

AESO Discussion Paper – Intertie Restoration Initiative  
 Stakeholder Comment Matrix  
**RESPONSE OF ENMAX ENERGY CORPORATION**

Section	Subsection	Stakeholder Response
	<b>2.0 Intertie Capacity Restoration Policy Background</b>	<p><i>[E]xport capacity supports the long-term viability of the market by stabilizing price cycles and allowing Alberta to develop more baseload generation than would be possible without connections to an external marketplace. [p.3]</i></p> <p>ENMAX agrees that export capacity <u>may</u> support the development of baseload generation. However, whether it does, and whether additional baseload generation supports the long-term viability of the market by stabilizing price cycles, depends on many factors.</p> <p>Applying the “baseload generation is good” argument to every jurisdiction in North America would suggest that all jurisdictions should build excess baseload capacity. Such an outcome would clearly be inefficient. The more rational approach is to let the market determine the generation mix, both within and across jurisdictions, so that areas with inherent competitive advantages are the ones that become exporters. While Alberta has enjoyed a clear advantage in natural gas for many years, it is not at all clear that the province will enjoy an advantage in electricity production: generation costs are not expected to be materially lower here than elsewhere, and Alberta exports typically face higher transportation costs. (It is notable that, with natural gas, royalties and employment creation provide substantial benefits to Alberta, yet exporters pay to get their products to customers.) Baseload generation intended for export from Alberta also faces some significant risks, including government policies in other jurisdictions that may or may not support imports from Alberta, uncertain future CO<sub>2</sub> costs,</p>

		<p>hurdles to building additional infrastructure and getting ex-Alberta consumers to pay for it, macro-economic factors, market prices, and exchange-rate fluctuations. Consequently, the risks of stranded export infrastructure are very high. If Alberta exporters believe they can overcome these challenges, they should risk their own money, not consumers' money.</p> <p>IPPSA often states that consumers should be free (and expected) to establish their own levels of reliability through their behaviour. Forcing consumers to pay for more export capacity to facilitate additional baseload generation is hardly in keeping with this idea, or with the idea that the market—and not the government or its agencies—should choose winners and losers among generation projects. Alberta consumers might, for example, be much better off with less Alberta baseload generation and more on-peak energy from BC, especially given that province's recently stated objective of becoming a "green energy powerhouse."</p> <p>ENMAX notes that some generators have expressed concern about competition from adjacent government-owned monopolies, in part because some of their costs are paid by consumers in those provinces. Yet there is no difference in principle (though there may be one in magnitude) between their consumers covering their fixed costs and Alberta consumers covering Alberta generators' transmission costs. ENMAX also notes that it is not aware of <i>any</i> articles in the peer-reviewed economics literature suggesting that costs should be allocated to one party while the benefits accrue to another, or more to the point, that consumers should pay export costs.</p>
	<p><b>2.1 Obligation to Restore Capacity</b></p>	<p>ENMAX agrees that the legislative framework requires the AESO to restore intertie capacity.</p>
	<p><b>2.2 Cost Allocation</b></p>	

ENMAX agrees that loads should pay import-related costs, since loads benefit from increased import capacity. However, for reasons set out below, ENMAX does not support having loads pay for export capacity.

*This paper suggests that inertie support products should be treated as non-wires solutions to resolving transmission constraints [p.2]. ... Inertie capacity restoration services are, in effect, a 'non-wires' solution to specific instances of congestion that impact the ability of the market to access the inertie for both imports and exports. [p.5]*

Non-wires solutions are being actively promoted to resolve constraints on the Langdon-Cranbrook transmission path, yet such solutions are not being considered to resolve constraints on the Edmonton-Calgary path (despite the fact that the only publicly available economic study of the proposed Edmonton-Calgary wire upgrades gives an NPV of roughly negative \$2 billion relative to a non-wires option; see <http://policyschool.ucalgary.ca/files/publicpolicy/TransmissionPolicyONLINE.pdf>.) There is no engineering or economic rationale for a difference in treatment depending on whether a constrained path does or does not cross a political boundary.

*The Alberta market model is premised on unconstrained access to transmission. [p.5]*

Unconstrained access to inerties implies an export capacity equal to Alberta's total generation capacity minus minimum Alberta load, and an import capacity equal to Alberta peak load. Such inertie capacities are economically irrational and practically unachievable. Import and export capacities should be determined by the market, not by the AESO or the government.

