# **PROPOSAL NARRATIVE Champlain Hudson Power Express Project**

# **RESPONSE TO REQUEST FOR PROPOSALS**

May 12, 2021



Portions of this Proposal contain confidential, proprietary, and/or commercially sensitive information which has been redacted from the "Public Version" of this Proposal. The proposal has submitted a "Confidential Version" of this Proposal which includes the redacted information, and which should be treated as a non-public record that is exempt from disclosure to the extent permitted under applicable laws and/or as expressly set forth in the RFP.

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# **GLOSSARY OF FREQUENTLY USED TERMS**

# FREQUENTLY USED TERMS

In addition to terms defined in the RFP (and not modified below), this Proposal frequently uses the defined terms listed below. Also, electrical, engineering and other technical terms, as well as common terms from the energy markets, used without definition have their customary industry meanings.

"AC" is alternating current.

"Astoria Annex Substation" is the Astoria Annex Substation in Queens, New York (Zone J), which is owned by NYPA and operated by ConEd.

"**BIPOC**" is the acronym that stands for black, Indigenous and people of color.

"Blackstone" is The Blackstone Group, Inc.

"CER" is the Canadian Energy Regulator.

"Champlain Hudson Power Express" is the name of the Project, and the New Transmission, namely the Québec Line and CHPE.

"CHPE" is the New York State portion of Champlain Hudson Power Express, consisting of a new transmission line that will connect with the Québec Line at the U.S.-Canada border and extend to Astoria, Queens, New York to deliver clean energy directly to New York City (Zone J).

"CLCPA" is the Climate Leadership and Community Protection Act.

"ConEd" is Consolidated Edison Company of New York, Inc.

"**DC**" is direct current.

"Delivery Point" is the Astoria Annex Substation.

"EIS" is an Environmental Impact Statement.

"Équipement" is HQTÉ when acting in its engineering and construction capacity.

"FERC" is the Federal Energy Regulatory Commission.

"FEIS" is the Final Environmental Impact Statement issued by the USDOE.

"GW" is gigawatts, and "GWh" is gigawatt hour.

"HDD" is horizontal directional drilling.

"Hertel Substation" is the Hertel 735 kV Substation located in La Prairie, Québec.

"HQ Production," "Hydro-Québec Production" or "HQP" is a group within Hydro-Québec responsible for generation assets owned by the enterprise.

"**HQTÉ**" is Hydro-Québec TransÉnergie and Équipement, a group within Hydro-Québec responsible for the transmission and construction functions of Hydro-Québec.

"HQUS" is H.Q. Energy Services (U.S.) Inc., a subsidiary of Hydro-Québec.

"HVAC" is high-voltage alternating current.

"HVDC" is high-voltage direct current.

"**Hydro-Québec**" or "**HQ**" was created in 1944 by the Hydro-Québec Act of the Parliament of Québec.

"IDA" is Industrial Development Agency.

"IREQ" is Institut de recherche d'Hydro-Québec (Hydro-Québec's research institute).

"**km**" is kilometers.

"MELCC" is the Ministere de I 'Environnement et de la Lutte contre les changements climatiques.

"Mvar" is mega volt amps (reactive).

"**MW**" is megawatts.

"**MWh**" is megawatt hour.

"NEPA" is the National Environmental Policy Act.

"New Transmission" is the Québec Line and CHPE to be constructed in support of the Project.

"NGO" is non-governmental organization.

"NOAA" is the National Oceanic and Atmospheric Administration.

"NYDOS" is the New York Department of State.

"NYDPS" is the New York Department of Public Service.

"**NYISO**" is the New York Independent System Operator, Inc., the administrator of the wholesale power markets in New York and the manager of the physical electrical operations of the New York Control Area.

"NYPSC" is the New York State Public Service Commission.

"NYSDEC" is the New York State Department of Environmental Conservation.

"NYSDOT" is the New York State Department of Transportation.

"NYSERDA" is the New York State Energy Research and Development Authority.

"NYSHPO" is the New York State Historic Preservation Office.

"O&M" is operations and maintenance.

"OGS" is the New York State Office of General Services.

"Québec Line" is a portion of the New Transmission in Québec consisting of a new transmission line that will extend from the Hertel Substation to the U.S. border, where it will connect to CHPE, as described in this Proposal. The Québec Line also includes the DC converter to be installed at Hertel Substation.

"RCM" are regional county municipalities.

"**RFP**" is the Purchase of New York Tier 4 Eligible Renewable Energy Certificates (RECs) Request for Proposals (RFP) No. T4RFP21-1 released January 13, 2021, by NYSERDA.

"**ROW**" is a right-of-way.

"**TransÉnergie**" or "**HQT**" is HQTÉ when acting in its capacity as the owner and operator of the transmission system in Québec.

"**Transmission Developers**" or "**TDI**" is the collective term for CHPE LLC, the owner of CHPE, together with TDI-USA, the developer of CHPE, and CHPE Properties, Inc., a New York transportation corporation, as well as their predecessor entities.

"TSA" is the TransÉnergie Transmission Service Agreement relating to the Québec Line.

"**TWh**" is terawatt hour.

"USACE" or "ACOE" is the U.S. Army Corp of Engineers.

"USDOD" is the United States Department of Defense.

"USDOE" is the United States Department of Energy.

"USDOS" is the U.S. Department of State.

"USFWS" is the U.S. Fish and Wildlife Service.

"Withdrawal Point" is the Hertel Substation.

# **CONFIDENTIALITY STATEMENT AND ENABLING STATEMENTS**

As contemplated under Sections 1.14, 7.3.2 and 10.1 of the Purchase of New York Tier 4 Eligible Renewable Energy Certificates (RECs) Request for Proposals (RFP) No. T4RFP21-1 released January 13, 2021 (RFP) issued by the New York State Energy Research and Development Authority (NYSERDA) and further described in the Request for Exemption from Disclosure letter (Letter) submitted by **Section 11** (Proposer) with this Proposal, certain portions of this Proposal (including attachments) contain non-public, confidential, proprietary and/or commercially sensitive information (collectively, Confidential Information). The Confidential Information constitutes trade secrets or is submitted to NYSERDA by the Proposer as a commercial enterprise or derived from information obtained from the Proposer as a commercial enterprise and which if disclosed would cause substantial injury to the competitive position of the Proposer. The Confidential Information also includes trade secrets and/or commercially confidential information supplied to the Proposer by Transmission Developers and subject to a confidentiality agreement executed by the parties.

Under New York Public Officers Law (POL) §§ 87(2) and 89(5) and 21 New York Codes, Rules and Regulations (NYCRR) Part 501.6(d), the Confidential Information is not a public record and is exempt from public records requests and disclosure. The Proposer intends for all Confidential Information to remain confidential and be treated as such by NYSERDA and the Scoring Committee. In that regard, the Proposer submits that the Confidential Information:

- includes protected critical information describing the assets, engineering and designs for the location and details of infrastructure that could be vital to sustaining and enhancing the State's energy supply such that disruption, incapacitation or destruction of such infrastructure could jeopardize the health, safety, welfare or security of the State, its residents or its economy. As such, the Confidential Information should be exempt from disclosure pursuant to POL §§ 87 (d) and 89 (5) (a) (1-a);
- contains trade secrets and information derived from a commercial enterprise, which, if disclosed, would cause substantial injury to the Proposer's and Transmission Developers' competitive position (see POL § 87 [2] [d]; 21 NYCRR § 501.6). For example, the information includes confidential, proprietary, and/or commercially sensitive records, costs, prices, forecasts of future energy production, proposed GHG and energy baselines, processes, plans, studies, surveys, analyses, engineering, designs, critical infrastructure information, work product, cost allocation strategies and projections developed at considerable time and expense in order to compete with other developers;
- is not available to the public and cannot be easily obtained or developed from public information;
- contains confidential or proprietary information that is not published or divulged, disclosure of which would cause substantial injury to the Proposer's competitive position as a commercial enterprise;
- would be of material economic value to competitors, including, without limitation, other proposers responding to this and future requests for proposals, and would provide them with an unfair advantage in their bidding and negotiating strategies; and

• has been preserved pursuant to confidentiality agreements and has been shared only with those individuals whose roles in the preparation of this Proposal required them to have access to it.

In accordance with RFP Sections 1.14, 7.3.2 and 10.1, the Confidential Information has been redacted from the "Public Version" of this Proposal. Further, the Proposer has submitted a Confidential Version of this Proposal that has been labeled "Confidential" or "Proprietary" on each page and identifies Confidential Information through shading in the narrative portion of this Proposal. The Confidential Version of this Proposal should be treated as a non-public record that is exempt from disclosure to the maximum extent permissible under applicable laws (including, without limitation, POL § 87(2)(d)), and as expressly set forth in the Letter pursuant to applicable law (including, without limitation, POL § 89(5) and the procedures set forth in 21 NYCRR Part 501).

This Proposal includes information concerning the Proposer's expectations, beliefs, plans, objectives, goals, strategies, and assumptions of future events regarding the Project. That information constitutes "forward-looking statements" based on the current expectations, estimates, assumptions or plans of the Proposer and does not guarantee the future. Those expectations, estimates, assumptions or plans may vary materially from actual results. Factors affecting the development, construction and operation of the Project are difficult to predict, many of which are beyond the Proposer's control. New factors also may emerge from time to time, and it is not possible for the Proposer to predict all of those factors, nor can the Proposer assess the impact of each factor on the Project or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

# Section 1 EXECUTIVE SUMMARY

7.6.1 Proposers are required to provide an executive summary that describes the Project and Resources, explains the eligibility of the proposed Project, how the Project will demonstrate the Zone J delivery requirement, and provides the expected Commercial Operation Date. Proposers should discuss any other factors Proposers deem to be important.

Shovel-ready, with permits in hand and a world-class, proud union construction team mobilized, this Proposal will deliver clean, renewable and reliable energy across a new, resilient transmission system, benefiting the environment, the State, New Yorkers and their communities.

Hydro-Québec and Transmission Developers (a Blackstone portfolio company), the Project sponsors, are proud to submit the

(Project) in response to the Request for Proposals (RFP) No. T4RFP21-1 released on January 13, 2021 by the New York State Energy Research and Development Authority (NYSERDA).<sup>1</sup>

The Project will deliver clean energy and associated Tier 4 RECs from Hydro-Québec's over a new intertie (New Transmission) to be constructed between the Hydro-Québec system and the New York Control Area (NYCA). This Project offers New York an opportunity to take a massive 1,250 MW step forward in realizing the ambitious climate goals that the Empire State has set for itself under the Climate Leadership and Community Protection Act (CLCPA) and build the foundations for a cleaner and more equitable and prosperous energy future for all New Yorkers.

<b>PROJECT HIGH</b>	ILIGHTS
Clean Energy As	> 10.4 TWh of clean baseload power that can replace over half of Indian Point's generation.
Early As 2025	The only project ready to begin construction in 2021.
Economic	> Over <b>\$49 billion</b> in total estimated economic benefits for New York State over 25 years.
Impact	More than 1,400 new direct jobs for New Yorkers during construction, with a
	commitment to union labor.
	> One of the largest investments in New York state history.
	An estimated <b>\$2.5 billion</b> reduction in the energy burden of <b>2.3 million New Yorkers</b>
	living in Disadvantaged Communities.
	million fund dedicated to help Disadvantaged Communities train for and take
	advantage of the green economy transition.
Environmental	Reduction of approximately 3.9 million metric tons of CO <sub>2</sub> emissions annually,
Benefits	equivalent to removing 44% of cars from New York City streets.
	> 20% decrease state-wide in localized air pollutants emitted by burning fossil-fuel for
	electricity generation in year one of operations. Half of this decrease will occur in New
	York City, where most fossil-fuel peaker plants in New York City are located in or adjacent
	to Disadvantaged Communities.
<b>Resilient Design</b>	➤ A 1,250 MW buried transmission line with , delivering Hydro-Québec's
	reliable system power, 24/7, maximizes resiliency and reliability on the downstate power
	grid.

<sup>&</sup>lt;sup>1</sup> All deliverables requested in the RFP have been developed in detail and provided in the main body of this Proposal.

High Certainty	Hydro-Québec's vast generation resources
of Execution	
	> CHPE is the only project with <b>all major permits in hand</b> , agreements in place with world-
	class HVDC contractors and a guaranteed cable manufacturing slot, allowing construction
	launch in 2021 and full operations between Hydro-Québec and New York City in 2025.
	Hydro-Québec and Transmission Developers/Blackstone are experienced clean energy
	developers with strong financial resources.
Options for the	> A flexible energy source that can maximize New York's ability to efficiently integrate the
Future: Flexible	planned development of offshore wind and solar.
Energy and	Hydro-Québec's reservoir system can act as an unparalleled long-term battery for
Unrivaled	seasonal storage of excess NY renewable generation reducing offshore wind curtailment by
Storage Conscity	up to an estimated 5 TWh annually by 2040.
Storage Capacity	

#### Linking New York City to North America's Largest Renewable Energy Generator

By the end of 2021, fossil-fuel generated electricity use downstate will power 85-90% of New York City's needs.<sup>2</sup> The urgent need to reverse this trend and deliver more renewable energy downstate, is clearly highlighted in the Public Service Commission's October 15, 2020 Order modifying the Clean Energy Standard.

To maintain reliability while reducing dependency on natural gas, downstate must be able to access a clean source of controllable baseload energy, to serve as a foundation on which intermittent energy sources can be added. CHPE allows just that, by providing a new 1,250 MW interconnection

#### Unparalleled Benefits to Help Relaunch New York's Economy

Economic benefits related to the construction of the New Transmission will help launch the State's economy post-COVID recovery and assist New York's Disadvantaged Communities, who have borne the brunt of dirty power plants and harmful emissions. Faced with more frequent and costly extreme climate events linked to the climate crisis, aging infrastructure, a growing reliance on fossil fuel, and a need for resilient and reliable energy to power New York's economic engine, the urgency to decarbonize the downstate generation mix has never been as dire.

