IESO 2011 Corporate Performance Results and Assessments

For the year ended December 31, 2011

This report presents the IESO's results and assessment of corporate performance for the year ended December 31, 2011.

A. Reliability (30%) - *"To sustain excellence in delivering reliable electricity service conditioned by costs and environmental performance."*

A1	
Performance Objective	The IESO-controlled grid provides reliable electricity service.
Measure A1.1	Ontario's annual unsupplied energy is within acceptable limits.
Target(s)	Ontario's annual system unsupplied energy meets the published Ontario benchmark (15.75 system minutes) and the IESO agrees to a mitigation plan with relevant external parties designed to improve performance for any local area with unsupplied energy above threshold.
Year End Result	Ontario's annual system unsupplied energy result in 2011 was 10.59. This was 'below` the published Ontario benchmark of 15.75 and bettered last year's performance of 11.96, which was itself the best result in 5 years. There were three red-flagged local areas and mitigation plans have been implemented with all relevant parties.
Overall Assessment	**Exceeds target**

A2	
Performance Objective	The IESO's actions support reliable operation of the IESO-controlled grid.
Measure A2.1	Compliance by the IESO and market participants with applicable reliability standards, market rules and regulatory requirements.
Target(s)	• The IESO reports full compliance with NERC high violation risk factor (VRF) requirements that are within the IESO's control and no violations of NPCC sanctionable criteria that are greater than Level 2 and that are within IESO's control; • 90% of market participants who have high VRF requirements reported full compliance with their high VRF requirements and no NPCC sanctionable criteria greater than level 2; and • NPCC audits find the IESO compliant with all High VRF requirements included in the audited NERC standards.
Year End Result	• The IESO reported full compliance with all NERC high VRF requirements and NPCC sanctionable criteria. • 98% of market participants reported full compliance with NERC high VRF requirements and NPCC sanctionable criteria. • The NERC reliability and CIP standard audits were conducted by NPCC in June. The Audit Teams did not identify any violations of high VRF requirements and noted several areas of excellence in the audit reports.
Overall Assessment	**Meets target**

A3	
Performance Objective	The IESO-controlled grid is equipped to provide reliable electricity service going forward.
Measure A3.1	Plans are in place to ensure timely identification and resolution of potential operability issues.
Target(s)	• Energy modelling – By the end of 2011, energy adequacy will be addressed for 2012 and

	2013, and a business case will be approved for an ongoing energy modelling capability. • Renewables integration – Key elements of the Renewable Integration Initiative (Variable Generation Forecasting, Real-Time Integration, Operations Planning, and Control Room Monitoring) will proceed as per the defined schedule (currently under development). • In the event that IESO reliability assessments identify power system inadequacies (generation, transmission or load) which could adversely affect future reliability, explicit activities to influence remediation of these issues are developed and communicated to the responsible parties.
Year End Result	• **Energy modelling –** The identification of potential operability issues is achieved in part through energy adequacy assessments. The energy modelling project, expected to be fully implemented by mid 2013, will provide the IESO with the capability to conduct more detailed and granular analysis, thus enhancing our ability to identify potential operability issues expected to be exacerbated by the changing supply mix. Project milestones in 2011 were exceeded with the approval of the business case in September. Meanwhile, an energy assessment was completed for 2012 and 2013. • **Renewable Integration Initiative (RII) –** Significant progress was made in 2011 with the RII starting with the endorsement of previously developed design principles. The IESO worked collaboratively with stakeholders to include their feedback and consensually agree upon the principles. In November 2011, the business case was approved by the Board and this was followed by the establishment of the project office, team and steering committee. The project received a positive report from internal audit on project management controls. The RII consists of multiple elements (below) and each progressed significantly during 2011: **Centralized forecasting**: The project is progressing on target. The RFP was concluded and a vendor selected. The delivery of accurate forecasts in 2012 will significantly improve the IESO's ability to maintain the efficient and reliable operation of the system as wind penetration increases. **Real time integration**: The passing of Visibility Market Rules and the establishment of the Dispatch Technical Working Group (DTWG) and Floor Prices Focus Group (FPFG) are key next steps in the RII. They will include stakeholder input in the rules that will articulate the dispatch merit order when faced with operational choices between baseload facilities (specifically wind and solar dispatch), as well as the finalization of the dispatch mechanics that will be the basis for rules articulating the dispatch process for the wind and solar fleet. **Operations planning:** As part of the operations planning component, the IESO is undertaking a formal review with the University of Toronto to analyze the system needs for regulation and load following considering various levels of wind and solar penetration. This will provide some of the necessary insight to determine what, if any, changes in this area the IESO will need both now and in the future with the changing fleet. **Control Room Monitoring**: The RII has been successful in developing early interim visibility tools for the control room to improve situational awareness when dealing with variable generation. These tools will evolve and are considered prototypes of the long term tools that will be provided as more information becomes available (i.e. centralized forecast products, embedded generation information, etc) to the RII team. These tools help provide the necessary up to the minute information used by the real-time operator to make operational decisions that maintain the operability and reliability of the system pre and post contingency. • The IESO has been active in supporting the need to advance projects to address developing system inadequacies. In addition to direct communication with the OPA and Hydro One, the IESO identifies areas of concern in each 18-Month Outlook. Examples identified in the

