 2010. Two PAG member companies provided their comments. Responses to the comments were provided and are posted on the IESO web site at:

http://ieso.ca/imoweb/consult/consult_se73-pag.asp

General comments and those comments that resulted in significant changes to the documents were reviewed with the PAG members. A number of the comments that did not result in changes to the document were discussed for clarification.

A PAG member requested that the IESO consider how to manage the situation where a schedule of record is issued at 15:00 and the IESO subsequently declares a DACP failure because constraints can't be loaded.

Action: The IESO will review and document the process for the situation where a DACP schedule of record is issued and constraints can't be loaded in contract manager as a result of a tool problem.

All comments will be incorporated in v1.0 of the documents and both clean and red-lined versions will be posted on the portal for access by the PAG members.

Action: The IESO will post v1.0 of Market Manual 9, Parts 9.0 to 9.4 on the portal.

A PAG member asked if there could be differences between the DACP Schedule of record and the Commitments Report. The IESO responded that the Commitments Report shows the MW committed for each hour for each resource. The commitment is to the MLP of the resource therefore it would only match the DACP Schedule of Record where the resource was scheduled to MLP. The resource schedule is found in the Day-Ahead Scheduled Energy{ XE "Energy" } and Operating Reserve{ XE "Operating Reserve" } Report (one of the reports that comprises the DACP Schedule of Record).

Action: The IESO will ensure that it is clear that if there is a difference between the DACP SOR and the Commitments Report the DACP SOR will take precedence.

Item 4 Introduction of Expected Market Rule Amendments

Pat Kamstra provided an overview of the market rule amendments that are expected for the EDAC project.

The presentation included a review of already approved rules, rule true ups proposed and the schedule for stakeholdering and approving the true ups.

The rules true up is a cleanup of existing rules and the addition of enabling rules to allow PSU modeling. The true up rules are summarized below:

- IESO obligation to carry out PSU calculations

- IESO Settlement obligations for PSUs
- IESO obligation to issue 9:00 SSR and remove obligation to produce 10:30 SSR
- RT treatment of IOG offset process (resulting from EDAC)
- Terminology and wording (e.g. DA-PCG)
- DA-LWFC – correct formula

More detail on the rules will be provided at the September meeting of the PAG. The PAG will be requested to provide comments at that time. The rules will be introduced to the Technical Panel in October and they will receive a first working draft in December which will include comments from the PAG. The intent is that the DACP rules will be approved by the TP and IESO board in advance of the Market Trials.

Item 5 Walkthrough of EDAC Draft Market Manual for the Day-Ahead Commitment Process: MM9.5 DACP Settlements

Navneet Singh presented a draft of Market Manual 9, Part 9.5 – Settlement for the Day-Ahead Commitment Process.

Navneet went through the market manual section by section and described the content in detail. Changes required to the document resulting from the comments received are summarized in an action item.

Section 5.1 – Breaker closed status - A member asked if a meter reading is required in the interval before the first scheduled hour in order to determine that the breaker was closed. Navneet responded that a meter reading indicating injection greater than 0 is required for the first four intervals of the first dispatch hour. For example, if the first hour of a DACP start event is HE 5, then Intervals 1 through 4 of HE5 must have a meter reading indicating injection greater than 0.

Paragraph 1 – A member asked if a start event is based on their day ahead schedule or what actually happens in real time. The IESO clarified that the start event is based on the day-ahead schedule and the costs that were determined to be economic day-ahead.

Paragraph 8 – A member raised a concern with how CMSC is treated when a start spans EDAC days. Navneet explained that the CMSC up to the MLP that may be clawed back in real-time has been accounted for in the DA-PCG calculation. Pat Kamstra pointed out that MR 252, if implemented, would allow the IESO to claw back any self induced CMSC where a generator is constrained on for technical requirements. The rule may have to be amended to cover this specific situation, or taken into account in the EDAC true-up rules package.

Section 6 – The fuel cost compensation due to de-commitment has not changed except that fuel cost compensation now covers all hours where a day-ahead schedule was received. The procedure is otherwise identical to the existing procedure.

The comments on Market Manual 9, Part 9.5 from the PAG members are summarized below:

General Comments

- Review the use of the word amount in the manual and specifically in the DIPC description and formulas.

Section 4

- State explicitly in section 4 that it only applies to pseudo-units.
- Change the word amount to quantity where it is a MW quantity and not a dollar amount.

