

Market Services Stakeholder Session

August 24, 2010

Today's Agenda

- Brief update on Market Services initiatives
- Market Suspension Presentation – Ruppa Minhas
- TCM/RAS rules – Gordon Nadeau

- We will take breaks at appropriate times throughout the morning.

1. Wind Power Integration –

- Wind technical rule was filed with the AUC August 10, 2010.
- Recommendation paper is under development and targeted to be issued for consultation in September

2. Intertie Restoration (LSSI) –

- Discussion paper has been issued and comments have been received.
- Recommendation paper is under development and targeted to be issued for consultation in September

3. Intertie Framework (ATC allocation) –

- Recommendation paper is under development and is being reviewed internally.

4. Transmission Congestion Management Rule –

- Rule is the subject of a AUC Decision.
- Draft rule is posted for public consultation
- Comments due August 31, 2010

5. Connection Remedial Action Scheme Rule –

- Draft rule is posted for public consultation
- Comments due August 31, 2010

6. Market Suspension –

- Discussion paper is posted for consultation
- Comments due August 31, 2010

7. Supply Surplus –

- Comments received on discussion paper.
- Recommendation paper is under development and targeted to be issued for consultation in September.

8. Fair, Efficient and Open Competition Regulation (FEOC Regulation) Implementation –

- Discussion paper has been issued and comments received.
- Recommendation paper under development.

Market Suspension Rule Review

Stakeholder Session

August 24, 2010

Agenda

- Background
- Purpose of discussion paper
- Guiding Principles of Market Suspension rule review
- Issues that may and may not lead to a market suspension
- Escalation procedures for determining a market suspension
- Options for updating the price during a market suspension
- Next Steps
- Discussion/Questions

- Market suspension rule in place since 1999
- Rule in place today is similar to original rule, minor updates in early 2000
 - Rule review and update to the rule is required to reflect current practices
- Issue Identification paper published for stakeholder comment in July 2009

Purpose of Market Suspension Discussion Paper



- Outline options for updating the market suspension rule
- Update pricing methodology
 - It is the AESO's responsibility to ensure that the ISO rules are reviewed and relevant as the market structure evolves.
- Provide additional clarity and transparency for the AESO SC and market participants

Guiding Principles of Market Suspension Review

- Market suspension must be used as a last resort
- The market should not be suspended for normal market activity
- The market price should be visible and transparent to all competitors
- Rules should be fair and reasonable for all market participants
- Market suspension rule changes must balance design complexity and implementation simplicity

Market Suspension

- Issues that may lead to a market suspension
 - Market Operations tool failure
 - Reliability issues

- Issues that may not lead to a market suspension
 - Market issues

Market Operations tool failure

- Continue to operate the market if possible
- Options: limited market operation or market suspension upon failure of tool
- Limited market operation upon failure of tool
 - Energy market operates using last merit order prior to the outage
 - DDS market suspended
 - Relies on automated systems
 - Generators operating in AS market continue to operate
 - If additional AS required, SC would direct assets using the last AS merit order
 - Payments to suppliers on the margin suspended
 - Relies on automated systems
 - Interchange tool outage
 - Documented process through WECC
 - Using fax and phone accepted: verbal approval between balancing authorities, fax to follow to document the approved tag

Market Operations tool failure (cont'd)

- Suspend all markets upon failure of tool – not a preferred option
 - SC would still be using the last merit order prior to the outage as a starting point for the energy and AS markets
 - Primary difference between limited market operation and this option:
 - Price is set administratively if market is suspended
 - SC is not required to follow the merit order if market is suspended

Market Suspension for reliability issues

- Stakeholders generally supported the relevance of the current market suspension rules related to reliability, such as:
 - Blackout
 - SC forced to abandon the workplace
 - AIES breaks up into two or more electrical islands
- Appropriate to handle on a case by case basis

Market Issues

- The AESO does not see the need to have rules to suspend the market for non-competitive outcomes
- There are measures already in place for insufficient energy supply or supply surplus over an extended period of time and non-competitive conditions as a result of a system failure

