

DRWG Meeting 3 Feedback

Topic	Participant	Summarized Comment	IESO Response
Capacity Transfers	EnerNOC	EnerNOC is committed to working with the IESO to identify potential legal and market issues that will need to be resolved before allowing transfers during the Commitment Period	<i>Discussion of the merits and issues with enabling DR Capacity Obligation transfers within a commitment period can be a topic of discussion at a future DRWG meeting. For the 2016 DR Auction, the IESO will focus on implementing DR Capacity Obligation transfers prior to the start of the Commitment Period.</i>
	EnerNOC	EnerNOC does not agree that the “Qualified MW” of participants needs to be published in the Post-Auction Summary Report. Other markets that allow for transfer of capacity obligations do not publish “Qualified MW” information and still maintain healthy bi-lateral transfer markets. They have dealt with the question of how to pair market participants together who are looking to trade/buy obligations by allowing interested parties to contact each other directly or through third parties and/or setting up message boards for interested parties to seek out partners for potential transactions, something that as the resource grows and expands into an Incremental Capacity Auction will be beneficial to all participants. EnerNOC recommends that the IESO follow PJM’s lead on this topic.	<i>The IESO believes publishing the qualified MW of participants is a transparent and effective way for all DRAPs to be aware of participants that can participate in a Capacity Obligation transfer. The IESO has not heard a compelling reason against publishing this information in the Report</i> <i>Other ISO-markets such as ISO-NE publish the qualified capacities of all resources that have a capacity obligation.</i>
	EnerNOC	EnerNOC recommends that the IESO review with the DRWG the reasons for the MW cap on virtual resources in zones where the cap on physical resources is set at a higher MW value	<i>Control room operators at the IESO do not have any real-time visibility or monitoring capabilities for the power flow among contributors in a virtual resource. Accordingly, reliability studies have to be conducted to</i>

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		and the work that would need to be accomplished to remove this barrier especially when the DR Auction moves to the Incremental Capacity Auction.	<p><i>determine the maximum amount of DR capacity that can be accommodated from virtual resources in a zone to avoid violating system security limits due to unmonitored MW flow between contributors across the zone.</i></p> <p><i>The IESO continues to assess opportunities to allow for less separation between the virtual and total zonal limits, recognizing that the lack of real time visibility on virtual resources means that there may continue to be instances where the virtual limit will be less than the total zonal limit.</i></p>
	ECS	We believe that the Post-Auction Summary Report should only provide each DRAP's available MW for transfer similar to PJM. It would still allow other participants to view which DRAP's are available to participate in transfers without disclosing their complete energy commitments.	<i>The DR Auction Post-Auction Summary Report currently publishes the quantity of DR Capacity Obligations for all DRAPs that clear the auction. This is consistent with the IESO's practice of publishing capacity procured from in other procurement initiatives and other ISO-markets such as ISO-NE.</i>
Target Capacity	City of Toronto	The City supports the IESO's commitment to meeting Provincial target of ~2,400MW Demand Response capacity, and recommends that the IESO evaluate strategies for ensuring that this commitment will be met post Demand Response -Capacity market integration.	<i>As the capacity auction design activities progress, specifically with respect to the integration of DR, this will be a topic for further discussion.</i>
	City of Toronto	Would the IESO provide updated information on the local regional DR projects?	<p><i>The IESO is investigating ways in which DR can be utilized to manage specific local area reliability needs identified through the regional planning process.</i></p> <p><i>Information regarding the first pilot program to test this capability was made available to the DRWG on August</i></p>