Economic benefits over 25 years include:

✓ An additional +3,000 secondary jobs created in New York.

✓

 $\checkmark$ 

- in new tax revenues for over 150 communities along the line.
- ✓ \$116 million in funding for restoration of the Hudson River and Lake Champlain and for communities along the line route.<sup>3</sup>

<sup>&</sup>lt;sup>2</sup> Comments of the City of New York on CLCPA White Paper, August 31, 2020 (http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=15-E-0302&submit=Search+by+Case+Number, p. 9).

<sup>&</sup>lt;sup>3</sup> This funding is comprised of the Environmental Trust Fund and funding for Rockland County communities.

# Unparalleled Benefits to Help Relaunch New York's Economy

- ✓ \$17 billion in wholesale power market savings by displacing less efficient, more expensive and higher-emitting fossil-fuel generation.
- ✓ \$1.9 billion in health and societal benefits due to reductions in carbon and local pollutants..

# **Reliable Hydropower to Help New York Meet its Climate Goals**

Hydro-Québec, with a corporate commitment to sustainably developing energy resources, a grid that is over 99% renewable, and a history of contributing to decarbonization both in Québec and throughout the Northeast, stands ready through this Proposal to transmit 10.4 TWh of renewable energy over CHPE into New York City, 24/7, starting in 2025 and for the next 25 years.



Beginning in 2025, ov J will offer an unsurpassed degree of reliability.

Furthermore, as these generation facilities are located far from New York City, are geographically diverse and the transmission line is buried, there is virtually no risk that local climate events, such as Hurricane Sandy that had considerable impacts on New York's energy assets, would also adversely affect Hydro-Québec's ability to generate electricity and deliver it over the new interconnection.

The use of high-voltage direct-current (HVDC) technology allows for continued power flows into New York City even if the downstate grid or the greater State power grid is undergoing stressed conditions that might otherwise constrain available supply into Zone J from the existing AC power grid.

In addition, CHPE could provide black-start capability for quick restoration of the New York City or New York statewide electric systems in the event of a blackout. The Québec electrical system, being asynchronous from its neighbors, would likely not be impacted by a New York State blackout and would remain available to provide much-needed reliable power over CHPE.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup> This was demonstrated by the August 2003 Northeast blackout event during which the Québec system was not significantly impacted. The cascading outages through Ontario and New York were stopped at the asynchronous interfaces with the Québec system.

Experts agree that maintaining a high level of reliability in the context of high penetration of intermittent renewables will be a challenge:

"The potential operational limitations of zero-emissions resources will have implications for system reliability. [...] On a system that is more heavily dependent upon wind, solar, and battery storage, reliability concerns may arise over energy shortfalls if intermittent supplies are unavailable and storage capabilities are limited in duration."<sup>5</sup>

# Champlain Hudson Power Express: Linking the Québec and New York Grids

CHPE is a permitted, shovel-ready high-voltage direct-current 339-mile transmission line project that will be constructed by Transmission Developers. Hydro-Québec will make the necessary additions to the transmission grid in Québec (the Québec Line) and Transmission Developers will construct the new CHPE line in New York.

will flow from generation sites in Québec to the Hertel Substation, which is served by four 735 kV lines, ensuring a reliable connection. The energy will then be converted from high-voltage alternating current (HVAC) to high-voltage direct current (HVDC), and then transmitted over a new 36-mile buried HVDC transmission line in Québec to the interconnection point at the U.S.-Canada border. Hydro-Québec will build, operate and bear the total cost and risks associated with construction of the Québec Line. The Québec Line is expected to be primarily sited within public rights-of-way. Because the Québec Line is considerably shorter than CHPE, construction time is reduced. The in-service date is expected to be 2025.

The CHPE portion of the New Transmission begins at the U.S.-Canada border under Lake Champlain and extends 339 miles southward, to a substation in Astoria, Queens, where the power will be converted from DC to AC. Approximately 60% of the line is located in waterways (under Lake Champlain and the Hudson and Harlem Rivers) and the rest is underground within existing rights-ofway.

<sup>&</sup>lt;sup>5</sup> NYISO Power Trends 2020, p. 26: <u>https://www.nyiso.com/documents/20142/2223020/2020-Power-Trends-Report.pdf/dd91ce25-11fe-a14f-52c8-f1a9bd9085c2</u>.



**Champlain Hudson Power Express** 

<sup>&</sup>lt;sup>6</sup> Comments of the City of New York to NYISO, January 19, 2021.

<sup>&</sup>lt;sup>7</sup> 6 NYCRR, Subpart 227-3.

#### New York Support for CHPE

Ensuring adequate time and opportunities for stakeholders to understand and participate in the development of major infrastructure projects is critical to identifying and adopting appropriate modifications that minimize impacts and optimize the project's success.

Over an 8-year period, Transmission Developers undertook extensive communications activities along the entire line route, focusing its outreach on listening to and addressing the concerns of New York residents and a variety of stakeholder groups. Through years of conversations and outreach efforts, Transmission Developers and Hydro-Québec have earned broad support for the Champlain Hudson Power Express from a range of stakeholders, including towns, citizens living along the line route, nonprofit organizations, academics, unions, legislators, and economic development agencies. Importantly, 34 municipalities have passed public resolutions of support for CHPE.

Examples of public support for linking New York City with Québec's hydropower resources include:<sup>8</sup>

"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

"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 applaud Governor Cuomo for championing renewable energy projects as part of New York's post-COVID economic recovery. 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-theabove strategy to reduce our dependence on fossil fuels to achieve the State's goal of

<sup>&</sup>lt;sup>8</sup> For more information on community engagement for both the New York and Québec portions of the New Transmission, see Section 15.

100% clean energy by 2040, while also creating green jobs." Julie Tighe, President of the New York League of Conservation Voters, May 2020

"The buried and resilient electric transmission line will create more than 2,000 construction-related jobs for New Yorkers, add millions in tax revenue annually to local governments that desperately need the funding and bring firm, green energy to New York City, satisfying the power needs of over 1 million residents for more than 50 years. The project will do this while reducing harmful emissions and helping the Governor and Mayor move towards a more renewable, sustainable future."

**Christopher Erikson**, Business Manager for IBEW-Local 3, Gotham Gazette, July 15, 2020

# A Solid Team of Recognized Clean Energy Generators and Transmission Developers and Suppliers



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

Carbon neutrality is a monumental challenge. A recent report commissioned by the New York City Mayor's Office of Sustainability<sup>9</sup> provides cost estimates for measures required to make the City carbon neutral: between \$1.5 and \$2 trillion. Hydro-Québec and Transmission Developers are committed to offering a solution that furthers decarbonization goals, but does so 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.<sup>10</sup> 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.

Also, a recent investigation by the U.S. International Trade Commission into the potential economic effects of increased renewable electricity commitments in Massachusetts (where Hydro-Québec's energy was selected after a competitive clean energy solicitation) concluded that:

<sup>&</sup>lt;sup>9</sup> Pathways to Carbon-Neutral NYC, April 2021

https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/Carbon-Neutral-NYC.pdf.

<sup>&</sup>lt;sup>10</sup> Ryan S.D. Calder, Mark E. Borsuk, and Celine S. Robinson, Analysis of Environmental and Economic Impacts of Hydropower Imports for New York City through 2050, Plain-Language Summary: <u>https://nicholasinstitute.duke.edu/sites/default/files/publications/Analysis-of-Environmental-and-Economic-Impacts-of-Hydropower-Imports-for-New-York-City-through-2050-Plain-Language-Summary.pdf.</u>

"Case studies show the potential for hydroelectricity imports to help stabilize electricity prices, reduce costs to consumers, and make variable renewable energy (such as wind and solar) more profitable."<sup>11</sup>

The January 2021 New York Power Grid Study<sup>12</sup> concludes that a new transmission project delivering renewable energy to New York City will be a critical component to achieving the 70% by 2030 renewable target:

"The Zero Emissions Study found that New York's 2030 goals could be met at low levels of curtailment and congestion without significant bulk-power transmission upgrades beyond those already planned and under development, and a new HVDC line delivering dispatchable renewable energy into New York City that is assumed to materialize as a result of the State's new Tier 4 procurement."<sup>13</sup>

The Power Grid Study also finds that achieving a zero-emission electricity system by 2040 will require additional flexible zero-emission resources in combination with the renewable and storage resources expected to materialize as a result of current State efforts and programs. Leveraging the flexible capabilities of Hydro-Québec deliveries over CHPE can provide these characteristics, and reduce the possibility that New York would need to extensively rely on the continued operation of thermal generation to provide operational flexibility, as Hydro-Québec can provide this flexibility using clean energy, and more cost-effectively than generation fueled by renewable natural gas and/or battery energy storage projects (which are assumed to be more expensive than conventional fuels).<sup>14</sup>



 <sup>&</sup>lt;sup>11</sup> International Trade Commission: <u>https://www.usitc.gov/publications/332/pub5154.pdf</u>, p. 18.
<sup>12</sup> Initial Report on the New York Power Grid Study,

https://brattlefiles.blob.core.windows.net/files/20842 initial report on the new york power grid study.pdf. <sup>13</sup> Power Grid Study, page 79.

<sup>&</sup>lt;sup>14</sup> Power Grid Study, page 89.

#### **Meeting Zone J Delivery Requirements**

The Project will meet the delivery requirements under RFP Section 2.2 because the Delivery Point of the New Transmission will be located in Zone J, and the electrical interconnection will occur after October 15, 2020.

# **Expected Commercial Operation Date**

CHPE is ready to begin construction by the end of 2021

allowing the New Transmission to be fully operational and begin flowing clean energy into New York Zone J in 2025.

# **Responding to Future New York Electricity Needs: Optional Operational Flexibility and Storage Capability**

In the near term, downstate New York can greatly benefit from a considerable influx of new clean renewable baseload energy able to replace output from Indian Point and fossil-fuel peaker plants. In coming years, and to meet the clean energy goals mandated through the CLCPA, specifically the 2040 carbon free electricity requirement, New York State and particularly the downstate region will witness a massive buildout of intermittent offshore wind and solar energy resources. A flexible resource will be needed to quickly ramp up when wind and solar generation decreases. Energy storage capabilities will be necessary when overproduction from these sources occurs to avoid curtailing the renewable resource. This clean energy transition will result in a fundamental change of New York's grid.

Hydro-Québec's **complemented** by a HVDC system will supply baseload generation but also offers operational flexibility, allowing for deliveries of controllable and dispatchable energy.

Access to from Québec represents a long-term flexible asset for New York State that will be of help with changing electricity needs, by providing a foundation for the downstate grid. To meet the 2040 CLCPA goal, deliveries over CHPE may need to be bi-directional to efficiently and reliably run the grid. A bi-directional line will be able to rapidly ramp up and down to meet energy requirements in Zone J. By acting 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. Using CHPE to flow excess offshore wind into the Québec reservoir system could help reduce NYISO offshore wind curtailment in 2040 by approximately 25%, or 5 TWh, depending on the level of offshore wind generation operating on the system. The value of this reduced curtailment is estimated at over \$500 million in 2040.<sup>16</sup>

<sup>&</sup>lt;sup>16</sup> PA Consulting Report on CHPE, May 2021 (Attachment 16.1).

A study published by researchers at MIT highlighted this point:

"[I]n a low-carbon future, it is optimal to shift the utilization of the existing hydro and transmission assets away from facilitating one-way export of electricity from Canada to the U.S. and toward **a two-way trading of electricity to balance intermittent U.S. wind and solar generation**."<sup>17</sup>

The terms of a PSA between Hydro-Québec and NYSERDA could include future additional services tailored to reflect the evolving needs of the New York and New York City electricity system, including bidirectional flow – to help with the State's clean energy transformation and achieve deep decarbonization of the electricity system.

# Conclusion

The permitted CHPE line offers certainty that no other project can and is poised to deliver, annually, 10.4 TWh of clean Québec hydropower beginning in 2025. This Project represents a unique, low-risk opportunity to enable New York to meet its CLCPA goals – and to meet them as quickly as possible.

This Proposal will provide firm clean energy, lower greenhouse gas emissions and reduce levels of localized air pollution, and create new construction jobs and considerable economic benefits for New Yorkers, especially in Disadvantaged Communities, at a time when relaunching the economy is imperative. Creating a new interconnection between the Québec and New York grids will increase the reliability and resiliency of New York's electricity supply, and tap a source of continuously generating baseload power that in the future could complement new intermittent resources to be constructed in downstate New York. This new structural element in the State's energy system will provide strategic value for decades to come.

<sup>&</sup>lt;sup>17</sup> MIT Center for Energy and Environmental Policy Research: Two-Way Trade in Green Electrons: Deep Decarbonization of the Northeastern U.S. and the Role of Canadian Hydropower, <u>http://ceepr mit.edu/publications/working-papers/719</u>.

# Section 2 IMPACTS OF COVID-19 ON PROPOSER AND PROJECT DEVELOPMENT

7.6.2 Proposers are required to describe how the COVID-19 pandemic has affected their business operations, the process of developing the Project, and the content of the Step Two Proposal. For the avoidance of doubt, the content of this section of the Proposal Narrative is informational only and will not affect the Project Viability scoring of any of the submitted Step Two Proposals.

This plan aims to ensure that the essential services provided by Hydro-Québec – generation, transmission and distribution of electricity for the Québec market and surrounding regions – are maintained, and includes measures intended to protect Hydro-Québec's employees and customers.

These measures include:

- Implementing actions necessary to protect Hydro-Québec's employees and its subcontractors and to ensure that applicable hygiene and social distancing measures are respected to prevent transmission of the virus;
- Inviting employees who are equipped to work remotely to do so;
- Requiring employees returning from a trip abroad to stay at home for 14 consecutive days following their return to Canada;
- Prohibiting employees from travelling for business outside of Canada and requiring prior authorization from a member of Hydro-Québec's management committee for any travel outside of Québec; and
- Restricting visitors from entering its buildings or facilities unless their presence is necessary for Hydro-Québec to supply electricity (managerial level authorization required).