Escalation procedure for determining a market suspension

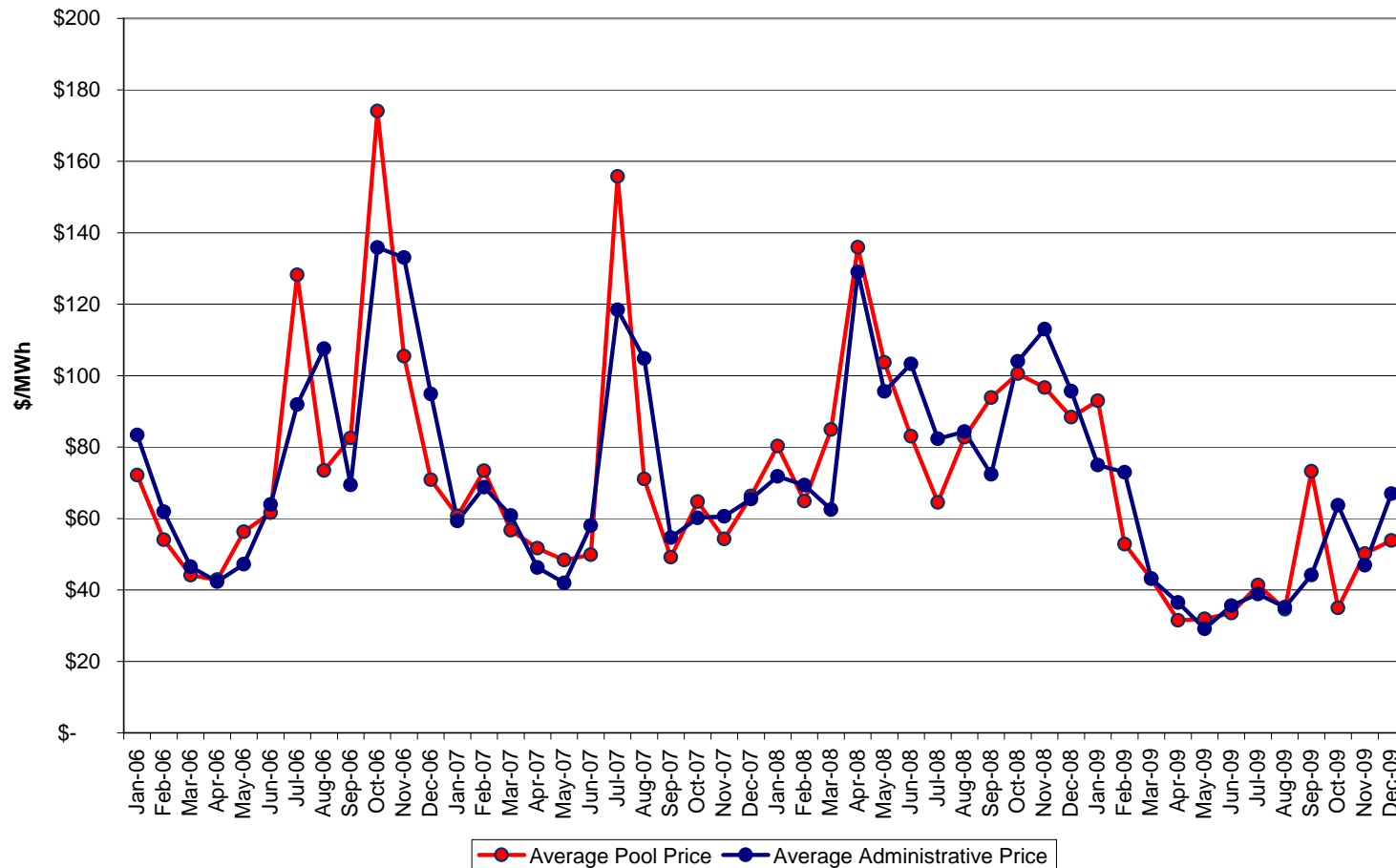
- Formal process must be followed before market suspension is declared
 - Will not be declared without the authorization of the CEO of the AESO or designee
 - SC will retain authority to suspend market operation in the event of a blackout

Updating the pricing methodology – options for consideration

Similar day demand patterns	<ul style="list-style-type: none">•The PP would be set at an administrative price, which compares demand patterns using historical data
30 day rolling average	<ul style="list-style-type: none">•The PP would be set equal to the 30 day rolling average
Reference Price	<ul style="list-style-type: none">•The PP would be set equal to the TMR reference price
Status Quo	<ul style="list-style-type: none">•No change to the market suspension pricing methodology from today
Same day of the week	<ul style="list-style-type: none">•The PP would be set at an administrative price, which averages the PP from the four most recent same day and same settlement interval
Combined approach	<ul style="list-style-type: none">•Considers market conditions to the extent possible

