

AESO Demand Response Discussion Paper
Stakeholder Comment Matrix
December 17, 2009

2.3 Demand Response Principles

Stakeholder	Stakeholder Comment	AESO Response
Alberta Direct Connect (ADC)	<p>The purpose of demand response in general is to create efficiencies in the power system. The Provincial Energy Strategy lists one of its key outcomes as “Wise Energy Use” and notes that we need to “integrate the demand side in our thinking”. We need to find a way that does this without load having to behave like a generator in order to participate. It would be helpful to think about what we want to accomplish with demand response in light of the above desired Provincial Energy Strategy outcome and identify any necessary policy changes to enable.</p>	<p>The AESO agrees that demand side concerns should be integrated into system design. There is currently a range of options for load to participate in the market and the AESO is seeking to expand those options within the context of the existing market design.</p>
ATCO	<p>We agree with the AESO's key principle that demand response must be consistent with the concept of a FEOC market. ATCO Power supports the AESO's interpretation of the principles that should be included in order to ensure a FEOC design to demand response.</p> <p>In product design, the AESO states '[a] related principle is that, where possible, products will not be created based on the cause of a system problem, but rather on the action that is required to resolve the problem. We support this principle but are concerned with the wording 'where possible'. We would appreciate the AESO elaborating on how circumstances that do not conform to the principle would be handled and how likely this scenario is to occur.</p>	<p>Acknowledged.</p> <p>The AESO is not currently aware of such circumstances.</p>
Capital Power	<p>Capital Power is very supportive of the principles proposed by the Alberta Electric System Operator (AESO) in the Alberta Demand Response Initiative Discussion Paper (“discussion paper”).</p> <p>a. Technical requirements that exist to maintain system reliability</p>	<p>Acknowledged.</p>

	<p>requirements should be maintained. Separate rules should not be created for loads as a means of increasing demand response (DR) or demand participation (DP) in the energy market.</p> <p>b. Generators and loads should face the same price signal and have access to the same options to mitigate price risk.</p> <p>c. Every effort should be made to prevent the fracturing of the existing energy and ancillary service markets. A competitive outcome is far more likely when all potential suppliers compete to sell the same products on the same platform.</p> <p>d. The market should provide incentives for load to curtail its consumption when the price of electricity rises above the value of lost load (VoLL) for that load. DR programs should allow for the delivery of the energy price signal to assist loads in making this determination.</p>	
EnerNoc	<p>EnerNOC does not believe that the current market can be said to be Fair, Efficient or Openly Competitive with respect to demand response, and particularly with respect to demand response as provided by third-party aggregators.</p> <p>The current market is not Fair because, as IPCAA notes, the single-sided merit order is biased in favor of suppliers by virtue of allowing only supplier offers to set price. The current market is not Efficient because it fails to compensate loads for reductions in demand at a price that is comparable to the value they provide to the system. This inefficiency is compounded because the market lacks sufficient elasticity of demand to discipline prices and prevent the exercise of market power by generators. Finally, the market is not Openly Competitive because it does not allow loads to compete to provide services they are technically capable of providing, specifically ancillary services such as spinning reserves.</p>	<p>The AESO notes that the current market structure allows a great deal of freedom for loads and generators. The market produces a price signal that reflects real-time market conditions. Generators and loads make their decisions based on this common price signal. Load participants can forward contract, manage risk in real-time via price responsive actions or sell flexibility to participants such as generators or retailers.</p> <p>The current market structure allows loads to bid into the market, but loads currently do not participate in this aspect of the market. Loads have the option to set price, and price responsive load that already participates in the market influences price by reducing demand in high priced hours.</p> <p>Energy prices are set at the lower of marginal cost (a generator offer) or marginal benefit (a load bid). Please see the response to ENMAX below for further details on the AESO's position.</p> <p>The AESO is working to facilitate loads in participating in more elements of the market, as noted in the paper. It should be noted, however, that technical requirements and standards for</p>

		products such as spinning reserve are set by the WECC.
ENMAX	<p>EEC is concerned that an “energy only market” may now be viewed as an end in itself, rather than as a means to provide consumers with a safe, reliable, and economic supply of electricity at the lowest possible delivered cost. EEC therefore urges the AESO to review again the principles behind demand response with a view to ensuring the appropriate objectives and interpretations are in place.</p> <p>The Energy-Only Market and Non-FEOC Outcomes The AESO’s discussion paper states, at page 7, that product design should be consistent with the existing market structure and support the existing energy-only, real-time price signal. EEC does not agree, for two reasons. First, Alberta does not have an energy-only market, at least from the perspective of electricity consumers. Second, such a restriction is not in keeping with a FEOC market.</p> <p>Consumers make de facto capacity payments for transmission. Non-energy payments are also made for ancillary services. In total, non-energy payments amount to hundreds of millions of dollars per year, a material fraction of consumers’ overall energy bill. Consequently, any rule that restricts non-energy payments to DR providers (or local generators) is inconsistent with the existing market structure. In EEC’s view, a rule that prohibits non-energy payments to DR providers or local generators would also violate FEOC. In a fair, efficient, and openly competitive market, consumers are able to choose the option with the lower overall cost, and are able to make their own trade-offs (if any are required) with respect to reliability.</p> <p>Asymmetric Rules The discussion paper states, at page 8, that the AESO should strive to ensure that there are symmetric rules for generation and load wherever practical. EEC supports such rule symmetry in principle. However, many of the conclusions the AESO has drawn regarding DR follow from the false premise that Alberta’s electricity market exhibits symmetry in the first place. It does not.</p>	<p>Government policy developed as a result of extensive consultation with and support from industry has maintained a commitment to an energy only market design (section 2.2 of the Discussion Paper). The demand response principles were developed in light of and consistent with this policy background.</p> <p>The AESO acknowledges that both transmission and ancillary services have different market structures and pricing mechanisms than the energy market. However, the AESO reiterates that there is a policy commitment to an energy only market for energy, and demand response initiatives within the energy market must conform with this principle. Products outside the energy market, such as reliability products, may have different pricing structures.</p> <p>The AESO acknowledges that customers pay for transmission costs, but notes that this model provides loads access to an integrated electrical system. An unconstrained transmission system is not a ‘subsidy’ for generators as load benefits through lower energy prices. Transmission is a regulated public infrastructure that enables the market and the AESO</p>