Further information about these measures is available on Hydro-Québec's website at <u>https://www.hydroquebec.com/covid-19-en.html</u>.

Certain Hydro-Québec business operations and practices have had to be adapted in response to the pandemic, including through the establishment of appropriate health measures such as those described above. Adaptive measures have been implemented at work sites throughout Hydro-Québec's generation, transmission and distribution facilities, and at construction sites. Despite making these changes, Hydro-Québec has continued normal operations.





# Section 3 PROPOSER EXPERIENCE

7.6.3 Proposers are required to demonstrate project experience and management capability to successfully develop and operate the Project proposed. NYSERDA is interested in Project Teams that have demonstrated success in developing projects of similar size and complexity and can demonstrate an ability to work together effectively to bring the Project to commercial operation in a timely fashion. Proposers are required to provide the following information with their Step Two Proposal:

Subsection 3.1 Project Organizational Chart

1. An organizational chart for the Project and associated New Transmission that lists all participants and identifies the corporate structure, including general and limited partners.

The Project is a collaboration between Hydro-Québec, Transmission Developers, and their respective affiliates to develop a new intertie (New Transmission) between the Hydro-Québec and New York transmission systems as part of a packaged Proposal for the delivery of clean, renewable energy and associated Tier 4 RECs.



The remainder of this Section 3.1 provides additional information regarding the corporate structures of the Project participants. Further details can also be found in Sections 10.2 and 10.13.

# **Project Participants**

The Canadian component of this Proposal involves groups or subsidiaries of Hydro-Québec, which is a state-owned corporation of the Province of Québec:



See Section 10.13 for a description of other related Hydro-Québec entities.



# Subsection 3.2 Proposer and Project Participant Experience

2. Statements that list the specific experience of Proposer and each of the Project and New Transmission participants (including, when applicable, partners, and proposed contractors), in developing, financing, owning, and operating generating and transmission facilities, other projects of similar type, size and technology, and any evidence that the Project participants have worked jointly on other projects.

This Proposal involves:

- New transmission to be constructed in Canada by Hydro-Québec (the Québec Line); and
- New transmission to be constructed in New York State by Transmission Developers (CHPE).

# Hydro-Québec

Since its creation in 1944, Hydro-Québec has designed, developed, owned and managed a vast fleet of hydropower generating stations.

# **Development of Generating Assets**

During the period from 1944-1959, Hydro-Québec undertook construction of a series of hydropower generating stations: the second and third sections of Beauharnois, Carillon, Bersimis-1 and Bersimis-2 and the Manic-Outardes Complex.

In 1971, Hydro-Québec commenced development of the La Grande Complex in the Baie-James region. Project management was assigned to Société d'énergie de la Baie James, which subsequently became a wholly owned subsidiary of Hydro-Québec. In 1996, when the final generating station (Laforge-2) was commissioned, La Grande became the largest hydropower complex in the world, a title it retained for a number of years.

Another major build-out period began in 2003. Since 2003, the following generation stations have been added to the fleet:

Generating Station	<b>Commissioning Year</b>	Installed Capacity (MW)
Sainte-Marguerite	2003	882
Rocher-de-Grand-Mère	2004	230
Toulnustouc	2005	526
Eastmain-1	2006	480

Generating Station	<b>Commissioning Year</b>	Installed Capacity (MW)
Mercier	2007	55
Péribonka	2007-8	385
Rapides-des-Cœurs	2008-9	76
Chute-Allard	2008-9	62
Bernard-Landry	2011-12	768
(Eastmain-1-A)		
Sarcelle	2013	150
Romaine-2	2014	640
Romaine-1	2015	270
Romaine-3	2017	395
Total installed capacit	ty added since 2003	4,919

# **Generating Station Operations**

Hydro-Québec owns and operates a fleet consisting of 60 hydropower generating stations<sup>20</sup> with a total installed capacity currently over 36,665 MW. The hydropower fleet also includes 28 large reservoirs, as well as 681 dams and 91 control structures (as of December 31, 2020).

Hydro-Québec Production supplies the company's Distribution group with up to 165 TWh per year of heritage pool electricity (plus losses, in a quantity determined by governmental decree) with its own generating stations and contracted supply.

#### **Québec Line**

HQTÉ, which is responsible for developing the Québec Line, is a world leader in transmission system design, operation and maintenance. Recognized throughout the world for the reliability of its transmission grid, HQTÉ spares no effort to stay at the forefront of the industry in this regard.

Hydro-Québec's transmission system is one of the most extensive in North America, composed of 538 substations and more than 21,639 miles of lines at various voltages, up to 765 kV. HQTÉ also markets transmission services, manages power flows across Québec and acts as Reliability Coordinator for the transmission systems in the Province of Québec. The group's fixed assets totaled CA\$23.8 billion at the end of 2020, and annual investment of Hydro-Québec in the growth of the transmission system, transmission asset sustainment and reliability projects totaled CA\$1,423 million.<sup>21</sup>

HQTÉ is also Hydro-Québec's in-house EPC contractor. HQTÉ is responsible for the execution of construction and refurbishment projects throughout the Province of Québec and has extensive experience constructing projects on the same scale as the Québec Line. Construction work performed by HQTÉ totaled CA\$2.1 billion in 2020.

#### CHPE

Transmission Developers, which is responsible for developing CHPE, is a Blackstone portfolio company that develops unique clean energy transmission projects in an environmentally responsible manner. It uses proven high-voltage direct current (HVDC) cable technology to link generation resources such as solar, wind, hydro and other renewables with markets that are seeking new sources of clean power. By installing cables underground or underwater, it avoids the negative impacts of overhead transmission and increases the electric grid's safety and reliability, while providing hardened infrastructure that is less susceptible to damage from natural disasters.

Transmission Developers has extensive experience working within the region to develop merchant transmission lines. As demonstrated throughout this Proposal, and due to the expertise of its management team, CHPE is already in a very advanced stage of development. In addition to CHPE, the same management team is also dedicated to the New England Clean Power Link project (<u>NECPL</u>). NECPL is a 1,000 MW buried HVDC transmission line that, once constructed, will link Canada to the New England Grid via a route through Vermont. Like CHPE, this 154-mile buried line

<sup>&</sup>lt;sup>21</sup> Section 10 contains additional financial and other information regarding Hydro-Québec and its affiliates involved in the Project.

is also fully permitted and well supported within the region.

Transmission Developers is backed by Blackstone, a preeminent global leader in the development and construction of energy infrastructure. Together with Blackstone, CHPE's management team has extensive experience in developing, financing, owning and operating power generation and transmission facilities.

See the table below for further detail:



More information on Blackstone can be found at <u>https://www.blackstone.com</u>. More information on CHPE is available at <u>www.chpexpress.com</u>.

For the CHPE transmission line and the Astoria converter station, a group of highly experienced contractors has been selected to ensure expert installation, efficient integration and optimal performance.













# Subsection 3.3 Key Staff Experience

3. A management chart that lists the key Proposer personnel and resumes of the key personnel. Key personnel of Proposer's development team having substantial project management responsibilities must have:

a. Successfully developed and/or operated one or more projects of similar size or complexity or requiring similar skill sets; and

b. Experience in financing power generation projects (or have the financial means to finance the Project on Proposer's balance sheet).



# Québec Line

In the ordinary course of business, personnel from HQTÉ have been involved in the development, planning, and design of the Québec Line, which will be operated and maintained by TransÉnergie's existing transmission workforce. That staff collectively, as an organization, was responsible for the successful installation of the transmission projects described in Section 3.4, and managing the CA\$2.1 billion investment by HQTÉ in property, plant and equipment in 2020.



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Below is a chart of individuals at Transmission Developers and Blackstone dedicated to CHPE's development.





# Subsection 3.4 Project Experience

4. A listing of projects the Proposer has successfully developed or that are currently under construction. Provide the following information for each project as part of the response:

- a. Name of the project
- b. Location of the project
- c. Project type, size, and technology
- d. Commercial Operation Date
- e. Estimated and actual capacity factor of the project for the past three years
- f. Availability factor of the project for the past three years
- g. References, including the names and current addresses and telephone numbers of individuals to contact for each reference.

#### Hydro-Québec

Hydro-Québec is continually expanding and renewing its generation and transmission systems.



HQTÉ similarly makes large-scale investments in transmission infrastructure to connect new hydroelectric facilities and wind farms to the grid or to increase transmission capacity in response to higher load demand or new customer requests. The table below includes some recent representative projects.<sup>25</sup>



(Million)^ Operation	Date
1 Integration of the Construction of four segments of new \$1.842 2014	
Romaine Complex transmission to interconnect 1 550	
MW hydroelectric complex at La	
Romaine:	
Romaine-2 – Arnaud: 163 miles	
Romaine-1 – Romaine-2: 17 miles	
Romaine-4 – Montagnais: 109 miles	
Romaine-3 – Romaine-4: 20 miles	
Also includes 4 switchyards, a	
switching substation at 735 kV, and	
transmission system upgrades.	
2. Integration of contracted Integration of 14 wind farms totaling \$1,466 2011-20	15
wind farms pursuant to 1,936 MW of installed capacity.	
HQ Distribution's March	
2005 request for proposals	
3. Chamouchouane-Boût deConstruction of a new 249-mile, 735\$1,1352019	
l'Ile Project kV transmission line between	
Chamouchouane substation in La	
Dore (Lac-Saint-Jean) and a new	
735/120/25 KV Judith-Jasmin	
substation in Terrebonne, and moving	
a section of an existing 755 KV line	
4 2nd Micoua-Saguenay Construction of a new 163-mile 735 \$793	
735 kV line kV line between the Micoua and	
Saguenay substations	
5. Outaouais Interconnection Construction of a new 1,250 MW \$662 2009-20	10
HVDC interconnection between	
Hydro-Québec and Ontario's Hydro	
One systems. The Outaouais	
interconnection includes a new back-	
to-back HVDC converter station built	
by ABB in L'Ange-Gardien, Québec.	
6. Integration of contracted Integration in the Gaspésie region of 8 \$598 2006-20	12
wind farms pursuant to wind farms totaling 990 MW of	
HQ Distribution's installed capacity.	
February 2003 request for	
7 Interconnection Addition of an HVDC-VSC converter \$823	
Appalaches-Maine at the Appalaches substation and	
construction of a 1.200 MW. 320 kV	
DC line (100 km) that will connect to	
the NECEC project in Maine.	

\*In Canadian dollars. Amounts approved by the Régie de l'énergie du Québec.
Hydro-Québec may be contacted for further information with respect to any of these projects at:



## **Transmission Developers**

See table in Section 3.2 for representative projects of Transmission Developers' organization.

For further information regarding those projects, please contact:



# Subsection 3.5 Project Team

5. Regarding Proposer's Project Team, identify and describe the entity responsible for the following, as applicable:

- a. Construction Period Lender, if any
- b. Operating Period Lender and/or Tax Equity Provider, as applicable
- c. Financial Advisor
- d. Environmental Consultant
- e. Facility Operator and Manager
- f. Owner's Engineer
- g. EPC Contractor (if selected)
- h. Transmission Consultant
- i. Legal Counsel



# **New Transmission**

The development and construction of the Québec Line and CHPE will be managed consistent with other large-scale transmission / infrastructure projects that have recently been completed by Hydro-Québec and Blackstone.

## Québec Line

As described elsewhere in this Section 3, HQTÉ will execute its obligations with respect to the engineering, procurement and construction of the Québec Line.

# **Construction Period – Labor**

For the construction of CHPE, Transmission Developers has committed to hiring organized labor. Transmission Developers has a longstanding relationship with the men and women of NY State labor, specifically with operating engineers, laborers and IBEW, which has been memorialized in supportive



op-eds and letters to the editor, supportive letters to elected officials and appearances at municipal and regulatory meetings.









# a. Construction Period Lender.



b. Operating Period Lender and/or Tax Equity Provider.



# c. Financial Advisor.





d. Environmental Consultant.

11 includes the results of the environmental assessment and planning conducted to date for the New Transmission.

Section



e. Facility Operator and Manager.



# f. Owner's Engineer.



# g. EPC/Construction Contractors.

h. Transmission Consultant.

i. Legal Counsel.



## Subsection 3.6 Proposer's NYISO Market Experience

6. Details of Proposer's experience in NYISO markets. Regarding Proposer's experience with NYISO markets, please indicate the entity that will assume the duties of Market Participant for the proposed Project. Please provide a summary of Proposer's or Market Participant's experience with the wholesale market administered by NYISO as well as transmission services performed by Con Edison, NYPA, and PSEG-LI/LIPA, as applicable.

HQ and its predecessors have a century-long track record of supplying clean and renewable energy to the State of New York, beginning with the construction of the Cedars Rapids intertie. This relationship has continued through the evolution of electricity markets. HQ was an active participant in the New York Power Pool through the 1980s and has continued that active participation since the creation of the NYISO in 1999.

In recent years, HQUS, the U.S. energy marketing subsidiary of Hydro-Québec,<sup>29</sup> has successfully continued this long-standing relationship, supplying approximately 5% of New York State's annual energy demand, mainly through the Châteauguay-Massena and the Cedar Rapids interties.

<sup>29</sup> HQUS sells energy and capacity in New York under FERC market-based rate authority.



# Section 4 RESOURCE DESCRIPTION AND SITE CONTROL

7.6.4 For each of the Resources listed in the Offer Data Form, worksheet "Resource Information", provide the following information

## Subsection 4.1 Proposed Resources and Route

1. Identify the Resources(s) that comprise the Project and the route or proposed route to the Injection Point. Provide a site plan or plans including a map or maps that clearly identify the location of the proposed Resource, proposed route of the generator lead line to the Injection Point.

Subsection 4.2 Status and Development Stage of Resource

2. Describe the status and development stage of Resource (development, construction, or operation).

Subsection 4.3 Technology and Equipment

3. For operating Resources describe the technology and equipment that is in service. For Resources that are in development or under construction describe the technology and equipment that is being considered or has been selected.

