

ONTARIO ENERGY BOARD

**ASSOCIATION OF MAJOR POWER
CONSUMERS IN ONTARIO (AMPCO)**

**Application for Review of an Amendment
to the Independent Electricity System Operator Market Rules**

COMPENDIUM FOR IESO PANEL

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TAB 1

Demand Response Discussion Paper

Utilization Payments

Prepared for:



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December 18, 2017

3. ECONOMIC EFFICIENCY ARGUMENTS

This section presents the arguments for and against providing utilization payments to DR resources.

3.1 Against Activation Payments in Ontario

3.1.1 Wholesale Price Efficiency

The argument is as follows. Real-time wholesale energy prices are an efficient price signal because they match supply and demand based on bids and offers on a minute-by-minute, hour-by-hour basis.

When price responsive loads are exposed to real-time wholesale electricity prices they assess whether it is more cost effective for them to operate or curtail based on the real-time price signal. During high-price events a customer can choose to curtail and save the cost of electricity. This provides an economically efficient incentive to reduce consumption when prices are higher than a customer is willing to pay.

For example, large industrial customers such as pulp and paper pay for electricity based on the wholesale electricity price. These customers can determine on an on-going basis if it is more economically efficient for them to continue operating and producing pulp and paper given the required input costs of electricity than it would be to stop production leading to loss of production revenues but savings in electricity costs.

Considerations for Ontario: This argument only applies to loads that receive the wholesale energy price. Many large commercial and industrial customers in Ontario are already exposed to wholesale energy prices. These customers are already price responsive. They can determine based on real-time energy prices if it is more cost effective from them to operate or to curtail. These customers would not need an additional payment to be incented to curtail when they are needed by the system. There are some customers in Ontario who are not exposed to the wholesale electricity price. These customers are not exposed to price spikes that occur in the wholesale electricity prices. Since they aren't exposed to the price spikes they are not receiving the signal to curtail when needed by the system. The wholesale price efficiency argument is not relevant in those cases. In Ontario, 58% of the total load is exposed to the market price⁶.

3.1.2 Disproportional Benefits

The argument is as follows. Providing a utilization payment compensates a DR resource disproportionately relative to a supply resource, because the DR resource did not incur a cost associated with the production of electricity. Under this argument, a DR resource should be treated as if it had first purchased the power it wishes to resell to the market.

This argument is based on a premise that a megawatt of electricity curtailed (negawatt) is not economically equivalent to producing a megawatt of electricity. This was the argument put forward by a group of economists in support of the Electric Power Supply Association's petition to US Court of Appeals

⁶ <http://www.ieso.ca/-/media/files/ieso/document-library/engage/ssm/ssm-20170817-presentation.pdf?la=en>

to overturn FERC Order No. 745.⁷ This argument was supported by FERC Commissioner Philip D. Moeller, who argued that paying demand response resources full LMP overcompensates those resources because in addition to any incentive payments received, those resources also receive the benefit of not paying the cost of retail energy consumption that they otherwise would have incurred⁸.

The underlying factor of this argument is the claim that DR is not a resource in the same way that generation is. A generating resource is providing a product and is paid for that. Opponents of DR utilization payments argue that since DR does not own the power they are not consuming, they should not be paid additionally for not consuming it. Despite this argument, FERC's final 745 ruling⁹ was based on the premise that negawatts and megawatts are functionally and economically equivalent.

Considerations for Ontario: This argument is based on a premise that a megawatt of electricity curtailed (negawatt) is not equivalent to a megawatt of electricity. The argument assumes the cost of curtailment (or the value of lost load) for a DR resource is immaterial. Whether the disproportional benefits argument is considered valid in Ontario depends on whether this premise is accepted.

3.1.3 Harm to Other Suppliers

The argument is as follows. Utilization payments can lead to greater levels of activation that put downward pressure on wholesale energy prices and negatively impact the profitability of other supply resources.

While initially a benefit to consumers, the argument is that this practice has the potential to harm suppliers in the long term to a point where existing or new generators, required to maintain system reliability, are not able to operate economically. This argument is based on the concept of dynamic efficiency.

The argument is that if more DR resources bid into the market at prices lower than traditional generation they will be dispatched rather than the generation. This is because the more demand response that sees and responds to higher market prices, the greater the competition, and the more downward pressure it places on generator bidding strategies by increasing the risk to a supplier that it will not be dispatched if it bids a price that is too high. This may make it difficult for the generators to recover their costs and ultimately to continue operating. In practice, the impact of providing a utilization payment has not been significant enough to affect generators ability to recover their costs.

Some FERC 745 commenters assert that a power system can function solely and reliably on generating plants and without any reliance on demand response, while the system cannot rely exclusively on demand response because demand response by itself cannot keep the lights on¹⁰.

Considerations for Ontario: To have a material impact on energy prices, utilization payments would have to result in a considerable increase in activation. Also, under the current market structure in Ontario, most generators are under contract or receive regulated rates and hence have a high degree of revenue or price certainty.

⁷ https://sites.hks.harvard.edu/fs/whogan/Economists%20amicus%20brief_061312.pdf

⁸ <https://www.cleanenergylawreport.com/energy-regulatory/federal-appeals-court-vacates-ferc-order-no-745-on-demand-response-compensation/>

⁹ <https://www.ferc.gov/EventCalendar/Files/20110315105757-RM10-17-000.pdf>

¹⁰ <https://www.ferc.gov/EventCalendar/Files/20110315105757-RM10-17-000.pdf>

TAB 2

DR STAKEHOLDER PRIORITIES FOR 2017

Demand Response Working Group

January 31, 2017

Objective

- The objective of this presentation is to consolidate stakeholder priorities received and ensure it is documented accurately
- The purpose of this presentation is not to discuss the merits of each priority item but to ensure the feedback has been documented correctly

Introduction

- The IESO thanks all stakeholders who have taken the time to submit their DR priorities for 2017
- The IESO considers all feedback items
- Over 2016, the IESO has successfully implemented a number of stakeholder-driven initiatives:

Capacity
Obligation Transfer

Target Capacity
Growth Trajectory

Randomized
Control Trials for
RDR

Framework to Record Feedback

- The IESO has categorized all the feedback received into three broad categories that reflect the primary decision making authority:



- The categorization distinguishes each feedback item by decision-making authority

External to the IESO

- “External to IESO” decision items are those items where the IESO Markets team responsible for DR has limited or no decision-making authority over the change process
- On these items, the IESO can potentially facilitate discussion with key interested parties
- IESO will work with stakeholders to ensure alignment going forward

Stakeholder Priorities: External to IESO

1. *Easy access to residential measurement data*

- Streamlined, simple process for 3rd party providers to access residential customer measurement data without partnership with an LDC
- Concerned Green Button “Connect My Data” may be implemented differently by every LDC, making it harder to use across LDCs
- Direct access by third parties to the MDM/R for residential DR purposes

Stakeholder Priorities: External to IESO

2. *Commitment to DR Auction capacity and growth within the Long-term Energy Plan*

- The 2013 LTEP sets a target for DR to be 10% of peak demand by 2025
 - LTEP's definition of demand response includes Industrial Conservation Initiative (ICI), Time-of-use, etc.
- Ensure other forms of “Demand Response” do not squeeze out capacity in the DR Auction
- Consider dispatchable DR capacity before embarking on new procurements

Broader Market Impacts

- Broader IESO priorities are related to broader market systems and processes that apply to all energy resources are not specifically for demand response
- Changes will require internal and external stakeholdering

Stakeholder Priorities: Broader IESO

1. *Reduce 1 MW minimum size for energy resources to 100 KW*
 - Reducing minimum size for energy resources will allow greater participation from the residential sector
2. *Peaksaver transition*
 - Optimize use of existing Peaksaver devices
 - Ensure value of Peaksaver resource is not lost
 - Implement a pilot program to transition Peaksaver resources

Stakeholder Priorities: Broader IESO

3. *Reciprocal Settlement terms*

- Market Participants must submit Notice of Disagreements within 4 business days of the Preliminary Settlement Statement (PSS) but the IESO is not subject to the same deadline

IESO and DRWG

- Priorities that are directly related to DR processes and procedures with limited broader market impact and where the IESO has direct decision-making authority
- Changes will still require internal and external stakeholdering

Stakeholder Priorities: DR Auction

1. *Preparation for future Incremental Capacity Auction*
 - Evolve the DR resource to help meet changing system needs
 - Transition/integrate DR resources into ICA

2. *Allow DR Capacity Obligation transfers within a commitment period and between zones*
 - Obligation transfers are permitted only during the forward period
 - Allow transfers to occur during the commitment period and between zones within their respective limits

Stakeholder Priorities: DR Auction

3. *Eliminate virtual zonal DR limits*

- Virtual limits restrict the amount of aggregated resources that can clear an auction in a zone
- Eliminate virtual limits and only apply a single zonal limit for both physical and virtual resources

Stakeholder Priorities: DR Auction

Commitment Period

4. *Allow longer Commitment Periods*

- Commitment periods are currently 6 months in duration
- Allow some amount of DR capacity to be committed longer than 1 year through the DR Auction

5. *Allow DR Capacity Obligations to vary on a monthly basis*

- Currently DR Capacity Obligations are fixed for a 6-month commitment period
- Allow DR Capacity Obligations to vary on a monthly basis

Stakeholder Priorities: DR Auction Administration

6. *Implement a more efficient contributor management data entry system*
 - For C&I HDR resources, contributors are currently entered manually, one contributor at a time
 - A more efficient system would make the process easier for aggregators
7. *Implement automated data submission (not via OnlineIESO)*
 - IESO requests clarification from participants on this item

Stakeholder Priorities: DR Auction Administration

8. *Change requirement for record of installation (ROI) for all HDR C&I contributors*
 - Less stringent requirements to recognize barriers faced by C&I HDR participants
 - Requirement should be changed to best-efforts basis or a threshold-based requirement

Stakeholder Priorities: DR Auction Utilization

9. *Allow dispatchable loads to be contributors to an HDR resource*
 - Modify IESO systems to allow dispatchable loads to participate simultaneously as an energy market resource and as a contributor to an energy market resource
10. *Send automated notification of standby and activation notices to Market Participant so they do not have to log-in to IESO portal*
 - DRMPs are required to check their private participant reports for standby and activation notices

Stakeholder Priorities: DR Auction Utilization

11. Maintain day-ahead standby notice for HDR resources

- The IESO clarifies that the current standby notice deadline is 7am EST of the dispatch day and not in the day-ahead

12. Shorten or eliminate standby notice for HDR resources

- Standby notice is not necessary for DR resources
- DR should become a more flexible resource
- Other jurisdictions (PJM, Alberta, ERCOT, ISO-NE) do not provide a standby notice

Stakeholder Priorities: DR Auction Utilization

13. Duration of activations should reflect system need

- Mandatory 4-hour activation block does not reflect system needs
- Allow a minimum 1 hour dispatch time

