

**Revised AESO Recommendation Paper - Operating Reserve  
 Market Redesign  
 Stakeholder Comment Matrix  
 April 1, 2010**

The AESO has released a revised Operating Reserves Market Redesign Recommendation Paper in response to feedback received on the January 2009 Recommendation Paper. Given the changes made to the recommendations, the AESO is soliciting stakeholder feedback on the revisions by April 16<sup>th</sup>, 2010. The changes from the previous paper are highlighted in the matrix below.

Please note that this comment matrix includes a few comments that ENMAX wishes to make with respect to the AESO's response to the *original* round of stakeholder comments.

Section	Subsection	Stakeholder Response
<b>3.1.2 Minimize AESO Influence</b>	<b>[Response to TransAlta]</b> The AESO believes that the benefits of moving all of its procurement to D-1 include: <ol style="list-style-type: none"> <li>1. Improving the reliability of the OR index;</li> <li>2. Reducing complexity of the market;</li> <li>3. More concentrated volume is traded in a single period;</li> <li>4. Removing AESO discretion in the market;</li> <li>5. Decreases the number of products and commitment a provider must make; and</li> <li>6. Establish more meaningful indices and promote liquidity.</li> </ol>	ENMAX reiterates its concern, stated in section 3.1.3 of the previous round of comments, that the elimination of all but D-1 auctions may result in the "squeeze" described in the AESO's original paper. ENMAX acknowledges the AESO's comments about its existing practice, but notes that the AESO proposes to submit volumes only in the future. (Those volumes are reasonably predictable by market participants.) ENMAX also notes again that the ability to trade at D- <i>n</i> must be preserved for weekend/holiday trading, which means there's a minimal incremental cost to preserving at least the option to trade at D- <i>n</i> . With these points in mind, ENMAX has the following comments on the AESO's response. <ol style="list-style-type: none"> <li>1. ENMAX is not aware of any competitive market theory that suggests a price is improved by concentrating all trades at a single point in time. In fact, it could be argued that a price discovered over time is truer than a price discovered at a particular instant, and indeed futures contracts for most commodities trade over multiple sessions. Any benefit that is perceived to come from trading all volumes at one instant must be weighed against the potential for market manipulation at that instant. ENMAX notes that the average volume of OR traded each day is the annual volume required divided by the number of</li> </ol>

		<p>trading sessions, regardless of whether D-1 or D-<i>n</i> is being used. The only difference with D-<i>n</i> is that the delivery schedule will not be the same for every MW traded, which is no different than trading on Friday for Saturday, Sunday, and perhaps holiday Monday.</p> <ol style="list-style-type: none"> <li>2. ENMAX acknowledges that there may be a slight reduction in complexity, though the participation of parties not having real-time trading operations would be facilitated by standing offers.</li> <li>3. Please see the comment in 1 about the average volume traded in each session.</li> <li>4. The AESO cannot remove its discretion to decide on OR volumes, at least at this time, since it must forecast OR requirements. It would be a simple matter to construct a mechanism to randomly divide the AESO's required volumes among trading sessions, leaving the AESO's influence at deciding on required volumes only. (This also addresses the AESO's response to Northstone Power that "multi-day auctions also force the AESO to participate in the market by determining volume splits for each day.")</li> <li>5. Under the AESO's proposal, OR <i>price</i> commitments aren't really commitments because prices are indexed to pool price. <i>Volume</i> commitments can be filled via asset substitution.</li> <li>6. Please see ENMAX's comments above on point 1.</li> </ol>
<p><b>3.2 Market Framework Products and Pricing</b></p>	<p><b>3.2.1 Add to the Suite of D-1 OR Products</b></p> <p><b>Hourly products are the revised recommendation for both Active and Standby instead of a shaped product with selling logic.</b></p>	<p>ENMAX supports the use of hourly products in lieu of shaped products with selling logic.</p>
<p><b>3.2.3 OR indexed to pool price with a marginal price model</b></p>	<p><b>[Response to EPCOR]</b>  The AESO agrees that a marginal price methodology indexed to the pool price best supports a FEOC market for OR. This design provides several benefits over pay as bid and/or fixed price offers...</p>	<p>ENMAX has no objection to marginal and indexed pricing in connection with Phase I of the market redesign. However, ENMAX cautions against the implicit assumption that such a market design is necessarily optimal or that it is the only one that is FEOC. For example, the existing real-time, marginal-price energy market suffers from several drawbacks,</p>