# Subsection 4.4 Site Area

4. Describe the area included in and surrounding the Resource site, a description of the local zoning, existing land use (*e.g.*, woodlands, brownfield, agriculture, other) and setting (*e.g.*, rural, urban, suburban, other) and describe what the site(s) has been used for in the recent past.

See Section 11.1 for further details regarding zoning approvals for the Québec Line, and see Sections 5.5 and 11.1 for additional information regarding existing land uses with respect to the Québec Line.<sup>33</sup>

# Subsection 4.5 Site Control

5. Provide documentation that Proposer owns the site, has a valid lease or irrevocable lease or purchase option to develop the site over the entire Contract Tenor.

<sup>&</sup>lt;sup>33</sup> As described in Section 11, Transmission Developers has already obtained the major permits for CHPE (which included land use considerations).

## Subsection 4.6 Injection Point and Generator Lead Line Rights

6. Identify any rights that Proposer has at the Injection Point and for the generator lead line right of way. Provide a detailed plan and timeline for the acquisition of any additional rights necessary for interconnection and for the generator lead line right-of-way. Include these plans and the timeline in the overall Project schedule in Section 7.6.13.



The construction of the converter terminal equipment will require an expansion of the Hertel Substation within lands owned by Hydro-Québec. The Hertel Substation is located in the municipality of La Prairie, Québec.

The converter will include a DC area where the HVDC underground line enters the terminal that includes disconnect switches, capacitors, reactors and instrument transformers.

The converter will be connected in the existing substation 735 kV bus through three 735 kV breakers (one in series and two in parallel).

# Subsection 4.7 Solar Resource Information

7. Proposers proposing a solar Resource must identify the Mineral Soil Group (MSG) classification of the Resource site. NYSERDA has adopted an approach to addressing concerns related to solar development and protection of agricultural lands and practices, in furtherance of the Agriculture and Markets Law Section 305. Depending on the MSG classification and agricultural district of the Resource footprint, a Proposer may be responsible for making an agricultural mitigation payment to a designated fund. A map of the agricultural districts, by county, is available from the <u>Cornell University Geospatial</u> <u>Information Repository.<sup>35</sup> A listing of MSG classifications by soil and county is available from the Department of Agricultural and Markets Agricultural Assessment program.<sup>36</sup></u>

<sup>35</sup> Cornell University Geospatial Information Repository is available by county at: https://cugir.library.cornell.edu/?f%5Bcugir\_category\_sm%5D%5B%5D=agriculture

<sup>36</sup> 9 <u>https://agriculture.ny.gov/land-and-water/tax-credits-and-agricultural-assessments#agricultural-assessmentinformation</u>

### Section 5 DELIVERY PLAN

7.6.5 Delivery Plan

### 5.1 Zone J Delivery

For Projects not located in Zone J, Proposers must provide a detailed description of how the Project will acquire the capability to deliver energy and Tier 4 RECs from the Injection Point of each Resource to the proposed Delivery Point in NYCA Zone J. Describe the firmness of the delivery path, expected contract arrangements, transmission rights, and/or other settlement and tariff mechanisms in NYCA and other control areas that will be used to effectuate delivery to Zone J. Proposers must describe how energy will be scheduled and delivered in each hour, from the Injection Point(s) to the Withdrawal Point of the associated New Transmission, either through the NYISO energy market or on a bilateral basis.



The Project will further meet the delivery requirement under RFP Section 2.2 because the Delivery Point of the New Transmission will be in Zone J, and the electrical interconnection will occur after October 15, 2020.<sup>38</sup>

#### New Transmission

The New Transmission is effectively a single physical HVDC system with separate ownership on each side of the border. The New Transmission will include (i) an expansion of the transmission grid in Québec (the Québec Line) and (ii) a new line in New York (CHPE). The Québec Line will be developed to interconnect with CHPE at the international border. CHPE will interconnect with the NYISO transmission system at the Astoria Annex Substation in Queens, New York (Zone J). Both portions of the New Transmission will be constructed in parallel.

<sup>&</sup>lt;sup>38</sup> See Section 7 for additional information regarding the advanced stage of CHPE in NYISO's interconnection process.

The New Transmission will be constructed between a single Withdrawal Point at the Hertel Substation in Québec, Canada and a single Delivery Point at the Astoria Annex Substation in Queens, New York (Zone J). It will be a 1,250 MW, two terminal, HVDC transmission line.

The New Transmission will utilize a 1,250 MW HVDC cable circuit operating at 400 kV, comprised of two XLPE cables for both the land and aquatic portions of the cable route. The New Transmission will use HVDC voltage-sourced converter(s), which allows for fully independent control of both the active and the reactive power flow over its operating range.

MW Capability	1,250 MW <sup>39</sup>
Withdrawal Point	Hertel Substation, Québec, Canada
Delivery Point	Astoria Annex Substation, Queens,
	New York (Zone J)
COD	December 2025
Proposed Route	339 miles in the U.S., 36 miles in
	Québec, total of 375 miles

The table below provides an overview of the New Transmission.

The following map depicts the route of the New Transmission.



# Québec Line

The Québec Line:

- Includes all the necessary system upgrades required on the TransÉnergie system to deliver 1,250 MW to the NYISO transmission system;
- Will convert electric power from AC to DC in a new converter terminal installed in the existing Hertel Substation;
- Consists of approximately 36 miles (58 km) of 400 kV, HVDC transmission line from the Hertel Substation to the New York/Canadian border; and
- Includes all AC system upgrades required for firm transmission service on the TransÉnergie system.

The Québec Line will be located entirely within Canada, originating in the existing Hertel 735 kV Substation located in La Prairie, Québec (Withdrawal Point). The Hertel Substation is supplied by four 735 kV lines, ensuring a reliable connection of the Québec Line to the existing TransÉnergie grid.

# CHPE

The CHPE line:

- Includes all the necessary system upgrades required on the NYISO system to deliver 1,250 MW to the NYISO transmission system;
- Will convert electric power from DC to AC in a new converter station installed in Astoria, Queens;
- Consists of approximately 339 miles (544 km) of 400 kV, HVDC transmission line from the New York-Québec border to Astoria, Queens; and
- Includes all AC system upgrades required for 1,250 MW of ERIS and CRIS rights (UDRs) on the NYISO system.

The CHPE line will be located entirely within New York. It will interconnect with the Québec Line within Lake Champlain.

# Firm Transmission Service

As described in Section 7.2, Hydro-Québec Production will receive firm point-to-point transmission service on the TransÉnergie system under TransÉnergie's Open Access Transmission Tariff (OATT)



pursuant to a TransÉnergie Transmission Service Agreement (TSA). Under its OATT, TransÉnergie is obligated (subject to the user agreeing to pay for the firm transmission service) to expand and/or upgrade its transmission system to provide that firm transmission service. An interconnection agreement is not required for the Québec Line because TransÉnergie will own the Québec Line and, through one of its groups, is also the transmission system operator in the Province of Québec.

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# 5.2 Risk of Unavailability, Curtailment, or Underutilization

Proposers must describe how the New Transmission will be operated and how energy will be scheduled on an hourly basis on the facility. Proposers must explain how the risk of unavailability, curtailment, or underutilization of the New Transmission may be mitigated. For risk of unavailability, curtailment, or underutilization of the New Transmission that cannot be mitigated Proposers must identify and provide a justification of any risk premium in the Bid Price. This discussion must explain any assumptions regarding compensation under Tier 1 for any undeliverable RECs. NYSERDA reserves the right to ask for additional information and to conduct due diligence with respect to Proposer's Bid Price justification, and NYSERDA may require independent audit and verification of the elements thereof.





# 5.3 Capacity Resource in Zone J

Consistent with the Order, Proposers need not qualify as a capacity resource in Zone J to demonstrate delivery. If Proposers intend to demonstrate delivery by delivering capacity to Zone J, Proposers must describe how each Resource will qualify for CRIS, and the number of UDRs that Proposer expects will be awarded to the New Transmission to allow for delivery of UCAP to Zone J. Note that this value of UDRs is informational only and need not be the same as the UDR value that Proposer enters in the Offer Data Form.

As described in Section 7.2, CHPE is the subject of two interconnection requests in NYISO's interconnection queue, Q #631 and Q #887.



# 5.4 Delivery Verification and Contract Settlement

To verify deliveries and effectuate contract settlement, the delivery plan must provide for hourly matching of: (A) each Resource's actual production metered at its Injection Point with (B) deliveries over the New Transmission Facility. As described in Section 4.2, the number of Tier 4 RECs delivered and compensated in each month is the lesser in each hour of (i) the energy metered at the Delivery Point of the New Transmission and (ii) energy metered at the Injection Point(s), summed over the hours in the month.

Proposers must explain how the expected energy production profile from each of the Resources at its Injection Point relates to the delivery profile at Zone J that is provided on the Offer Data Form, Delivery Profile worksheet. For dispatchable resources, explain what factors will determine the dispatch and delivery of energy to Zone J.

Imported energy from a neighboring control area must be identified with North American Electric Reliability Corporation (NERC) tag information, which will be used by the NYGATS to verify delivery into NYCA. Refer to page 36 of the Order regarding hourly matching requirements for delivery requirements for out-of-state intermittent renewable generators under Tier 1, which is adopted in the Order for Tier 4.





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### 5.5 New Transmission

Proposers must provide the following information regarding the New Transmission required to deliver energy and Tier 4 RECs to NYCA Zone J:

1. Facility name

The New Transmission will be known in the U.S. as CHPE and in Québec as the Québec Line, but for ease of reference, the facility will collectively be called the Champlain Hudson Power Express.

2. Entity responsible for developing the New Transmission

#### Québec Line

The Québec Line will be owned, operated and maintained by Hydro-Québec as an integrated asset within the Hydro-Québec transmission system. As described in Section 10.2, HQ TransÉnergie and Équipement group will manage the engineering, procurement and construction of the Québec Line and will then operate and maintain the transmission line and related facilities constructed for the Québec Line.

HQ, through its TransÉnergie and Équipement group, is currently developing the Québec Line.

Équipement will perform and/or manage the design, engineering, procurement, and construction of the Québec Line. Équipement has existing master contracts with vendors that have provided services and materials on TransÉnergie's system that are similar to what will be required to construct the Québec Line. This is standard practice for all Hydro-Québec transmission line projects. See Section 3.4 for a table that includes recent representative projects developed by Hydro-Québec.

TransÉnergie operates one of the most extensive transmission systems in North America and manages power flows across Québec. TransÉnergie:

- Is a leader in DC and AC transmission system design, operation and maintenance;
- Is recognized throughout the world for the reliability of its grid;
- Operates and maintains a transmission system that includes 538 substations and more than 21,639 miles of lines at various voltages; and
- Has fixed assets that total CA\$23.8 billion.

TransÉnergie will operate and maintain the Québec Line as an integrated component of its transmission system, in accordance with its internal maintenance procedures that are generally applicable to all of its transmission assets within the entire TransÉnergie transmission system.

TransÉnergie has significant experience interconnecting and operating between regional systems. In particular, TransÉnergie operates the HQT-MASS interconnection, a 765 kV AC interconnection line with the State of New York with an 1,800 MW transmission capacity. This interconnection sources a combination of power coming from the Beauharnois hydroelectric plant and from the TransÉnergie main system through two back-to-back HVDC converters at the Châteauguay Substation, each with a capacity of 500 MW. The 765 kV line has been in operation since 1978 and the Châteauguay HVDC converters have been operating since 1984.<sup>59</sup>

In total, TransÉnergie has 15 interconnections with systems in Ontario, New Brunswick, and the Northeastern United States.<sup>60</sup> For information regarding TransÉnergie's system and interconnections, see <u>http://www.hydroquebec.com/transenergie/en/reseau-bref.html</u>. The addition of the Québec Line will be yet another example of TransÉnergie's regional and inclusive approach to the transmission network.

# CHPE

CHPE is being developed by Transmission Developers, which is backed by Blackstone, one of the world's leading investment firms with \$649 billion of assets under management as of March 31, 2021.

http://www.oasis.oati.com/woa/docs/HQT/HQTdocs/Presentation Ch%C3%A2teauguayConverters may3 201 9 ENG.pdf.

<sup>&</sup>lt;sup>59</sup> HQTÉ is currently developing an important project to replace the Châteauguay back-to-back HVDC converters with new similar converters to assure the long-term reliable operation of this installation. Additional information can be found on the TransÉnergie OASIS website:

<sup>&</sup>lt;sup>60</sup> HQ is currently developing another interconnection with the U.S. transmission system in Maine through the New England Clean Energy Connect project. Additional information can be found on the Hydro-Québec website: https://www.hydroquebec.com/projects/appalaches-maine-interconnection/.

3. Proposed route

The New Transmission will be constructed between a single Withdrawal Point at the Hertel Substation in Québec, Canada and a single Delivery Point at the Astoria Annex Substation in Queens, New York.

**Ouébec Line** 

The Québec Line will be located entirely within Canada, originating in the existing Hertel 735 kV Substation located in La Prairie, Québec. The Hertel Substation is supplied by four 735 kV lines, ensuring a reliable connection of the Québec Line to the TransÉnergie grid.

The Québec Line will be entirely underground with a small portion underwater to reach the crossing point at the Québec/New York border in Lake Champlain (where it will connect with CHPE). The route of the Québec Line was initially established as part of the project siting activities conducted in 2012/2013. Hydro-Québec anticipates that a large portion of the route previously located within provincial or municipal roads will remain unchanged, but approximately half of that earlier route (18.6 miles (30 km) out of 36 miles (58 km)) will be re-evaluated as part of the current project siting effort.<sup>61</sup> Hydro-Québec expects that the total length of the Québec Line route will remain approximately the same (i.e. 36 miles (58 km)).

Generally, the two HVDC cables (and a fiber optic cable for telecommunications) will be buried within the same trench, which will require an approximately 13 foot (4 meters) ROW for future access. Horizontal directional drilling (HDD) may also be used to cross under major obstacles such as rivers or highway infrastructures.