14. Reinstate utilization payments for DR activations

- HDR resources are not compensated for DR activations
- Other jurisdictions (ISO-NE, NYISO, PJM) provide both energy and availability payments to DR

Stakeholder Priorities: DR Auction Utilization

15. Increase test dispatch structure

- IESO requests greater clarity from stakeholders on this feedback item

IESO Priorities

1. *Alignment with Incremental Capacity Auction development*
 - Evolution of DR should be consistent with ICA design
2. *How HDR resources are called upon in the energy market*
 - Review activation requirements
 - Review 4-hour dispatch block
3. *Further integration of residential DR resources*

Summary of Stakeholder Priorities

Category	Item
External to IESO	Easy access to residential measurement data
	Commitment to DR Auction capacity in LTEP
Broader IESO	Reduce minimum energy market resource size
	Peaksaver transition
	Reciprocal settlement terms for IESO and MPs
DR Auction	Preparation for future Incremental Capacity Auction
	Allow capacity transfers within commitment period and between zones
	Eliminate virtual zonal DR limits
	Longer commitment periods for some DR
	Varying DR Capacity Obligations
	More efficient contributor management data entry process for aggregated resources
	Automated measurement data submission capability
	Less stringent ROI requirements
	Allow dispatchable loads to be contributors in HDR resources
	Automated notification for standby and activation notices
	Maintain standby notice
	Eliminate or shorten standby notice
	More flexible dispatch duration
	Utilization payment
	Improved test dispatch structure

Next Steps

- Please ensure the IESO has captured all feedback items accurately
- To provide feedback, please contact engagement@ieso.ca as soon as possible to have a priority item considered for the 2017 DR workplan

TAB 3



Market Rule Amendment Submission

This form is used to request an amendment to, or clarification of, the *Market Rules*. Please complete the first four parts of this form and submit the completed form by email or fax to the following:

Email Address: Rule.Amendments@ieso.ca

Fax No.: (416) 506-2847 Attention: Market Rules Group

Subject: Market Rule Amendment Submission

All information submitted in this process will be used by the *IESO* solely in support of its obligations under the *Electricity Act, 1998*, the *Ontario Energy Board Act, 1998*, the *Market Rules* and associated policies, standards and procedures and its licence. All submitted information will be assigned the *confidentiality classification* of “Public” upon receipt. You should be aware that the *IESO* will *publish this amendment submission* if the *Technical Panel* determines it warrants consideration and may invite public comment.

Terms and acronyms used in this Form that are italicized have the meanings ascribed thereto in Chapter 11 of the *Market Rules*.

PART 1 – SUBMITTER’S INFORMATION

Please enter contact information in full.

Name: IESO Staff

(if applicable) *Market Participant /
Metering Service Provider No.*¹: N/A

Market Participant Class:
N/A

Telephone: 905-403-6983

Fax: 905-855-6371

E-mail Address: Rule.amendments@ieso.ca

PART 2 – MARKET RULE AMENDMENT SUBMISSION INFORMATION

Subject: Demand Response

Title: Delete References to the Transitional Demand Response and Emergency Load Reduction Programs

Nature of Request (please indicate with x)

☐ Alteration ☒ Deletion ☐ Addition ☐ Clarification

Chapter: 5, 7, 9, 11 Appendix: N/A Sections: Various

Sub-sections proposed for amending/clarifying: Various

¹ This number is a maximum of 12 characters and does not include any spaces or underscore.

PART 3 – DESCRIPTION OF THE ISSUE

Provide a brief description of the issue and reason for the proposed amendment. If possible, provide a qualitative and quantitative assessment of the impacts of the issue on you and the *IESO-administered markets*. Include the Chapter and Section number of the relevant *market rules*.

Summary

It is proposed to amend the market rules to delete all references to the Transitional Demand Response and Emergency Load Reduction Programs both of which have been discontinued.

In addition, it is proposed to delete the definition of “designated program market participant,” which refers to a person who participates in the Emergency Load Reduction Program.

Background

The Emergency Load Reduction Program (ELRP) was brought into effect June 20, 2006, as a reliability initiative that gave ELRP participants the opportunity to receive stand-by and activation payments to reduce load during emergency periods identified by the IESO.

Similarly, the Transitional Demand Response Program (TDRP) was a temporary initiative launched by the IESO to help reduce demand during peak hours; in turn participants were given economic assistance for voluntarily reducing demand based on market price signals.

Both ELRP and TDRP have been discontinued; TDRP ended April 15, 2007 with ELRP ending April 30, 2010 due to enhancements in other reliability initiatives and a variety of demand response programs which were established by the OPA.

PART 4 – PROPOSAL (BY SUBMITTER)

Provide your proposed amendment. If possible, provide suggested wording of proposed amendment.

Amend the market rules to delete all references to TDRP and ELRP both of which have been discontinued, and denote all sections as [Intentionally left blank – section deleted].

In addition, it is proposed to delete all references to the definition of “designated program market participant.”

PART 5 – FOR IESO USE ONLY

Technical Panel Decision on Rule Amendment Submission: Warrants Consideration

MR Number: MR-00388

Date Submitted to *Technical Panel*: November 22, 2011

PART 5 – FOR IESO USE ONLYAccepted by *Technical Panel* as: (please indicate with x)

Date:

☒ General☐ Urgent☐ MinorNovember 29, 2011Criteria for Acceptance: The amendment simplifies the market and “cleans-up” the market rules by deleting references to two discontinued programs.Priority: RegularCriteria for Assigning Priority: The amendment will delete all references to the Transitional Demand Response and Emergency Load Reduction Programs both of which have been discontinued. The term and references to “designated program market participant” will also be deleted from the market rules as it refers only to ELRP participants.Not Accepted (please indicate with x): ☐Clarification/Interpretation Required (please indicate with x): ☐*Technical Panel* Minutes Reference: IESOTP 256-1*Technical Panel* Comments: _____

TAB 4

AMPCO INTERROGATORY 4

INTERROGATORY

Reference:

IESO Evidence, paragraph 62.

The evidence states:

The IESO also determined that the TCA would provide opportunities for existing off contract generators, which might otherwise decide to wind down their operations to the potential detriment of Ontario reliability and the interests of Ontario consumers.

Questions:

(a) Please explain how the IESO made this determination. Please include in the response an explanation of the particular information and/or data relied on in coming to such determination, and the source of that information and/or data.

(b) Was the IESO approached by any particular generators, and if so which ones?

(c) Did the IESO have any discussions with, or requests from, the Ontario government to consider the manner in which to address concerns regarding how to address generators coming off contract? If so, please explain the nature of those discussions or requests.

RESPONSE

(a) The IESO is aware that some generators have begun the de-registration process with the IESO, or through their LDC, to effectively shutdown operations. The IESO is also aware, through the ordinary course of its business, that some generator counterparty resources will require investment in refurbishment and maintenance in order to continue to operate. Without generation contracts, there may be increased uncertainty about the financial viability of such investments, which in turn increases the probability that such investments will not be made and that existing assets will shut down. The loss of these existing generation resources could have a negative impact on reliability given the forecasted future capacity gap.

(b) The IESO received information relevant to its determination, from a range of sources, through the ordinary course of its business. Generators communicated their perspective through various channels. For example, in a presentation to the DRWG, Kingston CO-gen noted that providing generators access to a capacity auction: "...would help secure the long run viability of un-contracted generation as future capacity resources in Ontario."²

²Kingston Co-Gen Presentation to DRWG, February 12, 2019, (see slide 2, 5th bullet) <http://www.ieso.ca/-/media/Files/IESO/Document-Library/working-group/demand-response/drwg-20190212-expanding-dr-uncontracted-generators-northland-power.pdf?la=en>

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(c) IESO discussed its plans to evolve the demand response auction into a broader-based and more competitive capacity auction with the Ministry of Energy, Northern Development and Mines. The IESO also communicated that the TCA would provide an opportunity for off-contract resources to compete to meet system needs by providing capacity, in addition to their participation in the energy market.

TAB 5

AMPCO INTERROGATORY 2

INTERROGATORY

Reference:

IESO Evidence, paragraph 36.

The IESO states:

DRA participants have been activated in the energy market in very limited circumstances since the DRA was launched in 2015. This is likely due to the relatively high prices at which DRA participants have bid into the energy market.

Question:

Why, in the view of the IESO, have DRA participants bid into the energy market at such high prices?

RESPONSE

DRA participants submit bids reflective of their willingness to pay for electricity (and above which they choose not to consume). Opportunity cost of not consuming may be high for some loads, causing them to bid near the maximum market clearing price, but this may not be the case for all resources. The IESO is not privy to the costs or bidding strategies of DRA participants.

TAB 6

IESO Technical Panel Meeting

Minutes of Meeting

Date held: August 13, 2019		Time held: 9:00 am	Location held: IESO Office, Toronto
Invited/Attended	Sector Representation		Attended; Regrets
Robert Bieler	Consumer		Present
David Brown	Ontario Energy Board		Present
Ron Collins	Energy Related Businesses and Services		Present
Dave Forsyth	Consumer		Present
Sarah Griffiths	Other Market Participant		Present
Robert Lake	Residential Consumer		Present
Phil Lasek	Industrial Consumer		Present
Robert Reinmuller	Transmitter		<i>Absent</i>
Sushil Samant	Generator		Present
Joe Saunders	Distributor		Present
Jessica Savage	IESO		Present
Vlad Urukov	Generator		Present
Julien Wu	Wholesaler		Present
Michael Lyle	Chair		Present
Observers / Presenters			
Adam Cumming	IESO		Present
Mohab Elnashar	IESO		Present
Robert Doyle	IESO		Present
Silviu Motoc	IESO		Present
David Short	IESO		Present
Jessica Tang	IESO		Present
Candice Trickey	IESO		Present
James Hunter	IESO		Present

August 13, 2019

Page 1

IESO Technical Panel

Please report any suggested comments/edits by email to engagement@ieso.ca.

Secretariat		
Reena Goyal	IESO	Present
Jason Grbavac	IESO	Present
Prepared by: Mitchell Beer / Smarter Shift Inc.		

Agenda Item 1: Introduction and Administration

Chair's Remarks:

The Chair indicated that Robert Reinmuller would not be attending the meeting, but had provided his vote and rationale on Agenda Item #3. He also provided an update on the proposed Market Rule amendment previously submitted by Resolute Forest Products, advising Technical Panel members that the IESO had received notice of an application from Resolute to the Ontario Energy Board, calling for review of an existing market rule in accordance with Section 35 of the *Electricity Act*.

Members approved the meeting agenda with no amendments, on a motion by Joe Saunders.

Vlad Urukov provided two specific edits to the minutes of the previous meeting. The minutes were approved as amended on a motion by Mr. Urukov.