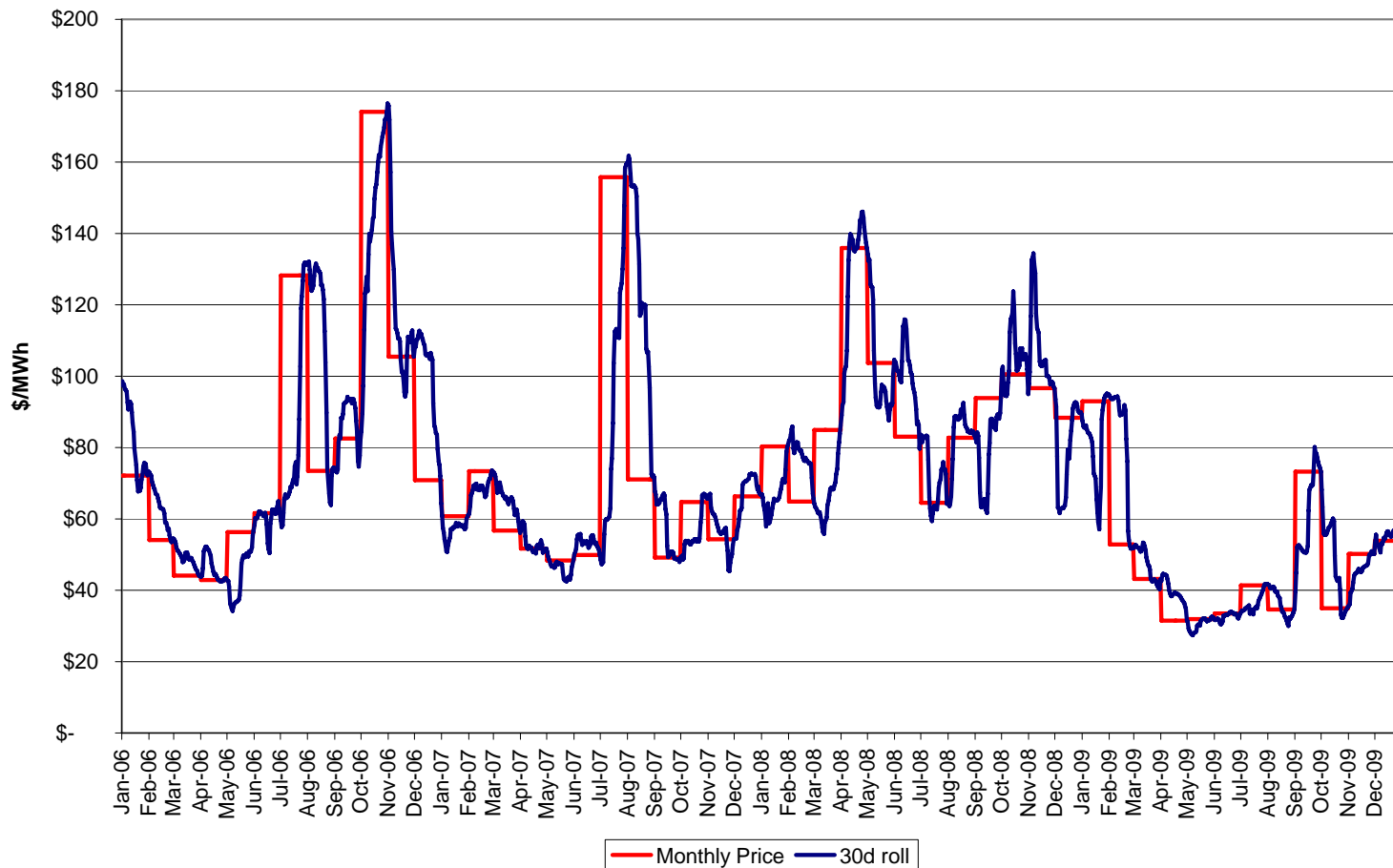
Option - Similar day demand patterns

Monthly Average Pool Price vs. Historical Administrative Price



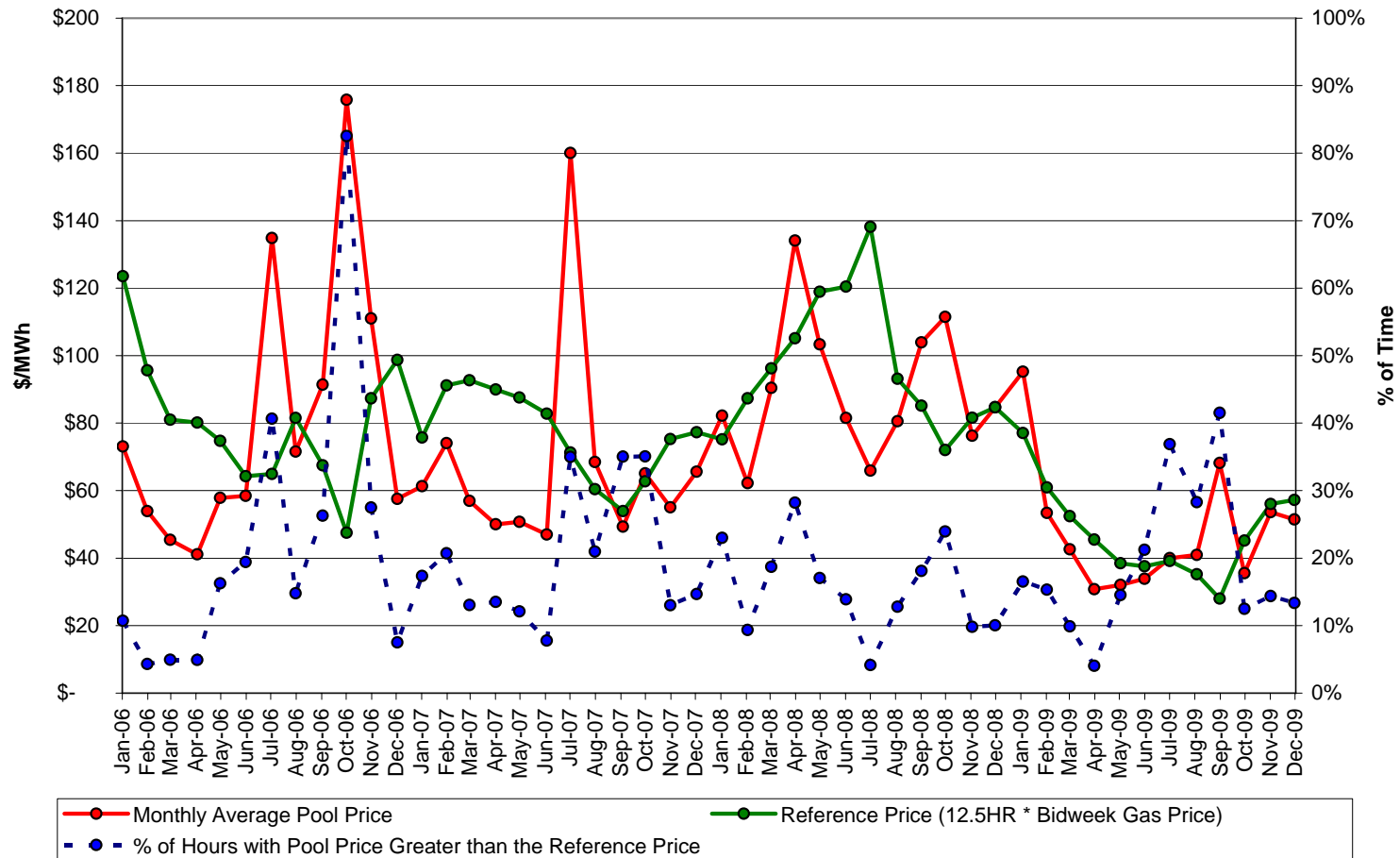
Option - 30 day rolling average