*Services to restore inertie capacity may have variable cost components that are only triggered through actual use of the service. It may be appropriate to charge these components to users of the service, i.e. importers and exporters. ... The*

*Electric Utilities Act (EUA) provides direction in this area under ISO duties, which are outlined in Section 17. [p.5] ... To the extent imports and exports trigger variable costs, it may be argued that these costs influence the relative economic merit of imports and exports. [p.6]*

ENMAX agrees with the AESO that variable costs should be charged to the users of a service that causes costs to be incurred. However, the AESO appears to be suggesting that s. 17(c) of the EUA, which requires that the dispatch of energy and ancillary services within Alberta and on the interties be done according to relative economic merit, means that fixed costs should not be charged to generators/exporters. ENMAX does not agree. Charging loads for the fixed costs associated with exports violates the principle of cost causation, creates a mismatch between risk and reward (or, if you prefer, between payer and beneficiary), creates subsidies from Alberta consumers to consumers in other provinces and the United States, and potentially saddles consumers with significant stranded costs. Allocating fixed export costs to consumers distorts future investment decisions; it is unfair, economically inefficient, and anti-competitive.

*In order to preserve the FEOC market, solutions to increase export ATC should not interfere with the overall energy or ancillary services markets. As such, export must run generation and bifurcating ancillary services products into north and south zones will not be considered as solutions. [p. 7]*

Consider the following scenario. In a particular hour the Alberta pool price is expected to be \$50/MWh, while the Mid-C price is expected to be \$80/MWh. Southern gas-fired generator "S" has a variable cost (and an offer to match) of \$55/MWh and is therefore expected to be out of merit, while northern generator "N" is expected to be in merit and running at full capacity. A Mid-C customer offers to buy 100 MW from N at a delivered price of \$75/MWh. So, N contracts bilaterally with S to run at 100 MW in return for a payment of \$7/MWh. S restates its offer to get into merit and, in the delivery hour, displaces 100 MW of SOK flow

		<p>and increases export capacity by 100 MW. Since S's displacement of 100 MW of Alberta load is matched by a 100 MW increase in export flow, no other generator's output is affected and the price stays at the projected \$50/MWh. Compared to the situation with S not running, S makes an extra profit of <math>\\$7 - \\$5 = \\$2/\text{MWh}</math>, N earns an additional profit of <math>\\$75 - \\$50 - \\$7 - \\$X</math> (where <math>\\$X</math> is the ex-Alberta transmission charge to Mid-C), and N's customer saves <math>\\$5/\text{MWh}</math>. Every party in this scenario is better off than had S not run, including Alberta loads, who benefit from a small amount of extra export opportunity revenue (in this case the pool price did not rise as a result of the export). This outcome is both fair and economically efficient. It could be made openly competitive by having a competitive process to determine which generator plays the role of S; both gas-fired generators and wind generators with "backstop" contracts could participate. Consequently, there is no reason to <i>not</i> implement an export must-run service.</p>
<p><b>3.3 Options to Increase Import ATC</b></p>	<p><b>3.3 Options</b></p> <ul style="list-style-type: none"> <li>a. LSSi to be pursued</li> <li>b. ILRAS not an option at this time</li> <li>c. Service available for in market use as opposed to emergency use only?</li> <li>d. Others?</li> </ul>	<p>ENMAX supports the development of an LSSi product.</p>
	<p><b>3.4 Next Steps</b></p> <ul style="list-style-type: none"> <li>a. Form working group</li> </ul>	<p>ENMAX wishes to participate in both working groups.</p>

<p><b>4.3 Options to Increase Export ATC</b></p>	<p><b>4.3 Options</b></p> <ul style="list-style-type: none"> <li>a. <b>GRAS to increase export limit to 935 MW</b></li> <li>b. <b>No GRAS to increase SOK flow limit</b></li> <li>c. <b>Integrate wind forecast into export ATC limit</b></li> <li>d. <b>Service available for in market use?</b></li> <li>e. <b>Others?</b></li> </ul>	<p>ENMAX supports increases in export capacity paid for by exporters. Having consumers pay export-related costs violates basic economic principles, results in Alberta consumers subsidizing consumers in other jurisdictions, and does not support a FEOC market. Having exporters pay export-related costs sends the correct price signals and results in economically efficient outcomes.</p>
	<p><b>4.4 Next Steps</b></p> <ul style="list-style-type: none"> <li>a. <b>Form Working Group</b></li> </ul>	<p>ENMAX wishes to participate in both working groups.</p>
<p><b>5.0 Conclusions and Next Steps</b></p>	<p><b>5.0 Conclusions and Next Steps</b></p> <ul style="list-style-type: none"> <li>a. <b>Form Independent Working Group</b></li> <li>b. <b>Should variable costs of services be charged to users?</b></li> </ul>	<p>ENMAX supports charging generators and loads for both the fixed and variable costs associated with exports and imports, respectively.</p>