Agenda Item 2: Engagement Update

Jason Grbavac, IESO, drew members' attention to the engagement update in their information packages, noting that several of the items on the chart, beginning with the Phase I of the Transitional Capacity Auction (TCA) were on the agenda for today's meeting. He said the TCA engagement team was preparing to launch work on the next phase of the Capacity Auction with plans to schedule an education item with the Technical Panel as was done for Phase I. The review of the Technical Panel's composition and process, as recommended by the Governance and Decision-Making Advisory Group, was also on the Panel's agenda for August and September, with comments already received from Technical Panel members as well as the Market Development Advisory Group.

Hourly Demand Response (HDR) Out-of-Market Activation and Payments and Grid Connection Payments were both on the agenda as education and information items, while a Market Renewal Program (MRP) education item and annual omnibus package are scheduled for the Panel's last meeting of the year in November. Mr. Grbavac noted that the IESO was currently conducting monthly update meetings on MRP, which will shift to a bimonthly schedule once a series of single-issue items have been fully addressed. The August 26 session will focus on the business case for MRP, and Panel members are welcome to attend.

The joint Technical Panel-IESO Board meeting has been rescheduled to October 23, and Mr. Grbavac said a more detailed agenda would be published in advance, including any business items the Panel might need to conduct.

Mr. Grbavac indicated that members would soon receive a draft schedule of Technical Panel meetings for 2020, and reminded them that a full list of engagements is always available on the engagement page of the IESO website.

Mr. Urukov asked about the colour coding in the engagement update. Mr. Grbavac said there was no significance to difference in shading.

Sushil Samant asked why the engagement update contained no reference to the Incremental Capacity Auction. Mr. Grbavac said the MRP education item would include an update on changes to the capacity stream. Jessica Savage, IESO added that the Technical Panel would be asked to address market rules amendments from the energy stream before capacity, as previously planned.

Mr. Urukov asked whether cancellation of the Incremental Capacity Auction would change the scope of the Transitional Capacity Auction, Phase II. The Chair invited him to pose that question to the presenters during the next agenda item.

Julien Wu asked about coordination between MRP education and the more general market education available through the IESO website. Mr. Grbavac said the customer readiness and support plans for MRP will be developed in coordination with Market Renewal and will include the support of the traditional IESO market training function as required.

Agenda Item 3: Transitional Capacity Auction (TCA)	
Presenters	Robert Doyle, David Short, Jessica Tang, James Hunter, Candice Trickey
Action	Review amendment proposal MR-00439-R00-R05 and vote on whether to recommend the amendment packages for consideration by the IESO Board.

Robert Doyle, IESO noted that the memorandum to members for today's meeting addressed comments received at the Technical Panel's June 25 meeting, and summarized feedback from individual Panel members and outside stakeholders. He invited questions and discussion from members.

Sarah Griffiths said the community she represents has always supported the Transitional Capacity Auction, as well as the initiative to expand the Demand Response Auction and include more resources. However, ever since Demand Response (DR) resources were migrated from the Ontario Power Authority contract program, there has been a concern about market fairness,

given that DR providers are not paid for meeting their energy dispatch requirements. She noted a concern that the issue has remained on the Demand Response Working Group agenda, the development of market rules and design has not advanced, and now the issue has become a fast-track priority. She said the legal brief submitted to the Panel by the Advanced Energy Management Alliance (AEMA) and the Association of Major Power Consumers of Ontario (AMPCO) called for a six-month delay in TCA Phase I to address concerns regarding the potential discriminatory nature of the market rules.

Ms. Griffiths said the authors of the legal brief had had a very productive meeting with IESO senior staff the previous day, but the omission of energy payments in the TCA would still have an impact on the competitive process for the December TCA auction.

Mr. Samant asked whether AMPCO and AEMA were concerned about activation or with testing. David Forsyth said the issue was with respect to regular, in-market dispatch and activations.

The Chair reiterated Mr. Urukov's question from agenda item #2 of whether the cancellation of the Incremental Capacity Auction would have an impact on the Transitional Capacity Auction, Phase II. Mr. David Short, IESO said Phase II work would continue, adding that the IESO has always sought to align the TCA as closely as possible with the ICA design given the time frames involved and the resources that could be admitted or enabled through the auction. He said the IESO is always seeking to evolve the capacity and energy markets, and ongoing stakeholder engagement might provide an opportunity to continue the evolution of the TCA following completion of the official project at the end of 2020. Mr. Short said the evolution of the capacity markets beyond 2020 would not constitute re-enactment of the ICA.

Robert Lake asked how long the TCA would be considered transitional. Mr. Short said he expected to address that point in conjunction with IESO communications staff. The TCA was branded as transitional to ensure that market participants understood that it sat between the Demand Response Auction and the future ICA, but at some point the "transitional" label will be dropped. Mr. Lake noted that the system will eventually need options for a range of renewable energy businesses entering the system. Mr. Short said the upcoming engagement would provide an opportunity to discuss that point.

Mr. Forsyth said the unequal treatment of different categories of market participants was the most contentious aspect of the Transitional Capacity Auction and expressed concern that the legal brief had only been distributed to Technical Panel members at 4:00 PM the previous day. He stressed the importance of the document, and of Panel members having time to thoroughly review it, and said the circumstances made it impossible to conduct a proper deliberation. The Chair said Ms. Savage had explained the late distribution of the legal brief, and invited Panel members to share their views.

Ms. Griffiths said the two organizations who authored the legal brief had made the decision not to post it online, since it addresses an issue with implications beyond the current market rule

deliberation. On that basis, the authors were initially prepared to work with the IESO to arrive at a mutually agreeable timing for posting the document. But she said the IESO only contacted the authors in the last week for permission to publish, and at that point AMPCO and AEMA agreed it would be better to circulate it to Panel members late rather than not at all. She said the late posting was ultimately driven by the communication back and forth between the parties.

James Hunter, IESO said the legal brief elaborated on and provided supporting arguments for a concern about alleged discriminatory treatment that had been introduced through the stakeholder feedback process and through formal written submissions to the Technical Panel from both AMPCO and AEMA, so the staff position was that the issue had already been communicated to stakeholders and the Technical Panel. Given the IESO's mandate to maximize market competition and transparency, he said the IESO position was that adding generators to the Transitional Capacity Auction, Phase I was not discriminatory. He acknowledged that the question of whether competition requires a utilization payment for DR resources is contentious and warrants further study, and the IESO has already committed to a more in-depth study of the impact on the market. But at the same time, the IESO recognizes the need to move forward with changes to the TCA, and sees no impact on efficiency or competitiveness in proceeding with the process and including DR resources in December 2019, given that the substantive concern is with activations. The outcome of the study might ultimately call for some form of market solution or compensation, but Mr. Hunter said the IESO sees no discriminatory impact on utilization payments. He noted that the U.S. Federal Energy Regulatory Commission had determined that DR resources may receive utilization payments subject to a net-benefit test, and that opinion had been a reference point for the IESO.

Mr. Forsyth said it was inappropriate for staff to critique the legal brief when Panel members hadn't had a chance to read it yet. Mr. Hunter said that wasn't his intent, but that staff had a responsibility to explain their position, adding again that the issue was complicated and warranted the further analysis to which staff had already committed. Mr. Forsyth said the commitment to further review would have no bearing on the concern about discriminatory aspects of the December 2019 round of the Transitional Capacity Auction. Mr. Hunter replied that there were parallel reasons to move forward with the TCA, but that staff would monitor the DR activation record during Phase I to assess any impact.

Mr. Urukov asked how frequently in-market activations had been utilized in the past. Mr. Hunter said they had been virtually non-existent. Mr. Short explained the IESO has access to sufficient energy, so the issue has to do with the small sliver of capacity that comes into play if a particular combination of extreme conditions occurs.

Ms. Griffiths said that members within her constituency had not been activated in the energy markets, while adding that the TCA was a new auction and its rules should be right from the beginning. It was on that basis that AEMA and AMPCO submitted their comments, during the TCA stakeholder engagement and directly to the Technical Panel. Ms. Griffiths expressed her

personal view that it was very important to move forward with the TCA in December, and that cancellation of the ICA represented an overall threat to some forms of market design.

Mr. Short said IESO staff agreed with the need for a complete assessment. But he stressed the underlying need to prepare for the anticipated capacity shortfall in 2023, adding that the transformation of the DR Auction was the first step in the required phase-in. Capacity is ultimately about system reliability, he said, and that was why the IESO proposed to complete the Transitional Capacity Auction Phase I, then continue deliberations in advance of the TCA, Phase II in June 2020.

Mr. Saunders asked how the December auction would be affected if the Panel postponed its decision. Mr. Short said a delay might leave staff with insufficient time to complete its pre-auction work, noting that the process called for an October 15 launch to give participants time to prepare for the auction to open on December 4.

The Chair noted that the current timeline called for a recommended Market Rule amendment package to be brought forward to August Board meeting, but said it was important that Panel members not feel pressured into a decision. The Chair noted that Technical Panel could delay the vote on this agenda item until later in the week, to give members a chance to review the AEMA/AMPCO legal brief in more detail.

In reply to a question from Mr. Collins, Mr. Short said a generator's participation in an auction would increase competition, but it would be impossible to predict what impact that would have on prices. Mr. Collins expressed concern that some market participants might not receive payments for their participation, a situation that amounted to discrimination that must be resolved in an expeditious way. Mr. Short reiterated that the IESO's paramount concern was to have a plan in place for 2023 which includes a capacity auction.

Mr. Samant asked whether the discussion applied to hourly demand response (HDR) as well as dispatchable loads, adding that utilization payments for dispatchable loads that had not participated in the DR auction would be a fundamental market change. Ms. Griffiths said the concern was with economic DR resources already participating in the energy market, and the difference between participating in the energy market versus a capacity market construct. Mr. Short clarified that this issue could provide energy payments for every load would participate in the energy market, whether or not they were a part of the DR market, and Mr. Samant reiterated that that represented a big change, since dispatchable loads have not received utilization payments since the market opened.

David Brown, OEB asked for clarification of the statement in the legal brief that the IESO had advised demand response participants to build utilization payments into their auction offers. Mr. Forsyth said loads had been looking for a provision similar to a utilization payment, and the IESO wasn't prepared to allow it, but advised entities to build the provision into their bids. In the new TCA rules, that advice applies to loads but not generators, which would incur costs and receive no corresponding payments.

Mr. Brown asked what equivalent provisions would apply to a generator entering the market today. Mr. Samant said he would assume the rules would be unchanged. Ms. Griffiths said the requirement to add the energy payments affected the competitiveness of her constituency's energy bids, potentially requiring bidders to adjust their auction offers accordingly.

Mr. Brown asked whether the advice to loads would be the same today. Mr. Short said it would still be up to the loads to decide how they wanted to participate in the capacity auction. If the Capacity Auction were to include energy payments, we expect the net benefit determination would be very complex as it should consider energy market participant bids/offers in the context of forecasted or actual energy market conditions. He added that the question was under review by the Demand Response Working Group.

