Market Renewal Update: IESO Board

DRAFT for ELT Review

October 25, 2017

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Introduction

Purpose:

- Provide an update on Market Renewal progress
- Discuss areas of stakeholder interest
- Share progress on key strategic issues

What is Market Renewal?

- Market Renewal is the most ambitious set of enhancements to Ontario's electricity market design since our market opened in 2002
- It will address known issues with our existing design and deliver ratepayer value through:
  - improved utilization, scheduling and dispatch of existing assets in the day-ahead and real-time
  - increased competition among resources, resulting in greater efficiency and flexibility
  - achieving resource adequacy in a more cost-effective and transparent manner that reduces and/or defers the need to build new resources
- Market Renewal will work effectively within Ontario's current policy framework while also preparing us for further changes in the sector
  - For example, clear price signals and low barriers to entry will better enable emerging technologies to compete and empower consumers to play a greater role in the sector

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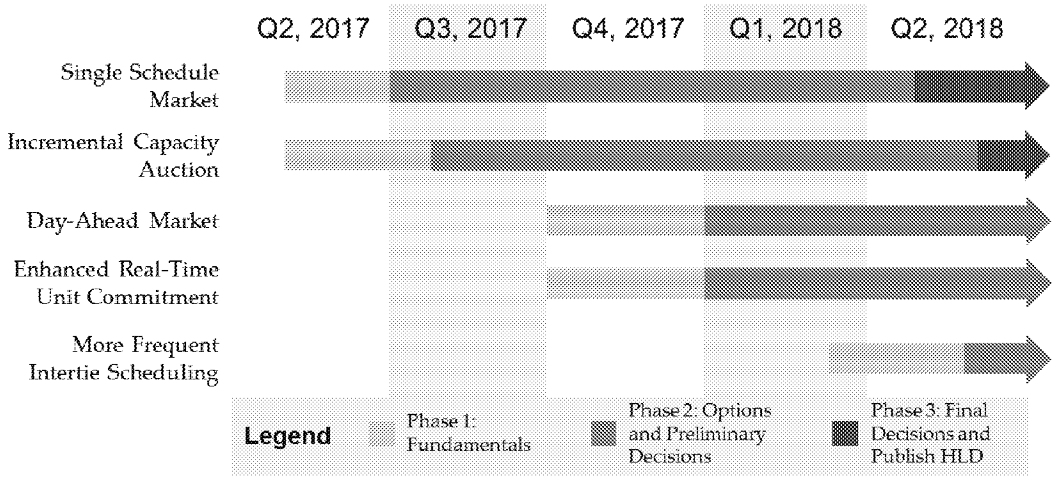
Market Renewal Status Update



- Making progress on SSM and ICA design options and decisions but time remains for analysis and discussion before final decisions are made
- The capacity export and enabling system flexibility engagements have also been integrated into Market Renewal to ensure a cohesive approach across initiatives

Recent and Upcoming Design Achievements

- ✓ Extensive engagement with stakeholders through Q3
  - 4 market renewal working group (MRWG) meetings, 6 stakeholder engagement meetings, 1 CEO roundtable meeting, regular one-on-one meetings
- ✓ Finalized MRWG terms of reference and improved group participation
  - Removed 2 members with inadequate participation, issued warning to others
- ✓ Completed fundamentals phase for ICA and SSM
- ✓ Launched DAM and ERUC stakeholder engagements
- ✓ On track to deliver near-term solutions for capacity exports and system flexibility by Q1 2018
- ✓ Established key near-term deliverables with MRWG
  - Including MRWG report in Q4 2017 and delivery of SSM/ICA high-level designs in Q2/Q3 2018

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Recent and Upcoming Program Achievements

- ✓ Program Charter completed and provided to steering committee for review
- ✓ Project-level risk assessments underway, building on earlier Program-level risk assessment
- ✓ Program Plan being finalized for Q4 2017
- ✓ Defense of Market Renewal Program costs through the 2017 OEB IR process
  - Outstanding issue relates to OEB governance as opposed to being MRP-specific
- ✓ MRP 2018 budget being updated as an input to the IESO's business plan
- ✓ MRP business case anticipated in Q3 2018, following high level design

Single Schedule Market Design Discussions

Design Elements

1. Energy Price – Congestion Component
2. Energy Reference Price
3. Energy Price – Loss Component
4. Ex-Post vs. Ex-Ante Pricing
5. Intertie Congestion Pricing
6. Supplier Pricing
7. Operating Reserve Reference Price
8. Operating Reserve Price – Congestion Component
9. Constraint Violations
10. Out of Market Operator Actions
11. Multi-interval Optimization
12. Price Setting Eligibility
13. Mitigation Process
14. Timing of Application
15. Reference Levels
16. Pricing for Loads
17. Financial Transmission Rights
18. Make Whole Payments
19. Uplift