	<p>An extremely important example of the lack of symmetry is the transmission policy, which requires consumers to pay for an unconstrained-for-generators bulk transmission system. The policy allows generators to minimize their private costs at the expense of those consumers.</p> <p>In EEC's view, the appeals by certain parties for rule symmetry are not consistent with their support for the existing, highly asymmetric allocation of transmission costs.</p> <p>Price Fidelity The discussion paper states, at page 8, that a key principle is that programs designed to encourage DR in the energy market should not alter the fundamental economic decision that loads make to curtail, and that in essence, loads should curtail only when the price of electricity is higher than the value of their lost load. EEC agrees that loads should curtail when the economic benefit of curtailing exceeds the economic benefit of continuing to consume, but does not agree that the economic value is simply spot price times megawatts.</p> <p>Consider a simple example. In hour one, electricity demand is 10,001 MW and the price is \$100/MWh. In hour two, a load reduces demand by 1 MW, foregoing \$5,000 worth of production in the process. In accordance with the energy market merit order, the reduced demand causes the price to fall to \$90/MWh. As a result, consumers' aggregate cost of electricity falls from 10,001 MW x 1 hour x \$100/MWh = \$1,000,100 in hour one, to 10,000 MW x 1 hour x \$90/MWh = \$900,000 in hour two. Consumers as a whole therefore achieve a gross benefit of roughly \$100,000. If the load is paid \$10,000 for interrupting, consumers in aggregate are better off by \$90,000 and the load is better off by \$5,000, clearly an economically efficient outcome. Prohibiting the load from receiving any payment beyond the foregone cost of electricity (1 MWh x \$100/MWh = \$100) would result in the load not interrupting and society suffering a net loss of roughly \$100,000 - \$5,000 = \$95,000. A similar situation exists around</p>	<p>does not believe it is comparable to the real-time energy market.</p> <p>The example provided in this comment is addressed in section 3.3.2 of the paper. The AESO agrees that some participants may be able to derive more value from price responsive load than simply the avoided spot market price, e.g. loads that sign a contract with retailers that compensates them for their flexibility). However, it is not appropriate for the AESO to participate directly in the market through product design in order to influence the price.</p> <p>The AESO does not support a rule whereby loads are prohibited from curtailing unless the price of power is greater than their value of lost load. The AESO will not make a payment to loads to facilitate or encourage curtailment in this situation.</p> <p>The AESO notes that retailers, marketers, generators or other participants are free to contract with loads with the intent of capturing the value their flexibility provides. A retailer may place a much higher value on a load reduction than an individual load due to portfolio impacts, for example. This type of load response fits with the Alberta market model, and the ability for participants to derive this value exists in the market today where loads have interval meters.</p>
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	<p>infrastructure, since not interrupting in one “right” hour in a year could create the need for an additional MW of transmission capacity that must be paid for 8760 hours a year.</p> <p>Clearly, a rule (or a payment scheme) that allows a load to curtail only when the spot price of electricity in a given hour is higher than its value of lost load is not in keeping with a fair or efficient market. It is perfectly legitimate for loads collectively to seek, through competitive processes, parties willing to provide the benefits achievable through demand response in return for payments greater than the cost of foregone energy. Seeking to minimize the delivered cost of energy over the long term does not, as some have suggested, constitute anticompetitive behaviour.</p>	
<p>Industrial Power Consumers Association of Alberta (IPCCA)</p>	<p>“Product Design should be consistent with the existing market structure...” This implies that the current market design is effective and sufficient to incent DR. IPCAA disagrees with this statement and believes the current market price signal fails on a number of fronts, including effective pricing for wind energy, DR and price elasticity in general.</p> <p>“...all competitors should respond to the same price signal whenever possible”. This does not mean that DR support products, such as LSSI and Wind-following, should be procured using the spot market price. With regards to “economic DR” the marginal unit of DR is worth more than the marginal unit of generation (from a load perspective) because it avoids paying all generators a higher price. This added value should be recognized in order to optimize the use of both load and generation resources.</p> <p>“The real-time energy price is the signal for loads to curtail in the energy market.” This does not recognize the added value of DR in avoiding unnecessary payments to all generators. In order to achieve</p>	<p>The current market design is set by government legislation, regulation and policy. The AESO is committed to implementing this design vision, and notes that the overall design has been successful in delivering reliable power and effective market signals to end consumers since its inception.</p> <p>LSSI and other products such as wind following will be priced as appropriate for those products following stakeholder consultation.</p> <p>Alberta’s design fundamentally sets the single market clearing price at the price of the highest dispatched resource. If payments are made outside the spot market via a DR product or a capacity payment that distort this pricing mechanism, it will not support a FEOC market.</p> <p>Please see above, as well as the reply to ENMAX with respect to the value added proposition for economic demand response.</p>

	<p>some effective price elasticity, loads providing DR need to be compensated relative to the value they bring to electricity consumers.</p> <p>Removing barriers, including loads in ancillary services markets and generally encouraging competition between resources are all areas that IPCAA agrees with.</p>	Acknowledged.
Independent Power Producers Society of Alberta (IPPSA)	<p>IPPSA strongly supports the principles that the AESO intends to use to guide demand response (DR) development. These include the need for product design to be consistent with the existing energy-only market structure and real-time price signal. To us, this precludes capacity or availability payments associated with energy market participation by loads.</p> <p>We also see Alberta's design as minimizing the scope of capacity payments for reliability products, and instead relying on market mechanisms.</p> <p>Fundamentally, we believe that in a commodity market, demand captures the value of curtailment via avoided costs.</p> <p>We applaud the AESO's interest in removing barriers to demand response and by binding its efforts in this regard by the following principle: "equivalent rules for load and generation are a guiding principle. Separate rules will not be created for loads as a means of increasing DR participation." (pg 7)</p>	Acknowledged.
TransCanada Energy (TCE)	<p>TransCanada supports the six identified Demand Response Principles.</p> <p>TransCanada also agrees that equivalent rules, and hence compliance, for load and generation be a guiding principle.</p>	Acknowledged.
Utilities Consumer Advocate (UCA)	<p>The UCA recognizes that the AESO's framework for discussion is the current market policy and underlying principles. In that context, the existing market price is by design the only signal load could turn to as input into curtailment protocols.</p> <p>Between the policy and principles set out, the options for</p>	<p>Acknowledged.</p> <p>The AESO will accommodate load resources in the design of</p>

	<p>achieving any significant change in DR seems very limited, at least in the energy market (there may be some opportunity in reliability products once the need for ramping (“wind following” is better achieved. It is disappointing that a further limitation beyond policy and market principles is that even if a change fits within the policy and principles, it would not be considered if it represents a change to existing market design: “Although a must bid, must comply model is consistent with the principle that supply and load should face symmetrical rules, this represents a significant departure from the current market design and is beyond the scope of this discussion paper.”</p> <p>The discussion paper provides no analysis of the potential impacts of broader changes, especially given the nature of the Alberta market merit order, nor any indication that this is reasonable beyond the comments about the performance of the existing market.</p> <p>The comparison of the amount of existing DR load in Alberta to other jurisdictions is not helpful; given the extremely high volume of large industrial load and a very high load factor experienced in Alberta relative to other jurisdictions, one would expect differences in DR in any event.</p>	<p>reliability products to the extent possible given the need for technical requirements. The AESO will consider all market design options for DR products, but notes that any product design must align with design principles, one of which is alignment with the market model.</p> <p>A mandatory must bid, must comply rule is a significant change to the market for load participants. Loads are currently entitled to bid into the market, which brings must comply obligations. While the AESO does not rule out the possibility of a must bid, must comply model for load at some point in the future, there was not wide support for this change.</p> <p>Acknowledged. The discussion paper was intended to provide design principles for DR products.</p>
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3.2 Barriers to Demand Response in the Energy Market

