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March 8, 2007

Ms. Colleen Fairhead
Alberta Electric System Operator
2500, 330 – 5th Avenue
Calgary, AB
T2P 0L4

Dear Colleen:

EPCOR Utilities Inc. (“EPCOR”) is pleased to provide the following comments regarding the Alberta Electric System Operator’s (“AESO”) Long Term Adequacy (“LTA”) Recommendation released on February 22, 2007.

EPCOR appreciates the time and effort the AESO has invested in the LTA process. EPCOR is generally supportive of the AESO’s LTA Recommendation but has some concerns with specific AESO proposals, detailed in the attached comment matrix. EPCOR supports the AESO’s medium-term “bridging mechanism” approach to LTA and selection of the Two Year Probability of Supply Adequacy Shortfall (“2YrPSAS”) Metric as the Threshold. This approach is consistent with Alberta’s energy only market, where the market determines the level of generation development and, indirectly, the reserve margin. EPCOR is also pleased that the recommended Threshold Actions, if implemented appropriately, should not negatively impact or distort the energy only market, thereby providing some much needed market stability and certainty.

While EPCOR’s concerns are provided in detail in the comment matrix, our most pressing concerns are highlighted below.

- It is crucial that Threshold Actions are only implemented to avoid an actual, real time involuntary curtailment of load.
- EPCOR believes that if any out-of-market energy is dispatched through the Threshold Actions, the pool price should be set at the price cap.
- The LTA Recommendation and metrics should include transmission status, and its impact on adequacy, as a key indicator as directed by the Department of Energy’s June 2005 Policy Paper. Transmission constraints may contribute to adequacy concerns by creating uncertainty with respect to transmission availability, negatively impacting generation development.
- EPCOR has concerns with the methodology of several Metrics (Reserve Margin, Supply Cushion and 2YrPSAS) as more conservative assumptions are applied to the generation forecast than are to the load forecast. This creates a bias in the Metrics toward a result of supply adequacy concerns.
- EPCOR opposes any disclosure of forecast outage information that could expose generators open position to the market.



EPCOR appreciates the opportunity to provide comments on this key initiative and encourages the AESO to carefully consider the feedback provided. Please contact me at (780) 412-3940 if you wish to discuss EPCOR's comments further.

Sincerely,

Sian Barraclough
Manager, Environment and Regulatory Affairs
EPCOR

Stakeholder Comment Form

Long Term Adequacy Recommendation

Date of Request for Comment: March 8, 2007
Period of Consultation: February 21 – March 8, 2007

Stakeholder: EPCOR Utilities Inc.

Section	Topic	Description	Stakeholder Comments
1	Introduction	Purpose of the paper is to recommend a solution that meets the requirements of the Policy Paper.	
2	Background		
2.1	Requirements of the Policy Paper	Definition of Metrics, Thresholds, Threshold Actions and Market Modifications.	Although the DOE Policy Paper clearly directs the AESO to consider transmission status in the assessment of long term adequacy, the AESO's Recommendation is focused entirely on generation or supply adequacy. EPCOR submits that transmission status and its impact should be explicitly included in the metrics as a key indicator.
2.2	Long Term Adequacy in an Energy Only Market	The market determines the appropriate level of adequacy in the long term. LTA as a bridging mechanism.	EPCOR supports the AESO's medium-term "bridging mechanism" approach to the long term adequacy issue. This approach is consistent with Alberta's energy only market where the market determines the level of generation development and, indirectly, the appropriate reserve margin.