A Panel member asked what costs a load would incur by participating in the auction under the current rules. Ms. Griffiths said the cost of stopping production would go well beyond availability prices for a capacity position and the dollars saved by not buying energy for that production.

Mr. Saunders asked whether the legal brief would be brought to the IESO Board's attention. The Chair said it would.

The Chair invited other views from members and observers. Candice Trickey, IESO said the DRWG would be addressing a number of related issues, including energy payments, which she noted is a difficult matter that has continued to receive considerable discussion in the United States. She said the working group had received initial feedback on the issue at its meeting in July, and would be putting forward a plan, timeline, and next steps to resolve the matter at its upcoming meeting on September 4. Additionally, IESO staff have a timeline for moving the item forward as quickly as possible, while following a stakeholder engagement process and having a transparent discussion, in which the IESO will engage with stakeholders to work through the issues and seek a resolution. One consideration, she added, is that energy payments should be provided when loads are activated if the practice delivers a net benefit to consumers. But if that approach was adopted, it would be necessary to understand how it would apply in Ontario.

Mr. Forsyth said he appreciated the explanation, but stated it had been a long time coming. The issue was on the table when the Demand Response Auction was first discussed, has remained on the DRWG's annual work plan, arose as a major issue at the first meeting on the Transitional Capacity Auction, and is now being dealt with as an emergency issue.

Mr. Brown noted that loads in Ontario are being economically dispatched against their own bid prices, in contrast to the FERC context where loads receive fixed recall rates and are dispatched for demand response at a price well below the spot price of electricity. Ms. Griffiths said dispatch on the PJM grid is based on scarcity prices, whereas price caps in Ontario are based on the bids that market participants submit. Mr. Forsyth said a PJM market participant would receive a favourable revenue stream anytime they were dispatched above a certain price per

megawatt-hour, but the cost is spread over more megawatts. The difference in Ontario is that demand response participants are competing directly against generators.

Mr. Forsyth said a market participant with a capacity position in demand response is required to bid into the energy market, facing a penalty if they fail to do so. On that basis, he said they should be compensated for competing against generators. Mr. Urukov said generators receive marginal costs; Mr. Forsyth said loads should, too.

Mr. Short said the discussion appeared to be presupposing an outcome on a complex issue, where the concerns of market participants have been articulated and are understood. In the United States, most independent system operators opposed the FERC policy decision when it was made. In Ontario, if the cost of implementing the new approach exceeds the benefit, the IESO won't pursue it, which is why the current objective is to understand the methodology, conduct the assessment, gather stakeholder feedback, and decide on implementation.

At the same time, Mr. Short said, it's essential for the Ontario system to prepare for 2023, and a delay in the implementation of the TCA now will mean a year of opportunity lost. The IESO's position is that it believes capacity auctions provide a benefit through increased competition. On the whole, he said the immediate course of action should be to prepare for the December auction, in order to meet future system requirements.

The Chair reiterated his earlier comment about the option of delaying the vote, posing the question to members as to whether they felt they had sufficient information to vote on the proposed Market Rule amendment or whether they preferred to wait until the end of the week and review the AEMO/AMPCO brief in more detail. Messrs. Saunders, Bieler, Samant, Lake, and Wu all said the few days would make no difference and they were prepared to vote. Mr. Bieler said the issues were complex, but that he had had an opportunity to read the submissions. Mr. Lake said the Panel was in an uncomfortable position, but a few days wouldn't change that, and Mr. Wu agreed.

Messrs. Collins and Urukov identified editorial and punctuation changes in the draft Market Rule amendment proposals. The IESO staff agreed to make all suggested changes.

On a motion by Mr. Collins, the Technical Panel agreed to recommend the Market Rule amendment proposals for consideration by the IESO Board.

The Chair thanked Panel members and the IESO team for their attention to a complex topic, and invited members to explain the reasoning behind their votes. Technical Panel members were asked to confirm their rationale, in writing – refer to Appendix A.

The result of the vote on MR-00439-R00-R05: Transitional Capacity Auction, Phase 1 was:

In favour: Bieler, Collins, Griffiths, Lake, Lasek, Reinmuller, Samant, Saunders, Savage, Urukov, Wu

Agenda Item 4: Hourly Demand Response Out-of-Market Activation Payments

Candice Trickey, IESO, explained the costs to be recovered and payments issued when a resource is activated, usually as a result of a test activation. Tests are carried out because market resources are not typically activated frequently, but must still be available for emergency use and as market economics dictate. The IESO tests them once per period to ensure that all parties are ready for an activation, and to give the IESO confidence that the resource is able to respond.

In this proposal, there are two scenarios in which a resource would be entitled to compensation. In test situations, resources are typically activated “out-of-market”, i.e. at a price below its bid price. Acknowledging that the loads incur costs, they should have the opportunity to recover because the activation is not based on the bid price. Also, an emergency activation can occur as one of a number of actions the IESO control room might initiate to restore balance across the system. These activations are also out-of-market.

Ms. Trickey said the IESO has been discussing Hourly Demand Response (HDR) out-of-market activation payments with the Demand Response Working Group, and very recently received a second round of feedback. The topic will be on the agendas for the DRWG and Technical Panel meetings in September.

Mr. Samant asked whether the discussion had to do with test or emergency activations. Ms. Trickey said an out-of-market activation could occur under either scenario.

In reply to a question from Mr. Urukov, having to do with the transition to the Transitional Capacity Auction, Ms. Trickey explained that the Demand Response Auction currently provides for two six-month commitment periods, and the current market rules allow two activations of a DR resource per period. The IESO’s typical practice is to activate each resource once, then conduct a second activation if the first one raises any issues.

Mr. Urukov pointed to the three options on Slide 7 of Ms. Trickey’s presentation, and asked whether the DR community was leaning toward bids as the basis for market payments. Ms. Trickey said that was the majority response in the first tranche of stakeholder feedback, but other preferences may be emerging from subsequent comments.

In reply to a question from Mr. Urukov, Ms. Trickey said the IESO would schedule a readiness test for generators to ensure they were prepared. Because they would be scheduled at a price that was uneconomic compared to the market clearing price, they would be compensated based on the difference between their bid and the clearing price.

Mr. Samant asked about the basis for the payment and whether activations are measured on a local meter. Ms. Trickey said resources are typically dispatched for the full amount of their

aggregation and calculated in megawatt-hours. Mr. Samant asked what would happen if a resource were dispatched for 10 megawatt-hours, for example, but could only deliver eight, and whether the activity would be measured on a revenue meter. Ms. Trickey said some resources have IESO revenue-grade meters, but some don't. For loads connected at the distribution level, the IESO doesn't have access to individual metering, but the aggregators manage bids on behalf of all their loads. In those cases, the IESO doesn't see the meters in real time, but still has a process to verify and quantify the responses to an activation. Additional information including draft market rules will be available for TP review in September.

Agenda Item 5: Updates to performance requirements for generation, load and electricity storage

Silviu Motoc, IESO, explained how the 2019 operability assessment was a driver for reviewing performance requirements, as distributed energy resources (DERs) are increasingly displacing transmission-connected generation that supports grid reliability. When an unexpected event occurs on the grid, he said a response takes about 100 milliseconds, and the transmission element is isolated—at which point all the system sees is a flicker in voltage. But that effect is felt across a very large area within the wider grid—in Ontario's 500-kilovolt system, the voltage dip would affect virtually every user south of Barrie. That reality pointed to the need to clarify the situation, to ensure that all market participants knew how they were to respond.

Mr. Motoc reviewed the considerable work the IESO has done on this issue to date, noting that the current agenda item served mainly to bring the market rules in line with updated Canadian Standards Association (CSA) standards for DERs connected to distribution systems.

Mr. Lake noted that Mr. Motoc had referred to transmission and distribution systems, and asked about the treatment of sub-transmission resources supplying 10 MW or less. Mr. Motoc said the IESO's definitions are based on the legislation defining transmission and distribution, and everything below 50 kV counts as distribution. He added that the IESO doesn't have access to data that would allow it to identify each individual resource, and noted that electricity storage is not currently defined in the market rules, even though it displaces generation when it injects energy into the grid.

Mr. Saunders said different types of DER behave differently in the system, and asked whether they would all be covered by a single update to the market rules. Mr. Motoc acknowledged the point, but said the IESO's focus was on their response to voltage and frequency fluctuations caused by faults in the transmission system. In reply to a short series of questions from Mr. Collins, he said the IESO was not recommending any changes that fell outside the CSA and NERC standards.

Ms. Savage said those details would be addressed through stakeholder engagement and the actual Market Rule amendments. Mr. Collins acknowledged the point, but still raised the concern that the proposed changes in practice would not be inexpensive. Mr. Motoc said the intention was to speak to the vast majority of cases, with a cut-off likely at 5 MW. Mr. Collins

said the issue was not only with the size of the unit, but also with the aggregate size of the resource being dispatched. Mr. Collins said he had confidence in aggregators to enter the market and take the small units, but expressed concern about applying the rules to aggregated resources.

Mohab Elnashar, IESO said the new CSA standard was expected to receive final approval by the end of August. That would make it applicable to new resources, he said, and the treatment of existing resources should be addressed in conversation between the IESO, the Ontario Energy Board, LDCs, and asset owners. Mr. Collins said the cost of the new provisions would be enough to shift the market, and suggested starting the conversation soon if there is any likelihood of applying them to existing resources. Ms. Griffiths said the provisions seemed to be in contradiction to work under way at Hydro One, and to discussions of the Energy Storage Advisory Group.

Mr. Motoc said the IESO's intention with the proposed update was to align market rules that are now one step behind current practices in distribution. Ms. Griffiths supported the IESO interest to initiate a stakeholder engagement with a wide enough reach to elevate the discussion beyond only storage. Mr. Urukov agreed the changes could apply to a wider range of market participants.

Adam Cumming, IESO said the intent at this stage in the process was to spur conversation with stakeholders. Ms. Savage said the issue also pertained to energy storage resources, and agreed on the need for broader stakeholder engagement. Mr. Collins acknowledged the point and said he appreciated the effort, but cautioned the Secretariat to be prepared for a lot of feedback.

Mr. Saunders reiterated that each form of DER has its own impact on the system. Mr. Collins stressed the need for a standard that would deliver consistency across all LDCs. Mr. Motoc said consistency was what the CSA standard would deliver. Mr. Collins said the IESO should be attentive to the time it takes to bring a new resource online, and Mr. Elnashar said staff were looking years down the road.

Agenda Item 6: IESO TP Review - Process and Composition

Mr. Doyle, said the review of the Technical Panel's process and structure had generated a lot of feedback, much of it from Panel members. He pointed to varied viewpoints on the Panel's composition between Technical Panel members and the constituencies they represent.