Legend
- Prepared to make recommendation
- More assessment required
- Stakeholder focus area requiring more analysis

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SSM Focus Area: Load Pricing

Range of Potential Pricing Options

- Uniform
- Zonal (Dispatchable Loads) / Uniform (Non-Dispatchable Loads)
- Zonal
- Nodal (Dispatchable Loads) / Zonal (Non-Dispatchable Loads)
- Nodal

Consistency ⟷ **Efficiency**

Consistency

Most consistent with existing practice

Muted price signal limits innovation *(technological, rate-making, etc.)*

Efficiency

Granular price signal enables innovation and efficient behaviour

Least consistent with existing practice

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Load Pricing Considerations

1 Under Zonal or Nodal pricing RPP customers would still pay a uniform rate

2 Impacts of changes could be mitigated through design features (such as congestion rents) can help maintain fair treatment of all consumers

3 Stakeholders remain open to a variety of options; discussions/analyses are still ongoing

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Incremental Capacity Auction Design Discussions

Design Elements

1. Participation Requirements	2. Resource Eligibility	3. Qualified Capacity
4. Market Power Mitigation	5. Length of Forward Period	6. Commitment Period(s)
7. Multi-year Commitments	8. Locational Considerations	9. Slope of Demand Curve
10. Target Capacity	11. Min/Max Capacity Limits	12. Net Cost of New Entry
13. Max Auction Clearing Price	14. Rebalancing Auctions	15. Resource Obligations (Forward Period)
16. Forward Non-Performance Implications	17. Resource Performance Obligations	18. Performance Assessment
19. Cost Recovery		

Legend

- Prepared to make recommendation
- More assessment required
- Stakeholder focus area requiring more analysis
- Shaded: Options not yet presented in detail

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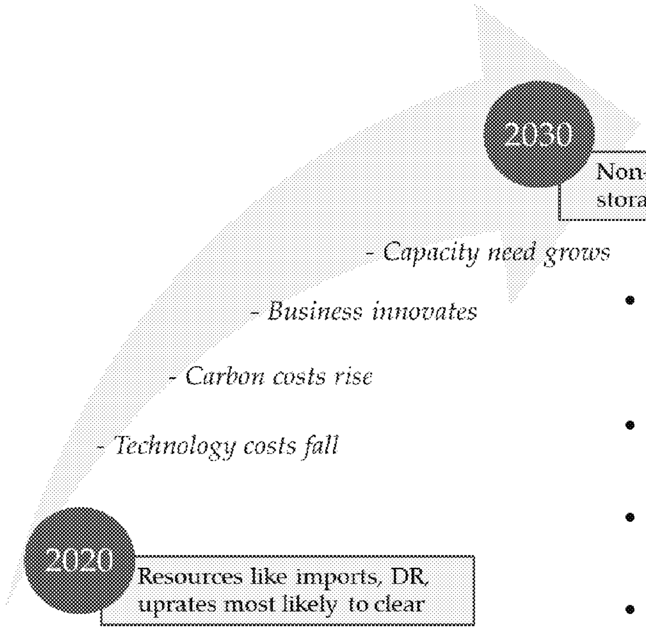
ICA Focus Area: Who Will Clear?



- ICA can deliver the lowest cost incremental capacity to meet policy goals and reliability needs
- Auction parameters will evolve over time to reflect a changing industry
- The ICA is just one piece of the puzzle, alongside other markets and programs
- However, achieving potential benefits requires commitment to the process

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Works alongside GOF, cap and trade, EE programs, energy and AS markets, and potentially additional incentives for non-emitting resources

Market Renewal Working Group: Managing Strategic Issues

A key role of the **MRWG** is to provide guidance on strategic issues

Issue 1:
Environmental Objectives

- Non-emitting resource subcommittee has been launched
- Focus on:
  - Removing barriers to participation
  - Implications of high penetration of low or zero cost resources
  - Exploration of incentive mechanisms for non-emitting resources

Issue 2:
Market Renewal Governance

- MRWG exploring stakeholder involvement in market structures
- Stakeholders need confidence in the process
- Conducting review of dispute resolution processes and setting the demand curve in other jurisdictions

QUESTIONS & COMMENTS