

2018 IESO Corporate Performance Measures

CPM	Description	2018 CPM Target
1) Reliable electricity service is sustained in a changing environment.	Reliability risks are assessed within a violation risk factor (VRF) matrix. VRFs indicate the potential reliability impact of violating a standard requirement. Each requirement is assigned a violation risk factor from the following three levels – high, medium, or low; this CPM being concerned with the high VRFs. A high VRF, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition. Given that the IESO is the sole entity in Ontario accountable to NERC (North American Electricity Reliability Corporation) and NPCC (Northeast Power Coordinating Council) reliability standards and criteria, the IESO must be able to demonstrate continuous compliance as it is subject to a rigorous compliance framework: • Numerous compliance assessments throughout the year (spot checks, self-certifications) • Mandatory on-site comprehensive audit every 3 years due to the importance of its functional roles on the bulk power system • All potential violations, regardless of severity, must be identified, reported and addressed (self-reports) • All confirmed violations are subject to possible financial penalties and corrective action plans.	100% compliance to NERC high violation risk factor (VRF) standard requirements is achieved. Compliance to the High VRF standard includes all the following 14 categories: • Resource and Demand Balancing • Communications • Critical Infrastructure Protection • Emergency Preparedness and Operations • Facilities Design, Connections, and Maintenance • Interchange Scheduling and Coordination • Interconnection Reliability Operations and Coordination • Modeling, Data, and Analysis • Nuclear • Personnel Performance, Training, and Qualifications • Protection and Control • Transmission Operations • Transmission Planning • Voltage and Reactive
2) The IESO is a recognized cybersecurity leader in the energy sector.	IESO's cybersecurity program is a strategic contributor to the sector's ability to protect the bulk electricity system reliability and in addressing threats to critical business operations. To meet the requirements of the established objective, the IESO needs to develop best in class cybersecurity systems, policies and capabilities such as the new 24/7 Security Operations Center (SOC) and to implement a "cybersecurity by design" culture at the enterprise level for all procured, or in-house developed technical solutions. Externally, the IESO also needs to establish a leading role within the electricity sector, through broad sector collaboration and an information sharing program as per OEB's cybersecurity framework (as per March 12th response to the letter from the OEB.)	By the end of 2018: • A cybersecurity maturity level of 3.5/5, as defined by recognized industry standards, achieves an increase of approximately 25% over the 2016 baseline; and • Implement all requirements of the OEB's information sharing program and support LDCs compliance with OEB's Cybersecurity Framework (such as self-certification reports).
3) Conservation and energy efficiency programs are available to all customers in Ontario to support the achievement of the 2020 Conservation First Framework (CFF) targets.	The 2015-2020 CFF and the Industrial Accelerator Program maps out Ontario's energy conservation goals over a six-year period, emphasizing a coordinated effort within all stages of energy planning, as well as more effective teamwork among sector partners, particularly with local distribution companies (LDCs). The goal of the conservation efforts is a total reduction of 8.7 TWh of electricity consumption in Ontario by December 31, 2020 to be achieved through conservation projects with transmission-connected customers, and from conservation programs delivered by LDCs to residential and business customers across the province. Each year, annualized targets are set to ensure that the IESO and the sector is making progress towards the achievement of the overall CFF goal.	By the end of 2018: • 66% (5.7 TWh) of the combined 2015-2020 energy savings target of 8.7 TWh for Conservation First Framework (CFF) and Industrial Accelerator Program is contracted in a cost-effective manner within 4 cents/kWh.