Stakeholder	Stakeholder Comment	AESO Response
ADC	The design of the Alberta electricity market does not support demand response beyond the existing ~200MW of price responsive load. The only loads that can participate and realize any cost avoidance are those that can respond in a short time. It is difficult to make the decision to curtail load if it takes longer than an hour to react to a price signal. Most loads would be categorized in this fashion.	The amount of price responsive load in Alberta is high by North American standards, and this response has been achieved entirely through in market means. The AESO recognizes that work remains to maximize the potential demand response. The market design sends a signal that forms the basis of rational curtailment decisions for load.
Capital Power	Capital Power is not convinced that the challenges identified in the working group should actually be considered barriers. The	Acknowledged. The AESO agrees that loads have the ability to participate in the energy market via contracts. The Alberta

	<p>challenges that load face, as the discussion paper points out, are the same challenges that generators face. Generators respond to these challenges by contracting and participating in the forward market for electricity. Changes to the energy only market design, even incremental, will not be as successful or efficient in addressing these challenges as contracting directly with energy suppliers will. Contracts can offer a flexibility that the market rules will never be able to mimic. Capital Power is of the view that long term contracting or hedging should be pursued as the best option for mitigating the risk associated with exposure to or participation in the electricity market.</p>	<p>design provides flexibility and market incentives for contracts that can place appropriate value on load flexibility and allow parties to manage the risk reward equation.</p>
EnerNOC	<p>EnerNOC concurs with the comments of IPCAA. To the extent that a focus on demand response has highlighted shortcomings in the existing underlying market design, that is a further reason to reexamine that market design in the appropriate context, not to dismiss those problems simply because they may imposes similar burdens (and similar inefficiencies) on generators.</p>	<p>The AESO believes the market design sends a price signal that allows loads to capture the value of curtailment. Work remains to maximize the potential demand response, but the market design sends a signal that forms the basis of efficient curtailment decisions for load.</p>
IPCCA	<p>These are actual barriers faced by loads. Asserting that “generators face similar challenges” suggests that the AESO is forgetting who pays for electricity. As the buyer of the product, loads deserve a fair, efficient and openly competitive market. Such is not the case with the current design wherein generators can take advantage of short supplies, generally caused by unscheduled generator outages to push prices to maximum allowable – whereas loads are restricted from employing similar such practices.</p> <p>A single-sided merit order structure uses only offers to set marginal prices – a fair, and openly competitive structure would use both bids and offers to determine price, as is the case with all other transacted commodities. So long as the single-sided merit order structure is employed and all generators receive the highest price then loads only recourse is to ensure the maximum available energy is available and offered into this market. Both loads and generators should have the opportunity to address these “challenges” instead of having them dismissed as equal but opposite.</p>	<p>The AESO agrees that both loads and generators are entitled to a FEOC market. The AESO believes the current design allows the price to reflect real-time market conditions. Loads are able to participate through their consumption behaviour and actions related to incentives created through forward contracts with retailers or generators.</p> <p>The AESO reiterates that loads currently have the option to participate in the spot market via bids, as well as in the AS market. The AESO is examining further options for load to participate in the market.</p>

<p>IPPSA</p>	<p>To answer the AESO’s question, we do not believe that the barriers to DR identified in this section are real barriers:</p> <p>Price Certainty and No Advanced Notice: The lack of price certainty may be a barrier to participant response, but it is fundamental to the nature of a competitive commodity market. The lack of certainty creates dispatch risk and creates the competitive tension essential for competition.</p> <p>Insufficient Financial Incentive In a commoditized market, the incentive to curtail is to capture avoided cost. To be consistent with our FEOC market, increasing the financial incentive for curtailment should only be done by raising the price cap.</p> <p>Curtailement is Limited to Real Time Prices Generators provide power in response to real time prices and, in accordance with symmetry, load response should be based on the same signal as well.</p> <p>Lack of a Baseline A baseline to track DR volumes may only be required in capacity markets where a demonstration of shedding is required in order to achieve a payment. Such payments are not consistent with Alberta’s energy-only market. In our market, the benefit of shedding is through avoided cost.</p>	<p>Acknowledged. The AESO recognizes that there are challenges for load participants in these areas that might not strictly be defined as barriers.</p>
<p>TCE</p>	<p>Loads can evaluate their risk(s) relative to electricity and if necessary, enter into forward contracts to hedge themselves thereby achieving price certainty. TransCanada does not believe this is a “barrier” to Demand Response participation. Price certainty can be obtained in the current market without any changes to the market design.</p> <p>TransCanada is concerned about the barrier entitled “There is insufficient financial incentive to curtail, i.e. loads are not compensated for the value they create by curtailing”. Other than participating in the Ancillary Services market, generators are not compensated for “value created by</p>	<p>The AESO agrees that loads have the option to enter forward contracts to manage price risk.</p> <p>The AESO is committed to a symmetric market design for loads and generators.</p>

	<p>curtailing”. Therefore, TransCanada questions why loads should be compensated for the “value” they create by curtailing.</p> <p>Although the “signal for curtailment is currently limited to real-time energy price”, a forward contract can provide another “signal” whether to hedge the real time price risk or not.</p> <p>A possible “barrier” to more DR in the Energy Market is the fact that loads may be reluctant to be subjected to “must bid, must comply” requirements similar to the “must offer, must comply” requirements imposed on generators.</p>	Agreed.
UCA	<p>The statement “generators face similar challenges” is overly simplistic, and likely to be resented by load customers; while generators are in the business of producing electricity, load customers are not in the business solely to consume electricity – it is an input into either commercial or industrial applications that have other business objectives than merely the consumption of electricity, or an essential service to farm and residential customers. Changing the output levels of generators should not be considered as equally complex as managing one of many inputs into commercial and industrial applications. However, the current market design, coupled with the characteristics of the Alberta energy market merit order, clearly reward fast response to unanticipated price changes.</p>	Acknowledged. However, load customers have a variety of options to participate in the market for electricity much like they participate in markets for other commodities for inputs and outputs to their process.