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			<i>25th and the IESO will continue to provide information through both the DRWG and the IESO website.</i>
Commitment Periods	City of Toronto	In an effort to maximize the opportunity for summer based DR the City recommends that the IESO evaluate the opportunity to shift the 2 commitment periods. The First will be a four (4) month period from May –August. The Second will be an eight (8) month period from September – April.	<i>The months chosen for each commitment period are reflective of load characteristics of each season. Further, it is important to ensure that the design of the commitment period is consistent with what will ultimately be developed for an incremental capacity auction.</i>
	City of Toronto	Can the IESO provide details if a participant can switch resources for different months of the commitment period? For example can an aggregator enroll resources with high weather variability for peak heat days and utilize other resources for availability/dispatch during non-peak days.	<i>Depending on whether the DR Capacity Obligation is physical or virtual, there may be different ways to achieve this. For more specific information about your situation, please contact your IESO customer representative.</i>
	City of Toronto	<p>The City recognizes the IESO goal of seeking greater certainty, and commitment to transparent rules and recommends that the IESO evaluate additional factors for increased certainty.</p> <ul style="list-style-type: none"> • Many Demand Response Projects require investment including Equipment, Customer Support and Training • The IESO has introduced a capacity swap that will provide ample opportunity for managing any short term commitment risk. <p>In consideration of the IESO’s commitment to reduce participant risk, the City recommends</p>	<p><i>In designing the auction, and specifically the commitment period, the IESO must strike a balance between a number of factors: participant certainty, cost-effectiveness, and flexibility of the auction mechanism to respond to changing system conditions. The December 2015 auction was effective in securing an increased quantity of demand response capacity at a lower price than historically had been achieved through multi-year commitment periods.</i></p> <p><i>The establishment of an annual growth trajectory for the Target MW in the auction is intended to provide greater business certainty to participants regarding their future opportunities to compete to provide DR capacity. The</i></p>

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		that the IESO verify if participants could provide greater market value through longer commitment periods	<i>IESO has signalled its near-term priorities for DR and is not considering multi-year commitments at this time. Introducing multi-year commitment periods would lead to significant complexity, making it difficult to conduct the auction efficiently and achieve the growth trajectory proposed at the July 15th DRWG meeting.</i>
	Gerdau	<p>The IESO should retain the 6 month summer/winter Commitment Periods currently being used for the following reasons:</p> <ol style="list-style-type: none"> 1. Shorter Commitment Periods provide more opportunity to institute rule changes, especially in the early years as the DRA is evolving. 2. The December auction occurs after Class A customers have a reasonable level of certainty of their ICI performance (5 CP's) and this allows coordination of the participant's DR Commitment Periods with the annual GA allocation billing period. 3. Summer/Winter periods work well as load reduction capability can vary by season 4. Curtailment costs are difficult to predict beyond one year and this is factored into Auction Offers 5. Longer Commitment Periods increase business risk and likely decrease participation by industrial participants. 	<i>Thank you for your feedback.</i>

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		<ol style="list-style-type: none"> 6. Buy-down costs could be extremely high if Commitment Periods are increased 7. Shorter Commitment Periods will allow HDL participants to migrate to Dispatchable Load participation with shorter lead time 8. Shorter Commitment Periods will not “lock in” participants who may want to migrate to new or other existing programs 9. Longer Commitment Periods may be a barrier to new participants 10. Shorter Commitment Periods allow participants who are growing their business to be able to increase commitment levels without layering additional contracts 	
	Gerdau	<p>Additionally, Gerdau supports conducting a second annual auction (in May/June) for the next winter period instead of holding both auctions in December. This will allow direct industrial participants to reduce risk and be more competitive in the auction as their forecast production levels would be more certain. This would also provide participants additional coordination with the ICI Global Adjustment billing period.</p>	<p><i>Part of the impetus for the DR Auction being held on the same day for both the Summer and Winter Commitment Periods is to ensure better alignment with a future incremental capacity auction design. Holding the DR Auction on the same day for both periods balances the shorter-term preferences for some participants to respond to market conditions and longer-term preferences for other participants for planning and resource development.</i></p>

