July 20, 2018
RE: CMD Final

The Cogeneration Working Group (CWG), as represented by Power Advisory LLC, is comprised of the following members: (1) TransCanada; (2) Suncor; (3) Cenovus; (4) Canadian Natural (CNRL); (5) Dow; (6) Imperial; (7) MEG Energy; (8) Husky; (9) Nova Chemicals Corporation; (10) Syncrude; (11) Lafarge; and (12) InterPipeline. This submission represents the consensus view of the group. Individual member companies may also make independent submissions.

On June 29, 2018, the AESO released the final CMD. The CWG appreciates the hard work of and interactive consultation process put on by the AESO over the past year. However, the CWG remains concerned that some of its comments on key issues remain outstanding. This letter highlights these key concerns.

UCAP and Availability Assessment

The CWG continues to urge the AESO to include more hours in both the UCAP calculation and availability assessment. When the capacity market concept was first introduced, both the Government of Alberta and the AESO suggested that one of the goals was to increase revenue certainty and reduce risks for investors. With a one-year term and limited hours for calculation and assessment, the capacity market is higher risk in terms of long term revenue certainty for generators.

The UCAP and availability assessment framework materially erodes the stability intended by the capacity market structure. The current design of 250 hours per year defines the annual revenues and risk to investors and is significantly higher compared to the energy-only market in terms of operational performance risk. Historically in Alberta, approximately 1,140 hours per year returned 90% of the annual profits above operating costs for a peaking plant (evaluated at a heat rate of 10). The CWG submits that capacity market revenue based on 1,000 hours or more is required to maintain similar risk levels to the energy-only market. Accordingly, the CWG proposes 1,000 hours be used for both the UCAP calculation and the availability assessment.

In addition, the extreme penalty structure design for performance assessment is punitive to generators and will not improve system performance. Generators can lose up to 25% of the annual capacity payment in a few hours solely by system circumstance, despite high asset availability. Forced outages cannot be timed and therefore this risk is unmanageable. This penalty dynamic is not helpful to investor confidence.

UCAP Calculation for Self-Supply

The AESO's approach to use regression analysis to determine the UCAP for self-supply units is an improvement on the previous approach. It accounts for a portion of the non-dispatched capacity, but it is not clear what the added complexity and uncertainty of the approach gains. The CWG prefers a simple approach consistent with other generators that assesses UCAP based on metered net-to-grid exports plus undispatched MW. The AESO analysis, in the CWG's review, indicates that this yields substantively the same results for many sites but ties actual performance and availability to results rather than estimated performance through a regression.

Self-Supply Status

Self-suppliers should maintain the flexibility to switch between net and gross participation in the capacity market as needed in response to a change in their business or market rules. These events will not neatly align on a four-year cycle. The AESO and the market should not further implement restrictions that add minimal, if any, benefits while removing necessary flexibility of Alberta business. As long as self-supply status is declared prior to the base auction for the associated obligation period, then the market is provided with adequate certainty and information. The determination of self-supply changes auction volumes only, so the rationale to tie the flexibility to the approval of demand curve parameters does not appear to be relevant.

Energy Market Power Mitigation

The AESO initially noted that the no look threshold is tied to the single largest contingency on the system. The CWG supports a no look threshold set at the size of the single largest contingency, however, the AESO's most recent proposal does not seem to be consistent with this concept as the no look threshold is now set at 250MW of supply cushion.

Further, the concept of mitigation based on a multiple of costs is concerning. This methodology will, for example, force a simple cycle unit to offer lower than a C2G unit. While it may be economic to dispatch units in order of costs in other parts of the merit order, in times of scarcity, offers need to be able to reflect the value of power during scarcity conditions as pricing of power during scarce conditions is more reflective of the value of lost load than of the marginal cost of generation.

Therefore, the energy market power mitigation regime should include three blocks and the delineation between the blocks should be based on the size of N-1 (the single largest contingency) and N-2 (the two largest contingencies) contingencies. Between the single largest contingency and the second largest contingency, the mitigated offer cap should be the same for all resources at a level that also motivates price responsive load to curtail.[1] The CWG submits the following thresholds for consideration:

Supply cushion larger than N-2	Similar to the AESO proposal, a mitigation level, such as 3x SRMC, that allows peakers to recover their costs in 95% of hours.
N-2 to N-1	A mitigated offer cap set at a level high enough to motivate all price responsive load to shut down, *i.e.* the higher of 6x SRMC or approximately \$300/MWh.
N-1 to 0MW of supply cushion	No mitigation, all market participants able to offer up to the price cap.

