

5.1.1.5 Hydro One

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5.1.1.5.1 Key facts

Key facts	
Headquarters	Toronto, Ontario, Canada
Service area	Ontario
Type of utility	Vertically integrated electric utility
Voltage level	115 kV–500 kV
Number of employees	5,516
Revenues (2015)	CAD1,536 million

CAD: Canadian dollar

Note: Data for revenue represents the transmission segment revenue of Hydro One; data for the number of employees is the total number of regular employees

Source: Hydro One

- Hydro One Limited, owned by the Ontario government, is the largest electricity transmission and distribution (T&D) company in Ontario. T&D activities in the state are undertaken by Hydro One Inc., which is the holding company for Hydro One's rate-regulated businesses. Hydro One Networks, which is a subsidiary of Hydro One Inc., is the principal subsidiary involved in the planning, construction, operation and maintenance of the T&D business. The transmission operations are regulated by the Ontario Energy Board (OEB) and the National Energy Board (NEB). The utility has an operating agreement with the Independent Electricity System Operator (IESO) and the North American Electric Reliability Corporation (NERC).
- The utility's transmission network serves 96 per cent of Ontario, with approximately 29,355 circuit km of high voltage power lines operational at the 115–500 kV voltage levels. It also owns 66 per cent interest in B2M Limited Partnership, a limited partnership between Hydro One and the Saugeen Ojibway Nation for the Bruce-to-Milton transmission line. Hydro One's transmission system is linked to five jurisdictions adjacent to Ontario (Manitoba, Minnesota, Michigan, New York and Quebec) through high voltage interconnections. The transmission assets, estimated at CAD12.06 billion, account for around 50 per cent of the total asset base of Hydro One.
- Hydro One launched its initial public offering (IPO) and secondary offering of 15 per cent each of its common shares in November 2015 and April 2016, respectively. This was followed by Province of Ontario's privatisation initiative to divest 60 per cent of Hydro One, which is currently under way.

5.1.1.5.2 Growth in transmission network, 2011–15

Table 1: Growth in transmission network

	2011	2012	2013	2014	2015
Line length (circuit km)	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
Number of substations	XXX	XXX	XXX	XXX	XXX

Source: Hydro One

5.1.1.5.3 Operational performance, 2011–15

Table 2: Key operational indicators

	2011	2012	2013	2014	2015
Annual transmitted electricity (TWh)	XXX	XXX	XXX	XXX	XXX
Unsupplied energy (minutes)	XXX	XXX	XXX	XXX	XXX
TSAIDI (average minutes of interruptions per delivery point)	XXX	XXX	XXX	XXX	XXX
TSAIFI-S (average number of sustained interruptions per delivery point)	XXX	XXX	XXX	XXX	XXX
TSAIFI-M (average number of momentary interruptions per delivery point)	XXX	XXX	XXX	XXX	XXX
Network availability (%)	XXX	XXX	XXX	XXX	XXX
Transmission line unavailability due to forced outages (% per 100 km)	XXX	XXX	XXX	XXX	XXX
Transmission station equipment line unavailability due to forced outages (%)	XXX	XXX	XXX	XXX	XXX
Conductor forced outage frequency (number of outages)	XXX	XXX	XXX	XXX	XXX
Transformer forced outage frequency (number of outages per component)	XXX	XXX	XXX	XXX	XXX

T-SAIDI: Transmission System Average Interruption Duration Index; T-SAIFI: Transmission System Average Interruption Frequency Index

Source: Hydro One

5.1.1.5.4 Financial performance, 2011–15

Table 3: Key financial indicators (CAD million)

	2011	2012	2013	2014	2015
Revenue	XXX	XXX	XXX	XXX	XXX
–Transmission revenue	XXX	XXX	XXX	XXX	XXX
Income before financing charges and income taxes	XXX	XXX	XXX	XXX	XXX
–Income before financing charges and income taxes from transmission	XXX	XXX	XXX	XXX	XXX
Net income	XXX	XXX	XXX	XXX	XXX
Capital expenditure on transmission	XXX	XXX	XXX	XXX	XXX
OM&A expenditure	XXX	XXX	XXX	XXX	XXX
–OM&A expenditure on transmission	XXX	XXX	XXX	XXX	XXX
Return on equity (%)	XXX	XXX	XXX	XXX	XXX
Debt-to-equity ratio	XXX	XXX	XXX	XXX	XXX
Profit margin (%)	XXX	XXX	XXX	XXX	XXX
Revenue per employee ratio	XXX	XXX	XXX	XXX	XXX
Operating expense ratio	XXX	XXX	XXX	XXX	XXX
–Operating expense ratio for transmission	XXX	XXX	XXX	XXX	XXX
Operating expense per employee ratio	XXX	XXX	XXX	XXX	XXX

OM&A: Operations, maintenance and administration expenditure

Source: Hydro One

5.1.1.5.5 Future plans and investment

Table 4: Planned capital expenditure on transmission (CAD million)

	2016	2017	2018	2019	2020
–Sustainment expenditure (projects to address safety, customer and reliability needs)	XXX	XXX	XXX	XXX	XXX
–Development expenditure (projects needed for inter-area network transfer, local area supply, and load connection)	XXX	XXX	XXX	XXX	XXX
–Operations expenditure (comprises projects such as new back-up control centre and replacement of end-of-life grid control network elements)	XXX	XXX	XXX	XXX	XXX
–Common corporate capital (expenditure on IT, transport and work equipment, etc.)	XXX	XXX	XXX	XXX	XXX
Total capital expenditure	XXX	XXX	XXX	XXX	XXX

Source: Hydro One

Table 5: Key planned projects

Project	Voltage (kV)	Estimated cost (CAD million)	Expected completion
Toronto Midtown Transmission Reinforcement	115	123	2016
Guelph Area Transmission Refurbishment	230	103	2016
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXX	XXX	XXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXX	XXX	XXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXX	XXX	XXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXX	XXX	XXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXX	XXX	XXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXX	XXX	XXX

Source: Hydro One

5.1.1.5.6 Recent contract awards

Table 6: Key recent contracts

Contractor/Company	Year of contract award	Scope of work
Black & McDonald Limited	September 2016	Design, supply and install 230 kV cables
Gerrie Electric	August 2016	Relay protection equipment
NGK Insulators of Canada Limited	July 2016	230 kV line post insulators
The State Group Incorporated	July 2016	EPC contract for relay building of Birch Transmission Substation
XXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
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EPC: engineering, construction and procurement
 Sources: Hydro One; Global Transmission Research

5.1.1.5.7 Key contacts

Name	Designation
Mayo Schmidt	President and Chief Executive Office
Michael Vels	Chief Financial Officer
Greg Kiraly	Chief Operating Officer
Tom Kydd	Vice-President, Operations
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Paul H. Barry	Executive Vice-President, Strategy and Corporate Development
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