Monthly Average Pool Price vs. 30 Day Rolling Average Pool Price



Option - Reference price

Monthly Average Pool Price vs. TMR Reference Price

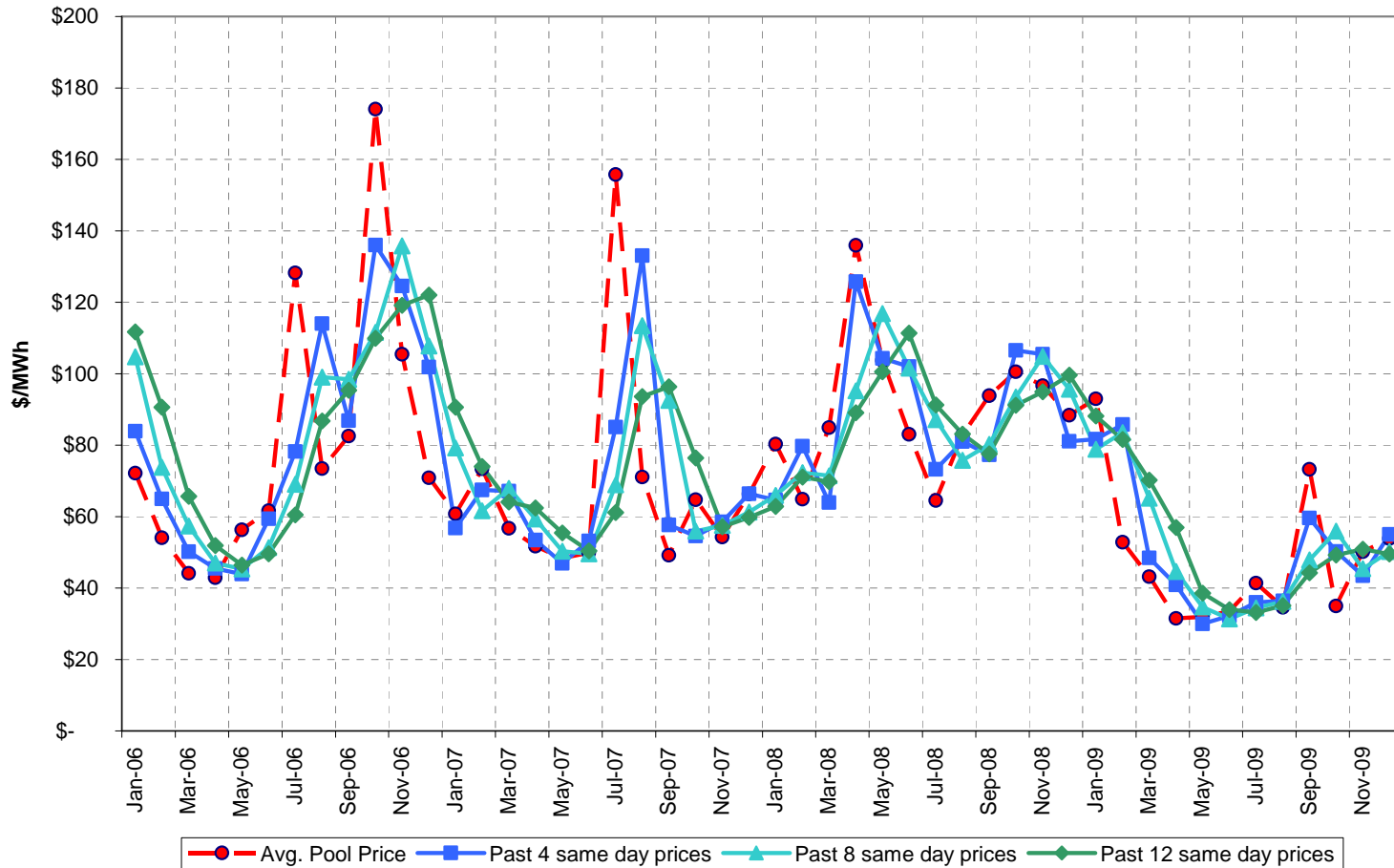


Option - Status Quo

- Under the current rule 6.9.4, the price when a market suspension is declared is:
 - SMP will be \$50/mwh in the event of a blackout
 - SMP will be set at the last block receiving an energy market dispatch prior to the energy market suspension
 - If AUC declares a market suspension, SMP is set at the price ordered by the AUC

