Market Renewal: Feedback from First Meeting

Gordon Drake, IESO

June 24, 2016

ieso
Connecting Today.
Powering Tomorrow.

Purpose

- Review feedback submitted after the first Market Renewal SE meeting
- Discuss IESO responses

ieso
Connecting Today.
Powering Tomorrow.

Stakeholder Feedback

- The IESO held the first stakeholder meeting for the Market Renewal Engagement on April 19th.
- The IESO asked for feedback on various elements of the engagement including:
  - the proposed Work Plan
  - priorities and objectives, and
  - how best to structure the engagement going forward.

Stakeholder Feedback

- The IESO received written feedback a broad cross-section of stakeholders, including:
  - Association of Power Producers of Ontario (APPrO)
  - Brookfield Renewable Energy Group
  - Market Surveillance Panel (MSP)
  - NextEra
  - Ontario Power Generation (OPG)
  - Ontario Society of Professional Engineers
  - Powerful Solutions
  - Rodan Energy Solutions
  - Suncor
- Feedback and responses have been grouped thematically and posted on the Market Renewal SE webpage.

Work Plan

- With uncertainty around supply and unforeseen contingencies emerging in the next few years, work on a capacity auction should not be unnecessarily delayed.

Replacing the two-schedule system is a foundational step for the Energy work stream, but the IESO agrees that the capacity work stream, including the capacity auction, is important in managing uncertainty and will proceed with the capacity auction work stream in parallel.

Impact to Market Participants

- In undertaking Market Renewal, the IESO should recognize the impact to stakeholders who have made investment decisions based upon the current market design.

The IESO recognizes the need to consider market participant implementation costs as well the longer term financial impacts of the proposed market design changes. The IESO will work closely with contract counterparties and regulated market participants, including one-on-one meetings, to understand and consider these impacts.

Reducing Seams with Neighbouring Markets

- The IESO should explore greater harmonization with the market designs of our neighbouring jurisdictions to reduce seams and improve the efficiency of trade within the broader market footprint.

One of the expected benefits of a more standardized market design is the reduction of seams and increased efficiency of trade. In addition, the IESO will examine specific initiatives that could facilitate more efficient utilization of the interties.

Other Initiatives

- The IESO should explore the development of competitive ancillary service markets in this initiative.

  Co-optimized energy, reserve and frequency regulation markets are common design features of electricity markets. The IESO is issuing an RFI related to frequency regulation to better understand the availability and market potential of this service beyond the traditional provider base. The findings of the RFI and additional further study may result in the inclusion of such a competitive regulation market within the Market Renewal initiative.

Environmental Attributes

- The IESO should include the value of environmental attributes when considering export of energy and capacity to neighbouring markets.

The IESO believes that competitive trade between markets should establish the value of energy and capacity-related products. The Market Renewal initiative will examine establishing an enduring approach to trading capacity with our neighbours. Issues such as environmental attributes will be examined through this work stream.

Cost Benefit Analysis

- Stakeholder feedback on the approach for the cost benefit analysis should be considered before analysis begins. The cost benefit analysis results should be reviewed with stakeholders before the Work Plan is launched.

The IESO values the input of stakeholders in the assessment of the costs and benefits of the components within the Market Renewal work plan. Discussion on the Benefits Case approach and supporting analysis will form a large part of this stakeholder engagement process.

Governance

- The IESO should consider addressing governance within Ontario's electricity sector, particularly as it relates to independent market rule amendment review, oversight and adjudication.

The IESO agrees that this is a valuable conversation to undertake with the sector as a whole. However, it is imperative to first examine and develop the changes to Ontario's market design to better understand the impacts on governance, if any.

An Updated Work Plan for Market Renewal

Barbara Ellard, IESO

June 24, 2016

ieso
Connecting Today.
Powering Tomorrow.

Purpose

- Provide an update on the proposed Work Plan for Market Renewal, specifically:
  - How we have incorporated stakeholder feedback
  - Expected work streams
  - Sequencing of components within each work stream
  - Alignment with the Benefits Case

How to Develop the Work Plan?