3.3 Options to increase demand response in the energy market

Stakeholder	Stakeholder Comment	AESO Response
ADC	<p>In the absence of any market policy changes, it seems that there is no further DR options within the context of the Alberta electricity market.</p> <p>We need to do some further work on mechanisms to promote energy efficiency. We ask the AESO to consider what their role would be in this area.</p>	<p>Acknowledged.</p> <p>The AESO agrees that there is a clear policy directive to improve energy efficiency in Alberta. The AESO’s mandate in this regard is to support the FEOC market that allows efficient</p>

		production and consumption decisions to be made by market participants. The fidelity of the price signal is central to ensuring efficiency.
EnerNOC	EnerNOC concurs with the comments of IPCAA. To the extent that a focus on demand response has highlighted shortcomings in the existing underlying market design, that is a further reason to reexamine that market design in the appropriate context, not to dismiss those problems simply because they may impose similar burdens (and similar inefficiencies) on generators.	While work remains to maximize the potential demand response, the current market design allows loads to realize significant benefits from curtailment.
IPCCA	Two alternatives should be considered – a re-design of the current market to a day-ahead and imbalance structure as is employed in several other jurisdictions, or use of a three part structure that emulates day-ahead and imbalance. This structure would incorporate availability, arming and exercise payments – with competitive procurement elements to ensure lowest costs – this structure is similar to that used in jurisdiction that have had large up-takes in DR in the past five years.	As noted in the paper, DR products should be consistent with the existing market design. A wholesale market redesign would constitute a change in policy and is therefore beyond the scope intended for the demand response initiative.
IPPSA	IPPSA does not have any further options to consider, beyond those raised in the paper.	Acknowledged.
UCA	Given the market policy framework the AESO is operating in, and the other limitations imposed by the AESO, other options seem unlikely.	Acknowledged.

3.3.1 Price Certainty

Stakeholder	Stakeholder Comment	AESO Response
ADC	There may be some benefit to setting up a pilot program to further explore the impact of payments to bids on the margin and a reduced settlement interval with the loads that are currently price responsive.	<p>The AESO is willing to explore payments to bids on the margin for loads that choose to participate in the market via a bid.</p> <p>In terms of altering the settlement period, the AESO is committed to examining the benefit of a 15 minute settlement period as settlement systems are updated and as need is identified. It is not appropriate to have different financial settlement for different loads/generators. The AESO will examine the benefit that could be realized by price responsive</p>

		loads with shorter settlement intervals.
ATCO	ATCO Power agrees with the AESO that loads must submit a bid into the market and comply with dispatch instructions in order to receive a payments for bids on the margin.	Acknowledged.
Capital Power	<p>Provided that loads are required to submit a bid into the merit order and to comply with dispatch we do not oppose the development of payments to bids on the margin.</p> <p>Capital Power supports shorter settlement intervals as it would have a positive impact on price fidelity. Would load not be required to submit bids in order to receive any benefits from this initiative as well?</p> <p>It is essential that load participation be developed within the existing market design.</p>	<p>Acknowledged.</p> <p>Loads would benefit from a shorter settlement interval to the extent they curtail consumption part way through an hour. Bids would not be necessary to see this benefit. As noted in the response to ADC, the AESO is committed to reviewing improvements in the settlement interval as systems are updated and as need is determined.</p> <p>Acknowledged.</p>
EnerNOC	EnerNOC concurs with the comments of IPCAA. In addition, we support the introduction of payments to bids on the margin for loads. To the extent that such a mechanism was deemed reasonable for generators, fairness suggests that loads should receive the same benefit.	Acknowledged. The AESO is willing to explore this context for those loads that bid into the market.
IPCCA	Loads are not generators – their business is not to supply energy – however, loads can be very effective at providing a range of reliability and ancillary support products to the energy market. Loads that are capable of supplying DR should not be treated as generators. The ability for loads to supply can be at even higher reliability and response time levels than generators and accordingly require different products and different compensation mechanisms for provision of these services.	Acknowledged. As noted in the paper, the ability of DR to supply a reliability or ancillary service will be considered when these products are developed. If standards for products mandated by WECC such as Spinning reserve change such that load qualifies, the AESO is willing to review and revise its technical standards. The AESO does not agree that different compensation mechanisms should be created for loads and generators when they are providing the same service.
IPPSA	IPPSA supports the AESO's observation that to qualify for a payment to bids on the margin, loads must schedule and loads must comply with dispatches. Should loads agree to do so, we believe such a payment would be fair as it reflects a misalignment of dispatch and settlement periods. A long term fix would be to better align these periods and avoid any true-up payments altogether.	Acknowledged.

	IPPISA further submits that requiring loads to schedule would create important visibility for the System Controller to aid it in its role of balancing supply and demand. Perhaps load scheduling is a good idea.	
TransCanada	<p>TransCanada supports the concept of “payments to bids on the margin” if loads are subject to similar rules as generators are. I.e. “must bid, must comply” and the installation of appropriate metering equipment.</p> <p>TransCanada supports further investigating shortening the settlement interval to assess the advantages and disadvantages of a shorter settlement interval.</p> <p>As a potential new product, loads could bid into a “pool price minus” product to allow the AESO to curtail them when congestion occurs.</p>	<p>Acknowledged.</p> <p>Acknowledged.</p> <p>This type of product would be appropriate to examine as part of the ongoing congestion management consultation.</p>

3.3.2 Insufficient Incentive

Stakeholder	Stakeholder Comment	AESO Response
ADC	Price responsive load will migrate to the product or service where they can realize the greatest value for their capabilities. Having price responsive load is seemingly valuable to other load customers as it dampens price volatility. What mechanism could be supported to allow other load consumers to pay interruptible loads to continue to participate in the market? In the cases of the interruptible load that has exited the Alberta market, having them remain would have meant that they continue to contribute to the Alberta economy and to the transmission costs. Their leaving places a greater burden on remaining load.	<p>Acknowledged. The AESO agrees that loads should pursue the service that maximizes the benefit of their flexibility.</p> <p>The AESO is working to increase the number of options for flexible loads in the market, but these options must be designed in the context of a deregulated energy market.</p>
ATCO	ATCO Power strongly agrees with the AESO that curtailment decisions in the energy market should be made on the basis of internal decision making by loads.	Acknowledged. Please see the response to ENMAX in section 2.3 of this response matrix for further discussion. As noted, loads are also free to contract with other market participants and sell the flexibility on a contract basis.
Capital Power	Capital Power agrees with the AESO statement that, “...loads	Acknowledged. Please see above.