Option – same day of the week

Monthly Average Pool Price vs. Monthly Average of Historical Same Day Prices

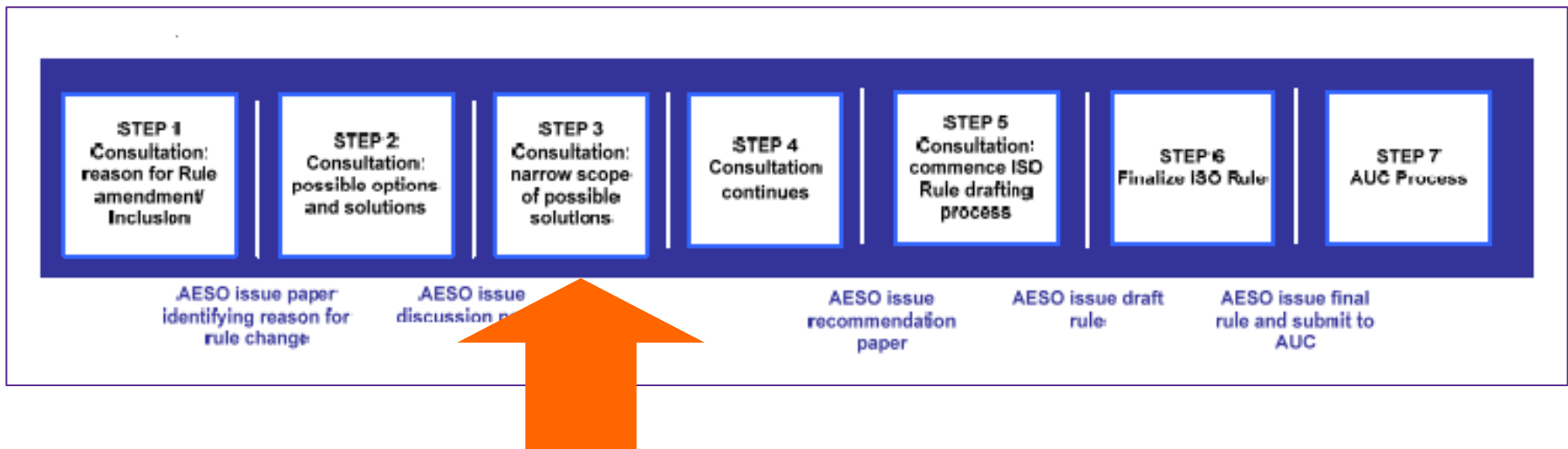


Option – Combined approach

- Price during a market suspension would be determined as follows:
 - When all available MW are dispatched in the energy market merit order, the SMP is \$999.99;
 - The SMP will be set at \$999.99 in the event of a blackout; and
 - In all other circumstances, the SMP is determined by using one of the proposed methodologies in previous slides (the recommended option)

Next Steps

- Discussion paper published to AESO website on July 29, 2010
- Stakeholder comments on discussion paper are due August 31, 2010
- Consultation will follow the normal stakeholder consultation process



Discussion/Questions?

Transmission Constraints Management (TCM) Stakeholder Meeting

August 24, 2010

- TCM / Connection RAS Background
- Overview of TCM rule 9.4
 - Real time rule to manage constraints
 - Section by section rule review
- Discussion of AUC Directions on TCM rule 9.4
- Overview of Connection RAS rule
 - Deals with constraints identified when planning for new connections
 - Section by section rule review
- Next steps
 - Implementation process
 - Request for comments on rule language

History:

- Project initiated by Transmission Regulation (sec17)
- TCM rule 9.4 filed with the AUC, hearing held, AUC Decision in 2009
- Refiling Proposal discussion paper issued December 3, 2009 and stakeholder comments were received
- Remedial Action Scheme (RAS) consultation proceeding in parallel with TCM rule 9.4 (discussion paper and comment response matrix); part of comprehensive consultations on constraint management

Progress:

- The TCM / RAS consultation continues with July 20, 2010 posting of:
 - TCM update letter on the AESO progress on TCM Initiatives
 - TCM discussion paper comment response matrix
 - Revised TCM Rule 9.4 language for stakeholder comment
 - New Connection RAS proposed rules for stakeholder comment
 - Connection RAS Information Document

Overview of Revised TCM rule 9.4

(Refer to Handout)

- **G1 Definitions**
- **Applicability**
- **Requirements**
 - **9.4.1 a) Protocol sequence**
 - **9.4.1 b) DDS and energy market rebalancing**
 - **9.4.1 c) AS before energy**
 - **9.4.1 d) Post RAS management**
 - **9.4.2 a) MSG procedure**
 - **9.4.2 b & c) Abnormal condition procedure**
 - **9.4.2 d & e) Reliability compliance procedure**

Revised TCM Rule 9.4

Protocol Steps to Manage Constraints

Sequential steps:

1. Determine effective generation and load
2. Directives to generate above MC are canceled
3. Curtail imports/exports if effective
4. Curtail downstream Demand Opportunity Service (DOS)
5. Dispatch/direct effective TMR (Use DDS to reconstitute price)
6. Curtail upstream energy in reverse merit order (RMO) based on energy offer price followed by pro rata; if congestion is sustained beyond T-2 period, use pro rata only
7. Curtail downstream load

When following the steps we will:

1. curtail ancillary services before energy
2. Dispatch DDS according to existing rules
3. Balance the system using downstream units in the energy market merit order

Revised TCM Rule 9.4

Additional Procedures to Manage Constraints



- **Post RAS management**

- After a RAS has been activated and the system is stable, the TCM protocol will be used

- **Minimum Stable Generation (MSG) procedure**

- MSG level may be maintained if constraint is of short duration

- **Abnormal condition procedure**

- If conditions are abnormal additional steps may be taken

- **Reliability compliance procedure**

- If following the protocol will result in a reliability standard violation an alternative sequence may be utilized provided that after the constraint is managed the protocol is followed

AESO Position on Revised TCM Rule 9.4

- The Revised TCM protocol is the best available solution to real time constraints within our current market framework.
- The transmission system is currently running at capacity and upgrades to the system are needed for many reasons.
- Until upgrades are in service the AESO will take appropriate temporary measures to maintain system reliability, optimize the use of the existing system and manage congestion.
- The TCM protocol is not expected to result in high pool prices as constraints are anticipated to be infrequent and of short duration until planned transmission enhancements are in place.
- The AESO will monitor the impact of the TCM protocol to ensure that the ongoing operation of a FEOC market.

