

# Energy Payments for Economic Activation of DR Resources

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October 10, 2019

# History and Context

- Energy payments for the utilization of demand response (DR) resources has been an ongoing topic of discussion at the Demand Response Working Group (DRWG)
- In 2017, the IESO commissioned Navigant to prepare a discussion paper in order to facilitate an informed discussion on the topic. The Navigant paper concluded, in part, that the “arguments for and against utilization [energy] payments are nuanced and prudent. Responsible stakeholders can arrive at different conclusions based on preferences for evaluation criteria” and that “Additional effort is required to estimate the quantum of the impacts”
- The IESO discussed the findings of the Navigant report with stakeholders at the DRWG in 2018 (refer to pre-reading materials)
- Stakeholder interest in energy payments was renewed in early 2019 as a result of the proposed market rule amendments to enable the then “transitional capacity auction”, now “capacity auction”
- Given that this is a complex issue and would be a substantive change to Ontario’s energy market, the IESO determined that a broader stakeholder engagement was needed to advise on the issue

# Today's Overview

1. Introductions
2. Engagement plan overview
3. Develop a common understanding of the energy payment issue
  - Q and A on pre-reading materials
  - Review of problem statement
4. Review draft research and analysis scope
5. Break-out discussion on draft research and analysis scope
6. Summary

# Engagement Objectives for Today's Meeting

- Develop a common understanding of the energy payment issue amongst all stakeholders
- Review the high-level proposed approach and schedule for undertaking this work with stakeholders
- Facilitate a break-out discussion to ensure the scope of the research to be conducted considers different stakeholder perspectives

## 2. STAKEHOLDER ENGAGEMENT PLAN: OVERVIEW AND APPROACH

# Stakeholder Engagement Plan

- To be conducted in accordance with the IESO's approved [engagement principles](#)
- Draft engagement plan posted for comment on August 22
- Engagement Objective
  - Provide a forum for stakeholders to advise on the research and analysis required to help inform the IESO's decision on whether demand response (DR) resources will be compensated with energy payments for in-market activations.

# Stakeholder Engagement Plan continued

- Feedback from stakeholders is needed on:
  - Inputs and outputs of third-party research and analysis to inform IESO's decision on the energy payment issue
  - Other information that should be considered
  - The IESO's draft decision and rationale on whether DR resources will be compensated with energy payments for in-market activations

# Engagement Schedule

<b>August 22, 2019</b>	Engagement launched and Draft Engagement Plan posted for comment
<b>October 10, 2019</b> <i>(Today)</i>	Review engagement plan and objectives Review and gather feedback on draft scope of research and analysis
<b>November 2019</b>	Final study scope and study plan
<b>Q1 2020</b>	Draft research findings and/or analysis for stakeholder review
<b>Q1 2020</b>	Final research findings and analysis
<b>May 2020</b>	Draft IESO decision and rationale for stakeholder review
<b>June 2020</b>	Final IESO decision and rationale

- IESO will be gathering stakeholder feedback throughout the engagement
- Any additional feedback on the draft engagement plan can be submitted to [engagement@ieso.ca](mailto:engagement@ieso.ca)

# 3. DISCUSSION OF THE ENERGY PAYMENT ISSUE AND PROBLEM STATEMENT

# Purpose

- Develop a common understanding of the energy payment issue amongst all stakeholders
- To seek feedback and input on the problem statement that will be answered at the end of this engagement

# Overview of the Issue

- Demand Response can be provided in Ontario by dispatchable loads and Hourly Demand Response (HDR) resources
- When a dispatchable load or HDR resource is activated to reduce consumption based on “in-market” signals in the energy market, i.e., when the applicable market price is greater than the resource’s energy bid, the DR resource does not currently receive an energy payment for reducing its consumption.
  - Demand Response Market Participants (DRMPs) that have a capacity obligation, awarded through the auction process, must register as either a dispatchable load or HDR resource. The DRMP fulfills its capacity obligation by making such capacity available in the energy market by submitting bids. The energy bid for DRMPs is required to be greater than \$100 and less than \$2000
  - Dispatchable loads can participate in the energy market with or without a DR capacity obligation
  - A description of how dispatchable loads and HDR resources are activated is described in the slides that follow

# Activation of Dispatchable Loads

- Dispatchable loads are activated in the energy market on a 5-minute basis
- In-market activation occurs when the shadow price, a 5-minute price determined by the constrained real-time run of the dispatch algorithm - is greater than the dispatchable load's energy bid price
- Under the current design, the settlement process reconciles any difference between the energy bid and the market clearing price

# Activation of HDRs

- HDRs are activated in the energy market on an hourly basis, for a time block up to 4 hours
- In-market activation occurs when the pre-dispatch shadow price at the node – determined through the constrained run of the dispatch algorithm - 3 hours prior to the activation, is greater than the HDR's energy bid price
- HDRs are provided with notice of the activation 2.5 hours before the start of the first dispatch hour to which it relates

# Out-of-Market Activations

- HDR resources can also be activated out-of-the market for a capacity test or emergency control action
  - In these cases, the HDR resources can be activated when they are not “in-market”, i.e., even if the pre-dispatch shadow price 3 hours prior to the activation is lower than the resource’s energy bid price
- Compensation for out-of-market activation of HDR resources was recently discussed through the DRWG and is out of scope for this engagement

# Establishing a Common Understanding of the Energy Payment Issue

- The following pre-reading materials were circulated in advance to build stakeholder understanding of the issue:
  - Navigant Demand Response Discussion Paper (December 2017)
  - DRWG presentations where the Discussion Paper findings were discussed (January and March 2018)
  - FERC Order 745 as supplementary background
- Do you have any questions, based on the pre-reading materials and concepts described in the earlier slides, to better understand the:
  - Characterization of the energy payment issue; and,
  - Factors considered in the previous work?
- Are there any other materials that should be considered within this stakeholder forum?