- Outline proposed changes and sequencing
- Obtain stakeholder feedback on perspectives and priorities
- Draft work plan
- Assess benefits of changes
- Stakeholder Input
- Final report on benefits
- Stakeholder Input
- Finalize Work Plan
- Start Design Phase

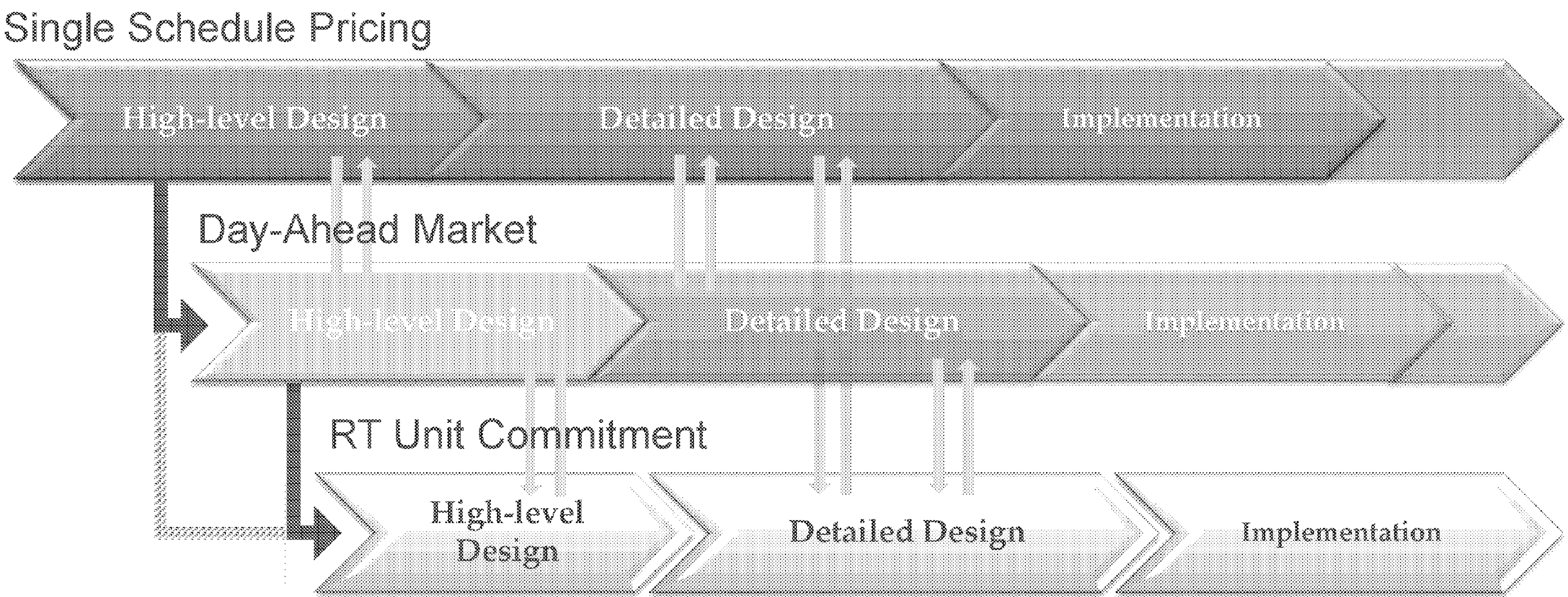
What We've Heard

- The work streams and component projects are the right initiatives to undertake as part of Market Renewal
- Initiating activity on the various work streams should not be unnecessarily delayed
- Design activities should be sequenced in order to recognize the dependencies between different projects and the need for coherence across those projects
- The need for Operability solutions merits inclusion in the work plan as a new work stream

Work Streams

Energy	Capacity	Operability
• Replacing the Two Schedule System • Implementing a Day-Ahead Market • Multi-hour Optimization of Real-Time Unit Commitment	• Continue to evolve the DR Auction • Facilitate short term projects on capacity trade • Implement an incremental capacity auction (incl. enduring capacity trade opportunities)	• Identify needs of an evolving power system • Establish scope of potential solutions • Investigate new market mechanisms as appropriate • Seek opportunities for more frequent intertie scheduling