AESO Response to AUC Directions on TCM Rule 9.4

Directions:

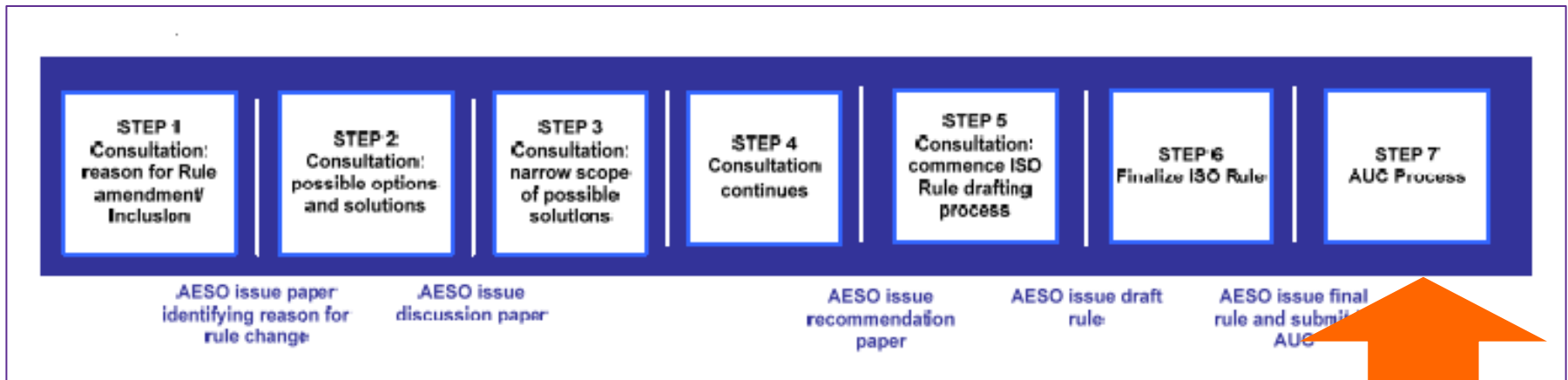
- Scope of Rule
- Use of TMR
- ENMAX Pay as bid
- Define fundamental terms
- Clarify TCM process steps

Proposal:

- 9.4 is real time rule only
- TMR for reliability only and not price management
- Pay as Bid not recommended
- Definitions provided for effective factor and other terms
- Language clarified regarding use of TMR/DDS, SC discretion

TCM Revised Rule 9.4 Language Consultation

- Revised TCM rule 9.4 out for stakeholder comment on rule language initiated July 20, 2010
- Seeking stakeholder comment on revised rule language by August 31, 2010.



- AESO RAS business practices have developed over time and the AESO is seeking to provide greater clarity to stakeholders with respect to the use of RAS by developing RAS rules and a RAS Information Document.
- A RAS discussion paper was published in July 2009, stakeholder comments on the RAS discussion paper were received and the AESO response to those comments was published in Dec 2009.
- On July 20 2010, the AESO initiated formal rule consultation on a proposed Connection RAS rule and provided a draft RAS ID to help clarify the policies applied to connection RAS.

Overview of Connection RAS rule

(Refer to Handout)

- **G1 Definitions - none**
- **1 Applicability**
- **Requirements**
 - **2 Identifying a constraint and a Connection RAS**
 - **3 Applicability Considerations of a Connection RAS**
 - **4.1 Notification content of a Connection RAS**
 - **4.2 Market Participant acceptance of a Connection RAS**
 - **4.3 Connection cancelation without acceptance**
 - **5 Connection RAS identification prior to connection**
 - **6 Connection RAS in the System Access Service Agreement**
 - **7 Multiple Connection RAS policies**

- **2 Identifying a constraint and a Connection RAS**
 - If connection causes a constraint that requires a RAS, then the RAS specifics will be provided thru the connection process
- **3 Applicability Considerations of a Connection RAS**
 - RAS an option only if:
 - a) the RAS manages the constraint in a reliable, operational sound and technically feasible manner,
 - b) the constraint cannot be managed in real time, and
 - c) the RAS does not impair the planning and operation of the system

