



Independent Electricity System Operator (IESO)— Market Oversight and Cybersecurity 2017 Value-for-Money Audit

Why We Did This Audit

- In Ontario, oversight of the electricity market is shared between the Ontario Energy Board (OEB) and the IESO.
- There has been heightened public interest about rising electricity costs in Ontario.
- According to the Canadian Cyber Incident Response Centre, the energy and utilities sector is the third-most attacked sector after the technology and finance sectors. Seven percent of all cyberattacks target the electricity sector.
- This is our first audit of the IESO's oversight functions and cybersecurity.

Why It Matters

- The IESO operates the wholesale electricity market, consisting of 560 market participants that include generators, electricity exporters and local distribution companies. Payments totalling \$17.5 billion were paid to market participants in 2016.
- Effective oversight of the market is important to protect Ontario ratepayers from energy producers that could unfairly benefit from market design flaws or non-compliance with the market rules.
- A strong cybersecurity system will prevent the IESO from cyberattacks.

What We Found

- The OEB's Market Surveillance Panel (OEB Panel) has been effective in monitoring and reporting inappropriate market conduct, and recommending that the IESO fix problems with market design. However, additional steps could have been taken by the OEB to have the IESO revisit market rule changes.
- The OEB Panel has recommended for years that the IESO scale back the Real-time Generation Cost Guarantee Program (Standby Cost Recovery Program), but the OEB Panel's recommendations have not been fully acted on by the IESO, and the program therefore continues to pay gas generators an average of about \$30 million more per year than necessary. In addition, nine gas and coal generators claimed as much as \$260 million in ineligible costs of the \$600 million of costs paid under this program between 2006 and 2015. The IESO recovered only about \$168 million, or two-thirds of the \$260 million.
- The OEB Panel has repeatedly warned the IESO about generators and large industrial consumers taking advantage of Congestion Management Settlement Credits (the Lost Profit Recovery Program) since the program began in 2002. Investigations by the OEB Panel found misuse of this program. For example, in one case, a generator received about \$20.4 million over eight months, claiming lost profits due to the IESO's intervention in the market. The generator was found to have misused the program but only had to return half of the overpayment (\$10.6 million).
- There is little representation of ratepayers' interests in the IESO's Market Renewal Initiative working group that is helping to determine the future design of the electricity market. Some members of this group, nominated by the IESO, work for companies that have been, or are being, investigated for benefiting financially from existing market design problems.
- The IESO Oversight Division's enforcement actions have been limited due to a lack of staff, high employee turnover, and fewer investigative powers compared with the OEB Panel. Nevertheless, three major investigations in the last three years (2015–2017) resulted in fines and settlement recoveries of \$30 million. There is the potential for more recoveries.
- The government has expanded the Industrial Conservation Initiative (ICI), which is increasing the electricity charges of residential and small-business ratepayers, while decreasing the electricity charges of large industrial ratepayers. For example, in the first 10 months of the ICI, large industrial ratepayers' electricity bills were lowered by a total of \$245 million, which was added to the electricity bills of residential and small-business ratepayers. The ICI has been expanded three times to make more industrial ratepayers eligible. Before the ICI launched in January 2011, all ratepayers were paying about 7 cents per kilowatt hour (cents/kWh). After six-and-a-half years (as of June 2017), residential and small-business users were paying 12 cents/kWh and large industrial ratepayers were paying 6 cents/kWh.
- The IESO could improve cybersecurity by creating a senior executive position dedicated to cybersecurity, increasing its cybersecurity staff, and having an IT cybersecurity vendor on standby. Also, it could procure technology that monitors authorized users' access to confidential information and do more to better protect backup tapes.

Conclusion

- The OEB Panel is effective in identifying market design flaws in Ontario’s electricity market. However, the IESO has not implemented some important recommendations of the OEB Panel directed at the Standby Cost Recovery and Lost Profit Recovery programs. Where a market rule amendment has been brought forward, the OEB has never used its powers under the Electricity Act, 1998, to revoke a market rule and send it back to the IESO for reconsideration.
- The IESO’s Oversight Division is not fully equipped with the resources, independence and enforcement power it needs to fully monitor and enforce the rules of the electricity market at a level required to protect ratepayers.
- Improvements can be made to address the risk of potential security breaches and cyberattacks that could disrupt the flow of electricity and negatively impact the Ontario electricity market.

To view the report, please visit www.auditor.on.ca