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4) The electricity market evolves to enable the province to have the appropriate sources of electricity at a more competitive market price.	Market Renewal is about improving the way electricity is priced, scheduled and procured to meet Ontario's current and future energy needs reliably, transparently, efficiently and at the lowest cost. Key Market Renewal initiatives are identified below: Single Schedule Market The IESO is working with stakeholders to design and develop a single schedule market (SSM) to replace the existing two schedule system. This initiative is a key foundational element of the IESO's Market Renewal program. Day Ahead Market The IESO is working with stakeholders to design and develop a financially-binding Day-Ahead Market. A Day-Ahead Market will provide market participants with price certainty ahead of real-time, increase operational certainty for both market participants and the IESO, and reduce out of market payments. Enhanced Real-time Unit Commitment The IESO is working with stakeholders to design and develop an Enhanced Real-Time Unit Commitment (ERUC) program. An Enhanced Real-Time Unit Commitment Program will improve the efficiency of unit commitments in the intra-day timeframe by considering all resource costs in commitment decisions. An ERUC will also improve commitment decisions overall by optimizing over multiple hours rather than solving for each hour independently. Incremental Capacity Auction The IESO is working with stakeholders to design and develop an Incremental Capacity Auction (ICA). The ICA initiative will develop an enduring market-based mechanism that will secure incremental capacity to help ensure Ontario's reliability needs are met cost effectively. Developing an ICA is a key element of the IESO's Market Renewal program. Enhanced Real-Time Unit Commitment, together with a Day-Ahead Market and a Single Schedule Market collectively will improve the dispatch, commitment and pricing of resources in the energy market.	High-level designs are complete and published for stakeholder review (but not formally approved) for the Market Renewal Program (MRP) projects including: • Single schedule market – end of Q3 2018 • Day ahead market – end of Q4 2018 • Enhanced real-time unit commitment – end of Q4 2018 • Incremental capacity auction – end of Q2 2019
5) Enhance the value of the smart meter data by enabling various third parties to leverage the consumption data in the meter data management repository (MDM/R) in a privacy compliant manner.	The IESO, as the Smart Metering Entity (SME) of Ontario, is responsible for maintaining and operating the province's smart meter data repository that processes, stores and protects electricity consumption data used for consumer billing by Ontario's local distribution companies. The IESO is working on enhancing the value of the data in the provincial MDM/R and set a path for third party access to this data for a range of purposes including: ○ Design, development and implementation of conservation and demand response programs ○ Electricity system planning ○ Academic research ○ Predictive billing ○ Outage management ○ Development of new products and services that support the potential of big data ○ Others	By the end of 2018, the Smart Meter Entity will have established the processes and policies to enable MDM/R data products to be available publicly or by third-party request, as per the process approved by the OEB and in compliance with the Information and Privacy Commissioner's (IPC) requirements.
6) Execution of government policy by the IESO towards the achievement of long term planning and reliability goals.	The IESO has a key role informing and implementing policy. The IESO is responsible for issuing a technical report to inform the Government of Ontario's Long-Term Energy Plan (LTEP) and provide an execution plan to outline the steps it will take to implement LTEP policy initiatives.	By the end of 2018: • 100% of the 10 key initiatives from the 2017 Long-Term Energy Plan are progressing on time and budget, as evidenced by meeting associated milestones and timelines in 2018. Key initiatives and timelines include: ○ First Nation and Metis Energy Support Programs – Q1 2018 ○ First Nation and Metis

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		Conservation Programs – Q1 2018 ○ Renewable DG Demonstration Projects – Q4 2018 ○ Energy Storage – Q3 2018 ○ Power-to-Gas Pilot Projects – Q4 2018 ○ Bulk System Planning Process (develop high level issues/straw case proposal for discussion with stakeholders) – Q4 2018 ○ Regional Planning Process (complete review of the existing process and complete a jurisdictional scan) – Q4 2018 ○ Transmission Assets End-of-Life – Q4 2018 ○ Transmission Procurement Process (develop high level issues/straw case proposal for discussion with stakeholders) – Q4 2018 ○ Customer Reliability (complete need assessment for changes to IESO reliability standards) – Q3 2018
7) The Ontario energy sector is innovative with the IESO's active support to enable reliable, efficient and clean technologies and foster a competitive and inclusive network for emerging resources.	The Innovation roadmap will encompass an IESO-wide innovation strategy and work plan. Based on input from across the IESO, external stakeholders and interested parties, the strategy will set out a vision for innovation within the electricity and broader energy sector, and IESO's role and key objectives with regards to grid modernization and broader innovation in support of our mandate. The multi-year work plan will outline the specific actions that IESO will take in pursuit of the vision and objectives including a research agenda that will set out specific initiatives to be undertaken to generate necessary learnings, test out new ways of doing business and guide IESO's innovation investments (e.g. projects funded through the Conservation Fund, Renewable Distributed Energy Integration Fund).	By the end of 2018, an Innovation Roadmap is developed and approved, informed by engaging a broad range of industry partners and stakeholders to support an environment that enables sector transformation. The Roadmap will encompass an IESO-wide innovation strategy and work plan that is endorsed by the IESO board in Q4 2018.
8) Stakeholders and communities are confident with the engagement process for making informed decisions.	On an annual basis, the IESO conducts customer and stakeholder surveys to help determine the level of stakeholder satisfaction with the IESO's engagement process. The annual survey is designed to gauge customer's perspectives on the IESO's management of the stakeholder engagement process.	A 2% improvement in satisfaction with the stakeholder engagement process is achieved from the 2017 customer satisfaction survey baseline of 67% that also establishes the new benchmark to measure progress in future years.
9) The IESO holds its revenue requirement at approved budget levels.	The IESO intends to hold its revenue requirement for 2018 at 2017 approved budget levels and continues to work to identify potential operating efficiencies within the planning period. The resourcing requirements to maintain high levels of performance required by the IESO includes delivering its core electricity system requirements as well as executing key initiatives such as Long-Term Energy plan implementation, cybersecurity leadership and continued progress of the Market Renewal Program.	2018 priorities are achieved within the IESO's approved budget of \$190.8 million.
10) Employees are engaged towards achievement of the IESO's business priorities.	An engaged workforce is necessary to meet the needs of the sector in the future. Better engagement is intended to lead to better productivity whereby, a more engaged workforce will feel a connection and alignment to the IESO's overall purpose and an inherent belief that the work undertaken is important. Each year, the IESO reaches out to its staff for feedback via an in-depth engagement survey or smaller 'pulse' surveys to pinpoint areas of improvement for the organization. The survey is conducted by an independent third party and the results inform an overall employee engagement action plan.	By the end of 2018, a 4-point increase in employee engagement is achieved from the baseline of 71% set in 2016.