Mr. Samant said differences of opinion on composition might have been influenced by recent discussions before the Market Design Advisory Group, where participants were not directly privy to the Panel's ongoing processes. Mr. Doyle acknowledged the point and noted that wider stakeholdering had still shown a wider range of perspectives on some issues. At that point, staff realized they needed more time to review stakeholder input before coming back to the Panel with recommendations. He invited further feedback from members before the recommendations are presented in September.

Mr. Urukov asked what process the Secretariat would undertake to deliberate and resolve the differences of opinion. Mr. Doyle said the extra month to develop recommendations would enable staff to review the discussion more closely, within the wider context of Market Renewal and the new rulesets it will generate, to set criteria for the choices ahead. Mr. Urukov asked that the Secretariat explain the rationales behind those choices. Mr. Doyle agreed, and the Chair said the recommendations would be a high level proposal to generate further discussion.

Ms. Griffiths pointed to the quality of the submissions from different groups of market participants, including demand response, aggregated response, generators, and renewables, and said it was crucial for those voices to be represented on the Technical Panel. She said it was very powerful that 34 market participants had worked together on a joint submission, adding that she wasn't sure the IESO had ever seen that level of response across so many resource types.

Ms. Griffiths said a structure that included a non-IESO co-chair would give a market participant a shared role in setting agendas, thereby helping to democratize the Panel's process.

Ms. Griffiths recalled submissions in the last year that called for a 'markets committee', with representatives of different categories of market participants and co-chairs who worked together to develop agendas and move issues forward, particularly as proposed market rules amendments become more complex and controversial. Mr. Urukov said he wasn't sure a co-chair structure would solve the problem. The Chair said the group could resume discussion of the topic in September.

Ms. Griffiths said an MDAG representative could bring valuable perspective to the Panel. Mr. Samant asked whether the Technical Panel's purpose and terms of reference would change significantly as a result of the review process. Mr. Doyle said the intent was to review the Panel's process and representation and avoid duplication with other decision-making bodies. Mr. Samant asked whether the Panel's specific role in ensuring that the market rules reflect stakeholder engagement was on the table. Mr. Doyle acknowledged the question, adding that he didn't believe the process had generated any impetus to change that role.

Mr. Urukov asked about the formation of the Market Development Advisory Group and the differences between the IESO Governance and Decision-Making Advisory Group and the MDAG.

Ms. Savage summarized the process and related streams of engagement to date, noting that formation of the committee that became the MDAG was just one of 14 recommendations. Mr. Urukov asked whether the process was still in a development phase, or whether the intent was to work it into the functioning of the Technical Panel. Ms. Savage said the development phase was still under way, and may or may not produce changes.

As one example of a change in process, Mr. Doyle noted that draft market rules are now subject to stakeholder engagement before they are brought before the Technical Panel. Mr. Urukov

asked whether that process had already taken place. The Chair said it had, adding that the question now is whether there's still a need for the Technical Panel to post those proposals for general stakeholder review. Mr. Doyle said members would be asked to consider that point when staff present recommendations next month, along with the promised narrative on the underlying rationale.

Agenda Item 7: Other Business

There was no other business.

The meeting adjourned at 11:35 AM.

Appendix A

The following is the TP member rationale regarding MR-00439-R00-R05: Transitional Capacity Auction, Phase 1

TP Member	Rationale to Support Vote
Bieler, Robert Representing: Consumers	The amendments as reviewed by the Technical Panel have been offered for stakeholder input and in my view the language reflects the intent of the policy approach for the Transitional Capacity Auction. I believe that implementing the capacity auction will provide greater competitiveness in the market and therefore benefits to consumers. While this approach may not be preferred by all stakeholders, this is transitional by definition and as such will evolve over time. There will be future opportunities to amend the Market Rules to address additional concerns should they arise.
Collins, Ron Representing: Energy Related Businesses and Services	I support the Market Rule amendments proposed by the IESO staff for the Transitional Capacity Auction. The proposed Market Rule amendments support the development of a capacity market to address future resource adequacy and increase flexibility in the IESO-administered market. Such amendments will encourage broader competition for establishment of capacity in a transparent and cost-effective manner.
Forsyth, David Representing: Market Participant Consumers	I voted against the TCA proposed rules based on the fact that in my opinion the TCA design is fundamentally flawed without including the energy payment element for loads, and therefore discriminates against some market participants. I believe this violates the Electricity Act. The basis for this opinion is included in the joint submission from AMPCO and AEMA.

<p>Griffiths, Sarah</p> <p>Representing: Other Market Participants</p>	<p>I voted today to approve the MRA for the Transition Capacity Auction as I have long advocated for markets and competition for the IESO to meet the capacity needs. However, without resolving how demand response resources are compensated for the value they provide to the IESO is an issue, and undermines the competition in this auction. Many DR Market Participants do not agree with the approval of the MR and asked me to vote against or abstain, and DR participants continue to ask the IESO to postpone the first Auction at least 6 months until this issue is resolved. Both AEMA and AMPCO have provided a legal brief to IESO staff that outlines how a TCA without resolving issues regarding just and reasonable compensation to DR resources is discriminatory.</p> <p>My vote is based on the acknowledgement that the IESO staff have outlined, at the DRWG, a path forward and that they continue to engage with market participants/interested parties on this topic. The DR resource is a valuable resource to the overall electricity system but it needs to be treated in a comparable manner to ensure the ratepayer and the system receive its true value.</p>
<p>Lake, Robert</p> <p>Representing: Residential Consumers</p>	<p>Representing consumers, I want our electricity system to develop into one where we have what economists call pure competition. If we would have had numerous suppliers competing at the time of deregulation we probably would have a competitive, mature electricity market today, like Sweden and Norway. While we might not initially get all details perfectly correct with this proposal, there will be accommodation to make changes in the future, after we have had some experience with TCA. This is one good step towards developing an efficient, competitive electricity market.</p>
<p>Lasek, Phil</p> <p>Representing: Market Participant Consumers</p>	<p>Generally supported the shift to a different program, adding that it might not be optimal but is still in the interest of power consumers.</p>

<p>Reinmuller, Robert</p> <p>Representing: Transmitters</p>	<p>I reviewed the comments provided and while feedback on behalf of DR participants has points that will need consideration, it was clear in the IESO plans that the DRA will evolve into the TCA and therefore due consideration will be made while finalizing the ultimate construct.</p> <p>In an attempt to ensure the system is adequately prepared to meet future needs, continued progress has to be made now and consideration for DR will have to be integrated as we develop the ultimate market construct. DR resources that are traditional load customers have been connected to the grid on the basis of their electricity needs at the time and as such, transmission, distribution and generation infrastructure was developed to meet their demand over a number of years. In most cases investments in the system are amortized and recovered through rates over a long period of time. When we discuss DR and equivalency with generation a more in-depth study needs to be undertaken to fully understand how existing upstream infrastructure investments (generation and system) are affected by DR. The current market takes into account the system needs and provides multiple quantifiable ways to fulfill capacity and energy requirements. As we transform to better integrate DR, DER, storage, load displacement etc., we must ensure that we can guarantee the long term viability of the solution, while quantifying the exact value of each resource in the overall context of the system need. Critical elements like voltage control, frequency control, phase angle, inertia, response time, etc. will need to be reviewed along with regulating local load quantities. As AMPCO indicated, a “reliable and affordable energy supply is critical” and we can only achieve that goal with thoroughly quantifying the value proposition of all critical resources included in the TCA.</p> <p>I trust that IESO will follow through with including DR and other existing and new resources into the ultimate TCA construct. This is why I vote yes to recommend sending the TCA MR amendments to the IESO BOD for consideration.</p>
<p>Samant, Sushil</p> <p>Representing: Market Participant Generators</p>	<ul style="list-style-type: none"> • The immediate implementation of the TCA will assist the IESO in its goal of Reliability • Increased competition in the TCA will put downward pressure on the capacity auction clearing prices, which is of interest to Ratepayers • The MRAs associated with the TCA have been thoroughly discussed and comments received at the appropriate Stakeholder

	<p>Engagement(s)z</p> <ul style="list-style-type: none"> ○ The IESO is in the process of making changes for the use of Utilization Payments for out-of-market activations for Hourly Demand Resources (HDR). ○ The IESO has agreed to further stakeholder the use of Utilization Payments for in-market or economic activations of all Demand Response (DR) resources. ○ The issue concerning compensation to DR resources for economic activations is a wider market issue that would require years of stakeholdering and has implications for the entire design of Ontario's electricity market (energy and capacity). As a result, it is not worth holding up this worthy TCA initiative for an issue that will most likely end up having little relevance or merit after further study (see my note below). ○ Furthermore, there has been a non-material amount of economic activations of DR resources in the past. It is anticipated that this will continue into the near future. This weakens the argument that the TCA initiative is flawed. <ul style="list-style-type: none"> ● As a result, I feel that the MRAs reflect the intent of the design as contemplated in the Stakeholder Engagement(s) ● The MRAs are a proper fit with other Market Rules <p><i>Note:</i> The legal brief submitted by AMPCO/AEMA and made public by the IESO on August 12, 2019 further solidified my decision to vote in favour. This is because its main argument for delaying the TCA so that the IESO could address the issue of compensation to DR resources seemed to rely on Item 33 (Page 6) which discusses the basis upon which FERC made its March 2011 Order.</p> <p>In particular, the recommendations in FERC Order No. 745 as described in the legal brief hinge on the condition that there is a positive "net benefits test" which measures the "billing unit effect" when dispatching DR resources. I felt that in Ontario, this threshold requirement of a positive "net benefits test" is not met.</p> <p>My reasoning was that while costs (i.e. HOEP or MCP) would be reduced when dispatching DR resources, there was a commensurate increase in</p>
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	<p>end user rates as fewer units are consumed. This increase in end user rates is the result of the Global Adjustment increasing whenever the price of electricity (i.e. HOEP or MCP) decreases. In effect, while fewer MWhs would be consumed as a result of DR, the fixed costs of maintaining the electricity system are still the same. This results in an increase to what FERC refers to as the billing unit effect.</p> <p>As a result, I believe the requirement of a positive “net benefits test”, if similarly adopted in Ontario, would not be met.</p>
<p>Saunders, Joe</p> <p>Representing: Distributors</p>	<p>The proposed amendments reflected the evolution of the existing market, and were important to the system as a whole. He acknowledged the concerns raised by market participants, but said he supported the package as a first step, on the understanding that the IESO will take stakeholders’ concerns into account.</p>
<p>Savage, Jessica</p> <p>Representing: IESO</p>	<p>The proposed Market Rule amendment is a “first step towards enabling competition to provide reliability services, in this case, capacity. Building on the existing DR auction and enabling additional resources to compete now is a prudent approach to maximizing future participation when a more significant capacity need emerges in several years’ time.</p>
<p>Urukov, Vlad</p> <p>Representing: Market Participant Generators</p>	<p>The Market Rule amendment package presented to the Technical Panel reflects solely the implementation of the first phase of a staged approach transitioning the existing Demand Response Auction to a more competitive auction process. The Market Rule package was <i>stakeholdered</i> in a dedicated stakeholder engagement and reflects feedback provided by participants. In my assessment, the proposed Market Rules reflect the intent of broadening participation by enabling auction bidding of uncommitted, dispatchable generators, while retaining all features and functionality required by Hourly Demand Response (HDR) and dispatchable loads to continue to participate. In addition, the proposed rules appropriately retain features essential for the execution and settlement of the remaining commitments associated with the last Demand Response auction.</p> <p>With consideration given to the submissions by AMPCO and AEMA, I support implementing the proposed Market Rule amendments as drafted on the following basis: The IESO has demonstrated and reaffirmed that based on history, existing Demand Response Auction participants have not been utilized materially over and above out-of-market activations for</p>