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	City of Toronto	The City recommends that the IESO run a simulation of the proposed alternative baseline methods to demonstrate the variability in capacity.	<i>The IESO will consider the alternatives against our evaluation framework, and compare baseline results to the extent possible as part of the selection process.</i>
	City of Toronto	The City recommends that the IESO add additional criteria for the IESO to obtain confidence of DR Capacity availability; including how new alternative baselines will identify available capacity during non-peak and or winter periods.	<i>The IESO currently utilizes the Market Rules and random testing to ensure DR Capacity availability from DRMPs. The purpose of a baseline is to provide an estimate of a load's typical consumption in order to properly measure performance during a DR activation.</i>
	City of Toronto	With respect to evaluating the robustness of alternative baseline methodologies, can the IESO define what is meant by 'DR programs grow'? Is the IESO referring to Capacity Market integration?	<i>The IESO is referring to the growth in overall DR capacity, as well as the increasing number of potential providers of DR capacity from new and emerging sectors, including residential. The IESO will consider the long term effectiveness of alternative baseline methodologies in its evaluation, recognizing this expected growth and including future integration with an incremental capacity auction.</i>
	City of Toronto	In an effort to provide accurate feedback and create value for electricity consumers the City requests details associated with the ownership and responsibility for maintaining the existing Peak Saver units? (Customer/ Utility/ IESO)	<i>Further discussions on the evolution of the peaksaverPLUS program and its integration into a market-based approach will address issues such as device ownership and maintenance. Currently, the IESO continues to fund the maintenance of active peaksaverPLUS devices.</i>
	PowerStream	The distinct characteristics of the residential customer (e.g., hourly data, small contributors, dynamic populations) must be recognized	<i>The IESO will consider these characteristics when working with stakeholders to develop Residential DR into the IESO-administered market.</i>
	PowerStream	While the majority of residential curtailable load is weather-sensitive, it should be noted that there is an opportunity for non-weather sensitive	<i>Thank you for this feedback. The primary driver for investigating new baseline approaches is to accommodate weather-sensitive load that is available in the market</i>

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		residential demand response to participate as well, especially in future years (e.g., customers with battery storage or electric vehicles). Rules for residential demand response should not limit the opportunity for these types of loads to provide their full value simply on the assumption that all residential demand response is weather sensitive.	<i>today but is not accurately captured by the existing historical baseline approach. As new technologies emerge and reach a critical mass, the need for additional measurement and verification approaches to capture the value of these technologies can be assessed.</i>
	PowerStream	A portion of PowerStream's residential customers are on a variable peak pricing program. Depending on the baseline methodology chosen, it may be relevant to include the price-day type and/or TOU type/period as a variable in the matching calculation	<i>At this point in time, explicitly accounting for such factors may introduce complexity which could undermine the feasibility of implementing a sufficiently accurate baseline methodology for the next DR Auction. As experience with such factors increases, it may require further evolution of any baseline methodology implemented for the upcoming auction if they are seen to be material.</i>
	PowerStream	Finer granularity of meter data is not available for all participants, but where it is available, it can be used for validating results.	<i>The IESO will consider utilizing all available data for measurement and verification.</i>
	OPower	OPower recommends randomized controlled trials	<i>The IESO will consider this alternative, along with other options, against our evaluation framework to be presented at the next DRWG meeting.</i>
	OPower	Opower recommends that the IESO address the barrier of meter data granularity by allowing residential DR aggregators to submit the 60-minute interval usage data as the average usage level for each 5-minute interval contained therein	<i>The IESO is considering meter data granularity for residential demand response and will consider this as a requirement for whichever baseline approach is proposed.</i>
	Joint Comments from Nest,	Include pay for performance approach - One approach to incorporating residential load participation (and that of other weather sensitive	<i>During the Commitment Period, DR resources have the flexibility to specify their availability, which can be less than their capacity obligation, on an hourly basis</i>

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	Opower, EnergyHub and WeatherBug	loads) is the accurate and precise measurement of load reductions in response to IESO dispatch, whether for tests or actual system events, and then payment for the actual performance on average across the commitment period.	<i>through their energy market bid quantity. Due to the weather-sensitivity of residential load, the participant will adjust their energy bid quantity based on the availability of their resource.</i>
	Joint Comments from Nest, Opower, EnergyHub and WeatherBug	Allow alternative baseline methodologies - Consider alternative methodologies, as appropriate to market design, including control groups, firm service levels, and like-day matching.	<i>As discussed at the July 15th DRWG meeting, the IESO is currently evaluating alternative baseline approaches for weather-sensitive residential DR. The IESO will evaluate these alternatives against a common set of criteria and propose a new baseline methodology as necessary.</i>
	Joint Comments from Nest, Opower, EnergyHub and WeatherBug	Simple customer registration - A key point to embrace with respect to incorporation of aggregations of small loads is that the marginal benefit of any one load participating is relatively small. The IESO will need to help facilitate the participation of such aggregations so that the effort to enroll and register customers is relatively small. Our experience shows that multi-step customer approval processes will dramatically reduce customer enrollment and increase the cost of residential demand response aggregations.	<i>The IESO will consider the characteristics of residential contributors when extending our current contributor management process and requirements to include residential contributors.</i>
	Joint Comments from Nest, Opower, EnergyHub and	Automate Meter Data Access - Residential participation requires relatively easy access to large numbers of customers' meter data through an automated programming interface to the IESO's meter data repository or that of each participating utility... Create a centralized digital	<i>Creating a centralized digital repository for the purposes of residential demand response is currently out of scope for the Demand Response Working Group. However, the Green Button Initiative does provide a centralized repository for residential load information and some LDCs provide their customers access to smart meter</i>