	December 2011 Outlook included south-west GTA and Kitchener/Waterloo/Guelph region. Studies conducted and communicated to the OPA identified requirements to support coal shutdown in both the north-west and in southern Ontario. From those same studies, requirements for north-west voltage support, once the north-west coal is phased-out, have also been communicated to Hydro One.
Overall Assessment	**Meets target**

B. Customers and Stakeholders (25%) - *"To continue to operate and adapt the IESO administered electricity markets to the benefit of all Ontarians."*

B1	
Performance Objective	Suppliers and consumers are responsive to the price of electricity.
Measure B1.1	Suppliers and consumers are increasingly exposed to prices and rates raising their awareness and ability to make appropriate decisions regarding their offers and consumption of electricity.
Target(s)	• The Global Adjustment (GA) education and outreach program is delivered to 75% of eligible large volume consumers within six months of the issuance of the GA allocation regulation. • The Enhanced Day Ahead Commitment (EDAC) Process is: o Delivered on time as per its project schedule; o Integrated into existing processes seamlessly; o Market participants express satisfaction with its market trials; and o EDAC achieves its stated objectives and operates as intended. • Time-of-use rollout: o The IESO proactively engages LDCs to move forward with their TOU plans; o Neither the IESO nor its services offer any barriers to LDC plans; and o The total number of consumers billed on TOU rates at the end of 2011 will be 4 million.
Year End Result	**Global Adjustment Education** GA outreach was completed within 6 months from the time the regulation was issued on October 27, 2010. By the end of February 2011, the IESO GA education and outreach program was delivered to all 61 market participants and at least 112 embedded large users. Direct evidence shows that the program reached 90% of the intended audience, but it is likely that even more were reached through the various communication channels that were used. The target group included 191 Class A customers, represented by 61 market participants and 130 embedded large users designated as Class A consumers. **EDAC** EDAC was delivered on time and under budget at the beginning of Q4 as per its revised project schedule. o The EDAC implementation was the largest market change project since the opening of the market in 2002. 70% of generator resources were impacted, with 40% of those heavily impacted with new procedures and systems. New, existing and modified systems and processes have been operating in an integrated fashion since deployment, with a relatively small number of defects and procedure clarifications identified after in service. o Market participants carried out Market Trials (testing) from June 2011 to mid-September 2011, including an integrated Settlements test environment, a first for the IESO. This significant effort led to a lower than expected volume of questions placed to IESO Customer Relations and Settlements and Notices of Disagreements in the first eight weeks of operation. Generator representatives at the December 7, 2011 Stakeholder Advisory Committee planning meeting indicated that EDAC was "staggeringly well implemented"

	and that all IESO staff involved should be congratulated. While EDAC's effectiveness will continue to be assessed and monitored in greater detail over the coming months, initial results indicate that EDAC is operating as intended, and the IESO markets (Day Ahead and Real Time) scheduled over 100 fewer starts over a similar period in October to December in 2010. This in conjunction with the positive results of the project demonstrates that the target was well met. **Time-of-use rollout:** o In 2011 SME staff delivered 20 training, workshops, and information sessions that were attended by over 500 people, with very favourable satisfaction ratings received from attendees. By the end of December, 4.7m smart meters were installed; 64 of 74 LDCs and their 4m smart meters were enrolled with the MDM/R. These 64 LDCs represent 94% of the 4.76m Regulated Price Plan eligible customers in the province. 8 LDCs were in enrolment and unit testing with the MDM/R. This represents a significant increase from 15 LDCs and 2.2m smart meters that were enrolled in the MDM/R at the end of 2010. Most of the remaining non-production distributors are in various stages of preparation to integrate with the MDM/R. o By the end of 2011, the MDM/R had over 4 million meters enrolled and was actively processing smart meter data from 3.3 million meters on a daily basis and producing time-of-use (TOU) billing quantities for LDCs' for customer invoices. Overall the MDM/R processed over 98% of the transactions within contracted service levels in 2011 while supporting an accelerated addition of meters and LDCs under the OEB mandate. The IESO implemented significant upgrades to the MDM/R and supporting infrastructure in 2011 delivering performance improvements, defect corrections and enhanced functionality. The IESO significantly improved the response and resolution times of LDC support requests by more than 50% while addressing over double the volume of calls from 2010. A third unqualified independent audit covering MDM/R Operations was issued in 2011. • The total number of consumers billed on TOU rate at year end was 3.6 million. While this did not meet the target of 4 million, the sector continues to make steady progress in its plans for adding the remaining consumer under the oversight of the OEB.s
Overall Assessment	**Meets target**