2.3	Locational Resource Adequacy	Within context of LTA, the paper is not proposing metrics or thresholds for locational issues.	While EPCOR agrees with the AESO's recommendation of not including metrics or thresholds for locational issues, EPCOR does note that location resource adequacy issues are the result of transmission adequacy constraints, not generation/supply adequacy concerns. EPCOR reiterates the importance of including a transmission status metric as a key indicator to provide context and balance to adequacy concerns.
3	Metrics	The metrics were chosen because they cover the key elements that directly or indirectly measure adequacy, relatively simple to understand, to the extent possible is based on public and verifiable information, provides an outlook on adequacy.	EPCOR stresses that transmission status has not been included as a metric, despite clear direction in the DOE Policy Paper to do so. While transmission adequacy constraints may cause locational issues, which are not the focus of the LTA Recommendation, these constraints may also contribute to adequacy concerns by creating uncertainty with respect to transmission availability which may negatively impact generation development.
3.1	New Generation Status and Retirements	Summarize public information on generation status and retirements.	EPCOR notes the AESO's commitment to ensure the confidentiality of information used to create this metric. EPCOR stresses that confidential information should not be disclosed in any form in any metric included in the LTA process.
3.2	Reserve Margin	A forecast, expressed in percentage terms, of the amount of Alberta firm generation capacity at time of system peak that is in excess of the annual peak demand.	EPCOR is concerned with the methodology proposed as it treats generation and load forecasts unequally, which is inappropriate. The Reserve Margin forecast only includes generation projects under Active Construction, whereas over a 5-year period other projects, including projects that are Approved and some that are Announced, could reasonably be expected to come on (particularly gas peaker plants). Excluding these projects, while allowing load forecasts to grow, imposes unfair and ultra-conservative assumptions on the generation side, which could lead to unwarranted negative perceptions of the energy only market. EPCOR submits that it would be appropriate to include any project that is under Active Construction, has been Approved or is Announced, that has a reasonable

			<p>likelihood of coming on during the 5-year period in the Reserve Margin metric. The AESO appears to have acknowledged this issue in the LTA Committee process and notes in the Recommendation that “The AESO will further assess the benefits of providing multiple reserve margin scenarios, as the design details of this metric are determined.” EPCOR believes that providing alternate scenarios should be an AESO obligation included in the Recommendation. EPCOR provides the following suggestions the AESO could consider to address this issue.</p> <ol style="list-style-type: none"> 1. Provide a Low Case (including only Active Construction generation), Base Case (assuming Active Construction and Approved generation), and a High Case (assuming Active Construction, Approved, and other reasonably forecast generation); and/or 2. Apply different levels of conservatism to forecasts of generation, depending on fuel type. For example, more conservative assumptions for coal generation (only Active Construction), which takes longer to develop, than for gas generation (Active Construction, Approved and reasonably forecast), which can be developed relatively quickly.
3.3	Supply Cushion	Two year forecast of available daily generation capacity and peak demand.	This metric should include any reasonably anticipated generation addition during the time frame, not be restricted to Active Construction. For example, the Clover Bar peaking plant project was announced in August 2006, received EUB approval in December 2006 and is expected to be in service in November 2007. If this metric had been calculated in November 2006 using the AESO’s proposed methodology, the Clover Bar project would not have been included in the Supply Cushion calculation, despite the expectation that it will be in service for half (one year) of the two year forecast period.
3.4	Two Year Probability of Supply Adequacy	A probabilistic assessment of a supply shortfall over the next two years.	This metric should include any reasonably anticipated generation addition during the time frame, not be restricted to Active Construction. For example, the Clover Bar peaking plant project was announced in August 2006, received EUB approval in December 2006 and is expected to be in

	Shortfall		<p>service in November 2007. If this metric had been calculated in November 2006 using the AESO’s proposed methodology, the Clover Bar project would not have been included in the 2YrPSAS calculation, despite the expectation that it will be in service for half (one year) of the two year forecast period. The AESO may have identified periods when the threshold was breached after the Clover Bar plant is in service and unnecessarily contracted for Threshold Action services, incurring unnecessary costs.</p> <p>It is also important to determine the “defined timeframe” over which the 2YrPSAS is intended to focus.</p>
3.5	Loss of Load Probability and Expected Unserved Energy	Demonstrate the probability of involuntary curtailments, expressed in total hours, and the expected total amount of unserved load, in MWhs during those involuntary curtailments, over a forecast period of 10 years or greater. A shorter timeline, or elimination of this metric is being considered.	<p>EPCOR encourages the AESO to adopt one of the AESO’s two proposals with respect to this metric – either to not include this metric in the adequacy assessment report or to truncate the metric at 5 years – for reasons related to the uncertainty of forecasts over the long 10-year timeframe which will limit the value of the metric.</p> <ul style="list-style-type: none"> • The calculation of the 10-year metric requires the AESO to calculate pool prices, which has inherent issues with respect to transparency and forecast error, particularly given the long timeframe. • As noted in the Recommendation, the AESO does not, and should not, perform a generation planning function. Given the 10-year timeframe, the AESO will be in the difficult position of forecasting uncertain generation additions. <p>If the AESO does keep the 10-year LOLP/EUE metric in the adequacy report, it must be recognized that this metric should not be used as a measure “as to the very long-term sustainability of Alberta’s energy-only market.” The metric is an uncertain forecast of supply adequacy based on limited assumptions. It should not be used to determine the success of failure of the energy only market paradigm.</p>

