

2011-2013 IESO Business Plan

Presentation to Stakeholder Advisory Committee

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- Stakeholders have provided valuable input into the Business Planning process
- Stakeholder priorities identified at the March 31 SAC meeting
- Two subsequent meetings with SAC members to discuss priorities and provide initial thoughts on approach to Business Planning and IESO initiatives

- Improving price signals
- Evolving the electricity market to improve efficiency
- Integrating renewable energy into the electricity system and market
- Educating and engaging consumers
- Resolving global adjustment issues
- Addressing intertie issues
- Advocating on behalf of customers with the Ministry of Energy and Infrastructure and other agencies to address issues and complexities outside of IESO control

- Maintain reliability
- Prepare for future operations
- Efficiently manage our business
- Effectively contribute to the development and implementation of government policy

- Transformation of power system underway but change more profound and occurring faster than expected
- System will continue to be configured over the next few years as:
 - coal is phased out
 - gas plants are commissioned
 - nuclear units are refurbished
 - significant amount of renewables are introduced
 - transmission and distribution systems are expanded
- Changes will require an unprecedented level of assessment, planning, coordination, monitoring and direction by the IESO

Renewables Integration

- Fundamental changes for Ontario's power system are now crystallizing
- IESO has a key role in enabling these changes while maintaining reliable and efficient operations – our business plan has to both:
 - address demands on our current functions; and
 - identify and address the requirements for integration of renewables into market and system operations

Current functions:

- the volume of analytic and related work driven by associated connection assessments, registration requirements, enabling and sustainment transmission projects, etc., is increasing substantially
- affects most functions of the Resource Integration business unit – and is already extending into Operations in order to be prepared as new facilities come into service, and coal units retire

Renewables Integration Project

- At the same time, we need to determine the requirements for integration of large quantities of renewables into operations, and then develop and implement the associated business processes, tools and market rules – all on a very tight timeframe
- This major project, now underway, covers everything from centralized wind forecasting to dispatch requirements, to treatment of and relationships with embedded facilities, to additional settlement issues
- The purpose of the project is to integrate renewables in a way that maintains the efficient and reliable scheduling and commitment of the resources required to provide electricity supply on a daily basis. This means:
 - Optimizing the use of existing and anticipated generation
 - Providing mechanisms to efficiently dispatch variable resources to maintain system reliability
- Will require associated policies, for example management of surplus baseload generation (SBG), to be firmed up

Energy Modelling

- We need this capability to plan for future operations. Our current focus on capacity will no longer be adequate to ensure reliability of supply in a world with high penetration of variable renewable resources – i.e. resources that have no assured fuel supply to maintain their output

Market Road Map

- This will be an intensive consultation with a small group of stakeholders aimed at developing an actionable road map for evolving the market
 - Issues driving the need for such a review include: the complexity of our current market; the need to better integrate contract, market and operational drivers; the role and value of the market and the role of efficient pricing, both generally and in light of developments such as smart grid enabled demand response; importance to Ontario of market co-ordination with surrounding jurisdictions
- Aim is to get this underway this fall

Addressing Increasingly-Complex Real-Time Operations

- The SBG periods over the past year vividly demonstrated how complex it is to accomplish efficient operations with the vast majority of suppliers operating under the influence of some form of long-term contract or revenue guarantee. This complexity will only increase going forward with the significant increases coming our way in renewable generation
- To address this increasing complexity, Operations is launching the following initiatives:

Increased Control Room staffing

- Adding one additional position to our shift staff complement, on a 7 x 24 hour basis to integrate the increased number of connected facilities, most of which will be variable generation sources, and to help participants address their complex operating challenges – a renewables integration desk

System Operations Simulator

- Providing staff with training opportunities on a power system simulator; initially using a basic system simulator, during which we will be defining our needs for a replica simulator as we develop our user requirements for our next Energy Management System

Simplification Initiative

- Explore ways to improve the operation of the system by playing a greater coordination function, or by simplifying. This may see IESO providing greater coordination for complex outage programs, or see IESO provide more customized information to help participants make decisions, or see IESO pursue a simplification of existing operating practices or market features

Compliance Program

- Compliance and enforcement of Market Rules, NPCC Criteria, and NERC Standards –all market participants, including the IESO, require an effective in-house compliance program, requiring greater focus

- IESO continues to recognize the impact of ongoing difficult economic conditions on customers and stakeholders
- In 2010, the IESO:
 - held its fee flat – meant staff reductions through efficiency and focus on priorities, consistent with 2009 organizational realignment
 - restructured its financing arrangements at lower costs; and
 - delivered or progressed on capital projects consistent with approved budgets

- Over the planning period:
 - While 2011 budgeted staff levels are increasing due to increased work volumes in key areas, these increases are moderated by some other staff efficiencies across the IESO
 - Significant replacement or refresh of internal systems/infrastructure while maintaining an overall annual capital program in the \$18-\$21 million range
 - Financing costs and debt levels remain low, below levels in last year's business plan
 - We are looking to moderate necessary fee increases over the planning period

- Total operating costs for 2011 are budgeted to be \$128.7 million, an increase of \$3.9 million (3.1%) from the 2010 budget or \$124.8 million
- Key driver to the increase is the staffing associated with the needs outlined earlier in the presentation
- Annual capital spending of \$19-\$21 million per year, consistent with last year's plan

- Debt remains at or below levels outlined in the 2010-2012 Business Plan
- Proposal is 2% increase in usage fee for 2011 to \$0.838/MWh, reflecting slight increase in assumed energy volumes in 2011 (153.3 TWh in 2011 vs. 151.3 TWh in 2010)
- Outlook is 4% increases in 2012 and 2013, reflecting material energy volume reductions in 2012 and 2013 (148.1 TWh and 145.6 TWh, respectively)