

5.11 Creating a Sustainable and Affordable Electricity System

A clean, reliable and affordable supply of electricity is key to creating sustainable jobs, fighting climate change and growing the economy. Energy planning does not fall within the IJPA, and energy assets are not included in the provincial asset inventory. Nevertheless, energy assets are still crucial parts of the Province's infrastructure. In addition to Ontario's infrastructure commitment of about \$190 billion over 13 years, the Province is making significant investments in energy. Ontario has:

- invested nearly \$70 billion in the electricity system since 2003, including generation, transmission and distribution assets to ensure that the province has a clean and reliable electricity system
- eliminated Ontario's use of coal for electricity generation, resulting in cleaner electricity
- expanded the use of clean, renewable power
- launched a new \$100-million natural-gas grant program in 2017 to support the building of natural-gas infrastructure to expand services to homes and businesses
- made important investments in nuclear generation — Ontario's nuclear industry generates \$2.5 billion in direct and indirect activity in the province annually
- provided support to lower electricity bills through Ontario's Fair Hydro Plan
- capped rate increases to inflation for the next four years, and provided extra support for low-income families and those living in rural or remote communities or on-reserve First Nation communities

How Ontario Is Building Better Energy Infrastructure

This fall, the government released a new Long-Term Energy Plan (LTEP), *Delivering Fairness and Choice*, to provide a road map of the Province's energy system over the next 20 years.

The 2017 LTEP focuses on the affordability and reliability of a clean energy supply, giving consumers more choice in the way they use energy, while offering ways to conserve energy and introducing new regulatory protections.

Key initiatives in the 2017 LTEP include:

- Maximizing the use of Ontario's existing energy assets, only securing new power when it is needed.
- Enhancing consumer protection by giving the Ontario Energy Board (OEB) increased regulatory authority over the 326,000 individually-metered condo and apartment units in the province.
- Working with the OEB to provide people with greater choice in their electricity price plans, by piloting alternatives to the current approach to time-of-use pricing in select communities across the province.
- Enhancing net metering by allowing more people the opportunity to produce clean energy and use it to power their homes and lower their electricity bills.
- Allowing utilities to intelligently and cost-effectively integrate electric vehicles into the grid, including smart charging in homes.

It has been projected that Ontario's consumers and businesses stand to gain \$6.3 billion in economic, environmental and reliability benefits if Ontario utilities invest in smart-grid technologies that will modernize distribution.

However, there are barriers standing in the way of modernization, and these barriers inhibit the domestic uptake of smart-grid technologies. The government will address these barriers as it implements the Long-Term Energy Plan, with a focus on creating the right environment for utilities to make investments in the smart grid where it makes sense. The goal is for utilities to modernize their systems and businesses in a way that improves efficiency and performance, lowers costs and gives customers more choice in how they participate in the energy system.

Where feasible, Ontario is supporting the expansion of the transmission grid to remote First Nations communities in northwestern Ontario, to reduce their reliance on diesel-powered generation. This initiative will support social and economic development for remote communities by increasing their access to clean and reliable power. Communities will be free from electrical load restrictions that limit housing and economic development and will reap environmental benefits (such as a reduction in GHG emissions and diesel spills). The Province has selected Wataynikaneyap Power L.P. as the transmitter for connecting 16 of these communities to the electricity grid, and has designated this project a priority. The Wataynikaneyap Power project is undergoing environmental assessments and will be submitting a Leave to Construct application to the Ontario Energy Board for regulatory approval to commence construction.

Smart-Grid Fund Success Story: FleetCarma, an award-winning Ontario-based company that provides electrical vehicle (EV) products and services, identified two main concerns relating to an increased number of EVs plugging into the electricity grid in the coming years. First, local grid reliability can be compromised if distribution transformers become overloaded in some neighborhoods. Second, during periods of peak electricity demand (e.g., hot summer afternoons), additional EV charging can strain electricity-generation resources.

With the support of the Ontario Ministry of Energy’s Smart Grid Fund, the FleetCarma Charge TO pilot project offered a solution to deal with these potential risks by controlling EV charging and thereby protecting local grid infrastructure, all while taking the needs of EV owners into account.

Indigenous communities are critical partners in Ontario’s energy sector. First Nation and Métis communities across the province are leading or involved in renewable-generation, transmission and conservation projects, and many are also engaged in community energy planning.

In Ontario, nearly 60 First Nations and Métis communities and groups are leading or partnering in more than 600 wind, solar and hydroelectric projects, largely as a result of incentives from Ontario renewable-energy programs.

In total, these projects have a contracted capacity of over 2,200 megawatts of clean energy.

Commented [TD1]: ENERGY Comment:

Wataynikaneyap recently commented that they do not want their name being shortened to Watay in official documents. We stick with Wataynikaneyap in LTEP so suggest same for LTIP.

Commented [TD2]: ENERGY Comment:

Changed the 600 projects and 2,200 MW to ensure consistency with LTEP. See pg #124.

Commented [TD3]: ENERGY Comment:

Not in LTEP