

# Powering New York City with Hydropower from Québec and New York based renewable energy

The **Champlain Hudson Power Express** is a collaboration between Hydro-Québec and Transmission Developers Inc. to deliver clean energy over a buried transmission line to be constructed between Québec and New York. Poised to start construction in 2021, it is ready to reliably deliver 10.4 TWh of clean energy annually to New York City by 2025.

Two supply options have been offered, (1) a 100% hydropower solution or (2) a mix of Canadian hydropower and New York based renewable generation, in response to the New York State Energy Research and Development Authority's (NYSERDA) Tier 4 renewable energy procurement process.

- firm, dispatchable clean energy delivered directly into NYC over buried transmission
- lower greenhouse gas emissions and reduction in local air pollution
- new construction jobs and extensive economic benefits for New Yorkers
- increased reliability and resiliency of New York's electricity supply, with a source of continuously generating baseload power that can complement new intermittent resources



## Project at a glance

- Fully permitted. In service by December 2025
- Underground and submarine transmission line to be built in Québec
- 100% hydropower sourced from existing HQ hydropower facilities
- NY-located renewable power sourced through a new converter station in the town of New Scotland, outside of Albany.
- \$40 million fund dedicated to help Disadvantaged Communities train for and take advantage of the green economy transition

## Economic Benefits

- Approximately \$50 billion in total estimated economic benefits for New York State from 2021 to 2050, including:
  - Carbon reduction worth over \$23 billion (over 25 years), and \$23 billion in economic output in New York from construction and operation of the line
  - 1,400 new direct jobs during construction, with a commitment to union labor and an additional +3,000 secondary jobs created in New York

## Environmental benefits

- 20% decrease State-wide in localized air pollutants (in Year 1). Half of this decrease will occur in New York City, where most fossil-fuel peaker plants are located in, or adjacent to, Disadvantaged Communities.
- Carbon reduction of 3.9 million metric tons/year, equivalent to removing 44% of cars from NYC streets
- \$117 million in funding for restoration of the Hudson and Harlem Rivers and Lake Champlain.

## Moving New York away from fossil fuels

CHPE is the most advanced, shovel-ready opportunity to achieve the goals of the nation leading Climate Leadership and Community Protection Act (CLCPA). Québec hydropower delivered over a new transmission line can –

- replace more than half of Indian Point's generation - a significant step in meeting the 70% CLCPA target.
- remove 3.9 million metric tons of carbon every year.
- provide increased reliability, resiliency, and flexibility for the downstate grid.

## Transitioning to a Carbon-Neutral Economy at the Lowest Cost Possible

A study conducted by researchers at Duke University examining potential scenarios for replacing Indian Point indicated that when direct costs and environmental costs are examined, all scenarios targeting decarbonization involve the development of CHPE. The same study also highlights the considerable economic benefit associated with avoided greenhouse gas emissions starting earlier – as of 2025 – than would be the case with other solutions.

## New York support for CHPE

*"The fully permitted and approved [...] TDI Champlain Hudson Power Express transmission project, which would bring low-carbon hydropower from Quebec to New York City, could also play a significant role in replacing Indian Point's power if it is built."*

**Kit Kennedy**, Sr. Director Climate & Clean Energy Program, Natural Resources Defense Council, April 2020

*"We know they have low-cost hydropower in Canada. Let's run the cable, the transmission lines from Canada to New York City to get that power down here and let's stop talking and let's start doing."*

**Governor Andrew Cuomo**, May 2020

*"That electricity will come down to us – it's zero-emission electricity coming to us from Canada, from Quebec, hydropower that is being produced right now. And we're not taking advantage of it. We're going to take the actions working with our partners to make sure that our City government doesn't need to get its electricity from fossil fuels."*

**Bill de Blasio**, Mayor of New York City, Earth Day 2019

*"We must invest in our clean energy infrastructure including support for wind and solar upstate, continuing to develop our offshore wind resources, and bringing existing renewable hydropower sources to New York, as proposed by the Champlain Hudson Power Express. We need an all-of-the-above strategy to reduce our dependence on fossil fuels (...)."*

**Julie Tighe**, President of the New York League of Conservation Voters, May 2020

*"Expansion of the city's renewable energy supply is essential to our post-pandemic economy and Canadian hydropower is a resource that will help ensure New York's future and sustain the Earth's environment,"*

**Kathryn Wylde**, President & CEO, Partnership for New York City.



## A Natural Battery for New York City

In the future, CHPE can play a critical role in contributing to deep decarbonization in New York. This long-term asset can complement and balance in-state renewable sources. Reservoir hydropower can also act as a natural battery, storing energy as needed in the form of water in its vast reservoir system – for hours, days, months, or even on a seasonal basis, and then returning that energy back to New York during periods of low renewable production and high demand. This allows for the efficient and affordable integration of higher levels of intermittent energy sources in New York without sacrificing reliability.