	<p>should curtail when the price of electricity is higher than their VoLL...” Payments made to load for curtailing artificially reduces demand and the price signal does not accurately reflect the underlying value of electricity and the investment signal is harmed.</p> <p>Paying loads to curtail in an effort to reduce the overall average market price would significantly harm the investment signal. In addition, these types of payments would result in load optimizing between curtailing energy consumption and producing the products they are in business to produce.</p> <p>Capital Power agrees that the current market design does not prevent load from bidding into the market, however, very few loads if any chose to do so. It is not clear to Capital Power why load would be incented to bid in above the price cap given that price will be set by that bid should the load be curtailed which is higher than the current cap of \$1000.</p>	<p>Acknowledged. Please see response to ENMAX in section 2.3 for further discussion.</p> <p>Acknowledged. Product design for voluntary load curtailment would address the incentive issue if this option is pursued.</p>
EnerNOC	<p>We entirely concur with IPCAA.</p> <p>Paying loads to reduce is entirely consistent with FEOC. All other North American ISOs/RTOs either have or are developing programs that allow this. There is significant debate about the appropriate level of the payment, with many believing that “LMPG” is the right level, while others, including EnerNOC believe that full LMP is appropriate. It is worth noting that Dr. Kahn’s defense of full LMP payment is not based on including externalities or other “system benefits.”</p> <p>Regardless of whether Alberta determines that full LMP payment is proper, there can be no defense of zero payment. Zero payment to loads for reducing their use is not “Fair”, nor is it “Efficient.”</p>	<p>The Alberta market design is quite different than that of PJM or other ISO/RTOs. The AESO has considered a number of options for payments to DR resources, and has concluded that payments for curtailment within regular energy market operations are not consistent with the Alberta design. The loads will be compensated through avoidance of pool price or for providing system support services at competitive rates.</p> <p>Voluntary load curtailment programs for use during emergency operations would be a separate discussion and the pricing mechanism for this type of program, if developed, would be open for discussion.</p>
IPCCA	<p>“Pay Loads for the System Benefit They Create.” This concept is extremely valid and should not be dismissed as “anti-FEOC” by the AESO. It is fair, efficient and openly competitive to have loads competing to provide DR products that can bring more value to</p>	<p>The AESO reiterates its position that it is not FEOC to pay loads an out of market or side payment in order to influence decision making in the energy market. These options exist for loads via contracts with retailers, marketers or generators.</p>

	<p>the marketplace than an additional unit of generation. The system is optimized much more efficiently in this manner.</p> <p>“Pay Loads the Energy Market Price”: The comment that “if prices fall, less generation will develop, which will lead back to higher prices” fails to recognize that DR can be used to better optimize the system. Cutting back consumption at peak times will mean that less generation needs to be built – and will bring environmental benefits. Generators may react by offering higher in other hours of the year, and not attempting to extract maximum value from the market over very few hours of the year.</p> <p>It needs to be recognized that most instances of the requirement for DR in Alberta is not coincident with high demand, it is as a reliability product to compensate for the shortcomings from suppliers – i.e. uncertainty of wind resources and unscheduled outages from coal plants. Loads pay for these shortcomings already through higher prices as other generators capture windfall benefits from the lack of reliability of existing generator resources.</p> <p>“Allow bids > \$1,000/MWh”: this is a non-starter as a solution to encourage more DR – sufficient DR can be encouraged within the current structure and current price cap if the availability, arming, exercise model is employed.</p>	<p>The AESO does not have a role to play in placing a value on the benefits price responsive load brings to the system beyond reliability concerns. Similarly, the AESO does not facilitate out of market payments to bring on additional peaking generation in order to reduce price volatility, for example. Where products are required, the price will reflect that value. Additional pricing is interventionist.</p> <p>The AESO does not believe out of market solutions optimize the system.</p> <p>The AESO agrees that load serving as a reliability product has value to the system. Price volatility is not a reliability issue.</p> <p>Demand should curtail in response to the price signal or via signals contractually agreed to with a contract counterparty such as a retailer. Allowing bids greater than \$1000/MWh could increase the value of these options within the current market context.</p>
IPPSA	<p>IPPSA notes that generators responding to market prices provide the same benefit that loads do when they respond to market prices. This includes, ‘reducing price volatility, increasing reliability and reducing the likelihood of out of market interventions.’ Generators do not receive and do not expect to receive anything but market receipts for providing these services. This is consistent with Alberta’s energy-only market design.</p> <p>To uphold the principle of symmetry, IPPSA does not support loads receiving any out-of-market payments for their role in the energy market, which is to consume energy at the price they want</p>	<p>Acknowledged.</p> <p>The AESO is proposing to look at products that will allow loads to curtail voluntarily under supply shortfall conditions. The design of this potential product will consider how prices should reflect load curtailments during a shortfall.</p>

	<p>or to shed when the price exceeds what they are willing to pay.</p> <p>IPPSA supports the AESO’s concern about loads being paid the energy price for when they curtail. This does not make sense in our commoditized market design. In what commoditized market does a consumer get paid the clearing price for not consuming a commodity?</p> <p>IPPSA supports examining a revised price cap. Increasing the cap increases the magnitude of avoided cost that can be saved should load decide to shed. This may encourage more price responsive loads. A higher price cap, combined with load bidding, would also enable the AESO to avoid curtailing a load that can withstand higher prices, should it see those bids.</p>	
TransCanada	<p>TransCanada is concerned with the notion “that DR suppliers should be paid the energy market price when they curtail” and questions how this is justified unless it is through an Ancillary Services product supported by a reliability need.</p> <p>TransCanada suggests that revisions to the price cap be symmetrical between load and generation.</p>	Acknowledged. The AESO does not propose to pay loads the energy price within the context of energy market curtailments. Price mechanisms for ancillary services will be developed separately.

3.3.3 Aggregation and Baseline Methodology

Stakeholder	Stakeholder Comment	AESO Response
Capital Power	<p>Capital Power is supportive of conservation and demand response programs for small consumers. We believe that many of the barriers will be addressed by technologies associated with smart metering such as smart home applications that allow aggregators to control, verify, and validate conservation and price responsive behaviours for residential consumers. These will ultimately enable aggregators to structure programs to incent small consumers to conserve without resorting to baseline methodologies, which are imperfect ways of measuring demand response. Therefore, we do not see the need for changes to the market to enable aggregator participation as these entities can</p>	Acknowledged.

	<p>use a combination of contracting and spot market position management to ensure that small loads receive the same benefits that any other load receives through participation in the market.</p>	
<p>EnerNOC</p>	<p>These are separate and distinct issues. It is possible to accommodate aggregators and not use baselines (e.g., NYISO's Demand Side Ancillary Services Program, or PJM's Synch Reserve program) just as it is possible to prohibit aggregators while still needing baselines (e.g., large customers participating on their own in the MISO DR programs.) Also, the existence of interval meters at customer sites does not obviate the need for baselines.</p> <p>All other North American wholesale market operators have concluded that allowing and encouraging aggregators is consistent with their versions of "FEOC." Indeed, the vast majority of demand response MW enrolled in existing ISO/RTO DR programs are enrolled through aggregators like EnerNOC (in NYISO it is well over 75%.)</p> <p>Similarly, all other North American wholesale market operators have either developed programs that pay DR resources market prices or integrated DR resources into the various markets as "suppliers." Attendant with treating DR as a supply resource is the need to develop baselines that estimate what the load would have done, but for its participation. While certainly not trivial, the development of DR baseline approaches has matured greatly over the last decade and much experience now exists regarding how (and how not) to construct an accurate DR baseline.</p> <p>AESO recognizes that customers facing a low retail rate in the face of high wholesale prices will make inefficient consumption decisions and we welcome AESO's willingness to correct that inefficiency. However the solution is not to ensure that loads "can avoid the hourly pool price." The solution to correcting the inefficiency that AESO has recognized between wholesale prices and retail rates is to pay the load the LMP, or, at the very least, the LMP minus the retail rate.</p>	<p>Acknowledged.</p> <p>The AESO agrees and intends to remove barriers for aggregators in Alberta where the barriers are within the control of the AESO.</p> <p>The AESO pays DR resources the market price within the OR market. However, within the energy market, it is inconsistent with the Alberta market design to pay consumers the energy price for avoided consumption. Consumers receive the benefit of avoided cost.</p> <p>The AESO disagrees with the conclusion and notes that avoiding the hourly price has created significant benefits for the existing price responsive load in Alberta. The AESO also notes that if load has purchased power on a fixed price , fixed volume contract, it is currently paid the spot price less the contract price when it curtails, in effect.</p>