# Stakeholder Submissions

- Stakeholders are invited to provide their own submissions that help develop an understanding of the energy payments issue for consideration in this engagement
  - Please identify interest in doing so by emailing [engagement@ieso.ca](mailto:engagement@ieso.ca) by October 25, 2019
  - Submissions are requested by November 13, 2019 so that these materials can be posted and reviewed in advance of the next engagement meeting (November 27, 2019) *\*dates to be confirmed*
  - Stakeholders will be invited to answer questions on their submissions at the next engagement meeting

# The Proposed Problem Statement

Should demand response resources receive energy payments when they are activated in-market?

# Definitions

- Where:
  - **Demand Response** refers to a resource that that is registered with the IESO as either a dispatchable load or HDR
  - **Energy Payment** refers to a payment for reducing energy consumption that is based on the amount of energy reduced and the applicable market price
  - **In-Market Activation** refers to the resource being scheduled to reduce consumption when the applicable market price is greater than the resource's energy bid

# Feedback on the Problem Statement

- Does the draft problem statement reflect the question that needs to be answered at the end of this engagement? If not, please provide and describe an alternate statement for consideration
- Stakeholders are invited to provide written feedback by October 25, 2019 by e-mailing [engagement@ieso.ca](mailto:engagement@ieso.ca)

# 4. DRAFT SCOPE OF RESEARCH AND ANALYSIS

# Purpose

- To review the draft scope of research and analysis, which will be used to inform the IESO's answer to the problem statement (discussed as a previous agenda item) and seek stakeholder feedback

# Proposed Decision Framework

**Problem Statement:** *Should DR resources receive energy payments for in-market activations?*

**Criteria:** *Is there an overall net-benefit to consumers over the long-term?*

**Research and Analysis:** *will form the basis to which the criteria will be applied (will be supported by the Brattle Group)*

# Draft Scope of Research and Analysis

The research and analysis will answer the following questions for both current market and the market design after the Market Renewal Program is implemented (where applicable):

- 1. What is the relevant Ontario context and history?**
  - History of DR programs and structures, current levels of DR participation and status quo outlook for future participation
- 2. What are the economic first principles that drive the activation decision for demand response resources?**
  - Including: marginal cost of dispatch, wholesale market prices, impact of “retail” rates, impact of activation payments which may or may not apply
- 3. How are in-market activations compensated in other jurisdictions and what are the key takeaways for Ontario?**

# Draft Scope of Research and Analysis continued

## **4. If compensation is provided, what could the compensation model look like in Ontario?**

- The purpose of this question is to provide the lens through which the benefits, risks and implications can be assessed; it should not be viewed as an indication of the answer / outcome to the problem statement

## **5. What are the benefits, risks, and implications of a) the status quo, and b) providing DR with energy payments in the near and longer terms?**

- Considers impacts on: market and economic efficiency, competition and level of DR participation, cost-recovery, consistency and fairness vis-à-vis other market participants and other indirect impacts

# Stakeholder Feedback on the Criteria and Scope of Research and Analysis

- Feedback on the scope of research and analysis will be collected through the upcoming break-out discussions
- Stakeholders are also invited to provide written feedback, on the following questions, by October 25, 2019 by e-mailing [engagement@ieso.ca](mailto:engagement@ieso.ca)
  - Is the decision criteria appropriate?
  - What else should be considered in scope of the research and analysis and why?
  - Are there any questions in the scope of the research and analysis that should be refined or removed? If so, why?

# 5. BREAK-OUT DISCUSSIONS

# Break-Out Discussions

- The purpose of the break-out discussions is to build awareness of the various perspectives and considerations related to this issue
- The discussion will help identify additions / refinements to the scope of the research and analysis that will be carried out to inform the IESO's decision
- The focus question for the discussion is:

What are the potential pros and cons of providing DR resources with energy payments for in-market activations?

# Break-Out Discussion Logistics

- Break into small groups
- Discuss focus question as a small group (35 mins)
  - Please write key discussion points on flip-chart paper with markers provided
- Report-back key discussion to all (5 mins per group)
  - Elect one presenter to provide the highlights
- IESO will collect, record, and post flip-chart notes on engagement webpage
- Webinar participants are invited to participate in a virtual break-out discussion

# Break-Out Discussion Focus Question

What are the potential pros and cons of providing DR resources with energy payments for in-market activations?

## 6. SUMMARY AND NEXT STEPS

# Summary of Stakeholder Feedback

Feedback Topic	Details
Understanding the energy payments issue	<ul style="list-style-type: none"> <li>Stakeholders to signal their intent to provide submissions that help develop an understanding of the energy payments issue</li> </ul>
Draft Problem Statement	<ul style="list-style-type: none"> <li>Does the draft problem statement reflect the question that needs to be answered at the end of this engagement? If not, please provide and describe an alternate statement for consideration</li> </ul>
Decision Criteria and Scope of Research and Analysis	<ul style="list-style-type: none"> <li>Is the decision criteria appropriate?</li> <li>What else should be considered in scope of the research and analysis and why?</li> <li>Are there any questions in the scope of the research and analysis that should be refined or removed? If so, why?</li> </ul>

- All feedback is requested by October 25, 2019
- Please use the feedback form provided on the engagement webpage

# Next Steps

- Next engagement meeting tentatively planned for November 27, 2019
- Scope of this meeting will include:
  - Discussion of consideration of feedback received following today's meeting
  - Discussion of stakeholder submissions
  - Final scope of research and analysis to be carried out