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	WeatherBug	repository of customer meter data that can be accessed by verified demand response providers, or at least a commonly adopted, simple, standardized process to be followed by each LDC.	<i>data. The IESO continues to work with the sector to allow for greater access to smart meter data. Any baseline methodology developed for residential DR will consider the means by which this data can be made available today.</i>
	Joint Comments from Nest, Opower, EnergyHub and WeatherBug	Change meter data granularity requirement - DR auction rules require 5 minute meter data, granularity that is not currently provided by residential AMI. Accommodate the native meter read frequency of residential meters in program design or allow longer intervals to be broken down.	<i>The IESO is considering meter data granularity for residential demand response and will consider this as a requirement for whichever baseline approach is proposed.</i>
	Joint Comments from Nest, Opower, EnergyHub and WeatherBug	Accommodate dynamic populations - Residential aggregations include many customers and each must be individually uploaded and removed from the IESO database. Update the IT system of the IESO to allow for bulk registration and enrollment of customers. Ensure resources do not go “offline” when accounts are added and removed.	<i>The IESO can review feasibility of updating the existing contributor management system to allow for multi-contributor uploads.</i>
	Joint Comments from Nest, Opower, EnergyHub and WeatherBug	Automate standby and dispatch signals Current notification of dispatch requires market participants to login each day to check in they have been scheduled for standby and/or activation.	<i>The IESO currently publishes private participant reports for Market Participants active in the energy market, including Hourly Demand Response resources. These reports are published in widely-used formats which allow for the development of automated solutions for Market Participants which can be tailored to their own specific needs.</i>
	Joint Comments from Nest,	Include activation hours and quantity of MWs in Standby Report	<i>Given the dynamic nature of the power system, emerging system conditions between the standby notification timeframe and potential activation hours can</i>

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	Opower, EnergyHub and WeatherBug		<i>be difficult to predict. The combination of the Standby Notification and other market participant-specific reports, specifically the pre-dispatch schedule report, can be used to identify the hours in which the IESO most likely expects the DR resource will be called upon to reduce its consumption in advance of publishing an Activation Notice.</i>
	Joint Comments from Nest, Opower, EnergyHub and WeatherBug	Reduce the Minimum Size of DR Aggregation to 100kW	<i>The minimum size for to participate in the DR Auction per resource is 1MW and is common to all resources (load and generation) submitting bids and offers into the energy market. Any changes to this minimum threshold would require a broader conversation with stakeholders and is currently beyond the scope of the DRWG.</i>
	Hydro One	For residential DR to be effective, the IESO should adjust the market rules/manuals and dispatch processes to ensure LDCs can attract and retain residential demand response customers.	<i>The IESO will consider potential changes to documentation and processes to eliminate unnecessary barriers to participation.</i>
	Hydro One	Weather sensitive residential resources (air conditioning) should be accommodated, including the issue of allowing pre-cooling strategies. Non-weather sensitive residential resources (hot water heaters) are also an opportunity for shifting demand from peak periods.	<i>The primary driver for investigating new baseline approaches is to accommodate residential load that is available in the market today but which is not accurately captured by the existing historical baseline approach. With respect to technology such as water heaters, the need for additional measurement and verification approaches to capture the value of these technologies can be assessed in the future if they are not already addressed in the existing approaches.</i>

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	Hydro One	The IESO should explore baseline methodologies that are robust and defensible while allowing maximum residential capacity. Hydro One recommends deemed values be developed based on ex-ante analysis for 1-in-10 weather years to reduce costs related to ex-post EM&V.	<i>Thank you for your feedback. At the next DRWG meeting, the IESO will propose an M&V methodology for residential demand response.</i>