IPCCA	The AESO should take advantage of the willingness of the aggregator community to assist in identifying baseline methodologies that have proven effective in other jurisdictions. The AESO does not need to re-invent the wheel when it comes to DR and the role of aggregators.	Acknowledged. The AESO welcomes input and experience from other jurisdictions where applicable and appropriate in Alberta, noting that there is often a substantial difference in market design in other jurisdictions.
IPPSA	It is IPPSA's understanding, from the presentations provided by aggregators, that a key purpose for the baseline data is for those aggregators to receive out-of-market compensation for the volume that they can curtail. Such a payment would not be consistent with Alberta's energy-only market design. On the other hand, we do support the AESO's willingness to work with aggregators to ensure that loads that curtail, and that have an interval meter, can avoid the hourly pool price, rather than the average prices.	Acknowledged.
UCA	There is very little discussion as to what programs the individual retailers may already be taking to manage their portfolios.	Acknowledged.

3.3.4 Signals Beyond the Spot Energy Price

Stakeholder	Stakeholder Comment	AESO Response
ATCO	ATCO power agrees with the AESO that it does not have a mandate to participate in the market for the purpose of managing market outcomes.	Acknowledged.
Capital Power	Capital Power agrees; the AESO does not have a mandate to participate in the market for the purpose of managing market outcomes.	Acknowledged.
EnerNOC	We agree with AESO that managing peak loads is a commercial function that the market operator should not perform on behalf of load serving entities. EnerNOC often works with LSEs within an ISO footprint to reduce their loads and capture additional benefits. Such layered programs are relatively new, but a number of utilities(e.g., ConEd, PPL, PECO) are using such programs to manage their system peaks and/or meet state mandates.	Acknowledged.

IPCAA	The AESO should recognize that by not enabling load to capture the full value of DR (through savings across the entire offer stack), it is effectively managing market outcomes in favour of generators.	The AESO does not agree with this conclusion. Market outcomes are driven by individual participant decisions in the marketplace, which is consistent with AESO's mandate to operate the market in a FEOC manner.
IPPSA	We support the AESO's resolve in showing symmetrical treatment to loads and supply when it comes to price response. Like the AESO, we do not support any facilitated or incented load response to price.	Acknowledged. The AESO does support facilitating load response through means that conform with the principles articulated in section 2.3 of the paper.
TCE	TransCanada agrees that the AESO should not interfere in the market for the purpose of managing market outcomes.	Acknowledged.

4.2 Barriers to more DR participation in Reliability Products

Stakeholder	Stakeholder Comment	AESO Response
ADC	<p>Barriers to participation are:</p> <ul style="list-style-type: none"> a. Technical requirements – can be in the areas of communications – (SCADA), time to respond and recover b. Contract risks – liability c. Credit requirements d. Price determination – difficult to know what the product is worth. Most evident in LSS, LSSi, wind following. e. Asset substitution could be considered as a means to get further participation. 	<p>Acknowledged.</p> <p>The AESO will work with loads to eliminate those technical barriers that can be removed without impacting reliability, where those barriers are within the AESO's control.</p> <p>The AESO's credit requirements for participation in reliability markets are generally limited (or zero) since the AESO is the buyer in these markets.</p> <p>The AESO will consider this issue as reliability products are developed and implemented.</p> <p>The AESO will explore asset substitution within reliability markets.</p>
Capital Power	New reliability products should not be created for the sole purpose of engaging load in the demand response. System requirements should dictate the need for products and the technical requirements of supplying the required service.	Acknowledged.
EnerNOC	Demand response resources are demonstrably as or more technically capable of providing ancillary services as large generators. ISO-NE, NYISO, PJM and MISO all allow DR to	Demand response providers participate in several AESO markets. The WECC is examining allowing DR participants into further markets such as Spinning.

	<p>provide ancillary services. Where barriers exist within the regional reliability councils, the ISOs/RTOs have been effective in eliminating them.</p> <p>It is not “Openly Competitive” to bar DR from providing high-value spinning reserves and regulation when the technical capability exists. The fact that the barrier has been erected by WECC makes it no less so. AESO should work with other western system operators to amend outdated, generator-centric definitions so that loads capable of providing spinning reserves without degrading reliability may do so.</p>	<p>The AESO agrees that this is a barrier, but one the AESO must comply with. The WECC standards are in the process of being revised. The final standard is not yet available.</p>
IPCAA	<p>The WECC and FERC standards on loads supplying spinning reserves should be addressed. Other jurisdictions have already addressed this.</p>	<p>Acknowledged. The AESO is participating in these discussions and will respond to an amended standard.</p>
IPSSA	<p>We would encourage the AESO to examine the removal of barriers to load response, such as the WECC prohibition of loads from providing spinning reserves, but only if the AESO deems appropriate and safe under its reliability mandate.</p> <p>Should the AESO need to make changes to enable loads to provide spinning reserves, we would want to ensure that those changes do not discriminate in favour of load participation, but rather ensure that loads and supplies can compete to provide the service equally.</p>	<p>Acknowledged.</p> <p>Agreed. This is consistent with the AESO’s FEOC mandate.</p>
UCA	<p>The potential new service of ramping or “wind following” does appear to hold the most hope for larger DR participation, especially in light of the other restrictions placed on the DR initiative.</p>	<p>Acknowledged. DR resources are a potential supplier of ramping service, particularly in the event that wind energy decreases more quickly than the system can handle.</p>

4.3.1 New Products

Stakeholder	Stakeholder Comment	AESO Response
ADC	<p>Ramping product: The ADC members with interruptible load are interested in working collaboratively with the AESO in developing the ramping products.</p>	<p>Acknowledged. The AESO will consult with stakeholders during the development of new products as required for wind mitigation or other system reliability concerns. DR resources are a potential supplier of ramping service, particularly in the event that wind energy decreases more quickly than the</p>