- **4.1 Notification content of a Connection RAS**
 - If a RAS is an alternative for connection then the RAS specifics will be provided thru the connection process including costs, in service date , facilities required to remove the RAS with estimated removal date and other material information as appropriate
- **4.2 Market Participant acceptance of a Connection RAS**
 - If the market participant agrees to the proposed RAS, the connection proceeds thru the connection process
- **4.3 Connection cancelation without acceptance**
 - If the market participant and the AESO cannot agree on a RAS option, the AESO will not proceed with the connection

- **5 Connection RAS identification prior to connection**
 - The AESO may assign a RAS anytime after the connection proposal up to the actual time of connection if planning and operational studies determine the need for a RAS
- **6 Connection RAS in the System Access Service (SAS) Agreement**
 - The RAS terms and conditions will form part of the market participant SAS agreement

- **7 Multiple Connection RAS policies**

- **7.1 Use of AESO connection queue**

If there is more than one planned RAS required in an area the AESO will assign and utilize the RAS based upon the ordering in the connection queue

- **7.2 “Last on first off” policy**

If more than one existing RAS is effective in managing a constraint, the last RAS in the connection queue will be the first activated followed by the next to last RAS and so on until the constraint has been mitigated

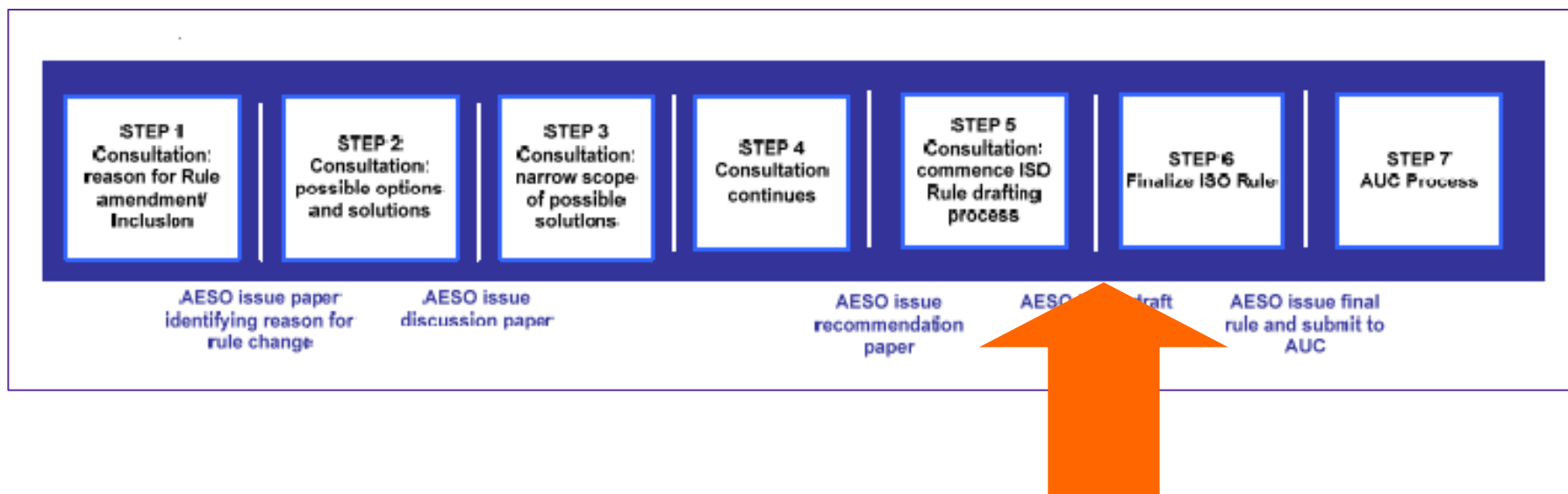
- **7.3 Multiple Connection RAS assignment policy**

When planning connections to the system the AESO will not normally mitigate a constraint by pro rating multiple connection RAS applications to multiple facilities

- Transmission Regulation gives the AESO the authority to use RAS
- Connection RAS documented through the new connection process which is being revised and consulted upon
- RAS assignment based on connection queue
- Temporary RAS applies until no longer required
- No compensation for being constrained down
- RAS criteria stem from reliability criteria which is being revised and consulted upon

Connection RAS Consultation Progress

- Proposed Connection RAS rule out for stakeholder comment on July 20, 2010
- Seeking stakeholder comment on proposed rule by August 31, 2010.



- Upon reviewing rule language comments, consider revisions and, when ready, file revised TCM rule 9.4 with the AUC
- OPPs will be filed in stages beginning in 2010 and full implementation of Rule 9.4 thru OPPs and systems to proceed through 2011 and beyond as required
- Proceed thru normal ISO rule process to finalize Connection RAS rule and at the same time finalize the RAS ID