### CHPE

CHPE will begin at the U.S.-Canada border where it will connect with the Québec Line in Lake Champlain. From the border, CHPE will be installed for approximately 339 miles entirely underground or underwater to a converter station location in Astoria, Queens, New York. This entire route has been permitted by New York State and federal authorities.

CHPE consists of both marine (underwater) and terrestrial (underground) segments. For the purposes of understanding the route in detail, the transmission line route can be divided into four geographically logical segments, as follows:

<sup>&</sup>lt;sup>61</sup> See Section 11 for additional information regarding the permitting of the Québec Line, including the additional studies required due to the passage of time.

Electric power from the POI at the Astoria Annex Substation will flow to the ConEd transmission system both at the Astoria Annex Substation, as well as at the ConEd Rainey Substation in Queens, New York which will be connected to the Astoria Annex Substation via the Astoria Rainey Cable, a 3.5 mile underground 345 kV HVAC line.

# 4. Withdrawal Point and Delivery Point

The Withdrawal Point (the point at which energy is delivered to the Québec Line) is the Hertel 735 kV Substation located in La Prairie, Québec.

The Delivery Point in Zone J of the NYCA is the Astoria Annex Substation located in Queens, New York.

5. Development stage of the New Transmission

The New Transmission involves the construction of transmission facilities in Canada and the United States, connecting the Hertel Substation (Canada) to the Astoria Annex Substation (New York City).

## Québec Line

As described below and in Section 11, HQTÉ will build the new Québec Line, a direct-current underground and underwater transmission line in Québec. It will be a 400 kV HVDC line with a

1,250 MW transfer capability and will extend approximately 36 miles from the Hertel Substation to the Québec-New York border. The new line will be entirely underground with a small portion underwater to reach the crossing point at the Québec/New York border in Lake Champlain (where it will connect with CHPE).

New equipment (including power transformers, power electronics within a converter building, disconnect switches, capacitors, reactors and instrument transformers) will be added at Hertel Substation to convert alternating current to direct current, to supply the planned transmission line.



The Québec Line will be constructed, maintained and operated by HQTÉ and will be integrated into the Hydro-Québec transmission system.



5-15



Testing activities include ensuring all subcomponents of the terminals and cable are working properly. Following completion of all sub-testing activities, the commissioning integration between the Hydro-Québec and the NYISO transmission systems would begin with low voltage testing followed by high-voltage testing and an initial operating period test leading up to an in-service date of December 2025. All transmission testing will involve careful orchestration between Hydro-Québec and the NYISO to ensure that all constraints within the transmission systems such as transmission and distribution line outage constraints, seasonal constraints, and maintaining system reliability are considered.



# CHPE

As described in the table below, CHPE is in a very advanced stage of development.



# CHPE: Significant Development Milestones Completed/Achieved

Milestone	Status
Design & Engineering	
	See
	Attachment 10.3.3 for more details.
Permitting	
	See Section 11 for more details.
Interconnection Studies	Interconnection studies have been completed with NYISO
	Section 7 for more details
Site Control	Section 7 for more details
Sile Control	
Financing	
1 maneting	
	See Section 10 for more details.
Stakeholder Engagement	CHPE has and continues to consult coordinate and collaborate
Stationora of Dirguzomoni	with stakeholders throughout New York State to ensure
	with stakeholders throughout new 101k State to elistic

Milestone	Status		
	compliance with all regulations while also maximizing positive		
	community benefits. See Section 15 for more detail.		
Public Support and a	CHPE has widespread support from a variety of stakeholders		
Commitment to Unions	throughout the State. It has received formal and/or public support		
	from all the terrestrial host communities it will travel through and		
	formal letters of support from trade unions. In addition,		
	See Sections 3.5 and 15 for more detail on these		
	commitments.		

6. Status of acquiring right of way for proposed route, and plan to acquire remaining rightof-way

## Québec Line

The Québec Line will start at the Hertel Substation (which will be expanded within property already owned by Hydro-Québec) and span a distance of approximately 36 miles (58 km) before reaching the border crossing point. Portions of the line route are currently being determined in the facilities study (see Section 11). Route variants in the northern and southern sections will be developed and analyzed as part of the environmental impact statement (EIS). Through the public information and consultation processes, the optimal route will be narrowed down to address local concerns and to minimize environmental impacts.











7. MW capability

The New Transmission will have a transfer capability of 1,250 MW. Transmission Developers has received approvals to increase capacity of the line from 1,000 MW to 1,250 MW from USACE and USDOE.



8. Expected in-service date

The expected in-service date for the New Transmission is December 2025.

9. Status of any expected transportation service agreement, operating agreement, or other contract arrangement between the Proposer and the New Transmission owner or operator

10. Expected entity that will be Scheduling Coordinator for the New Transmission and the terms of any operating agreement among the parties

**11. Expected entity that will be the NYISO Market Participant with respect to the Project Resources** 

12. How transmission capacity will be utilized if there are hours when energy from all Resources is less than the capability of the New Transmission

13. How the New Transmission capacity will be allocated among different Resources in a portfolio (including hydropower and non-hydropower Resources, if applicable) if the energy production from the Resources exceeds the capability of the New Transmission in any hour.

Describe arrangements among the different Resources with respect to priority for use of New Transmission capacity.

# 5.6 New Transmission Allocation

If the Proposer will not have exclusive firm rights to the entire capability of the New Transmission, Proposer must state what portion of the New Transmission will be allocated to Proposer. More than one Proposer may propose to utilize the same New Transmission facility, provided that each Proposer describes how New Transmission capacity would be allocated among the different Proposers and Resources, priority rights, which entity will have scheduling responsibility, and any other terms of the arrangements among Proposers. As indicated in Section 7.2, Proposers must state whether their Proposal is conditional upon acceptance by NYSERDA of other Proposal(s) proposing to utilize the same New Transmission.
### Section 6 BASELINE VERIFICATION PLAN

7.6.6 Exhibits H and I to the Agreement outline the approach towards compliance with the two baselines. Proposers should propose how compliance with the Supplier GHG Baseline and Supplier Energy Baseline would be measured and verified and submit any other comments regarding how baseline compliance should be implemented, consistent with the general principles defined in Exhibits H and I. Proposers must also describe how, if selected for award, they would ensure that NYSERDA receives the data needed to verify compliance with the baseline conditions. Proposers must also consent to the use of any tracking system and/or auditing regime that may be necessary to verify continued compliance with the delivery and additionality requirements throughout the Contract Delivery Term.





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## Section 7 INTERCONNECTION PLAN

7.6.7 Interconnection Plan

### 7.1 Interconnection Status

Proposers are required to provide information regarding each Resource's status with respect to its interconnection application with NYISO or with a neighboring control area, at its Injection Point. If the interconnection process has been initiated, provide the queue position and available information regarding interconnection request to NYISO or any neighboring control areas for Capacity Resource Interconnection Service (CRIS) or for Energy Resource Interconnection Service (ERIS), or equivalent interconnection service in the neighboring control area. Available interconnection studies undertaken by the applicable control area or third parties on behalf of Proposer must be provided. Interconnection studies should include estimates of system upgrade costs.



### 7.2 Interconnection Status of New Transmission

Proposers must also provide information regarding the interconnection status of any New Transmission that will be relied upon to deliver energy and Tier 4 RECs to Zone J. If the interconnection process has been initiated, provide the queue position and available information regarding interconnection request to NYISO and/or any neighboring control areas for the Withdrawal Point and Delivery Point, as applicable. Available interconnection studies undertaken by the applicable control area or third parties on behalf of New Transmission must be provided. Discuss whether the New Transmission is expected to be awarded Unforced Delivery Rights (UDRs) and the quantity of UDRs expected. Describe transmission system upgrades that will be needed to interconnect the New Transmission at the Withdrawal Point and at the Delivery Point.

# **NYISO Interconnection Status**

CHPE is the subject of NYISO's interconnection requests, Queue Position Q #631 and Q #887. CHPE has entered the Class Year (CY) 2021 process with both Q #631 and Q #887, a combined 1,250 MW, two-terminal project with a Delivery Point at the Astoria Annex Substation in Zone J.





October 2019. After that, on February 7, 2020, Hydro-Québec Production and TransÉnergie entered into a Facilities Study Agreement. As a result, HQTÉ has initiated a facilities study during which engineering, siting and environmental activities will be completed to prepare the filing of all approvals and permits required to build, own, maintain and operate the Québec Line. Additional information regarding the development of the Québec Line is available on Hydro-Québec's website at:

https://www.hydroquebec.com/projects/hertel-new-york-interconnection/

As with any customer, when Hydro-Québec Production filed its interconnection request for firm transmission service with TransÉnergie, it triggered a system impact study that was conducted pursuant to TransÉnergie's Open Access Transmission Tariff (OATT). Under its OATT, conditioned on the customer agreeing to pay for the firm transmission service, TransÉnergie has the obligation to expand and/or upgrade its transmission system (in this case build the Québec Line and related system upgrades) in order to offer the requested firm transmission service and to avoid degrading or impairing the reliability of service to the native-load and to other customers receiving firm transmission service, or interfering with TransÉnergie's ability to meet prior firm contractual commitments. This obligation assures that the transmission system is capable of delivering the energy produced by the generation stations to the destination.

After construction, the New Transmission (through the combination of the Québec Line and CHPE) will interconnect the respective systems of TransÉnergie and the NYISO. During the construction phase of the New Transmission, in due course, TransÉnergie and the NYISO will enter into appropriate agreements.



## Section 8 ENERGY RESOURCE ASSESSMENT

7.6.8 Energy Resource Assessment

### 8.1 Energy Resource Data

For each Resource, Proposers should provide available energy resource data supporting the aggregate delivery profile provided under Section 7.6.5 and the Offer Data Form, Delivery Profile worksheet. For Resources that have not achieved Commercial Operation, the energy resource data may be based on site-specific resource measurements or an assessment report from a qualified resource assessment firm.






# 8.2 Projected Energy Production and Generation; Planned Maintenance Outages

For each Resource, provide a projection of net annual energy production and a 12 x 24 P(50) energy generation at the Resources' Injection Point as an Excel spreadsheet attachment, which reflects the first year of full operation of the Resource. For each Resource as applicable, provide a schedule of planned maintenance outages over the Contract Delivery Term.









#### 8.3 Effect of Scheduled Maintenance or Degradation

If scheduled maintenance and/or degradation of the Project Resources will affect the expected monthly quantity of Tier 4 deliveries to Zone J over the Contract Delivery Term that is provided in the Offer Data Form Table III-1, explain in detail how expected monthly deliveries will change over the Contract Delivery Term.











### 8.4 Compliance with Baseline Conditions

Proposers of Projects that include hydropower resources must also describe how, if selected for award, they would ensure that NYSERDA receives accurate data needed to verify compliance with the baseline conditions.





## 8.5 Curtailment

The Proposer must also provide a narrative description of the assumed level of curtailment built into the Resource assessment and any projected impacts on the Resource's energy and, if applicable, capacity deliverability.









# Section 9 ENERGY STORAGE OPERATION PLAN

7.6.9 Energy Storage Operation Plan

## 9.1 Assumptions and Parameters

For Step Two Proposals that include Energy Storage, provide all assumptions used in preparing the energy profile provided in Offer Data Form, Delivery Profile worksheet, and explain how the energy profile relates to the intended deployment strategy. As explained in Section 2.3, not all energy discharged from Energy Storage need be eligible for Tier 4 RECs. However, Proposers must explain in detail how all or a portion of the energy discharged from the Energy Storage will be eligible for Tier 4 RECs.

For Step Two Proposals that include energy storage, the Proposer must provide the following:

- System operating parameters
  - Manufacturer and model for major components (battery and inverter units, etc.), if known
  - Maximum continuous power (MW or kW, AC)
  - Total energy (MWh or kWh, AC)
  - **Duration (hours)**
  - Round trip efficiency (%)
- Available specification sheets from manufacturer
- Expected system degradation over the contract term
- For paired and co-located storage, provide diagram showing arrangement of generation unit(s), storage unit(s), inverter(s), meter(s), and interconnection.

### 9.2 Deployment and Dispatch

Proposer must fully describe the intended deployment and dispatch of the storage system over the contract term, and how the deployment provides operating flexibility and/or peak coincidence benefits. Example deployments may include:

- Dispatched to provide renewable integration and firm up a variable renewable energy resource
- Dispatched dynamically to reduce system peak demand or energy cost to load
- Available to provide ancillary services, e.g., reserves, voltage control, frequency regulation

# Section 10 BUSINESS ENTITY AND FINANCING PLAN

7.6.10 Proposers are required to demonstrate the financial viability of their proposed Project. A narrative description of the financing plan should be included in the Proposal Narrative. Detailed supporting information, including financial statements and other documents, should be included in the required Financing Plan. Information provided must include the business entities responsible for development and/or operation of the Resources as well as the New Transmission, if applicable. Proposers should provide the following information:

# Subsection 10.1 Long-Term Contract Implications

1. Submit information and documentation that demonstrates that a long-term contract resulting from this RFP process would either permit Proposers to finance Projects that would otherwise not be financeable or assist Proposers in obtaining financing of its Project.





**Transmission Developers** 



#### Subsection 10.2 Business Entity Structure

2. Describe the business entity structure of Proposers' organization from a financial and legal perspective, including all general and limited partners, officers, directors, managers, members and shareholders, and involvement of any subsidiaries supporting the Project. Provide an organization chart showing the relationship among the different Project participants and the developer of the New Transmission. For joint ventures, identify all owners and their respective interests, and document Proposers' right to submit a binding Step Two Proposal.

The Project has resulted from significant coordinated planning and development efforts undertaken by Hydro-Québec and Transmission Developers, and these efforts have advanced toward completion of permitting and siting phases in anticipation of commencing construction. The following organization chart shows the relevant entities within Hydro-Québec and Transmission Developers and the relationship between the parties for purposes of this Proposal. The remainder of this Section 10.2 provides additional information regarding those entities and the proposed transaction structure.