	<p>To the extent voluntary load curtailment would increase the market price beyond the cap in an opp 801 event, and the market faced an exposure to that price, the cost to consumers would be more than the benefit to the curtailed load. This doesn't seem to make financial sense.</p> <p>For TMR, the AESO should be considering load as a potential congestion mitigating strategy, especially if the congestion can be managed with an infrequent number of interruptions. The value of this needs to be weighed against a transmission infrastructure solution.</p>	<p>system can handle.</p> <p>Allowing voluntary load curtailment products to impact the market price would bring this product more 'into market'. Currently, OPP 801 balances the market during supply shortfalls via out of market actions.</p> <p>The AESO is willing to consider load options for TMR where feasible and allowable in open competition with generation resources. The Transmission Regulation states that congestion cannot be resolved with TMR except in specific instances, and the AESO plans the system according to this standard.</p>
Capital Power	<p>The system and technical requirements should dictate the service providers. Any resource that can meet the technical requirements should be able to compete to provide a service.</p> <p>Paying loads to curtail in a system emergency indicates that the price has not risen sufficiently to incent those loads to reduce consumption independently. The use of this type of service may be negated if the price cap were higher. In the absence of a higher price cap, Capital Power would support the procurement of this service provided that those loads providing VLC are required to bid into the energy market.</p>	<p>Acknowledged.</p> <p>Acknowledged. There are a number of potential designs for voluntary load curtailment that would allow it to be more 'in market'.</p>
EnerNOC	<p>EnerNOC concurs with the comments of IPCAA. In addition, we strongly suggest that AESO consider the high degree of success that other ISOs have had with programs that pay DR providers a nominal fee to stand ready to assist the system operator in the event that grid reliability is jeopardized.</p> <p>As IPCAA has suggested a multi-part payment structure that provides an ability or call option payment to ensure that customers are ready to respond on short notice, coupled with an activation or performance payment to maximize timely response when needed, is a highly effective approach to securing emergency DR resources. AESO should procure, directly or</p>	<p>Product design will be subject to stakeholder consultation upon a determination that there is a need for a new or expanded service to ensure reliability.</p> <p>The structure of a potential voluntary load curtailment product will be consulted on with stakeholders if this product is pursued.</p>

	<p>through aggregators; the 400 MW that it believes it needs in order to address OPP 801 events.</p> <p>The proper way to determine the correct availability payment would be via a competitive solicitation. Experience in other ISOs suggests that customers value revenue certainty and that multi-month commitments would lower the long-term cost of the product.</p> <p>While AESO has termed this “Voluntary Load Curtailment,” EnerNOC believes that any provider agreeing to perform and receiving an availability payment should be obligated to respond when called. Failure to do so should result in an appropriate penalty. Subject to appropriate geographic restrictions, aggregators should be allowed to meet their commitments by effectively managing their portfolio of providers (in other words, AESO should not care if some customers under-perform, so long as the enough others over-perform to meet the commitment.)</p>	<p>The AESO agrees that competitive procurement is the correct approach.</p> <p>Voluntary in this case simply means that customers could choose to sell the product or not. Actual performance requirements would be part of the product design consultation.</p>
IPCCA	<p>The Wind-following product should be designed using the same platform as LSSI in order to create an effective DR standard for rules and procurement. The AESO should engage loads (via their respective associations) in the development of such a product.</p>	<p>Any potential load following product will be designed via stakeholder consultation in concert with technical requirements. This will not be a specific DR product but rather a product that both DR and generation resources will compete to supply.</p>
IPPSA	<p>IPPSA supports the AESO’s principles to incorporate demand response into reliability products. These are:</p> <p>1) “New reliability products will not be created for the sole purpose of engaging load in demand response in the broader market.”</p> <p>2) “The AESO will only develop reliability products that meet a defined system need and are required to meet the reliability mandate outlined in the EUA.”</p>	<p>Acknowledged.</p>
TCE	<p>Properly structured, TransCanada supports load participating in providing reliability products through the Ancillary Service market on a level playing field.</p> <p>Another alternative is to design an Ancillary Service product that allows loads to shed at prices in excess of \$1,000 but</p>	<p>Acknowledged.</p> <p>Acknowledged. The structure of a potential voluntary load curtailment product will be consulted on with stakeholders if</p>

	less than the prices other loads want to shed their load. In that way, rather than prorata load shedding, the loads more willing to shed can be shed first and be compensated by the loads that are not shed. This becomes a load shedding service paid by other loads. It would be similar to the existing Voluntary Load Curtailment Program (VLCP).	this product is pursued.
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4.3.2 Aggregators

Stakeholder	Stakeholder Comment	AESO Response
Capital Power	We agree that it would be inappropriate to relax technical standards to encourage small load participation in the market. Further development of standards for aggregators should be pursued, if aggregators demonstrate an interest in supplying reliability products.	Acknowledged.
EnerNOC	EnerNOC agrees that aggregators must assume comparable responsibilities for meeting technical and other rules. As noted above, all other North American wholesale market operators have concluded that aggregators provide significant value, including that referred to by IPCAA. Barring aggregators completely is not FEOC. Barring them from providing higher-risk (read: higher value) products because of unfounded concerns is also not FEOC.	Acknowledged. As noted in the paper, the AESO plans to remove barriers for aggregators, where those barriers are within the AESO's control.
IPCCA	Aggregators can provide valuable services to the marketplace and should be enabled to participate in both economic and reliability DR markets. DR products require operational, technical and risk management. Not all loads can accommodate all three of these parameters and aggregators can provide a valuable bridge for these services.	Acknowledged. See above.

4.3.3 Technical Standards

Stakeholder	Stakeholder Comment	AESO Response
ADC	For supplemental reserves, it would be worthwhile exploring	Acknowledged. The AESO is willing to discuss the practicality

	<p>alternate means to comply with the 15 min recovery time. For example, if a site was not able to recover in 15 minutes - say they needed a half hour, could they substitute another load to take their place until they were able to be armed again? The substitute asset would only need to be able to demonstrate they can interrupt in 10 minutes.</p> <p>We encourage the AESO to support the WECC review of load providing spinning reserves. The spinning reserves market is valuable and would benefit from further competition.</p>	<p>of this option within the Phase 1 OR market redesign. Any potential change would need to be examined in detail to determine if system reliability would be impacted and if the IT infrastructure is in place to manage the substitutions.</p> <p>Acknowledged.</p>
EnerNOC	As noted above, AESO should work with others to lift the existing restrictions on DR providing spinning reserves.	Acknowledged.
IPPSA	As noted above, we would encourage the AESO to examine the removal of barriers to load response, such as the WECC prohibition of loads from providing spinning reserves, but only if the AESO deems appropriate and safe under its reliability mandate.	Acknowledged.