Section 5.1

- Provide a reference to section 7 in item 4 of section 5.1.
- Paragraph 6 – Cost of arranging delivery – is this terminology consistent with the market rules. If not it should be better described.
- Paragraph 7 – In the sentence that begins “If your MGBRT will require” Change wording to reflect that start up cost can be changed hourly for other circumstances as well (not just this circumstance).
- Paragraph 8 – Include the details for starts that span midnight in the manual from charge types and equations.
- Paragraph 8 – Provide the reference to the logic used in determining the initial hours of operation
- Paragraph 10 – Review terminology “revenue earned when scheduled off” and revise throughout the document.
- Paragraph 12 –Review the terminology used in this paragraph for consistency with the charge types and equations

Section 5.2

- Last bullet – provide a reference to how it is determined that MLP is achieved in RT
- Reference required for DIPC calculation in Appendix A

Section 7

- Replace schedule with commitment in the first paragraph

Section 7.1

- Paragraph 2 - first bullet should say generator and not import
- Paragraph 3- Ontario energy price is italicized. Is it a Market Rules a defined term?

Section 8

- Paragraph 1 - correct footnote superscripts
- Paragraphs 3 & 4– check language – “portion of schedule not implemented in real time”

Section 9

- Table 9.1 needs to be updated

- 9.3.2 Change title of Real Time Offer Price test to Real Time Bid Price Test for exports
- Table 9.2 charge types 135 & 136 should reference real-time

Appendix A

- Reference required for DIPC calculation in Appendix A

Action: The IESO will provide a reference to the detailed design discussions where the IESO explained why the ST PCG is limited to the Derived Interval Guarantee Quantity (DIGQ) when the output of another CT in real-time (above its DA schedule) made up the difference?

Action: The IESO will provide a reference to the previous discussion explaining why fuel cost compensation is only to the MLP and not to the full day ahead scheduled quantity.

Action: The IESO will provide a link to material on the website explaining why DIPC is required and how it relates to a collapsing offer curve.

Action: The PAG members will provide their input on the approach of placing the DIPC formula in Appendix A of Market Manual 9, Part 9.5 instead of in the body of the document.

Action: EDAC project staff will discuss the impacts to the RT IOG offset to the Inter-jurisdictional Trading Standing Committee.

Action: The IESO will incorporate the changes resulting from the comments Market Manual 9, Part 9.5 in an updated draft which will be provided to the PAG for their review and comment by September 10, 2010.

Item 6 Impact of Enhanced DACP on Settlement Adjustments and Additional Compensation under Administered Pricing

Patricia Murray presented an overview of the initiative to automate administered pricing due to the impact of the EDAC design. The rules to support the change will be moved ahead in parallel with the EDAC true-up rules and the functionality will be implemented in tandem with EDAC.

Patricia reviewed the current process for accepting and validating a NOD to determine if it is a negative CMSC claim or an Additional Compensation Claim.

The new settlement programs for EDAC create complications in the settlement of NODs for administered pricing events. The Administered Pricing compensation process will be automated, which will mean that MPs will not be required to submit a NOD. Materiality limits, the test for offsetting IOG payments and the test for compliance with dispatch will be removed.

The following criteria will not be changed in the automated process

- Administrative Pricing Event must have intervals which were copied from one hour to another
- MP must have submitted different price quantity pairs in their offers/bids for the source and administered hours
- Negative CMSC for both energy and operating reserve will be fully reversed if the administered dispatch interval meets the above criteria

Action: The PAG members were requested to provide written comments on the proposed Administered Pricing methodology by September 10, 2010.

Item 7 Preparation for Market Trials

Rhonda reviewed the market trials business scenarios provided by OPG. Some of the scenarios proposed were tests of the tools and the market rules. These aspects of the systems will be tested in detail during FAT, SAT and SIT. The market trials will provide an opportunity for market participants to interact with the IESO systems using any new systems and processes that they developed for EDAC.

During the market trials there will be two streams of testing that will not be connected. The first is the day-ahead operating system and the second is settlements. Rhonda pointed out that during market trials the EDAC settlements system will use real time telemetry and metering data. This creates a disconnect between the DACP schedules which are based on the test system and the resulting settlement which is based on the actual DACP and real-time dispatch. The IESO may be able to intervene to provide DA schedules that reflect what happened in real-time. If this is to be supported, the IESO will need to understand the market participant scenarios in order to prepare the necessary inputs.

The technical (ability) testing to ensure that market participant & IESO systems can interact will be done in advance of the market trials.

Registration of new DACP data will start late in 2010 to be available for IESO testing and market trials.

Action: Prior to the next PAG meeting, the IESO will provide a high level list of potential market trials scenarios, based on the test cases developed for internal testing.

Action: The IESO will provide principles (guidelines) for testing that will help the MPs determine the structure of the scenarios.

Action: The IESO will provide a diagram showing the two streams of testing during the market trials.

Item 8 Wrap-Up

The next meeting of the PAG is scheduled for Thursday September 23rd. A potential date for an October meeting will be proposed by email.

Action: The IESO will propose a date for the October meeting of the PAG.