	<p>testing. The IESO is in the process of addressing out-of-market activations through ongoing stakeholder engagement, targeting an implementation in advance of the first auction held under the proposed new rules.</p> <p>The assessment of the appropriateness of other forms of payments is a complex question that must consider a wide range of economic aspects across the breadth of applicable costs and supplier types. The IESO has committed to evaluate and report on an appropriate path forward in the context of the Ontario market in subsequent phases of auction development. While I support and encourage the IESO to ensure that the issue is addressed in a thorough and transparent fashion, this effort need not delay the implementation of the proposed set of Market Rules.</p>
<p>Wu, Julien</p> <p>Representing: Wholesalers</p>	<p>The proposed Market Rule amendments are necessary and important for planning and reliability, with the Transitional Capacity Auction coming into force very quickly. However, the deliberation has been reminiscent of the discussion initiated previously by Resolute Forest Products, where it felt as though nothing had been resolved in the end because both the substance and the process were so complex. In that instance, there was a dispute resolution going on in parallel with the Technical Panel discussion. Julien voted in favour of the draft amendment so that the concerned parties would not have its resolution process held up by the Panel, and could take the matter forward to the Board if they so choose as a next step.</p>

TAB 7

AMPCO INTERROGATORY 5

INTERROGATORY

Reference:

IESO Evidence, paragraphs 90 – 92.

The evidence mentions the AMPCO/AEMA Joint Legal Brief regarding compensation for demand response activation, and goes on to discuss the Technical Panel approval of the 3 market rule amendments. The evidence further references the IESO's planned study of the topic of activation payments for demand response resources as a reason for the Technical Panel's approval of the amendments.

Questions:

(a) Was the Joint Legal Brief provided to the Technical Panel, and if so on what date?

(b) What information did the Technical Panel have on the "*planned study*" when it made its decision on the amendments?

RESPONSE

(a) This question is not relevant to the present Application as it has no bearing on the issue as to whether the TCA market rules unjustly discriminate against DR resources, as alleged by AMPCO.

Nevertheless, yes, the IESO provided the Joint Legal Brief to the Technical Panel ("**TP**"). Prior to receiving the Joint Legal Brief, both AMPCO and AEMA individually submitted feedback to the Technical Panel in response to its request for comments due by July 9, 2019. This feedback was consistent with the position expressed in the Joint Legal Brief. On July 19, 2019, IESO management received the Joint Legal Brief directly, for the IESO's consideration. In the email presenting the Joint Legal Brief, drafted on behalf of AEMA and AMPCO, Colin Anderson wrote:

We are providing you with an advance copy of this brief so that you can review its content prior to any further action. Ultimately, we would like to post this in the public domain, but we are happy to discuss the timing of that with you, at your convenience.

AEMA and AMPCO are pleased to provide this brief to the IESO and we hope that it is found to be instructive and helpful. AEMA and AMPCO look forward to continuing to work with the IESO going forward.

Given that the brief elaborated on the position expressed by AEMA and AMPCO previously in response to the TP's request for stakeholder comments, the IESO ultimately elected to provide the Joint Legal Brief to the TP on August 12th, in advance of the August

1 13th TP meeting to vote on the TCA market rule amendments. The Joint Legal Brief was
2 discussed at the August 13th meetings, and panel members were given an opportunity to
3 postpone their vote on the TCA market rule amendments in order to to give members a
4 chance to review the AEMA/AMPCO legal brief in more detail. The TP voted against
5 delaying their vote, and voted 11-1 in favour of recommending the TCA market rule
6 amendments to the IESO Board.

7
8 Both the Joint Legal Brief, and AMPCO and AEMA's separate feedback, are published on
9 the TP webpage.

- 10
11
12 (b) At the time of the Technical Panel vote on the TCA amendments, the Technical Panel was
13 made aware that the IESO had committed to further study of the issue of energy payments
14 to DR resources in the Ontario market.

15

AMPCO INTERROGATORY 6

INTERROGATORY

Reference:

IESO Evidence, paragraphs 95 - 97.

The evidence discusses the approval by the IESO Board of the amendments, and the rationale for that approval, which includes the IESO's commitment to "completing an independent study to determine whether there would be a net benefit to Ontario consumers if demand response resources receive energy payments for economic activations".

Questions:

- (a) Was the Joint Legal Brief referred to in paragraph 90 of the evidence provided to the Board of Directors, and if so on what date?
- (b) What information did the Board of Directors have on the "planned study" when it made its decision on the amendments?
- (c) In respect of the Board's consideration of whether existing non-committed generators "may choose to wind down their operations" (as referenced in sub-paragraph 95(c) of the IESO Evidence), what particular information and/or data was provided to the Board of Directors in respect of this consideration, and what was the source of such information and/or data?

RESPONSE

The questions in this interrogatory are not relevant to the present Application as they have no bearing on the issue as to whether the TCA market rules unjustly discriminate against DR resources, as alleged by AMPCO.

- (a) Yes, the Joint Legal Brief was provided to the IESO Board of Directors, as part of an agenda item package, on August 20th, 2019, in advance of the August 28th, 2019 IESO Board meeting.
- (b) The IESO Board was made aware that the IESO had committed to further study of the issue of energy payments to DR resources in the context of Ontario, and had recently announced an extended stakeholder engagement on point.
- (c) It was communicated to the IESO Board in general terms that some existing non-committed generators had communicated the possibility that they may wind down their operations.

1 **AMPCO INTERROGATORY 7**

2
3 **INTERROGATORY**

4 Reference:

5 IESO Evidence, paragraph 98.

6 The evidence indicates that the IESO Board, in its consideration of the amendments, noted “a
7 *process issue related to the AEMA/AMPCO joint brief*” in respect of the Technical Panel’s
8 consideration of the amendments.

9 Question:

10 What was the “*process issue*” referred to in this evidence?

11 **RESPONSE**

12 Please see IESO Response to AMPCO IR 5, filed November 6, 2019.

TAB 8

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Sched. B, as amended;

AND IN THE MATTER OF an Application by the Association of Major Power Consumers in Ontario, pursuant to section 33 of the *Electricity Act, 1998*, S.O. 1998, c. 15, Sched. A and Rule 17 of the Ontario Energy Board *Rules of Practice and Procedure* for review of amendments to the Independent Electricity System Operator market rules related to the implementation of a Transitional Capacity Auction (MR- 00439-R00-R05).

AND IN THE MATTER OF a notice of motion by the Association of Major Power Consumers in Ontario, pursuant to section 33 of the *Electricity Act, 1998*, S.O. 1998, c. 15, Sched. A and Rule 17 of the Ontario Energy Board *Rules of Practice and Procedure* to stay the operation of amendments to the Independent Electricity System Operator market rules pending determination of the Application.

AFFIDAVIT OF

**Brian Rivard, Adjunct Professor at the Ivey Business School and
Research Director of the Energy Policy and Management Centre, Western University**

November 8, 2019

Revised: November 21, 2019

50. The Industrial Conservation Initiative (“ICI”) is a government policy that defines how the costs in the Global Adjustment are allocated to different classes of consumers. Large consumers, known as Class A consumers, are charged global adjustment on the basis of their share of the total system demand during the highest five peak hours of the year. Class A consumers include consumers with an average monthly peak demand greater than 1 MW and consumers in certain manufacturing and industrial sectors, including greenhouses with an average monthly demand greater than 500 kilowatts (kW). Smaller consumers, known as Class B consumers, pay Global Adjustment as a monthly fee based on the kilowatt-hours of electricity they consume in the month, or as part of their regulated time of use prices. I understand that most AMPCO members qualify as a Class A consumer.
51. The Board’s Market Surveillance Panel has shown that the ICI provides Class A consumers with an extreme price incentive to reduce their demand in the expected system peak demand hours to avoid paying the Global Adjustment. This will provide DR resources that are Class A consumers a competitive advantage over non-committed dispatchable generators in the new TCA. I demonstrate this in Figure 4. Attached hereto as **Exhibit “E”** is the Market Surveillance Panel’s Report.
52. Figure 4 assumes the same characters for DR Corp. and GEN Corp. as Figure 1, except it also considers the effects of the incentives provided by the ICI. Both DR Corp. and GEN Corp. qualify as a Class A consumer. Assume that both companies anticipate the Global Adjustment charge to be \$5,000/MWh. The Global Adjustment is charged based on the metered quantity consumed at the level of the IESO (i.e., based on metered quantities at the transmission level). As a result, DR Corp. can avoid Global Adjustment charges by self-supplying its demand and reducing its net-metered quantity with the IESO to 2MWh. GEN Corp. cannot avoid Global Adjustment by generating. As Figure 4.A demonstrates, even if DR resources are not provided an energy payment for economic activations, DR Corp. has an extreme incentive to generate electricity to avoid $\$5,000 \times 4\text{MWh} = \$20,000$ in Global Adjustment charges. This decreases the opportunity cost of not incurring the fixed avoided cost to maintain the availability of its generator by

\$20,000. DR Corp. is clearly better off by maintaining the availability of its generator; it will do so even if it does not earn an availability payment through the TCA. DR Corp. can offer a capacity price of \$0/MWh in the TCA. In effect, the ICI rewards DR resources that are also Class A consumers by compensating them twice for making their generator available; once through the avoidance of the Global Adjustment (which recovers the capacity cost of the committed generator) and once through the availability payment. As Figure 1.B demonstrates, paying DR resources an energy payment for an economic activation would only further DR Corp.'s competitive advantage over the non-committed generator of GEN. Corp.