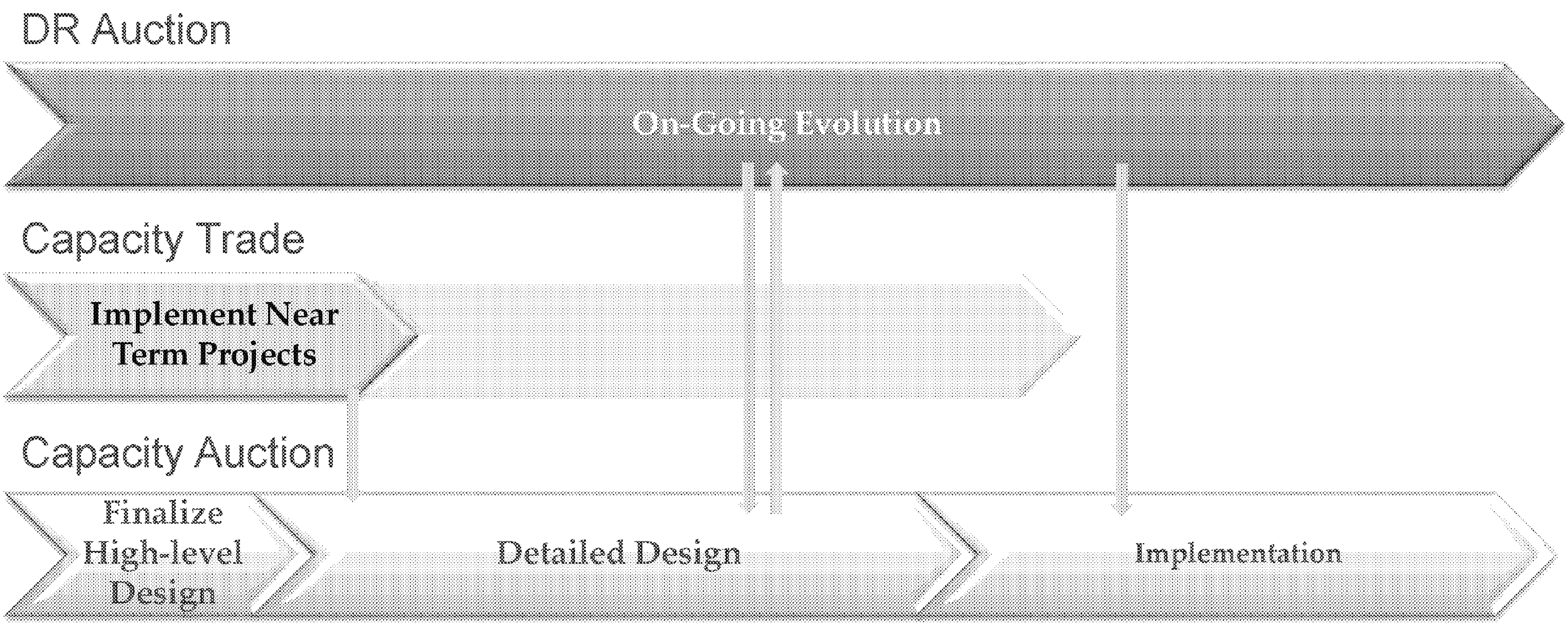
Proposed Sequencing: Energy



Responding to Stakeholder Feedback

- A single-schedule real-time market is the essential first step, enabling efficient unit commitment and settlement
- High level and detailed designs must consider interplay between real-time, day-ahead and pre-dispatch processes
- Coordinated implementation of changes to all three energy work streams is desired, where feasible
- Availability of stakeholder and IESO resources to contribute to this and other engagements will be considered