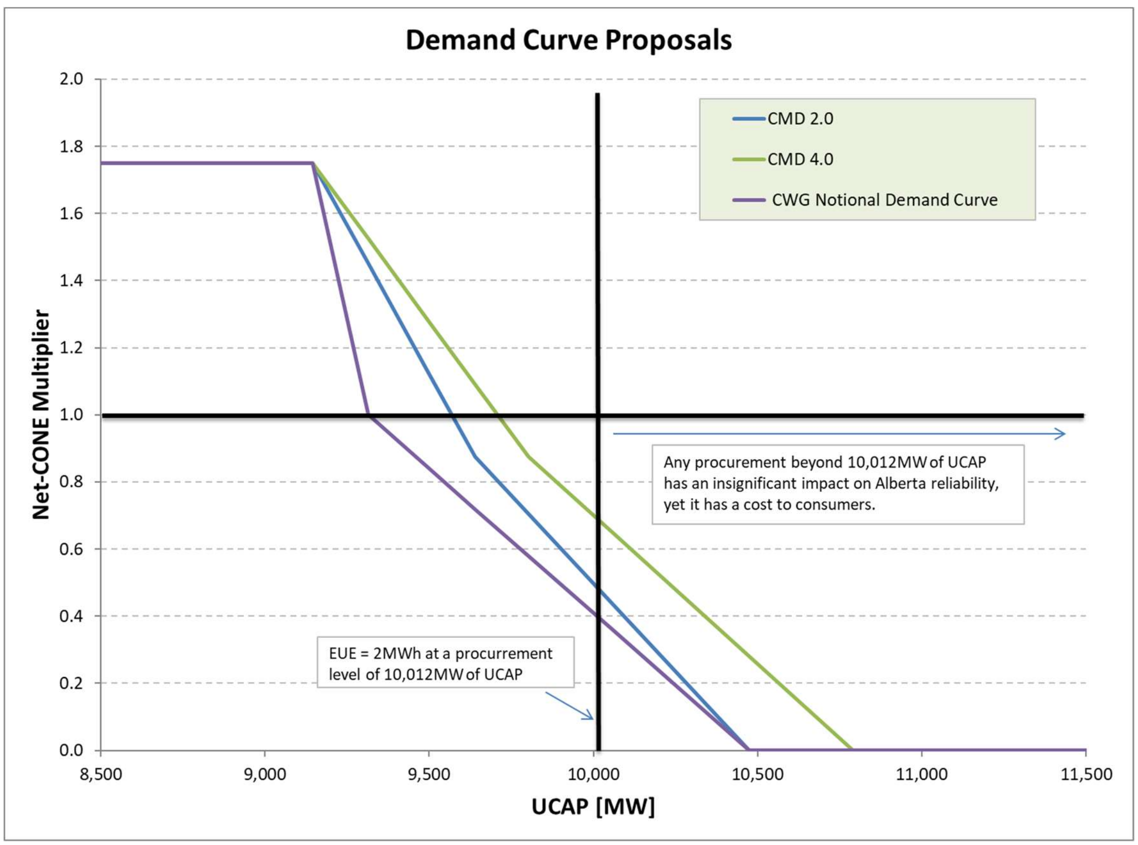
[1] It should be possible for resources to offer above the mitigated offer cap in the case that their costs are significant, for example, if gas prices were to rise high enough, \$300/MWh may be inadequate for some resources.

Demand Curve Parameters

The CWG remains concerned that the design continues to bias the Alberta market to a significant over-supply of capacity, with the associated depressed energy prices. This has two main impacts: (1) the capacity market will become the primary driver of investment decisions; and (2) Alberta customers will face materially higher costs of electricity than necessary.

As noted in the CWG's CMD 2.0 comments, the CMD 2.0 demand curve shape recommendation is estimated to result in higher costs for electricity in the range of $60 to $75M per annum, based on the same approach highlighted in previous CWG submissions on the cost of the rightward shift in the demand curve. The graph below shows that the CMD 4.0 demand curve is shifted to the right of the CMD 2.0 demand cure. The CWG submits that this new demand curve will result in higher costs of approximately $100M per year to load customers and therefore fails to meet the objective of delivering power at the lowest possible cost.