5.1 Generator Outage Coordination and Rescheduling

Stakeholder	Stakeholder Comment	AESO Response
ATCO	ATCO Power would prefer an in market solution over an out of market solution. We support the competitive compensation of a willing participant over conscription.	<p>The AESO does not plan to pursue a demand response program that creates payments for loads willing to alter their outage plans. This implies a market for outage scheduling that does not exist and has a potentially negative impact on the voluntary coordination of outages.</p> <p>It must also be noted that compensation for outage cancellation is based on cost recovery rather than as a revenue source. Outage cancellation is a last step reliability measure and is not intended to be a frequent occurrence in the market.</p>
Capital Power	Capital Power agrees that the AESO should not create a market for outage scheduling.	Acknowledged.
EnerNOC	To the extent that DR resources are providing services to the AESO that are analogous to those provided by generators,	Acknowledged. DR providers of reliability products will be required to meet the same technical standards determined by

	EnerNOC is not opposed to appraising AESO of changes in the ability to provide those services. For example, if the emergency DR program described above were implemented and AESO was relying on it to defend system reliability in the case of OPP 801 events, EnerNOC would support a requirement that participating loads or aggregators inform AESO if they were to be unavailable for an extended period of time.	the AESO that generation providers are required to meet.
IPCCA	The AESO continues to expect loads to provide DR services for free (including outage coordination and the value brought by price-responsive loads). Loads should be compensated for the added reliability value they bring to the system.	Outage coordination and price responsive loads are examples of market participants reacting to market signals. Reliability 'created' by a functional price signal is a benefit to the system. It does not fit with the market design to incrementally compensate loads (or generators) for beneficial choices made in response to market prices.
IPPSA	<p>As IPPSA has testified in the past, outages are already scheduled by the market's availability of crews and cranes.</p> <p>One option we put forth to avoid the long-term implications of cancelling a generator's maintenance outage is to contemplate paying a load or a supply (which ever is cheaper) to move a scheduled outage.</p> <p>Should the AESO seek a service from a market participant, we would prefer that it be willing to compensate the participant for it, rather than seeking to get it for free (or "voluntary rescheduling"). This is especially true if the service is intended to meet reliability objectives.</p>	<p>Acknowledged.</p> <p>The AESO does not plan to pursue programs that create payments for market participants willing to alter their outage plans. This implies a market for outage scheduling that does not exist and has a potentially negative impact on the voluntary coordination of outages.</p> <p>Compensation for outage cancellation is based on cost recovery rather than as a revenue source. Outage cancellation is a last step reliability measure and is not intended to be a frequent occurrence in the market. It is in place to ensure reliability in the event that market signals such as prices and monthly outage reports do not result in sufficient capacity on the system.</p>

5.2 Long Lead Time Energy

Stakeholder	Stakeholder Comment	AESO Response
Capital Power	Since loads do not offer into the merit order it is difficult to determine if a load actually intended to consume and as a result	Acknowledged.

	loads with no intention of consuming could potentially receive payment.	
IPPSA	We note the AESO's concerns about the mechanics of a long lead time load response service. We also appreciate the AESO's point that a long-lead time directive has never been issued. As such, defining such a product may take more time than it's worth. If long-lead time directives to generators become common, the principle of symmetry will require this to be revisited.	Acknowledged. Acknowledged.

5.3 Dispatch Down Service

Stakeholder	Stakeholder Comment	AESO Response
Capital Power	Since loads do not offer into the merit order it is difficult to determine if a load actually intended to consume and as a result loads with no intention of curtailing could potentially receive payment.	Acknowledged.

5.4 Load Shed Service

Stakeholder	Stakeholder Comment	AESO Response
ADC	We encourage the AESO to advance the LSSi program as quickly as practical. We would also encourage the use of a pilot program to test the various potential procurement methods. Because this product is armable, the pricing mechanism needs to be reflective of the exposure to pool prices – either through a load factor requirement as in the LSS product or by having it indexed to pool price.	The AESO plans to move this program forward. A recommendation paper will be released that will discuss product design, contestability, cost prudence and other key issues for products such as LSSi. The paper will also discuss products for increasing export ATC via a separate product.
ATCO	ATCO Power is concerned with how LSS will be distinguished for reliability purposes versus market purposes (import and export capacity). There are two very different products. ATCO Power would like the AESO to address in their recommendation paper on increasing inertia capacity how increased capacity can be	The recommendation paper will address this issue.

	achieved fairly and efficiently in a FEOC LSSi design for market purposes.	
EnerNOC	EnerNOC strongly supports IPCAA's LSSi proposal and urges the AESO to move forward with it, including the three-part payment structure, with all speed.	The forthcoming recommendation paper and stakeholder consultation process will form the basis for product design work.
IPCCA	The AESO should move forward with LSSi procurement. This process has been stopped and started again too many times. There are hundreds of MWs of load available to supply this service, and IPCAA has proposed a product design and procurement process.	The AESO is moving forward to the next stage of the consultation process for LSSi. Product design will form a part of the process.
TCE	TransCanada looks forward to participating in the LLSi consultation once the AESO issues its recommendation paper.	Acknowledged.

6 Conclusions and Next Steps

Stakeholder	Stakeholder Comment	AESO Response
ADC	<p>The DR effort may be enhanced by expanding it into the context of the transmission tariffs for Load (DTS). For example tariff development for interruptible loads that don't require firm service.</p> <p>It would be worthwhile to meet jointly with the DoE on the DR paper and conduct a gap analysis of what the PES envisioned for demand participation. This would include identifying where policy changes are necessary. Once identified, an action plan could be developed to implement programs perhaps outside of the AESO mandate (i.e. energy efficiency) to achieve potential efficiencies that only demand participation can yield.</p>	Acknowledged. The AESO is willing to discuss further options to expand load participation.
EnerNOC	EnerNOC appreciates the opportunity to comment upon the discussion paper, as well as the opportunity to have participated in its development over the last year. We believe that the AESO has an improved understanding of the benefits that demand response, especially as delivered by aggregators can bring to the system. However, we find the AESO's interpretation of its "FEOC" mandate to be at best confusing and at worst inconsistent with the plain meaning of the constituent terms.	Acknowledged. The AESO agrees DR can be a valuable resource for the system and is working to reduce barriers for DR providers and implement products that are consistent with the Alberta market design.

	<p>While AESO may lack of a “capacity” market, there is nothing inherent in such markets that mandates against DR products and services that elsewhere may receive a “capacity” payment. Like the systems of ISOs that have capacity markets, Alberta’s system also obeys Kirchhoff’s Laws and the products and services that DR can provide are the same in Alberta as elsewhere.</p>	<p>There is no mandate ‘against’ products. Rather, the AESO will not design and purchase products for use in the energy market that do not align with the Alberta market design as set by government policy. There is flexibility in the types of products other market participants may be able to develop with DR providers.</p>
IPCCA	<p>The contents of this paper clearly indicate that the AESO has spent over a year in stakeholder activities on DR without listening to the views of electricity ratepayers. IPCCA firmly believes that loads have value to offer the marketplace through the effective design, development and use of DR products. The AESO appears too preoccupied with an undefined vision of FEOC to work with consumers to develop a better and more price elastic electricity system. This paper is extremely disappointing in its current form.</p>	<p>The AESO agrees that there are DR products that can bring value to the system within the context of the Alberta market design. The AESO is mandated to promote a FEOC market, and the development of any DR products must be consistent with this mandate.</p>
UCA	<p>Given the market policy framework and the AESO-imposed restrictions, the paper provides little indication that increased DR participation is achievable. However, the subjective nature of the paper (with no analysis of what might be achievable in a less constrained exercise) limits the usefulness of the paper.</p>	<p>Acknowledged. The paper outlines principles for DR products given the market framework and tests potential products against these principles.</p>