

# AESO Recommendation Paper – Intertie Framework Stakeholder Comment Matrix – ENMAX Energy Corporation

Section	AESO Recommendation/Feedback Requested	Stakeholder Response
4.0 Policy Coherence	The AESO is interested feedback as to the AESO's policy interpretation.	<p>ENMAX Energy Corporation (“EEC”) appreciates the opportunity to provide comments on the AESO’s <i>Intertie Framework</i> discussion paper. Before commenting on specific sections of the paper, however, EEC wishes to confirm that its understanding of the AESO’s proposals is correct and to make some general observations based on that understanding. For this purpose it will be useful to consider the hypothetical scenario shown in the following diagram.</p> <div style="text-align: center;"> </div> <p>Assume that generator <math>G_X</math> is located 1 km outside the Alberta border. Assume that load <math>L_X</math> is also located 1 km outside the border, possibly at a considerable distance from <math>G_X</math>. Alberta Generator <math>G_A</math> and Alberta load <math>L_{A1}</math> are located across the street from each other, while Alberta load <math>L_{A2}</math> is 1 km inside the border and electrically connected to the same line that connects to <math>L_X</math>. While the generators and loads in this hypothetical scenario are referred to in the singular for simplicity, each could</p>

		<p>represent a collection of the respective elements.</p> <p>Based on our understanding of the AESO’s proposals, EEC submits that the following statements are true. If the AESO disagrees with any of them, EEC would find an explanation helpful.</p> <ol style="list-style-type: none"><li>1. The full import capacity of the line from <math>G_X</math> will be deemed to be in merit. Given its view that the “unconstrained transmission” policy must be applied to in-merit imports, the AESO will construct sufficient intra-Alberta transmission to accommodate full imports from <math>G_X</math> in every hour.</li><li>2. Consistent with the unconstrained transmission policy, the AESO will also build infrastructure to accommodate exports to <math>L_X</math> in every hour.</li><li>3. By definition, opportunity rates are not supposed to trigger the construction of infrastructure. However, infrastructure will be constructed as noted in statements 1 and 2, and importers and exporters will be charged IOS and XOS, respectively. (MTS will apply if one or both lines are merchant facilities.)</li><li>4. Because importers and exporters will pay opportunity rates while Alberta loads will pay the fixed costs of the wires built to provide the opportunity services, <math>L_X</math> will pay a much lower transmission charge than <math>L_{A1}</math> or <math>L_{A2}</math>. If <math>L_X</math> were to enter a bilateral financial transaction with <math>G_X</math> and <math>L_{A1}</math> were to enter one with <math>G_A</math>, <math>L_X</math> would pay less to get energy from the distant <math>G_X</math> than <math>L_{A1}</math> would pay to get energy from the across-the-street <math>G_A</math>.</li><li>5. If the bilateral agreement between <math>G_X</math> and <math>L_X</math> is effectively a wheel-through (i.e., <math>L_X</math> withdraws in each hour whatever <math>G_X</math> injects), Alberta consumers will have paid for a (possibly massive) transmission upgrade for which they will receive zero</li></ol>
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		<p>benefit.</p> <ol style="list-style-type: none"><li>6. The fact that <math>L_X</math> may be curtailed ahead of <math>L_{A2}</math> in an emergency may be of little practical consequence because the AESO will provide both <math>L_{A2}</math> and <math>L_X</math> with unconstrained access. Any reliability difference between them would arise only out of supply shortfalls in Alberta, which will almost certainly be very rare.</li><li>7. As more and more transmission costs are allocated directly to load customers, competition (including competition between Alberta generators and imports) becomes less and less able to influence the delivered cost of electricity. Obviously, the ability to save (say) 10% of 90% on an annual electricity bill makes competition more relevant than the ability to save 10% of 30%.</li><li>8. If the cost of energy from <math>G_X</math> is slightly lower than the cost of energy from <math>G_A</math>, but the transmission cost to access <math>G_X</math>'s energy is significantly higher than the cost of accessing <math>G_A</math>'s energy, <math>G_X</math> will appear ahead of <math>G_A</math> in the merit order despite its higher delivered cost of electricity.</li><li>9. <math>L_X</math> may be, or become, practically or legally inaccessible to Alberta generators. There are several possible reasons, including the lack of an open market in <math>L_X</math>'s jurisdiction, unfavourable moves in market prices or exchange rates, and renewable portfolio standards that preclude the use of out-of-jurisdiction renewable energy. If export-related infrastructure is under-utilized, Alberta consumers will still be required to pay for it.</li><li>10. While <math>G_X</math> has the right to offer energy into the Alberta market, it has no obligation to do so. It is not clear that anything like "must offer must comply" can be imposed on ex-Alberta generators.</li></ol>
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		and more costs are allocated directly to consumers, the proportion of the delivered cost of energy that can be affected by competitive outcomes gets smaller and smaller; the market effectively becomes regulated instead of competitive.
<b>5.1 Real-Time Dispatch/Scheduling</b>	The AESO recommends implementing dynamic scheduling to enable real-time dispatch and to permit the submission of priced/bids and offers.	Provided the level playing field issues described above between Alberta and ex-Alberta generators can be resolved, real-time dispatch and scheduling makes sense. Dynamic scheduling would be an appropriate mechanism. If dynamic scheduling can't work for technical or unlevel-playing-field reasons, an intra-Alberta dispatch up/down service could work. EEC does not believe there are any regulatory restrictions on bilateral transactions, and notes that such transactions do not preclude dispatch by the AESO.
<b>5.2 Transmission Rights - Policy</b>	The AESO recommends that it plan the transmission system so that each intertie can transfer up to its path rating simultaneously.	There are no transmission rights in Alberta, so seams with jurisdictions having such rights will always exist. EEC notes that, if exports are to be treated as loads at the border, they should be required to pay the DTS tariff, not the XOS tariff.  As noted on many occasions, EEC does not support an unconstrained transmission model as it is unfair and economically inefficient. Applying the model in the presence of increased intertie capacity will exacerbate the problem, increase Alberta consumers' risk of having to pay for underutilized transmission infrastructure, and increase the size of the subsidies that Alberta consumers pay on behalf of consumers outside the province.
<b>5.3 Transmission Products</b>	The AESO recommends that a merchant transmission service (MTS) be added to the AESO tariff, offered to the merchant transmission asset owner, which appropriately reflects system access service to inject/withdraw at the border.	As noted in EEC's comments on policy coherence the overall framework, including the treatment of imports and exports as generators and loads at the border, must be reviewed. EEC fully supports the merchant transmission model and the use of competitive forces to determine intertie capacity.