The CMD 4.0 demand curve proposal is shown in green below. On this curve, the AESO shows a willingness to pay of approximately 0.7xNet-CONE for capacity beyond an EUE of 2MWh. Given that it is nearly impossible to reach an EUE of 0MWh, this point represents approximately the maximum reliability achievable through procurement of capacity, the AESO is dramatically overstating true willingness to pay for reliability through its choice of demand curve parameters.



The purple, or left-most curve, represents a more reasonable demand curve that achieves target availability at equilibrium and was submitted by the CWG in response to CMD 3.0. In light of the analysis that shows that at 10,012 MW of UCAP the EUE is at 2 MWh, it should be considered whether an improvement of this curve would be to reduce the width of the foot.

The key element is that capacity price equals net cone at the target reliability. Any other design in effect results in higher costs for consumers with little to no expected increase in reliability. The rationale that an expected over supply is required due to an assertion that the market will not attract new capacity in a timely manner given a 3 year forward period simply has not been justified.

Performance Framework

The CWG continues to submit that the overall performance penalty/incentive scheme remains too complex, punitive and will not achieve the desired outcome. The penalty and incentive mechanism should ensure that what is purchased is delivered, value the obligation and the delivery of capacity, should be predictable, and not create undue risk. The current mechanism does not appear to achieve these goals. Further, the mechanism with extremely punitive penalties occuring in small and unpredictable set of emergency hours results in an unmanageable risk that in excess of 25% of an asset's annual capacity revenue can be lost in a few hours.

Punitive penalties beyond revenue claw back are not required as a failure to perform will also result in a lower UCAP, which is an additional penalty in future years. In other markets, penalties are intended to encourage availability in specific hours. However, in those markets, the UCAP is based on performance throughout the year. In Alberta, the UCAP is calculated based on performance in the specific hours when the system is at risk for reliability. Given that non-performance in the 250 tightest hours will result in lower capacity revenues in future years (the impact of the reduced UCAP will persist for five years), the penalties in Alberta should not be of the same magnitude as the penalties in other markets.

The CWG has produced a holistic performance framework design and submitted it during a previous round of comments. The CWG requests further consideration of its proposal as it incents overall performance more effectively and predictably and reduces undue random risk.

Cost Allocation

The CWG recognizes that the issue of cost allocation has been deferred to the tariff consultation. However, the AESO continues to comment in capacity market documentation that self-suppliers may need to be allocated additional costs to combat an alleged free-rider problem. The AESO has not adequately defined or demonstrated a free rider issue. The AESO should not be insinuating a free-rider issue absent support for the position[2] and further should evaluate the potential that the issue is in fact in the reverse direction. The CWG supports the principle that all loads should be treated equally, both pure loads and self-supplied sites when importing should be subject to the same cost allocation formulas.

Process Moving Forward

The CWG notes its concern regarding the timeline for the rules consultation. The AESO will have very little time to turn around a second draft of the set 2 rules. It is important that the AESO has adequate time and resources to consider and incorporate all the comments received before publishing a second draft of the rule language. Further, participants will have very limited time to review the rules and prepare comments, especially given the large volume of rules that will be out for comment at the same time. To aid in this effort the CWG requests that the AESO, as soon as

[2] The example provided in the rationale document is inadequate due to its over-simplification.

possible, release a list of the 57 rules that will form the consultation with a division between expected set 1 and set 2 rules. This will allow market participants to start reviewing the existing rules and contemplate required changes based on CMD final.

The CMD final is a well written document that will continue to provide value even after the rules are approved. Other markets have capacity market manuals that describe the workings of their markets in one location. The CWG submits that the AESO should endeavor to maintain the CMD as rule changes are approved into the future such that market participants have access to the full market design manual.

Finally, the CWG is concerned with the possibility of significant rule amendments being approved after the provisional process given the condensed time frame and lower bar of approval. This creates significant investor uncertainty. The government has required two deadlines be met: (1) the AESO initiate the first auction in 2019; and (2) the first delivery year begin in 2021. The AESO has already interpreted 2021 delivery to mean November of 2021. Accordingly, the first auction does not need to occur in June of 2020. If the pre-qualification and qualification rules are approved provisionally and the AESO is able to begin these activities in late 2019, then the auction can occur after the final rules are approved through the 18-month process. This will prevent an abrupt change in rules between the second and third delivery year. Consideration should be given to an alternative process, such as this, to increase investor certainty in the early auctions.

Sincerely,

Kris Aksomitis