TAB 9

Demand Response Working Group Meeting Materials

Demand Response Working Group

June 19, 2019

Meeting Agenda

Time	Agenda Item
9:00am	Welcome
9:05am	DRWG Update
9:10am	Presentation - Revised DRWG 2019 Work Plan
9:40am	Presentation & Discussion - Capacity Obligation Transfer in the TCA
10:00am	Presentation – HDR Resource Testing Results
10:15am	Presentation & Discussion – HDR Resource Testing Proposal
10:35am	Break
10:50am	Presentation & Discussion – Cost Recovery for Out-of-Market Activation Payments - HDR Resources Proposal
11:40am	Presentation & Discussion - Energy Payments for Economic Activation of Demand Response Resources Research Plan
12:10pm	Wrap-Up & Next Steps
12:20pm	Adjourn

Cost Recovery for Out-of-Market Activation of Hourly DR Resources - Proposal

Demand Response Working Group

June 19, 2019

Purpose

- Discuss a proposal to provide HDR resources cost recovery for out-of-market activations (i.e. testing or emergency activations) consistent with treatment of other resource types

HDR Activations

- There are two ways an HDR resource can be activated

In-Market

- Based on market economics
- HDR energy bids intended to reflect the maximum they are willing to consume at given price
- HDR will be “activated” when the price for electricity is greater than their willingness to consume

Out of Market

- HDR resources can be activated outside of market economics to respond to a:
 - 1.Capacity test, or
 - 2.Emergency Control Action
- HDR will be activated even if the electricity price is lower than their bid price

- Observed bid prices and stakeholder feedback indicate that activation costs (explicit and opportunity) can be significant for HDR resources

Out Of Market Costs

- When other resource types (dispatchable load, generator, import) are dispatched out-of-market they are eligible for some form of “make-whole-payment”
 - A make-whole payment may apply when a participant faces a shortfall between their resource bid/offer price and the revenue earned through market clearing prices
 - The payment restores the participant to the financial situation they would have been in as implied by their bids/offers
- HDR resources do not receive a make-whole payment for out of market activations
- These costs may be reflected in their capacity offers potentially increasing the cost of the capacity

Implications for ICA and TCA Participation

- In the Demand Response Auction, HDR participants could reflect the expected cost of out-of-market activations in DR Auction offer prices
 - Since the DR Auction was for DR only, all HDR resources were impacted equally
- In the context of the proposed capacity auctions, where HDR will be competing against other resource types, how these costs are recovered will potentially impact market efficiency

Proposal

- IESO's initial assessment concludes that providing HDR resources cost recovery for out-of-market activations is:
 - appropriate as testing or emergency activations can occur at a price below bid price of an HDR
 - consistent with energy market and existing design treatment of other resources (including dispatchable load)

Potential Design Considerations/Issues

IESO requests feedback from stakeholders on potential design considerations, including:

- Most appropriate method for determining compensation; for example:
 - Using energy bids as representative costs
 - Historical precedents, such as CBDR activation payments
 - Identify costs on individual or type of resource basis
- Undue administrative burden of potential options
- Operational impacts on market participants, for example measurement data requirements
- Other considerations that should be assessed

Next Steps/Timelines

- Stakeholders to provide feedback on concept and design considerations by July 5
- Work with stakeholders on design details of this concept and initiate market rule amendment process during Q3, 2019
- Timeline
 - Implement changes for May 2020 TCA obligation period to enable DR participants to incorporate change to offers in December TCA

TAB 10

Demand Response Working Group – Meeting Notes

June 19, 2019

Dates held: June 19, 2019	Time held: 9:00am to 1:00pm	Location: Crowne Plaza, Toronto International Airport
Company	Name	Attendance Status (A) Attended; (WebEx) Attended via WebEx
Alectra Utilities	DeJulio, Gia	Attended
AMPCO	Anderson, Colin	Attended
Bruce Power	Zhang, Alvin	Webex
Cascades	Ross, Jean-Philippe	Attended
Centrica Business Solutions	Cavan, Peter	Webex
City of Toronto	Gu, Michael	Attended
Cpower Energy Management	Hourihan, Mike	Webex
Customized Energy Solutions	Luukkonen, Paul	Attended
Customized Energy Solutions	Withrow, David	Attended
Ecobee	MacCaull, Aira	Attended
EDA	Williams, Lynn	Attended
Enel X	Chibani, Yanis	Attended
Enel X	Griffiths, Sarah	Attended
Great Circle Solar Management Corp	Wharton, Karen	Attended
HCE Energy Inc.	Crown, Mike	Webex
Ivaco Rolling Mills	Abdelnour, Francois	Attended
Ministry of Energy	Akhter, Freed Kersman, Paul	Webex
MSP	Yauch, Brady	Attended
Northland Power	Samant, Sushil Zajmalowski, Mike	Attended
NRG Curtailment Solutions, Inc.	Briggs, Kara Popova, Julia Vukovic, Jennifer	Webex
Ontario Energy Board	Brown, David	Attended
Ontario Power Generation	Kim, Jin	Attended
Power Advisory	Simmons, Sarah	Webex
Power Advisory	Lusney, Travis	Attended
Resolute Forest Products	Degelman, Cara	Webex
Rodan Energy Solutions	Forsyth, Dave Quassem, Farhad	Attended
Rodan Energy Solutions	Goddard, Rick	Webex
Newmarket Tay Power	Gaye-Young, Donna	Teleconference
Southcott Ventures	Lampe, Aaron	Attended

Dates held: June 19, 2019	Time held: 9:00am to 1:00pm	Location: Crowne Plaza, Toronto International Airport
Company	Name	Attendance Status
Strategic Policy Economics	Tzolov, Marty	Webex
Rayonier Advanced Materials	Laflamme, Serge	Attended
Toronto Hydro-Electric Services Limited	Marzoughi, Rei	Webex
Voltus, Inc.	Grav, Jorgen	Attended
Voltus, Inc.	Strawczynski, Zygmunt	Webex
Independent Consultant	Coulbeck, Rob	Attended
IESO	Campbell, Alexandra	Attended
IESO	Chapman, Tom	Attended
IESO	Cumming, Adam	Attended
IESO	Karapetyan, Samvel	Attended
IESO	King, Ryan	Attended
IESO	Kula, Leonard	Attended
IESO	Nicholson, Tina	Attended
IESO	Rashid, Fahad	Attended
IESO	Singh, Diljeet	Attended
IESO	Short, David	Attended
IESO	Trickey, Candice	Attended
IESO	Woo, Phillip	Attended
IESO	Young, Jennifer	Attended

Please report any corrections, additions or deletions by e-mail to engagement@ieso.ca
All meeting materials are available on the IESO web site at: <http://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Working-Groups/Demand-Response-Working-Group>

Introduction – Jennifer Young – IESO

The IESO welcomed participants and described the format of the meeting.

Agenda Item 1: DRWG Update - Alexandra Campbell (IESO) and Candice Trickey (IESO)

With the introduction of the TCA, there is renewed focus to the DRWG and the group will be expected to move faster during the upcoming months. As part of refocusing the group, Candice Trickey will be the new chair of the DRWG. Alexandra Campbell will continue to participate as needed.

The IESO noted that an additional presentation has been added to the agenda regarding how performance testing is conducted for other IESO programs (Non-Demand Response Resources).

Agenda Item 2: Presentation - Revised DRWG 2019 Work Plan
Speaker: Candice Trickey (IESO)

Candice presented the revised 2019 DRWG work plan that includes items raised by stakeholders and the IESO. The IESO noted it is looking to gather feedback on this proposal. The purpose is to ensure that the current Demand Response Auction (DRA) program flows smoothly into Transitional Capacity Auction (TCA) and then to the Incremental Capacity Auction (ICA).

A participant asked if only the Market Manual 12.0 would be considered for documentation updates should there be changes related to Contributor Management, Measurement Data Submission and DR Audit?

The IESO explained that it is too early to specify what document changes will be made. It will be necessary to understand what are the opportunities and challenges before progressing to the next steps of documentation changes.

Participants asked for more clarity regarding different aspects of Single Schedule Market (SSM): Hourly Demand Response (HDR) participation types, HDR settlement prices, and settlement calculations.

The IESO committed to providing some further documentation on this topic.

Editor's Note: Additional information on the proposed SSM design was sent to DRWG participants on June 26, 2019. The materials can be found on the IESO's website [here](#).

Agenda Item 3: Presentation & Discussion - Capacity Obligation Transfer in the Transitional Capacity Auction (TCA)
Speaker: David Short (IESO)

David presented the current work on changes to Capacity Obligation Transfers in the TCA based on the received stakeholder feedback.

A participant asked how does the IESO define transferring capability within entities. Does it mean the delivery points associated with the entity? Sometimes one entity can have two delivery points - one withdrawing, one injecting.

The IESO explained that an entity assigns a resource to meet the obligation. For a physical resource, there is a delivery point associated with it. It is up to the transferor and transferee to agree and accommodate the transfer between uncongested zones.

A participant asked how does an entity qualify for a transfer and whether it is based on the delivery point.

The IESO explained at a high level what the qualification requirements are to transfer a capacity obligation from one resource to another.

Editor's Note: These requirements are included in Section 9 of draft Market Manual 12, prepared for the TCA and available on the IESO website [here](#). The requirements for qualifying for a transfer are also described at a high-level in Section of 5.4.2 the TCA Phase 1 Design Document (available on the IESO website [here](#)), and in Chapter 7, Section 18.9 of the Market Rules (available on the IESO website [here](#)). The capacity obligation transfer in Phase 1 of the TCA is based on the obligation, which is set by organization and zone, not by delivery point.

A participant asked if a physical resource can have multiple delivery points. The IESO will get back on this request. The IESO further explained that in case of a physical connection, the facility should have a delivery point. There are no multiple delivery points within a zone for virtual resources.

Editor's Note: A capacity auction market participant with a capacity obligation may use multiple resources (i.e., multiple delivery points) to fulfil its obligation so long as the resources linked to the physical capacity obligation have the same-metered market participant (MMP).

Agenda Item 4: Presentation – Demand Response Testing Results **Speaker: Diljeet Singh (IESO)**

Diljeet presented the additional DR testing results as requested by the stakeholders during the April 25th DRWG meeting.

A participant noted that at a prior DRWG meeting, Enel X presented difficulties faced by HDR, specifically with setting the baseline. The IESO explained the current focus is the existing criteria for HDR testing. The IESO did take a note of the comments made by Enel X, and it will consider those as the IESO evolves the HDR testing process.

A participant asked why are dispatchable loads (DL) tested for 15 minutes (three, five-minute intervals) and not for more intervals. The IESO explained that DL is a 5-minute resource that participates in the market, and IESO has good visibility of the DLs' in-market performance, therefore IESO regards 3-interval tests is sufficient to evaluate their performance.

A participant commented that the method of evaluating the test results for DLs and HDRs is different, so drawing comparisons where the results show better performance for DL versus HDRs is not correct. The IESO explained that the intention is not to compare, but to present HDR results.