			Further, if the metric is used, EPCOR suggests the AESO make public its forecast of pool prices and include an analysis of the impact of transmission and distribution related constraints and outages, and not be limited to generation issues.
3.6	Generation Investment Signposts	Show forecast/trends of reserve margin, forward electricity prices, forward natural gas prices, levelized cost of generation	Given the limitations of the Reserve Margin metric, as discussed in 3.2 above, care must be taken in any interpretation of this metric as the conservative Reserve Margin forecast is unlikely to reflect reality and should be compared to the other statistics with caution.
3.7	Contribution to Fixed Costs of Notional Gas Fired Peaking Unit	Demonstrate the contribution to fixed capital of a new gas-fired peaking unit could have received over each of the previous three years.	EPCOR sees limited value to back-casting the contribution to capital costs of a notional gas-fired unit. This metric is unlikely to add any value to future investment decisions and does not provide the AESO with any information on future adequacy. Further, as the unit's impact on pool price will not be included in the calculation, the metric will have an inherent bias that shows better results for the notional plant than would be the reality.
4	Threshold	When the 2yrPSAS is calculated and breaches a specific level, the AESO would take steps to implement the Threshold Actions within the 2 year time frame.	EPCOR does not object to the use of the 2YrPSAS as the Threshold metric, subject to comments in 3.4 above. Given the medium-term focus of the adequacy measures, a 2 year measure is appropriate. It is, however, crucial that the AESO consult with stakeholders on both the appropriate Threshold level and for what duration the Threshold must be breached in order for the Threshold Actions to be implemented. EPCOR notes the AESO's comment that the 2YrPSAS was not intended to have a daily or hourly focus and encourages the AESO to consider this when determining the appropriate duration.
5	Threshold Actions	Determining threshold actions must balance effectiveness, market stability, and cost.	EPCOR wishes to confirm that the market stability and certainty principle is not related to price stability and certainty.
5.1	Threshold Actions for Inclusion in	Three options are recommended. Other options are not being considered due to	It is absolutely crucial that contracts for the Threshold Action services are only entered into if the Threshold level is breached for a certain duration (both to be determined in consultation with stakeholders) and the

	AESO's LTA Toolbox	significant cost that outweighs perceived contribution, or due to significant structural change that would be required to be made to the market.	<p>Threshold Action services are only implemented to avoid an actual, real time involuntary curtailment of load.</p> <p>The AESO Recommendation does not address what the pool price will be if and when the Threshold Actions are implemented in real time. EPCOR submits that the pool price should be set at the price cap if any Threshold Action service is dispatched. As dispatch of any Threshold Action MWs would bring out-of-market energy onto the system, it is appropriate that the price for in-market energy be set at the cap at this point in time.</p> <p>EPCOR stresses that any form of alternative or capacity payment in addition to an energy payment, including one time or standby payments, must be carefully considered to ensure that it does not disrupt or distort the energy only market. Distortion of the energy only market could have the effect of stranding or diminishing the value of existing generation investments and discouraging future investment in generation, paradoxically worsening the long term adequacy of the market. Given the decrease in MWs available under the VLCP after the take or pay contract option was eliminated in 2000, it is likely that some alternative payment, in addition to an energy payment, will have to be made to ensure sufficient MWs are available if an adequacy event occurs. EPCOR would not oppose alternative/capacity payments to providers of LSS or Back-Up Gen, however would be opposed to any form of capacity payment to providers of Emergency Portable Generation, given the potential for these MWs to compete directly with other generators in the energy market in the short-term, subject to penalties, or long-term, unfettered once any restrictions on participation expire.</p>
5.2	Load Shed Service	AESO would contract with load customers for the right to curtail load under specific terms and conditions.	It is necessary that the appropriate checks and balances are put in place to ensure that this service can not be used for economic purposes. Specifically, this will require appropriate definitions for eligible participants in the program and assurance that the service will only be