Proposed Sequencing: Capacity Auction

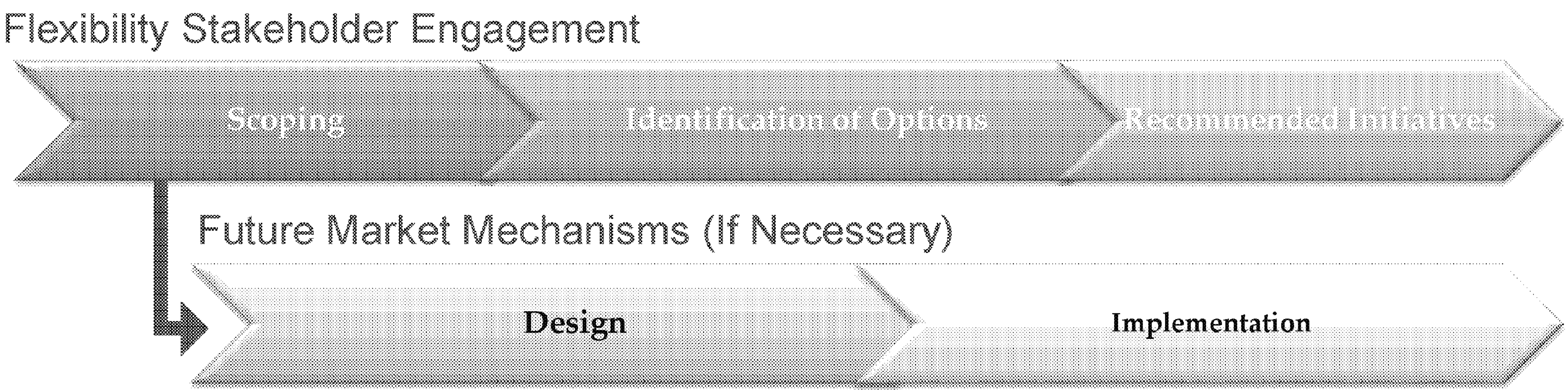


Responding to Stakeholder Feedback

- Work on a capacity auction should commence given the uncertainty that emerges in the early part of the next decade.
- This work will begin now to ensure that the auction is in place to manage that uncertainty
- Capacity trade will be an enduring feature of future capacity auctions and thus design effort the enduring design efforts should be aligned
- The evolution of DR Auctions will support integration into the incremental capacity auction.

ieso
Connecting Today.
Powering Tomorrow.

Operability Placeholder



Responding to Stakeholder Feedback

- Operability needs have been identified by the IESO which require a variety of solution.
- Some solutions may involve the development of new market mechanisms to incentivize greater flexibility on the system
- The outcomes of the Flexibility stakeholder engagement will inform the extent to which potential solutions are incorporated into the Market Renewal work plan

Work Streams Overview

Single Schedule

Day-Ahead Market

Real-time Unit Commitment

Capacity Auction (incl. Trade)

Placeholder

Operability Scoping

Near-term Solutions

Market-based Mechanisms

ieso
Connecting Today.
Powering Tomorrow.

Work Plan Benefits Case

- The Benefits Case will be based on several work streams with multiple initiatives:
  - Energy
  - Capacity
  - Yet to be determined: Operability/Flexibility
- In parallel to the Benefits Case, the IESO will start discussions with Stakeholders on all three key projects
  - Single Schedule: Information Sessions
  - Capacity Auction and Trade: Restart of Engagement
  - Flexibility: Scoping Exercise

Market Renewal: Benefits Case

Tom Chapman, IESO

June 24, 2016

ieso
Connecting Today.
Powering Tomorrow.

Purpose

- Outline IESO approach to developing a Benefits Case
  - Scope
  - Timing
  - Opportunities for stakeholder input and feedback

Where are we at?