B2	
Performance Objective	Market Participants are satisfied with the IESO's administration of the electricity market.
Measure B2.1	Customer satisfaction with the IESO's administration of the market.
Target(s)	In the annual survey, customers provide an average rating of 7.5 on their satisfaction with the IESO's administration of the market.
Year End Result	The IESO achieved an average rating of 7.5 (out of 10) for those questions pertaining to the value of products and services in the 2010 Customer Satisfaction Survey.
Overall Assessment	**Meets target**

B3	
Performance Objective	The IESO administered market promotes the purposes of the Green Energy and Green Economy Act (GEGEA).
Measure B3.1	IESO actions adapt to support the objectives of the GEGEA and the obligations prescribed within its regulations.
Target(s)	• Connection assessments related to renewable energy generation projects, shall be completed within 150 days; and • A dispatch priority policy is implemented by Q2 2011.
Year End Result	• IESO supported the GEGEA objectives by processing all connection assessment with an average project completion time of 135 days; 10% better than required under the GEGEA regulation and 10 days better than the previous year 2010. Actual output for 2011 was 24 completed connection assessments for renewable projects compared to 15 projects in 2010. • The dispatch priority policy was not implemented by Q2 2011. This timing was adjusted to account for delays in decision making and the adjusted RII timelines included in the approved business case.
Overall Assessment	**Meets target**

C. Operational Effectiveness (20%) - *"To provide excellent products and services in an efficient and effective manner that meets the needs of customers."*

C1	
Performance Objective	The IESO's infrastructure is capable of meeting the needs of customers in the future.
Measure C1.1	IESO successfully undertakes and completes change initiatives.
Target(s)	Achievements of projects are ranked through the project portfolio management (PPM) process: • 100% of the approved regulatory projects are initiated and completed as proposed and meet, or are progressing according to project plan to meet, the regulatory requirement; • Refresh projects are initiated and completed according to the refresh life cycle requirements; and • The top 5 discretionary projects, including any existing "key capital projects", are completed as per their approved business case.
Year End Result	All regulatory projects were initiated as proposed and were completed or are progressing according to the regulatory requirements. As of December 2011, only one regulatory project is on-going (SOD Simulator). Refresh projects are progressing in accordance with the priority set as part of the project portfolio management process consistent with the lifecycle requirements and business risks. By the end of 2011, a total of 43 projects had been ranked, 35% are in service, 44% have been initiated, 16% have not started and 5% were cancelled. The top 5 discretionary projects for 2011 were: o Enhanced Day-Ahead Commitment (EDAC) – implemented business case – bettered. o Renewables Integration Initiative – stayed on track in 2011. o Customer Energy Summary – ran late due to resourcing conflicts ; now expected March 2012. o Centralized Forecasting for Wind Generation on track at year end. o Enrolment Automation Program – Registration Automation – live per business case.
Overall Assessment	**Meets target**

C2	
Performance Objective	The IESO's human resources are capable of meeting the needs of customers in the future.
Measure C2.1	The training and development of the IESO's human resources.
Target(s)	Management shall define and implement a corporate wide strategy for training and development, and will establish a methodology to track staff training and development within all business areas by the end of 2011.
Year End Result	The development of the IESO's corporate wide training and development strategy was co-ordinated with a related initiative to re-fresh the IESO's overall HR strategy. The training and development strategy establishes the demand for training and development in relation to business interests, business success and capabilities. In conjunction with the implementation of the strategy, HR has established a methodology to track staff training and development across the organization. The IESO did not meet the target for this measure reflecting the fact that although both the strategy and methodology were produced during the year, they were produced too late for final approval prior to year end.
Overall Assessment	**Does not meet target**

C3	
Performance Objective	IESO resources are used effectively and efficiently to meet the needs of customers and achieve stakeholder satisfaction.
Measure C3.1	Delivery on the business plan both capital and OM&A.
Target(s)	• The IESO operates at no operation deficit; and • Demonstration of improved efficiency while delivering and meeting all the obligations outlined in the business plan. Business units will establish the current cost of delivering identified overhead and commodity transactions and demonstrate a 3% reduction in total for the specified areas by the end of 2011. It is expected that in total, the baseline work would cover over 50% of the IESO's operational workload.
Year End Result	• IESO's operating surplus for 2011 was $6.0 million (exceeds target of $2.5 million). This was achieved entirely through cost savings while revenue remained neutral. • Overall, the IESO achieved cumulative efficiency gains of 3% on at least 50% of its operational workload.
Overall Assessment	**Meets target**