#### Hydro-Québec

Hydro-Québec supplies virtually all electric power distributed in Québec, the largest province in Canada in land area and the second largest in population. Hydro-Québec was created in 1944 by the Hydro-Québec Act of the Parliament of Québec. As such, Hydro-Québec is a government-owned corporation; all of its capital stock is held by the Minister of Finance on behalf of the Government of the Province of Québec.

Hydro-Québec is a long-standing participant in the New York energy market and is North America's largest generator of clean renewable energy. Its system power is almost exclusively generated by hydroelectric facilities. Hydro-Québec also transmits and distributes electricity. For over a century, hydropower from Québec has supplied clean energy to New York State, and in recent years, Hydro-Québec has provided approximately 5% of New York State's annual electricity supply.



Transmission Developers					





Subsection 10.3 Description of Financing Plan

**3.** Provide a description of the financing plan for the Project, including construction and term financing. The financing plan should address the following:

a. Who will finance the Project (or are being considered to finance the Project) and the related financing mechanism or mechanisms that will be used (i.e., convertible debenture, equity or other) including repayment schedules and conversion features

Hydro-Québec

b. The Project's existing initial financial structure and projected financial structure Hydro-Québec	Transmission Developers				
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nyuro-Quebec	Hydro Québec				

Hydro-Québec's finances are strong and show a high degree of stability over time. As of December 31, 2020, Hydro-Québec's capitalization ratio based on its consolidated financial statements was 31.0%.<sup>101</sup> In addition, transmission operations in Québec are regulated by the Régie de l'Énergie (Québec's energy board) on a cost-of-service basis. The authorized return on the rate base for transmission assets in Québec is calculated based on a capitalization ratio assuming 30% equity and 70% debt, which will be maintained.



Transmission Development
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d. Estimated construction costs
L
Hydro-Ouébec

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e. The projected capital structure

See Section 10.3.b.

f. Describe any agreements entered, both pre and post Commercial Operation Date, with respect to equity ownership in the proposed Project and any other financing arrangement.



With the completion of hundreds of capital projects over the past decade, Hydro-Québec and Blackstone have established a successful track record in delivering customer value and demonstrated expertise in building, financing, owning and maintaining infrastructure for the electric industry.








# Subsection 10.5 Financial Resources and Strength

5. Provide evidence that Proposer has the financial resources and financial strength to complete and operate the Project as planned.

Hydro-Québec and Blackstone are stable and diverse companies with strong balance sheets indicative of the financial strength to complete and operate the New Transmission in the ordinary course of their respective businesses.

# Hydro-Québec

HQTÉ, which will construct the Canadian transmission facilities constructed for the New Transmission, had fixed transmission assets totaling CA\$23.8 billion on December 31, 2020. Hydro-Québec Production is one of the largest power generators in North America, with close to CA\$31.7 billion in property, plant and equipment for generation assets. In 2020, Hydro-Québec's net income was CA\$2.3 billion.

The 2020 annual report referenced in Section 10.7 includes additional information regarding the financial strength of Hydro-Québec as of December 31, 2020.

Blackstone

# The strong financial condition of both HQ and Blackstone is further evidenced by their credit ratings from the three major ratings agencies, Standard and Poor's (S&P), Moody's Investors Service

(Moody's), and Fitch Ratings (Fitch), as set forth in Section 10.7.

Subsection 10.6 Federal Production Tax Credit or Investment Tax Credit Role

6. Describe the role of the Federal Production Tax Credit or Investment Tax Credit (or other incentives) on the financing of the Project or the New Transmission, including presumed qualification year and percentage. The Step Two Proposal may not be contingent on receipt of the Production Tax Credit or Investment Tax Credit.

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Blackstone

Subsection 10.7 Audited Financial Statements and Annual Reports

7. Provide complete copies of the most recent audited financial statement and annual report for each Proposer for each of the past three years; including affiliates of Proposer (if audited statements are not available, reviewed or compiled statements are to be provided). Also, provide the credit ratings from Standard & Poor's and Moody's (the senior unsecured long-term debt rating or if not available, the corporate rating) of Proposer and any affiliates and partners.

# Hydro-Québec

The current senior unsecured (long-term) debt ratings of Hydro-Québec are:

Sponsor	S&P	Moody's	Fitch
Hydro-Québec	AA-	Aa2	AA-

The Annual Reports of Hydro-Québec for the fiscal years ended December 31, 2020, December 31, 2019, and December 31, 2018 can be found at:

https://www.hydroquebec.com/about/financial-results/annual-report.html

# Blackstone

The current senior unsecured (long term) debt ratings of Blackstone are:

Sponsor	S&P	Moody's	Fitch
Blackstone	A+	N/A	A+

Blackstone's Annual Reports for the fiscal years ended December 31, 2020, December 31, 2019, and December 31, 2018 can be found at: <u>https://ir.blackstone.com/sec-filings-annual-letters/default.aspx</u>.

Ratings reports and printed copies of any annual reports are available upon request.

# Subsection 10.8 Board of Directors, Officers and Trustees List

8. List the board of directors, officers, and trustees for the past three years and any persons who Proposer knows will become officers, board members or trustees.













# Subsection 10.9 Bid Security

9. Demonstrate Proposer's ability (and/or the ability of its credit support provider) to provide the required security, including its plan for doing so.

Hydro-Québec and

its affiliates maintain credit facilities with a number of investment grade financial institutions. Note 12 to the

Consolidated Financial Statement in Hydro-Québec's 2020 Annual Report, included in Section 10.7, provides more details on the credit facilities available to Hydro-Québec.

# Subsection 10.10 Credit Issues

10. Provide a description of any current or recent credit issues/ credit rating downgrade events regarding Proposer or affiliate entities raised by rating agencies, banks, or accounting firms.

# Hydro-Québec

Hydro-Québec is rated by the three major credit rating agencies and does not have any current or recent credit issues or credit rating downgrade events. Hydro-Québec's S&P credit ratings currently are "AA-", and its ratings have remained stable since 2017. Credit rating agencies, banks, and accounting firms have not raised any issues regarding the company during that period. Hydro-Québec's credit ratings are available in Section 10.7 and on Hydro-Québec's Investor Relations website:

http://www.hydroquebec.com/investor-relations/about-the-issuer/credit-ratings.html

# Blackstone

Since CHPE's inception, no credit issues or rating downgrade events have occurred for Blackstone or Transmission Developers and their affiliates. Blackstone's credit ratings from S&P and Fitch have remained stable since ratings on Blackstone were initiated in 2009. In 2013, Blackstone's S&P credit rating was raised to "A+" from "A" on strong growth and sound financial performance. Blackstone does not have any current or recent credit issues or credit ratings downgrades to report. See Section 10.7 for Blackstone's current credit ratings from S&P and Fitch.

# Subsection 10.11 Pending Litigation

11. Disclose any pending (currently or in the past three years) litigation or disputes related to projects planned, developed, owned or managed by Proposer or any of its affiliates in the United States, or related to any energy product sale agreement.

# Hydro-Québec

There is no pending (currently or in the past three years) or threatened litigation or disputes related to any energy product sale agreement regarding the Proposer or any of its affiliates in the United States.

Hydro-Québec's U.S. Securities and Exchange Commission Form 18-K discloses material litigation and disputes involving Hydro-Québec and its affiliates. The Form 18-K annual report is available on Hydro-Québec's website at:

http://www.hydroquebec.com/investor-relations/documentation/

# **Transmission Developers**

There is no pending (currently or in the past three years) or threatened litigation or disputes related to any energy product sale agreement regarding Transmission Developers or any of their affiliates in the United States.

The annual reports referenced in Section 10.7 disclose material litigation and disputes regarding Blackstone and its other affiliates.

Subsection 10.12 Expected Operating Life				
12. Provide the expected operating life of the proposed Project and the depreciation period for all substantial physical aspects of the offer, including generation facilities, generator lead lines to move power to the grid, and transmission system upgrades.				
New Transmission				
Subsection 10.13 Affiliated Entities and Joint Ventures				
13. List all of Proposers' affiliated entities and joint ventures transacting business in the energy sector.				
Hydro-Québec				



Hydro-Québec, a government-owned utility of the Province of Québec, is engaged in the generation of power, predominantly from hydroelectric sources, and the transmission, distribution, and sale of such power to wholesale and retail customers within Québec.



# **Transmission Developers**



# Subsection 10.14 Litigation, Disputes, Claims or Complaints, or Events of Default

14. Describe any litigation, disputes, claims or complaints, or events of default or other failure to satisfy contract obligations, or failure to deliver products, involving Proposer or an affiliate, and relating to the purchase or sale of energy, capacity or RECs or other electricity products.

# Hydro-Québec

In relation to the purchase or sale of energy, capacity, RECs or other electricity products, there is no litigation, dispute, claim or complaint, or event of default or other failure to satisfy contract obligations, or failure to deliver products, involving the Proposer.

Material litigation and disputes regarding Hydro-Québec and its affiliates are disclosed in the annual report (Form 18-K) filed at the Securities and Exchange Commission. This report is available on Hydro-Québec's website at:

http://www.hydroquebec.com/investor-relations/documentation/

# Transmission Developers

In relation to the purchase or sale of energy, capacity, RECs or other electricity products, there is no litigation, dispute, claim or complaint, or event of default or other failure to satisfy contract obligations, or failure to deliver products, involving Transmission Developers.

# Subsection 10.15 Statement Regarding any Governmental Investigation

15. Confirm that Proposer, and the directors, employees and agents of Proposer and any affiliate of Proposer are not currently under investigation by any governmental agency and have not in the last four years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction involving conspiracy, collusion or other impropriety with respect to offering on any contract, or have been the subject of any debarment action (detail any exceptions).

# Hydro-Québec

The Proposer, the directors, employees and agents of the Proposer, and any affiliate of Hydro-Québec are not currently under investigation by any governmental agency. The Proposer and its affiliates have not in the last four years been convicted or found liable for any act prohibited by State or federal law in any jurisdiction involving conspiracy, collusion or other impropriety with respect to offering on any contract, nor have been the subject of any debarment action.

#### **Transmission Developers**

Transmission Developers, along with its directors, employees, agents and affiliates are not currently under investigation by any governmental agency. Transmission Developers and their affiliates have not in the last four years been convicted or found liable for any act prohibited by State or federal law in any jurisdiction involving conspiracy, collusion or other impropriety with respect to offering on any contract, nor have been the subject of any debarment action.

# Section 11 PERMITTING PLAN

7.6.11 Proposers are required to demonstrate a plan for permit acquisition for the Project. Proposers should provide the following information:

Subsection 11.1 Permits, Licenses, and Environmental Assessments and/or Environmental Impact Statements Required

1. Provide a comprehensive list of all the permits, licenses, and environmental assessments and/or environmental impact statements required to construct and operate the Project, including the New Transmission and any other transmission infrastructure necessary to effectuate delivery of energy to Zone J. Along with this list, identify the governmental agencies that are responsible for issuing approval of all the permits, licenses, and environmental assessments and/or environmental impact statements. If a Proposer has secured any permit or has applied for a permit, please indicate this in the response.

# Permits and Approvals Required – Québec Line

# Canadian Transmission – Québec Line

# A. Government of Québec (Provincial)

Pursuant to Québec's provincial environmental framework, Hydro-Québec is required to obtain certain approvals, including an authorization from the Government of Québec under the *Environment Quality Act* (RLRQ, c. Q-2) (Environment Quality Act) which is the main provincial environmental approval required for construction of the Québec Line.

In accordance with the provisions of the Environment Quality Act regulation, an environmental impact assessment and review process will be performed for the Québec Line as being an electrical transmission line project of a voltage greater than 315 kV having a distance greater than two kilometers in length.



In this context, following the receipt of Hydro-Québec's project notice, the Government of Québec, acting through its Ministère de l'Environnement et de la Lutte contre les changements climatiques (MELCC, the department responsible for the environment and the fight against climate change ), issued in 2018 specific directives for the completion of an environmental impact statement (EIS) relative to the Québec Line.

Once the EIS is completed by HQTÉ, it will be filed with the MELCC. The MELCC will then proceed with a screening review coordinated with other provincial governmental entities. Those may include data requests and additional commitments from Hydro-Québec.

As part of the provincial process and if requested by a third party, hearings will be conducted by the Bureau d'audiences publiques sur l'environnement (BAPE), the provincial environmental hearing board. The BAPE will summarize the information gathered through its consultation process in a report submitted to the MELCC.

The MELCC will then proceed with an environmental acceptance review, in coordination with other provincial governmental entities, and make its recommendation to the Minister responsible for the administration of the Environment Quality Act.

Finally, the project authorization is issued by the Government of Québec based on the documents and reports prepared during the process.

See Table 11.1.1 for a list of additional provincial authorizations.

# B. Canada Energy Regulator (Federal)

Hydro-Québec is required to obtain an authorization from the Canada Energy Regulator (CER) under the *Canadian Energy Regulator Act* (S.C. 2019, c. 28, s. 10) (Canadian Energy Regulator Act), which regulates the construction and operation of international power lines. Hydro-Québec intends to file a request for permit under Section 248 of the Canadian Energy Regulator Act. The CER permit process provides for a publication of notice of the permit application and a public comment period. The CER will determine whether to issue a permit based on its review of the application and the comments on the application.

The CER permit process is conducted in parallel with the above-described Québec's provincial environmental impact assessment and review process. As explicitly prescribed under the Canadian Energy Regulator Act, the CER permit process must seek to avoid duplication of measures taken by the applicant and the government of the province where the line is routed and even encourage anyone with concerns to participate in the provincial process.

For the Québec Line, HQTÉ intends to file the EIS and its supplements, the BAPE report, the MELCC analysis report and the Government of Québec application as an integral part of the CER permit application, in addition to all information required pursuant to the Canadian Energy Regulator

Act and regulation. The CER also undertakes its own independent consultations with Indigenous communities during the CER permit process.

The timeline associated with the CER approval process generally runs in parallel with the Government of Québec process.