April 19: Initiate SE

June 24: Second SE meeting to respond to feedback

Summer: Review framework for analysis of benefits

Potential information sessions, additional SE meetings on work plan elements

Fall: SE meeting to review benefits analysis and work plan development

Late 2016/Early 2017 Finalize benefits analysis and work plan

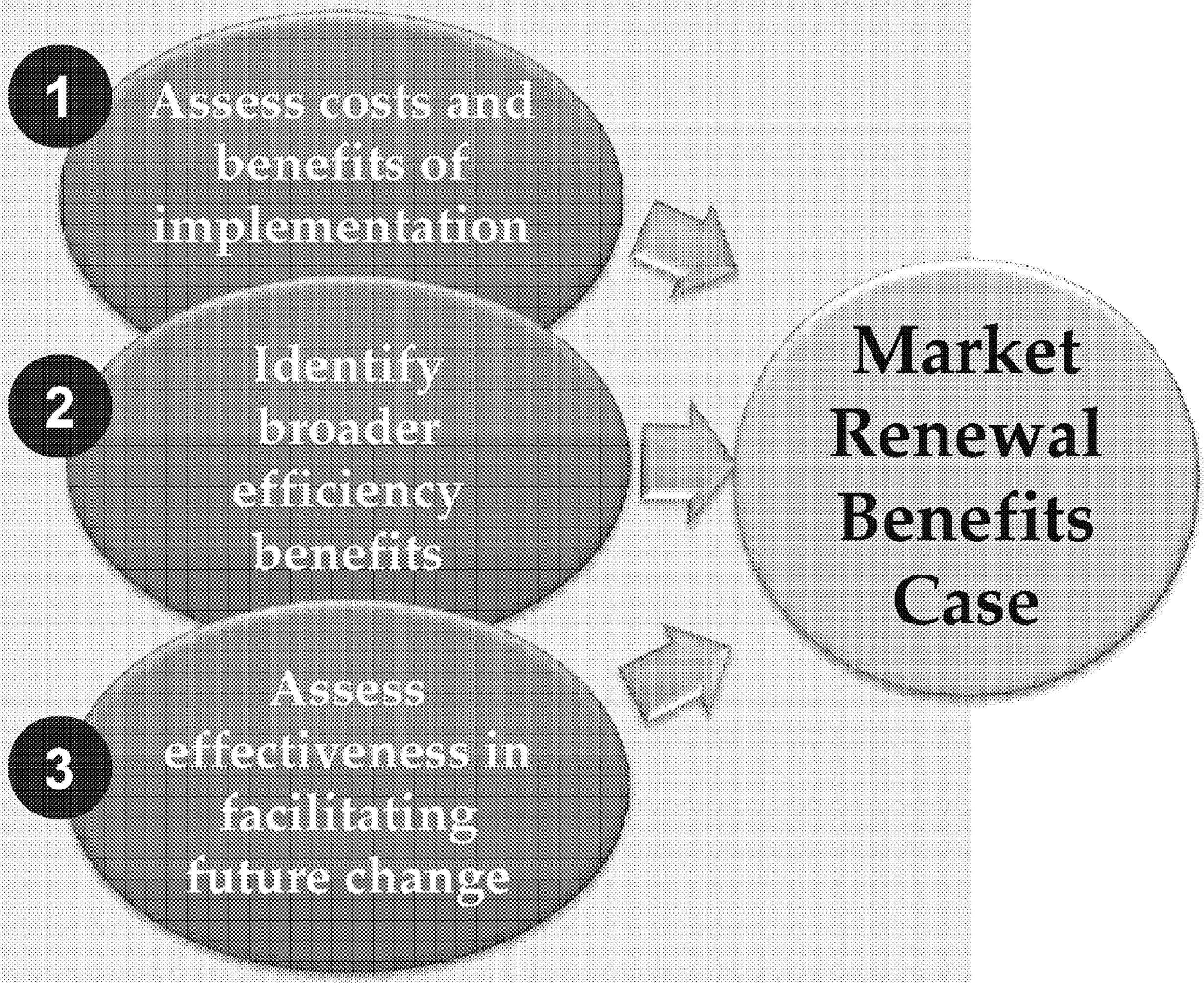
ieso
Connecting Today.
Powering Tomorrow.

Scope

- An essential step in developing the work plan will be to assess the benefits of the proposed changes of the Market Renewal Initiative
- The Benefits Case should bring together the quantitative and qualitative benefits of the Market Renewal Project
- Consider all of the proposed elements of the Market Renewal Project both individually and holistically
  - Some costs and benefits can be identified with a high degree of certainty, others are best assessed as a range of likely outcomes
- Provide a clear and complete narrative of the range of expected benefits that is understandable to a wide range of audiences (industry and non-industry)

Proposed Approach

What



How

- Engage third party consultant
- Both qualitative and quantitative assessment
- Focus on efficiency
- Supplement research and analysis with significant number of interviews
- Seek stakeholder input and feedback on analysis

1. Assess Costs and Benefits of Implementation

- Quantify expected benefits:
  - Cost reductions associated with a more standard design relative to planned IT system replacement and upgrades to the IESO current bespoke design
  - Organizational efficiencies from reduced administrative burden, dealing with band-aid solutions on a piecemeal basis
- Assess the expected costs:
  - IT systems implementation costs
  - Legal and consultant costs
  - Market participant costs
- Provide a realistic cost/benefit assessment
  - Will include practical considerations such as contract implications