Action Item Summary

| Action Item Summary | | | | |
|---------------------|---------------|--|--------|---|
| # | Date | Action | Status | Comments |
| 1 | June 11, 2010 | IESO will review the PAG Terms of Reference, revise the wording where appropriate and re-post the document. When the document is posted, the IESO will request written comments within one week. Comments on the Terms of Reference can be provided at: edac@ieso.ca | Closed | IESO posted the revised ToR on the PAG website. PAG Members were given until July 30 to comment on the draft. No comments were received and the ToR were posted as final. |
| 2 | June 11, 2010 | IESO to determine how the information relating to market participant testing environments will be communicated to stakeholders. | Open | This item will be addressed at future meetings. |
| 3 | June 11, 2010 | PAG members were requested to provide feedback on the proposed structure of market manual 9. Comments can be provided by email to edac@ieso.ca and they will be discussed at the next PAG meeting. | Closed | No comments were provided |
| 4 | June 11, 2010 | IESO will provide information on how the Shadow Price Report is generated and what the prices mean. | Closed | A response was provided in the minutes of the July 15, 2010 PAG meeting. |
| 5 | July 15, 2010 | IESO to post final June 11, 2010 minutes on the web site. | Closed | Meeting minutes were posted as final. |

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| 6 | July 15, 2010 | PAG members were requested to submit comments on the draft market manual 9 documents by email to edac@ieso.ca | Closed | Comments from PAG members were due July 30, 2010. |
| 7 | July 15, 2010 | IESO will post the draft EDAC Project timeline showing the scheduled connectivity testing and Market Trials on the web site. | Closed | Posted July 16, 2010 under meeting materials for June 15, 2010 meeting of PAG. |
| 8 | July 15, 2010 | IESO will set up an agenda item for next meeting to provide in advance a list of Market Trials scenarios. | Closed | Market Trials scenarios were discussed at the August 26, 2010 meeting. |
| 9 | July 15, 2010 | The IESO will create a survey to understand PAG members' needs for Market Trials. | Closed | Action items 22, 23 & 24 were created to address stakeholder needs for Market Trials. This action item is no longer required. |
| 10 | July 15, 2010 | PAG members to provide a list of potential scenarios for Market Trials prior to the next PAG meeting in August for discussion. | Closed | Scenarios from PAG members were due on July 30, 2010. |
| 11 | August 26, 2010 | PAG members to provide comments on the draft minutes of the July 15, 2010 meeting by September 2, 2010. | Open | |
| 12 | August 26, 2010 | The IESO will review and document the process for the situation where a DACP schedule of record is issued and constraints can't be loaded in contract manager as a result of a tool problem. | Open | |

Enhanced Day-Ahead Commitment Detailed Design (SE-73)

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| 13 | August 26, 2010 | The IESO will post v1.0 of Market Manual 9, Parts 9.0 to 9.4 on the portal. | Open | |
| 14 | August 26, 2010 | The IESO will ensure that it is clear that if there is a difference between the DACP SOR and the Commitments Report the DACP SOR will take precedence. | Open | |
| 15 | August 26, 2010 | The IESO will provide a reference to the detailed design discussions where the IESO explained why the ST PCG is limited to the DIGQ when the output of another CT in real-time (above its DA schedule) made up the difference? | Open | |
| 16 | August 26, 2010 | The IESO will provide a reference to the previous discussion explaining why fuel cost compensation is only to the MLP and not to the full day ahead scheduled quantity. | Open | |
| 17 | August 26, 2010 | The IESO will provide a link to material on the website explaining why DIPC is required and how it relates to a collapsing offer curve. | Open | |
| 18 | August 26, 2010 | The PAG members will provide their input on the approach of placing the DIPC formula in Appendix A of Market Manual 9, Part 9.5 instead of the body of the document. | Open | |

Enhanced Day-Ahead Commitment Detailed Design (SE-73)

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| 19 | August 26, 2010 | EDAC project staff will discuss the impacts to the RT IOG offset to the Inter-jurisdictional Trading Standing Committee. | Open | |
| 20 | August 26, 2010 | The IESO will incorporate the changes resulting from the comments Market Manual 9, Part 9.5 in an updated draft which will be provided to the PAG for their review and comment by September 10, 2010. | Open | |
| 21 | August 26, 2010 | The PAG members were requested to provide written comments on the proposed Administered Pricing methodology by September 10, 2010. | Open | |
| 22 | August 26, 2010 | Prior to the next PAG meeting, the IESO will provide a high level list of potential market trials scenarios, based on the test cases developed for internal testing. | Open | |
| 23 | August 26, 2010 | The IESO will provide principles (guidelines) for testing that will help the MPs determine the structure of the | Open | |

Enhanced Day-Ahead Commitment Detailed Design (SE-73)

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| | | scenarios. | | |
| 24 | August 26, 2010 | The IESO will provide a diagram showing the two streams of testing during the market trials. | Open | |
| 25 | August 26, 2010 | The IESO will propose a date for the October meeting of the PAG. | Open | |