# C. Zoning Approvals

No local zoning approvals are required for the construction and operation of Hydro-Québec facilities. Instead, in compliance with applicable procedures, the regional county municipalities (RCM) along the proposed line route, as well as the Communauté métropolitaine de Montréal (CMM), will confirm the project's compliance with the objectives of the RCM and CMM land-use and development plans. As the EIS is developed, the permitting and land use issues will be identified and addressed through the processes described above. The considerations presented typically involve the same as those addressed in a U.S. siting proceeding, and may include, where applicable:

- the economic justification for the project;
- consistency with local municipal land use plans;
- the use of land in agricultural zones for non-agricultural uses;
- mitigation of impacts on flora and fauna, forests, and wetlands;
- impacts on people, such as the effects of sound or electromagnetic fields;
- visual impacts; and
- economic development.

The Government of Québec's review of Hydro-Québec's application for a certificate of authorization to construct the Québec Line will include a review of the environmental and social impact assessment of that project. The review process will effectively address mitigation of those impacts.

The environmental impact study (performed by Hydro-Québec during the facilities study phase) will evaluate the best possible route from the technical, economic, environmental, and social acceptance points of view. Hydro-Québec's approach for selecting the least impactful route will use successive steps to narrow in on the optimum routing for the proposed underground line.<sup>108</sup>

# D. Other Provincial or Federal Permits and Approvals

Table 11.1.1 lists all permits, licenses, and environmental assessments and/or environmental impact statements required to construct and operate the Québec Line, as well as the anticipated timing.

<sup>&</sup>lt;sup>108</sup> See Sections 12 and 15 for additional information regarding HQ's approach to determining line routes.

 Table 11.1.1

 Regulatory Approvals and Certifications Required for the Québec Line (by Issuing Agency)

ISSUING AGENCY	PERMIT	DESCRIPTION OF PERMIT	STATUS
PROVINCIAL AND R	EGIONAL PER	RMITS	
Government of Québec	Certificate of authorization	A certificate of authorization to construct the transmission line under section 31.5 of the Environmental Quality Act subject to the environmental and social impact assessment and review procedure	
Ministère de l'Environnement et de la Lutte contre les changements climatiques (MELCC)	Certificate of authorization	The approval of plans and specifications of the transmission line is required under section 22 of the Environmental Quality Act	To be filed in due course after issuance of the Government of Québec certificate and prior to construction
MELCC	Certificate of authorization	An authorization for the extension of the existing Hertel substation in wetland is required under section 22 of the Environmental Quality Act	To be filed in due course prior to construction
Commission de protection du territoire et des activités agricoles du Québec	Authorization	Approval of the use of new parcels of land situated in an agricultural zone for purposes other than agriculture under sections 58 and 62 of the Act Respecting the Preservation of Agricultural Land and Agricultural Activities	
Regional county municipalities & Communauté métropolitaine de Montréal (RCM & CMM)	Opinion	Opinion on project compliance with objectives of the RCM and CMM land-use and development plans.	
Régie de l'énergie du Québec	Authorization	Authorization to acquire, construct or dispose of transmission assets with a project $\cot 2 CA$ million	
FEDERAL PERMITS	1 	·	
Canadian Energy Regulator (CER)	Permit	A permit is required for the project because it seeks to construct, operate, maintain, or connect an electric transmission facility crossing an international border	
Minister of Fisheries and Oceans	Permit	A permit is required in case of harmful alteration, disruption or destruction of fish habitat.	

ISSUING AGENCY	PERMIT	DESCRIPTION OF PERMIT	STATUS
International Border	Permit	A permit is required for construction	To be filed in due course
Commission		within ten feet of the boundary	prior to construction

# Permits and Approvals Required/Obtained – CHPE

CHPE has obtained all of its required material permits for construction and operation.

These permits enable CHPE's financing and its subsequent construction to commence in Q4 2021 and to effectuate delivery of renewable energy to Zone J in 2025. CHPE's successful permitting accomplishments have been the result of rigorous and inclusive processes spanning years and requiring extensive coordination with a number of non-profit organizations, community representatives and government and regulatory agencies at both federal and State levels.



Table 11.1.2 lists CHPE's required and existing permits, including the issuing agencies and permit details, secondary reviews and any anticipated amendments.

		DATE		PERMIT			
PERMIT	ISSUING AGENCY	ISSUED	EXPIRATION	NO.			
Presidential Permit	U.S. Department of	04/30/2021	No Expiration	PP-481-1			
	Energy (USDOE)						
Permits pursuant to the Federal Clean	U.S. Army Corp of	04/20/2015	12/31/2025	NAN-2009-			
Water Act and Rivers and Harbor Act	Engineers (USACE)			01089			
- Modification 1		10/17/2016					
- <u>Modification 2</u>		11/15/2017					
- Modification 3		11/25/2019					
- Modification 4		04/28/2021					
Certificate of Environmental	New York State Public	04/18/2013	No Expiration	Case 10-T-			
Compatibility and Public Need	Service Commission			0139			
- <u>Amendment #1 - Approval 1</u>	(NYPSC)	03/20/2020					

 Table 11.1. 2

 CHPE-Issued Permits and Regulatory Approvals

		DATE		PERMIT
PERMIT	ISSUING AGENCY	ISSUED	EXPIRATION	NO.
- <u>Amendment #1 - Approval 2</u>		09/21/2020		
- <u>Amendment #2</u>		08/13/2020		
- <u>Amendment #3</u>		01/26/2021		
- Amendment #4		Expected May 2021110		
Negotiated Rate Authority	U.S. Federal Energy	05/29/2020	No Expiration	Docket No
	Regulatory Commission	00/20/2020	rto Expiration	ER20-1214-
	(FERC)			000
Boundary Crossing Permit	U.SCanada	05/04/2020	No Expiration	N/A
	International Boundary		1	
	Commission (IBC)			
SECONDARY REVIEWS SUPPORTIN	NG PERMITS	1	1	1
National Environmental Policy Act	USDOE	08/15/2014	N/A	EIS-0447
Final Environmental Impact Statement				
(NEPA FEIS)				
Presidential Permit Concurrence	U.S. Department of	03/03/2021	N/A	N/A
	Defense (USDOD)			
Presidential Permit Concurrence	U.S. Department of State	01/05/2021	N/A	N/A
	(USDOS)			
Endangered Species Act (ESA) Section	U.S. Fish and Wildlife	03/29/2021	N/A	N/A
<u>7 Concurrence</u>	Service (USFWS)			
Endangered Species Act (ESA) Section	National Oceanic and	03/31/2021	N/A	N/A
<u>7 Concurrence</u>	Atmospheric			
	Administration (NOAA)	02/10/2021	27/4	27/4
National Historic Preservation Act	New York State Historic	03/10/2021	N/A	N/A
(NHPA) Section 106 Concurrence	Preservation Office			
401 Weter Orality Cartificate	(NYSHPO)	01/19/2012	NT/A	С 10 Т
401 water Quanty Certificate	NYPSC	01/18/2015	IN/A	Case 10-1-
Federal Coastal Zono Management Ast	New Vork Donartmont of	06/08/2011	N/A	N/A
(Consistency Certification Conditional	State (NVDOS)	00/08/2011	1N/A	1N/A
Concurrence)	State (INI DOS)			
- Amendment 1		03/03/2014		
- Amendment 2		12/15/2014		
- Amendment 3		04/22/2021		

# **Presidential Permit**

A Presidential Permit issued by the USDOE is necessary to construct, operate, maintain, and connect electric transmission facilities at the United States international border with Canada. Before a Presidential Permit is issued, the action must be found to be consistent with public interest and supported by an evaluation of environmental impacts, as well as by confirmation that electric reliability will be maintained. In addition, concurrences are required from the following agencies:

<sup>&</sup>lt;sup>110</sup> The 250 MW petition is on the consent agenda for the May 13, 2021 meeting of the NYPSC.

- USDOS;
- USDOD;
- USFWS and NOAA (pursuant to ESA Section 7); and
- NYSHPO (pursuant to NHPA Section 106).

CHPE's original Presidential Permit was issued in 2014 (PP-362) after the completion of a Final Environmental Impact Statement and was reissued on July 21, 2020 (PP-481) to accommodate a corporate restructuring. The Permit was amended on April 30, 2021 to accommodate route modifications and a 250 MW uprate and is now identified as PP-481-1. All concurrences conducted by USDOS, USDOD, USFWS, NOAA and NYSHPO were also reaffirmed as appropriate in the context of the 2021 permit.

# **USACE** Authorizations

Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act require that permits must be obtained from USACE in order to construct any structure in or over navigable waters, or to place or excavate any dredge or fill material in U.S. waters. USACE permits were therefore required and obtained for the CHPE portions that are to be placed in waterways or that involve jurisdictional wetlands or stream/river crossings in the overland portion. The modifications to the USACE permits identified in Table 11.1.2 were completed to:

- extend certain milestone dates in the original permit;
- update the permit due to a corporate reorganization; and
- update the permit to reflect route modifications and add a 250 MW uprate.

As required by USACE, a Navigational Risk Assessment for CHPE was completed and filed with USACE and the U.S. Coast Guard. This assessment was a multi-year process involving significant public input from stakeholders interested in these waterways. It confirmed that CHPE can be constructed and operated with no impact to navigation.

# <u>NYPSC's Certificate of Environmental Compatibility and Need (Article VII Certificate) and</u> <u>Related Concurrences</u>

NYPSC's Article VII Certificate is the comprehensive siting approval required by New York State for CHPE's construction and operation. As part of this approval, NYPSC also issued CHPE a 401 Water Quality Certificate, which confirms that CHPE's construction and operation will comply with the requirements of the Federal Clean Water Act and New York's Water Quality Standards.

In addition, and in accordance with the Federal Coastal Zone Management Act, the NYDOS issued a Consistency Certification Concurrence Determination in June 2011 and amendments in 2014 and 2021 for project activities that occur within the regulated coastal zone.

NYPSC has also issued several amendments to the Article VII Certificate:

- *Amendment* #1 *Approval 1*: Approved changes to three certificate conditions and a new installation method for the overland route;
- *Amendment #1 Approval 2*: Approved changes to one certificate condition related to the scheduling of construction activities;
- *Amendment #2*: Approved eight route modifications totaling less than 10% of CHPE's route and a relocation of the Converter Station in Astoria, Queens;
- *Amendment #3*: Approved an approximately one-mile relocation of CHPE in New York City and minor "bump outs" to the permitted deviation zone in Rockland County, NY; and
- *Amendment #4*: Pending approval to add 250 MW of capacity to the project. This Amendment was submitted to NYPSC in January 2021. A public hearing and statement process was completed and an order was issued by the Administrative Law Judge confirming no additional process is needed. Approval is expected in Q2 2021.

# Subsection 11.2 Anticipated Timeline for Seeking and Receiving Required Permits, Etc.

2. Provide the anticipated timeline for seeking and receiving the required permits, licenses, and environmental assessments and/or environmental impact statements. The permit timeline should be included on the Project schedule in as described in Section 7.6.13.



acceptance of the EIS, several regulatory processes are undertaken, which are expected to include public hearings. The CER approval process is conducted in parallel with the provincial review process (as described in Section 11.1).

After

At the end of the project facilities study, TransÉnergie will file for an authorization by the Régie de l'énergie du Québec (provincial energy regulator). The filing will include the estimated project costs and schedule resulting from the facilities study, as well as the transmission service agreement that will define the conditions of the point-to-point transmission service in Québec.



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CHPE has already been issued all of its material permits for construction and operations (see Table 11.1.2).



# Section 12 ENVIRONMENTAL MITIGATION PLAN

7.6.12 Environmental Mitigation Plan

# 12.1 Mitigation Measures; Collaboration

Proposers must include in their Step Two Proposals an Environmental Mitigation Plan that describes how Proposer will mitigate adverse environmental and agricultural impacts that may be caused by the Project. The Environmental Mitigation Plan should detail, to the extent practical, specific measures the Proposer will take to avoid, minimize, and/or mitigate potential environmental and agricultural impacts of the proposed Project, including the construction of Resources, New Transmission, and other transmission infrastructure. The Environmental Mitigation Plan must describe how the Proposer will work collaboratively with the State, federal agencies if applicable, and other stakeholders to define avoidance, minimization, and mitigation measures.

# **Environmental Mitigation Plan: Québec Line**

HQTÉ is currently preparing an environmental impact statement (EIS) for the Québec Line.<sup>114</sup> The EIS, which will serve as the environmental mitigation plan for the Québec Line, is based on the integration of the following aspects of the project:

- **Techno-economic studies**, which help define the exact nature of the project and determine its characteristics and optimal cost of implementation; and
- Environmental studies and consultation with host communities, which help maximize the integration of the project within the host communities and reduce its environmental and social impacts, whether through project improvement in the design phase or the implementation of mitigation measures.<sup>115</sup>

Hydro-Québec develops line route variants based on the needs of the project, knowledge of the environment, and social concerns. In developing potential routes, in addition to technical criteria (including length of the route and difficulty of construction), costs and the presence of environmentally sensitive elements, the following criteria are prioritized:

<sup>&</sup>lt;sup>114</sup> See Section 11 for additional information regarding the permitting plan for the Québec Line.

<sup>&</sup>lt;sup>115</sup> See Section 15 for HQ's community engagement plan.

Criteria	Considerations
Follow an existing linear axis as much	This criterion is important since it imposes basic restrictions to ensure
as possible	that the impacts on private property are limited.
Preserve wooded areas	Since the study area is located in RCMs with less than 30% of
	wooded area, the variants of the route which would lead to forest
	clearing should be limited if possible.
Limit agricultural land encroachment	The study area crosses the best farmlands in Québec; therefore, the
	development of the line route must take this into consideration to
	minimize possible encroachment on these lands.
Easy access to the construction site	The construction of temporary roads to access the site of work or to
	move along the transmission corridor is among major impacts during
	construction. This accessibility criterion is very important since it
	contributes to the reduction of many impacts.
Limit impacts on the population	Construction work can cause impacts on the quality of life of the
	population (such as increased traffic, noise and dust). All of the
	solutions studied must take this element into account in order to
	reduce the impacts of the project.