Another participant made a point that DL's face more stringent testing criteria. If a DL doesn't follow dispatch instructions, then the financial implications can be bigger compared to the HDRs. The IESO acknowledges that HDR is a new resource and that there is an opportunity for the IESO to better understand their level of performance and what is holding HDR resources from passing tests,

whether it is the testing methodology or the capabilities of the resource. IESO is open to further discussions.

A participant commented that they want to understand testing criteria better and asked for additional details on testing, such as, for example, a confidential performance report on a monthly basis to be benchmarked against peers' performance, similar to what metering service providers currently receive. This will enable to clearly identify which HDRs cause the problem and address it.

The IESO indicated that the purpose is to build the confidence that resources are there to meet dispatch instructions when called upon and if there is something in the testing that can be modified then we can have a further discussion.

The participants asked if it is possible to publish data behind regular testing results to set the benchmark publicly, so when working on addressing HDR low performance issues all participants have the same foundation.

The IESO will consider this recommendation as it evolves the HDR testing.

A participant noted that the way the results are calculated is completely dependent on the baseline. The participants expressed the need for more details on how the IESO calculates the baselines.

The description of how the IESO calculates the baselines is included in the Market Manual 5.5, Section 1.6.26.3.

The participants asked if the IESO considered Enel X proposal regarding measurement verification.

The IESO replied that the Enel X proposal will be considered when working on the HDR testing updates.

A participant, who has a facility consisting of both DL and HDR resources, indicated that they face challenges when the IESO tests their DL resource separate from the HDR resource and ideally, it would be best if they were tested at the same time. This becomes challenging for the participant when the operation of their DL is dependent on a portion of their HDR capacity.

The IESO acknowledged the participants concern.

Editor's note: Currently the IESO is not considering a change to the testing requirement for participants that have both HDR and DL obligations. These types of participants can be subjected to activations separately and are required to comply with both HDR and DL capacity obligations, which reflect the real-time activation scenario.

Agenda Item 5: IESO Performance Testing
Speaker: Diljeet Singh (IESO)

Diljeet presented how the IESO conducts performance testing for other products and services that it procures outside of the DRA.

A participant asked for which facilities the unit readiness test is applicable.
The IESO explained that it is applicable to all non-quick start facilities whether under contract or not.

Agenda Item 6: Hourly Demand Resource (HDR) Testing Proposal
Speaker: Diljeet Singh (IESO)

Diljeet presented the IESO's proposal for changes to testing of HDR resources. The deadline to provide written comments is July 5th.

A participant asked to provide more clarity on how many times the IESO will test the resources, since in one slide the IESO mentioned at least once and on another slide it was mentioned up to two times.

The IESO explained that the IESO has authority to test DR resources twice per commitment period, but tests DR resources at least once every commitment period.

A participant thanked the IESO for taking steps towards revisiting testing process. One participant found that many issues are in the measurement and verification process and asked if this can be included in the future considerations for updating the testing procedure.

The IESO thanked the participant for the comment.

A participant asked to provide more clarity when the resources will be re-tested.

The IESO responded that the plan is to revise the testing criteria which may allow a reduction of testing duration from the full 4 hours. Having said that, the IESO highlighted that it will always reserve the right to test resources for the full 4 hours for reliability purposes.

One participant asked if receiving a Standby report without an advisory notice will mean that Demand Response Market Participants (DRMPs) should expect in market activation the next day.

The IESO explained that there will be an Advisory notice before issuing a standby notification. DRMPs should understand the reason behind receiving a standby notification. If there is no advisory notice issued that will imply that this is an in-market standby notification. DRMPs should confirm if there were any triggers for in-market standby notification met before following up with the IESO.

As a follow up, the participant asked if they can see in the standby notice for what hours they will be activated during the dispatch day.

The IESO responded that triggers for a standby notice are identified in the Market Manual 4.3. In the standby notice the IESO doesn't specify for which hours the resource will be activated. The IESO sends

activation notices at least two hours before the actual activation, where it specifies for which hours the resource will be activated. The rationale is that the IESO wants to make the activation decision as close as possible to dispatch hour to appropriately account for real-time conditions.

One participant asked what happens if a resource increases or decreases its capacity obligation significantly (due to transfer) after they pass a four-hour test.

The IESO responded that this will be explored as part of the revised test criteria.

A participant asked what is the relationship between in-market and test activations given the expectation is to have more in-market activations with \$200 trigger, especially what is the implication if the resource successfully met in-market activation.

The IESO responded that when the IESO schedules resources for a test, it considers not only past test activations but also past in-market activations.

Agenda Item 7: Presentation & Discussion – Cost Recovery for Out-of-Market Activation

Payments: HDR Resources Proposal

Speaker: Ryan King (IESO)

The IESO presented the proposal for cost recovery for out-of-market activation of HDR resources and possible methods of providing compensation for out-of-market activations.

One participant noted that if loads were to receive some sort of economic payment, outside of out-of-market framework, that may change the bid that they put in.

The IESO noted that it can be a consideration with the work underway for the energy payment for economic activation.

Of the various methods and precedents presented on how to determine compensation, one participant asked if Capacity Based Demand Response (CBDR) activation payments were based on \$/MW.

The IESO replied that cost recovery was set at a \$/MW price for CBDR.

One participant asked which compensation method presented results in the most administrative burden on the IESO?

The IESO replied that quasi-regulatory cost recovery model may have the highest administrative burden, however, at this point; the IESO is looking at all possible compensation models.

One participant suggested that it may be useful for the DRWG that the IESO presents how other resource types are being paid for out-of-market activations.

The IESO indicated that on a high level, the payment is a function of the bid/offer.

One participant noted that when testing a generator to meet some requirements, they have to get scheduled, they have to offer at a price that may not be economic to make sure that they meet testing requirements, which can result to higher costs than generators will be compensated.

The IESO clarified that contract requirements and IESO market testing are treated differently. The IESO also noted that with regard to compensation design considerations the IESO was comparing with existing market testing processes.

One participant thanked the IESO for considering cost recovery models for out-of-market activations and is looking forward to the next steps.

The IESO noted also that work will require market rule changes and the deadlines are aggressive. The market rule amendment process will start Q3, 2019.

Agenda Item 8: Presentation & Discussion - Energy Payments for Economic Activation of Demand Response Resources Research Plan

Speaker: Candice Trickey (IESO)

The IESO presented the research plan for energy payments for economic activation of DR resources and asked for input from stakeholders (feedback is due by July 19).

The participants asked if the assessment to be undertaken would mirror the cost effectiveness element of FERC Order 745.

The IESO replied that the market context is different in Ontario. This is why it may not be possible to completely mirror the cost effectiveness element of FERC Order 745. The assessment would require understanding what elements from the FERC Order 745 would be applicable in the Ontario context.

One participant expressed its concern that there is no end date on this particular analysis and could take long to complete.

IESO will need time to do a proper analysis, however, the IESO noted that hopefully the progress we have demonstrated on the non-economic activation cost recovery is a show of good faith and gives some confidence that we will have good progress on this. The IESO understands this is of high importance to the DR community.

While a net benefit analysis to ratepayers will be examined in the energy payments analysis, one participant expressed if a similar net benefit analysis that was used for the TCA be applied for this analysis.

IESO mentioned this is something that can be looked at if there is a relevant parallel.

Agenda Item 9: Wrap-Up & Next Steps

Speaker: Candice Trickey (IESO)

The IESO recapped the main topics of the meeting and reminded important deadlines for feedback from stakeholders.

The participants expressed that they will be happy to be engaged in HDR testing and measurement data submissions discussions rather sooner than later.

The IESO thanked the participants for the comments.

Responsible Party	Action Item
IESO	Provide more clarification on which HDR (physical/virtual) will be bidding in DAM, which will be settled on nodal, which on the uniform price. <i>Editor's Note: Additional information on the proposed SSM design was sent to DRWG participants on June 26, 2019. The materials can be found on the website here.</i>
IESO	Provide further information on the methodology of calculating testing results and how the IESO calculates the baselines. (i.e. provide Market Manual reference).
IESO	Clarify what happens if a resource increases or decreases its capacity obligation significantly after they pass a four-hour test.
Stakeholders	Stakeholders to refer to the DRWG slide deck for the list of items and dates in the 2019 Work Plan requiring their feedback.

TAB 11

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Sched. B, as amended;

AND IN THE MATTER OF an Application by the Association of Major Power Consumers in Ontario, pursuant to section 33 of the *Electricity Act, 1998*, S.O. 1998, c. 15, Sched. A and Rule 17 of the Ontario Energy Board *Rules of Practice and Procedure* for review of amendments to the Independent Electricity System Operator market rules related to the implementation of a Transitional Capacity Auction (MR- 00439-R00-R05).

AND IN THE MATTER OF a notice of motion by the Association of Major Power Consumers in Ontario, pursuant to section 33 of the *Electricity Act, 1998*, S.O. 1998, c. 15, Sched. A and Rule 17 of the Ontario Energy Board *Rules of Practice and Procedure* to stay the operation of amendments to the Independent Electricity System Operator market rules pending determination of the Application.

AFFIDAVIT OF

**Brian Rivard, Adjunct Professor at the Ivey Business School and
Research Director of the Energy Policy and Management Centre, Western University**

November 8, 2019

Revised: November 21, 2019

one by reducing demand and one for producing electricity. Doing so fails to recognize that DR Corp. is effectively compensated twice for reducing demand while GEN Corp. receives no net benefit for producing electricity (i.e., it earns zero net revenue). I argue that when designing fair and efficient electricity markets, it is important to understand the underling incentives of participants.

89. Second, the Amendments do not place DR resources at a competitive disadvantage to non-committed dispatchable generators in the TCA as per AMPCO's assertion. To the contrary, pay DR resources the market price for economic activations would place non-committed-generators at a competitive disadvantage. Through examples, I show that paying DR resources the market price for an economic activation compensates them twice for their demand reduction. This double benefit would allow them to bid lower in the energy market, and offer lower capacity prices in the TCA to the disadvantage of non-committed generators. Furthermore, I demonstrate that DR resources that are Class A consumers already have a competitive advantage over non-committed generators in the TCA since they can avoid paying Global Adjustment as a capacity resource. This later point creates incentives for large-consumers to invest in behind-the-meter generation at a cost greater than the cost to operate and maintain a non-committed generator facility.
90. Third, the Amendment is consistent with the promotion of fair and equitable competition as it provides the proper incentives for DR resources to operate efficiently within the TCA and the IESO's energy market.
91. Fourth, the presence of the Global Adjustment means that the FERC net benefits test will rarely if ever be satisfied in Ontario. Furthermore, there would be significant complications for the IESO to implement the net benefits test in Ontario due to the Global Adjustment. In my opinion, the evidence shows that there is no net benefit to even further studying the merits of the application of the net benefits test in Ontario.
92. Fifth, Ontario has made significant progress towards reducing the types of barriers to DR resources that concerned the Commission at the time of FERC Order No. 745. In