D. Reputation and Relationships (25%) - *"To advance the IESO's reputation and relationships to further engage the electricity sector and accomplish its mission."*

D1	
Performance Objective	The IESO is perceived as a leader in the electricity sector.
Measure D1.1	Reputation amongst customers and stakeholders.
Target(s)	• In the annual survey, the IESO is perceived as a leader amongst customers and stakeholders by over 50% of respondents. • Management maintains visibility of the IESO by speaking at 55 engagements or other forums.
Year End Result	• In the results from the 2011 IESO Customer Satisfaction Survey, 54% of respondents rated the IESO as a leader as compared to 48% in 2010. • Management maintained strong visibility in 2011 by speaking at a total of 70 engagements.
Overall Assessment	**Meets target**

D2	
Performance Objective	The IESO is able to influence important policy decisions that impact the IESO.
Measure D2.1	Strategic engagement with government, regulators and stakeholders to advance the IESO's objectives.
Target(s)	• Operability profile of the supply mix. • The Electricity Market Forum will provide an actionable plan that is endorsed by stakeholders and presented to government in Q4, 2011.
Year End Result	The IESO continued to provide feedback and support to the OPA procurement and contract management to help ensure the supply mix supports the operational needs of Ontario. These efforts include: • Input into contract design for existing contract holders Input into the design of new contracts, Demand response implementation and design support. • Joint and independent operability studies, and ongoing support assessment of the IPSP/LTEP. The objective was advanced in 2011 by the following strategic engagements: • Coal shutdown/conversion reliability assessments Technical participation in Integration of Variable Generation Task Force (IVGTF) - NERC in which the IESO influenced the deliverables (technical reports) of the four teams, out of 13, in which staff were active. • Active participation as the IRC representative on the NERC Planning Committee brought the Ontario perspective into the continental planning arena. • Participation on the FIT Review technical team provided the opportunity to promote solutions for managing the changing supply mix. The Market roadmap, which is a component of the full Market Forum Report, was endorsed by the Market Forum. The Market Forum report was presented by the IESO to the Ministry in December. The Electricity Market Forum's report contains a number of recommendations that have been developed and are supported by a broad cross section of the electricity sector participants, including many members of the IESO's Stakeholder Advisory Committee. The report identifies a roadmap that provides a clear path forward for Ontario's electricity market consistent with the Government's focus on the cost of electricity for the consumer. The roadmap focuses on

	three key areas: improved sector transparency, identifying opportunities for market efficiency improvements and reduced complexity, and providing opportunities for consumers to have greater control of their electricity costs either directly or through a third party provider.
Overall Assessment	**Meets target**

D3	
Performance Objective	The IESO maintains its supportive role of government policy in operational, market, and environmental planning activities.
Measure D3.1	IESO's technical capability supports government policy in the planning activities.
Target(s)	• Services provided to the OPA and relevant transmitters including, support of the integrated power system plan (IPSP) operability. • Timely information products developed to meet reporting obligations and expectations; and • Support provided under section 92, leave to construct, of the OEB Act, 1998.
Year End Result	**Services Provided** The agencies rely on IESO's technical expertise to supply specialized assessments and technical recommendations for planning decisions. The results of technical assessments performed during 2011 set the foundation for decisions necessary to support a balanced and reliable generation portfolio, promote clean energy resources, and economic prosperity. **Information Products** While increasing the level of support to the OPA the IESO continued to meet all of its reporting obligations and expectations, in particular: o 18-Month Outlook September 2010 – February 2012. o Transmission Assessment for the 18-Month Outlook September 2010 – February 2012. o Quarterly Demand Forecasts. o NERC Winter Assessment (2010/2011). o Updates provided on NERC Long Term Reliability Assessment to incorporate changes in renewable/FIT projects. o Compliance assessment for NPCC **Section 92 Support** The IESO provided document reviews, support and approval with respect to confirmation of the reliability and operational impacts and compliance requirements of proposed new or modified transmission reinforcements. The IESO continues to facilitate the connection of new generation and load and address reliability or congestion concerns for OEB leave to construct proceedings in which the IESO is participating. In 2011, the following decision and orders were issued: • Detour Gold Corporation • Summerhaven Wind LP • Grand Renewable Wind LP • South Kent Wind LP • Ontario Power Generation - Lower Mattagami
Overall Assessment	**Meets target**