**5.4 ATC Allocation**

The AESO recommends when there is congestion on the interties, an ATC allocation rule be implemented that arbitrates by energy price and then pro-rata between remaining same priced schedule requests.

The AESO is interested in feedback as to what the best timing (xx:yy) for ATC curtailments to be made if not xx:45.

EEC agrees conceptually with a price-then-pro-rata ATC allocation, but notes that the allocation will necessarily depend on both offer prices and which interties the flows are scheduled on. An intertie-independent allocation, which is what EEC interprets “pro-rata between scheduled participants” to mean, is not possible unless there is a willingness to allow import/export capacity to go unused, as the following example shows.

In a given hour, the import capacities of the SK, MT, and BC ties are 150 MW, 300 MW, and 700 MW, respectively, for a total of 1150 MW. The offers from the market participants, the intertie each participant has *external* rights to, and the aggregate merit-order-based MW available to each intertie and the interties collectively are as shown in the following table.

Participant	MW	Price	Line	Agg MW SK	Agg MW BC	Agg MW MT	Agg MW All Lines
A	100	\$55	SK	100	0	0	100
B	500	\$55	BC	100	500	0	600
C	75	\$60	SK	175	500	0	675
D	200	\$60	MT	175	500	200	875
E	100	\$60	BC	175	600	200	975
F	250	\$72	BC	175	850	200	1225
G	100	\$72	BC	175	950	200	1325
H	100	\$80	MT	175	950	300	1425

Under a merit-order-based dispatch that is independent of the allocation across specific interties, the marginal offer would be that of F. A through E would have their full amounts allocated, while F and G would split the remaining  $1150 - 975 = 175$  MW, presumably with F being allocated  $(250/(250+100)) \times 175 = 125$  MW and G being allocated  $(100/350) \times 175 = 50$  MW. This dispatch, however, would result in flows of 175 MW on SK, 200 MW on MT, and 775 MW on BC, violating two constraints and under-utilizing the MT intertie.

		<p>To fully utilize each tie, the dispatches would be:</p> <ul style="list-style-type: none"> <li>• A = 100 MW and C = 50 MW on SK;</li> <li>• D = 200 MW and H = 100 MW on MT; and</li> <li>• B = 500 MW, E = 100 MW, F = 71 MW, and G = 29 MW on BC.</li> </ul> <p>In the intertie-independent case the price, if set by an intertie transaction, would be F's and G's price of \$72/MWh. When intertie capacities are considered in the allocation, H's offer sets the price at \$80/MWh.</p>
<p><b>5.5 Next Steps</b></p>	<p>The AESO is interested in stakeholder comment on the AESO's next steps.</p>	<p>As noted above, EEC believes additional work on basic principles and the level playing field is warranted.</p>