			dispatched as a last resort before curtailing involuntary load.
5.3	Self-Supply and Back-up Generation	AESO would contract with back-up generation owners for the right to dispatch it on under specific terms and conditions.	See comment in 5.2 above.
5.4	Emergency Portable Generation	AESO would contract with emergency portable generation owners for the right to dispatch it on under specific terms and conditions.	See comment in 5.2 above. EPCOR is not opposed to emergency portable generation as a Threshold Action as long as its use does not distort the energy only market for electricity in Alberta. Distortion of the energy only market could have the effect of stranding or diminishing the value of existing generation investments and discouraging future investment in generation, paradoxically worsening the long-term adequacy of the market. The AESO has indicated that any such portable generation would be ineligible to participate in the energy market and that this goal be enforced through penalties or moratoriums. EPCOR agrees that preventing portable generation, developed as a Threshold Action, from offering into the energy market is crucial and suggests that the AESO must carefully consider how to effectively achieve this goal, as penalties would have to be sufficiently (and very) high to achieve the desired result.
5.5	Rationale for This Suite of Threshold Actions	The threshold actions provide a balance of effectiveness, market stability/certainty and reasonableness of cost, when compared to other alternatives. Load would pay for the service, either as an ancillary service, or through another AESO cost recovery mechanism.	EPCOR supports these costs being borne by load.
6	Market	Any market enhancement or	EPCOR notes that the AESO has not included as a Market Modification

	Modifications	modification can impact the level of adequacy in the market. Discussion of modifications that will require an extensive consultation effort are more appropriately held outside the LTA initiative, as outlined in the Policy Paper.	that temporary out of market solutions to increase ATC in the Recommendation. EPCOR believes this is an important initiative that should be pursued. EPCOR stresses the importance of the ATC issue, along with the other constraints listed in Section 6 of the paper, and encourages the AESO to deal with these issues, with priority on the ATC and imports issues, as quickly as possible in the appropriate forum.
6.1	Outage Disclosure	Generators 5 MW and greater must provide planned outages on a rolling 2 year basis, which will be used for calculating metrics. Forecasts will be provided in aggregate form, as provided today. Actual planned outages will be reported after the fact. Forecasts may be made available on a historical basis.	<p>EPCOR supports the AESO’s proposal to increase the outage forecast timeframe to 24 months, with monthly rolling updates. EPCOR also supports the AESO’s recommendation to continue to provide forecast outage information on an aggregate basis by fuel type. EPCOR notes that maintaining the confidentiality of the outage information is consistent with the AESO Rules and the principles on outage coordination recently agreed to by the AESO and generators. EPCOR supports publishing actual outage data on a historical basis.</p> <p>EPCOR is opposed to the AESO publishing the forecast information on a historical basis after the date on which the forecast was expected to take place. EPCOR does not see benefit of the disclosure of forecast information on a historical basis, given that actual information will be published. Further, EPCOR believes that publishing forecast information after the date on which the forecast was expected to take place could expose generators to significant risk if the dates of outages are moved, and forecast data is published before the actual outage occurs. Publishing such information could expose generators open position to all market participants. On a long term basis, this increased risk and cost of building generation in Alberta could have a negative impact on adequacy. EPCOR submits publishing such information would breach the principle on confidentiality included in the principles on outage coordination recently agreed to by the AESO and generators.</p>

7	Next Steps	After considering feedback and making appropriate modifications, implementation of LTA will be in the form of rules, and adequacy reports. Topical workgroups will be hosted in areas that require further development.	EPCOR looks forward to being involved in further consultation on all aspects the LTA Recommendation and implementation.
	Additional Comments	Additional comments that supplement the feedback being provided are welcomed.	

Stakeholder Comment Form