		<p>including after-the-fact price discovery, system marginal prices that in many hours are set by ramp-rate requirements rather than by the intersection of supply and demand, and the fact that a large proportion of offers are not based on marginal cost at all (as a rudimentary examination of almost any supply curves will show). Also, while indexed pricing may reduce generators’ risks and therefore risk premiums in prices, it transfers outage risk to consumers—who cannot manage it. Transferring generators’ risks—whether associated with energy or OR—to consumers makes sense only if generators’ risk profiles and preferences are homogeneous and if consumers get the upside benefits along with the down-side risks (i.e., if risk and reward are matched). The AESO’s comment that lower risk should reduce the overall costs of OR could, by extension, be taken to mean that the lowest cost of electricity should be achieved if generators face zero risk. Having zero risk removes the incentive for efficient operation.</p>
	<p><b>3.2.3 Standby Baseload On and Off Peak</b></p> <p><b>Premium is set based on a clearing model rather than pay as bid. Premium establishes a merit order for activation.</b></p>	
<p><b>3.2.4 OR market price cap equal to energy market price cap</b></p>	<p><b>[Response to ADC]</b>  The economics of a load participant versus [a] generating facility selling OR are different. When a load participant is dispatched to provide OR they are required to continue with their operations and process and are able to run their business. When a generator is dispatched to provide OR they are not permitted to generate energy and make additional revenue.</p>	<p><b>[Response to ADC]</b>  Since loads face the opportunity cost of lost industrial production when they curtail for OR, it is not true that only generators lose their opportunity costs. Also, quick-start generators that are not in merit are eligible OR providers, which means may not suffer opportunity losses through OR provision. Further, whereas all generators’ opportunity costs are inextricably linked to the electricity market, loads’ opportunity costs may be linked to oil, gas, forestry, steel pipes, petrochemicals, and so on. Consequently, opportunity costs are not homogeneous among</p>

	<p>The AESO therefore believes that it is not appropriate to compare the economics of load[s] and generator[s] when under a directive to provide OR.</p> <p><b>[Response to ENMAX]</b> ENMAX's understanding is correct that regulating reserve must be maintained even in the face of firm load shedding.</p>	<p>loads. For some products, therefore, pay-as-bid might make more sense than the use of a clearing price.</p> <p><b>[Response to ENMAX]</b> ENMAX's understanding is that spinning and supplemental reserves can be shed before firm load. If this is correct, a payment of more than the highest price that can be paid by firm loads would not seem to make sense. With respect to regulating reserve, is there a minimum volume that must be maintained that is different from the volume that would normally be dispatched (due, for example, to the possible use of regulating reserves for wind following)?</p>
<p><b>3.3 Procurement Process and Timing</b></p>	<p><b>3.3.2 A reasonable procurement schedule</b></p> <p>The trading schedule has been revised. The revised schedule has 10 minutes between closes for baseload markets and 20 minutes between closes for hourly markets.</p>	<p>Agree.</p>
<p><b>3.4 Market Framework</b></p>	<p><b>3.4.4 5 MW minimum blocks</b></p> <p>The AESO will consider assets less than 5 MW for participation in the Supplemental market. Aggregators will also be considered. The ISO Rules consultation will further develop these concepts and standards.</p>	<p>Agree.</p>
<p><b>3.6 Multiple Buyers</b></p>	<p><b>3.6.2 AESO facilitate third party asset substitution</b></p>	<p>ENMAX supports third-party asset substitution.</p>

	<p>There are issues concerning confidentiality of sellers that must be resolved prior to enabling third party asset substitution. The AESO is committed to finding a practical solution for third party asset substitution and will continue to pursue this issue.</p>	
<p><b>5.0 Consultation and Implementation Process</b></p>	<p><b>5.0 Phased Implementation</b></p> <p>Following the comment period, the AESO plans to initiate changes to the OR market design in a phased manner. It is expected this will facilitate a smoother transition to the revised market design.</p>	<p>ENMAX supports a phased implementation.</p>
	<p><b>5.1 Changes to Current Practices</b></p> <p>The first step in the OR Redesign is to move all procurement to D-1 within the current market design. In addition, the AESO will begin improving the transparency of the OTC market by providing pricing information after the close of the OTC market.</p>	<p>Please see ENMAX's comments above regarding moving all procurement to D-1.</p>