Scope 2. Broader Benefits to Ontario

- Develop expanded range of the expected financial benefits as a result of the Market Renewal Project taking into account:
  - The experience of other jurisdictions which have implemented comparable market design changes
  - The findings of past IESO studies
  - Interviews with IESO staff, staff at other ISOs and RTOs, Vendors and Market Participants
  - A review of relevant existing research and literature
- Assess expected short and long run efficiencies
- Take into account existing contractual arrangements

Scope 3. Future Change

- Provide a qualitative assessment of the value the Market Renewal Project provides in enabling future market evolution in Ontario.
  - provide an assessment of how the Market Renewal Project will increase Ontario's ability to adapt to and benefit from future change
  - provide a realistic assessment of the costs, lost efficiencies or unrealized opportunities, that would be incurred if we were to maintain our existing market design (i.e. the status quo) in the face of such change

Interviews

- The IESO expects the Benefits Case to be based on first hand evidence as well as desk research and will require the consultant to conduct interviews (in-person or via conference call) including:
  - Interviews with PJM, NE-ISO, NYISO and other North American system operators;
  - Interviews with impacted IESO business units;
  - Interviews with vendors of energy market systems relevant to the Market Renewal Project;
  - Interviews with Ontario stakeholders both on the demand and supply side; and
  - Interviews with other relevant parties such as market monitors, industry organisations

Process and Stakeholder Input

- IESO is in the process of engaging a third party consultant to undertake the bulk of work associated with the Benefits Case assessment
  - Expect to retain consultant in July
- IESO is seeking stakeholder input and feedback at critical times during this project
  - Feedback on scope and methodology as presented
  - Opportunity to provide feedback and review initial analysis in the fall
- Stakeholders will be actively engaged throughout the development of the Benefits Case

Timeline

Milestone	Proposed Date
Incorporate stakeholder feedback on methodology	July, 2016
Conduct research, interviews and analysis	Q3, 2016
Present initial assessment of findings to IESO and stakeholders	October 1, 2016
Conclude research and analysis and prepare draft report incorporating IESO and stakeholder feedback	November 1, 2016
Finalize and publish report	Q1, 2017

Note: the dates in the proposed timeline are tentative and will be updated as necessary to reflect stakeholder feedback and the work of the consultant

Engagement Structure

Ryan King, IESO

June 24, 2016

Connecting Today.
Powering Tomorrow.

Purpose

- Stakeholder Feedback
- Outline proposed Market Renewal Working Group
  - Objectives and Scope
  - Engagement Integration
  - Membership
- Next steps

Stakeholder Feedback

- Stakeholders identified need for a smaller dedicated group to focus on work plan details with input from the broad stakeholder community at periodic intervals.
- Dedicated group should be integrated into engagement

Market Renewal Working Group

ieso
Connecting Today.
Powering Tomorrow.

Objectives and Scope

- Assist the IESO and stakeholders by providing valuable insight, technical expertise and advice to support the development and implementation of the Market Renewal initiatives.
- Play an active role in reviewing preliminary analyses related to qualitative and quantitative aspects of the work plan

Objectives and Scope

- Provide input to assist the IESO to understand the costs, benefits and scope of change that different market participants will face as a result of market changes
- Participate in preliminary, in-depth discussions and provide their perspectives on a series of issues related to market renewal
- Longer term MRWG will also support the development and implementation of specific market design initiatives.

Engagement Integration

- The WG activities will be integrated with broader the broader stakeholder consultation
  - As issues are discussed and advanced in the WG setting, they will then be brought forward for discussion with all stakeholders.
- MRWG member feedback will be published on IESO Working Group webpage

Membership

- Expectations include attending scheduled meetings, reviewing information/materials and providing constructive feedback and insight.
- Seek a balance of different types of market participants, stakeholders and communities to ensure feedback from different points of view.
- Depending on interest, the IESO may contact stakeholders directly to inquire about their interest in participating.

Membership

- Limited to 10-12 participants, selected based upon their experience and background and balanced to ensure representation from different market participant and stakeholder perspectives
- Interested participants are invited to email engagement@ieso.ca and are asked to outline how they can contribute to the WG

Terms of Reference

- Draft Terms of Reference posted
- Interested stakeholders can also offer comments on ToR along with membership request

Next Steps

- Stakeholders interested in participation in WG should contact engagement@ieso.ca by Friday July 8
- Request should outline experience and background, ability to meet time and work commitments as well as comments on ToR.