After analysis of potential variants, a route will be chosen that represents a compromise between technical, economic, environmental and social aspects. The choice of the route for the Québec Line will take into account the concerns and demands of the communities located along the proposed route.

The EIS will describe the potential impacts on each of the targeted components of the natural environment and on people. Environmental considerations to be analyzed include effects on vegetation, wetlands and water, invasive alien species, plant and animal species with special status (at risk), and terrestrial and aquatic fauna. With respect to impacts on people, the components to be analyzed will include land use, soil quality, archaeology, electromagnetic fields and psychosocial impacts.

The EIS will focus on the Québec Line's construction and operations. Mitigation measures will be developed that aim to reduce, or in some cases, eliminate negative impacts. Certain measures will also aim to optimize positive impacts. In cases where impacts cannot be mitigated, compensation measures will be put in place. For example, the Québec Line may require the following mitigation measures:

- Adapting construction periods to local activities;
- Inventorying areas with potential archaeological remains that may be affected by construction;
- Agreeing with land users on the periods when construction work hours will occur, in order to avoid disrupting periods with heavy traffic;
- Restricting clearing of land along waterways; and
- Identifying colonies of plant species located along the edges of the construction zone, to limit disturbance to at-risk species.

The EIS will also include an environmental monitoring program, which will:

- Determine the main activities or sources of impact that need to be monitored on the ground;
- Ensure that recommendations and measures in the environmental assessment and tender documents are implemented on site; and
- Ensure compliance with the conditions and commitments set by government authorities, as well as applicable laws and regulations.

Appropriate environmental monitoring is proposed for each Hydro-Québec project, to measure the actual impact of the project and assess the effectiveness of mitigation and environmental development measures. The results of environmental studies and follow-up are published by Hydro-Québec on a regular basis.<sup>116</sup>

Hydro-Québec has successfully obtained major authorizations for similar major HVDC interconnection projects with the U.S. in the recent past. For example, the Québec-New Hampshire Interconnection project (1,090 MW, 320 kV DC transmission line) was fully permitted at the provincial and federal levels. Similarly, the Appalaches-Maine Interconnection project (1,200 MW, 320 kV DC transmission line) recently obtained all major provincial authorizations and the issuance of the federal authorization is expected in Q3 2021.

Throughout the project, Hydro-Québec will maintain frequent communications and consultations with provincial and federal departments with environmental authority. At the same time, Hydro-Québec's public participation process will ensure that community concerns are taken into account when developing routes, analyzing variants, choosing variants, and developing mitigation measures.<sup>117</sup>

# **Environmental Mitigation Plan: CHPE**

Since CHPE has already received its material permits, the environmental mitigation plan for CHPE has been established and is part of the regulatory record.

As part of the permitting process, CHPE consulted with stakeholders and federal and state agencies to develop specific actions and/or procedures to avoid or reduce environmental impacts during construction and operation of CHPE. Specifically, as part of the Article VII process, Transmission Developers and thirteen other parties engaged in a multi-year process that resulted in a Joint Proposal of Settlement (JP).<sup>118</sup> The JP process resulted in route changes to CHPE and avoidance and mitigation measures that formed the foundation of the Best Management Practices (BMPs) (which

<sup>&</sup>lt;sup>116</sup> For example, see the Summary of environmental knowledge of line and substation projects • 1973-2013 at <u>https://www.hydroquebec.com/sustainable-development/specialized-documentation/synthese html</u>.

<sup>&</sup>lt;sup>117</sup> See Section 15 for additional information regarding outreach conducted as part of HQ's community engagement plan.

<sup>&</sup>lt;sup>118</sup> The JP is the foundational document that was relied upon by the NYPSC during the Article VII permitting process for CHPE. The JP was signed by numerous state agencies as well as municipal and nongovernmental organizations. See <u>https://chpexpress.com/wp-content/uploads/2020/03/permit-PSC.pdf</u> (page 108 of PDF).

functions in large part as an Environmental Mitigation Plan) that are required as part of the issued permits.

These BMPs offer protections to environmental, agricultural, cultural, and other potentially sensitive resources along the proposed CHPE route. The BMPs are attached to the Article VII Certificate as well as the federal EIS and will be incorporated into the final Environmental Management and Construction Plan (EM&CP), which documents environmental and construction management procedures and plans to be implemented during construction activities and during facility operation.

<u>Attachment 12.1</u>, which is also Appendix G of the EIS, provides a listing of the suite of BMPs agreed upon by CHPE. This 24-page document covers a wide range of BMPs including:

- Environmental, Aquatic, and Agricultural Inspectors to monitor compliance with BMPs and applicable regulations and guidance documents;
- Mapping of known resources, including wetlands and sensitive species habitat, prior to initiating construction;
- Establishment of erosion and sediment control devices prior to and during construction, followed by restoration of all areas disturbed by construction activity;
- Coordination of in-water construction with U.S. Coast Guard and maritime community;
- Construction work windows to avoid impacts to bat species as well as sensitive aquatic species, including shortnose and Atlantic sturgeon;
- Any vegetation management, emergency repairs, or other operational maintenance activities required within Karner blue butterfly or frosted elfin butterfly habitats would be implemented in accordance with a mitigation plan being developed in consultation with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation;
- Monitoring for turbidity and contaminants during in-water construction;
- Use of horizontal directional drilling (HDD) to enter and/or exit water bodies and to avoid mapped Karner blue butterfly and frosted elfin habitats;
- Maintenance of vegetative buffers along waterbodies during construction;
- Planning to prevent or control transport of invasive species;
- Implementation of a Spill Prevention, Control, and Countermeasure (SPCC) Plan or its equivalent during construction to establish appropriate protection measures to prevent or clean up spills of hazardous materials;
- Development of a Cultural Resources Management Plan to manage potential impacts on cultural resources; and
- Conducting four different in-water surveys prior to, during and after construction to understand impacts of installing the cable in New York's waterways.

In addition to avoidance and minimization measures, Transmission Developers has also agreed to provide three mitigation funding programs:<sup>119</sup>

<sup>&</sup>lt;sup>119</sup> See Section 15 for additional information regarding these programs.



- <u>In-Water Mitigation</u>: Transmission Developers has established a \$117 million Hudson River and Lake Champlain Habitat Enhancement, Restoration, and Research/Habitat Improvement Trust Fund to be used exclusively for in-water mitigation studies and projects that have a direct nexus to the construction and operation of CHPE;<sup>120</sup> and
- <u>Rockland County Mitigation</u>: Transmission Developers has established a \$31 million fund to mitigate impacts, primarily related to traffic during construction, to the community along Route 9W in five municipalities in Rockland County.

# 12.2 Reducing Greenhouse Gas Emissions; Benefits to Disadvantaged Communities

The Environmental Mitigation Plan should also describe the contribution of the Project to meeting New York State's target of reducing greenhouse gas emissions 80% by the year 2050, and CLCPA's target of delivering 40% of the overall benefits from New York State's climate programs to Disadvantaged Communities. Describe how the Project will contribute to a reduced energy burden, avoided environmental pollution, avoided health costs, added climate resiliency, avoided environmental costs and added environmental benefits to Disadvantaged Communities.

Overall, the Project will result in significant environmental and economic benefits associated with the use of clean, renewable energy, leading to annual reductions in carbon emissions and added benefits to Disadvantaged Communities. Those significant and positive environmental impacts will more than offset the primarily short-term and highly localized impacts resulting from the construction of the New Transmission.<sup>121</sup>

# **Greenhouse Gas Emission Reductions**

Average annual emission reductions in the State of New York and New York City from CHPE will be 3.9 million metric tons of  $CO_2$  under a consumption-based standard. These  $CO_2$  reductions would help the State of New York and New York City achieve approximately 6.5% and 28%, respectively, of the economy-wide emission reductions required to meet their 40% by 2030 emission reduction goals. CHPE's impact on  $CO_2$  emissions will contribute 2% to achieving the State of New York's economy-wide 171 million metric ton GHG reduction target by 2050. CHPE will also contribute 9% to achieving New York City's 42 million metric ton GHG reduction target by 2050. These reductions are especially critical in New York City, where achieving deep  $CO_2$  emission reductions will be particularly challenging.

<sup>&</sup>lt;sup>120</sup> More information on this funding is available here: <u>https://chpexpress.com/environmental-trust-fund/</u>.

<sup>&</sup>lt;sup>121</sup> The information in this Section 12.2 is based on the findings in the PA Consulting report, relevant portions of which are included as <u>Attachment 16.1</u>.

The CO<sub>2</sub> emission reductions attributable to CHPE will substantially benefit the State of New York and New York City. Using the "Social Cost of Carbon" values published by the NYSDEC in its October 2020 Value of Carbon Guidance documents and consumption-based accounting, the 97 million metric tons of CO<sub>2</sub> emission reductions attributable to CHPE over its first 25 years of operations will result in economic benefits valued at approximately \$23.2 billion.

# **Cleaner Air for Disadvantaged Communities**

CHPE will provide significant benefits to New York's Disadvantaged Communities, including by:

- enabling peaker plants located in Disadvantaged Communities to retire, which will result in an approximately 20% reduction of local air pollutants State-wide, creating an estimated \$1.9 billion in avoided health costs over 25 years;
- reducing wholesale electricity costs, which will decrease the energy burden on Disadvantaged Communities by \$2.5 billion over 25 years;
- addressing climate resiliency by adding a 1,250 MW converter station connected to HQ's geographically diverse generation resources via 339 miles of buried transmission line; and
- providing other additional environmental benefits to Disadvantaged Communities

Peaker plants and other fossil generators located in and around New York City contribute to environmental injustice in New York. These facilities are primarily located in working-class waterfront locations and many of them are near large public housing developments where higher concentrations of low-income New Yorkers live. The map below shows that most peaker plants in New York City are within or adjacent to a Disadvantaged Community.



Peaker Plant Locations and Disadvantaged Communities in New York City

Peaker plants emit pollutants such as NOx, SOx, PM2.5, NH3 and VOCs, which are harmful to human health. Historically, gas-fired peaker plants have been relied on to provide energy quickly during high-demand events or if there are limitations in supply from other energy sources. By providing clean, reliable energy, CHPE will provide a source of dispatchable energy in New York that will balance out fluctuating supply and demand on the grid. For example, during times of higher demand or during periods with variations in the energy provided by wind and solar energy, CHPE can help provide balance and reduce reliance on gas-powered peaker plants.

CHPE's ability to displace fossil-fuel power generation from peaker plants will also result in considerable reductions in the local air pollutants like NOx, SOx, PM2.5, NH3 and VOCs. Based on estimates from PA Consulting, CHPE will decrease local air pollutant emissions from New York State power plants of those five harmful pollutants by an average of approximately 800 tons per year through 2050, with approximately 50% of that decrease coming from New York City. To put these reductions in perspective, the New York City reductions are equivalent to the total NOx emissions from 15 of New York City's 16 peaker plants, based on 2019 emissions.

Based on these harmful pollutant reductions, PA Consulting estimates that CHPE's operations will result in up to 6 lives saved each year, with an economic benefit of up to \$102.5 million per year across New York State. This benefit will primarily come from reductions in heart attacks and

premature deaths. Through 2050, the cumulative economic benefit of improved health from lower pollutant emissions is estimated to be between \$1.2 billion and \$2.7 billion. As depicted in the table below, in New York City specifically, it is expected that the majority of pollutant reduction will come from the retirement of peaker plants. By delivering clean, reliable power, CHPE is expected to reduce the need for peaker plants and in turn reduce pollutants, which is expected to have concentrated, positive health effects on the Disadvantaged Communities that peaker plants are often located in or near.

Location	NO <sub>x</sub>	$SO_2$	NH3	PM2.5	VOC	Total
New York State (tons)	10,207	419	4,757	3,597	1,118	20,097
NYC (tons)	5,247	173	2,425	1,833	570	10,247
% of Reduction in NYC	51%	41%	51%	51%	51%	51%

#### Cumulative Pollutant Emissions Reductions From CHPE Operations (2025-2050)

# **Reduced Energy Burden for Disadvantaged Communities**

CHPE will also lead to a significant reduction in wholesale electricity prices with respect to both energy and capacity costs, across multiple zones in NYISO. As a result, it will lead to a reduction in retail electricity rates. Low-income and Disadvantaged Communities spend a higher share of their income on energy, so the reduction in electricity costs will benefit these communities to a greater extent than others, and will reduce their energy burden.<sup>122</sup>

It is estimated that CHPE, on average, between 2025 and 2050, will result in each low-income New York State household saving approximately \$40 per year, with a total savings of \$2.5 billion for all low-income households in New York during that timeframe. The money saved on electricity bills by residents will be available to spend on other expenses such as food, medicine, and education, and will positively impact the broader New York economy, resulting in higher economic output for the State.

# Added Climate Resiliency

One foundational principle of the CLCPA is to make New York communities more resilient to ever intensifying threats from global climate change. In New York, climate change is exacerbating many types of hazards; scientists expect rising sea levels, greater variability in temperature and precipitation, and an increased number and intensity of storms in the Atlantic like Super Storm Sandy. Only a few months ago, in February, unprecedented cold winter temperatures drove record high electricity demand in Texas and knocked out over 30,000 MW of power generation, resulting in

<sup>&</sup>lt;sup>122</sup> In 2016, the State of New York set a target that New York residents should spend no more than 6% of their income on energy bills. An energy burden above 6% is considered high, and above 10% is considered a severe energy burden. Lower-income households are disproportionally impacted by energy burdens. Data shows that the energy burden for a low-income family in New York City is 9.3%, which is almost triple that of a median-income household.

nearly four days of rolling blackouts with over \$100 billion in estimated economic damage. CHPE provides New York State the opportunity to achieve the emission reductions necessitated by the CLCPA while simultaneously improving the resiliency and reliability of New York's electric grid.

CHPE uniquely enables New York's access to

. By having access to a network of power generators capable of producing clean energy significantly in excess of CHPE's needs, CHPE improves the resiliency of the NYISO grid by eliminating the negative impact of a single generator outage and provides an unprecedented form of new, baseload clean energy

Québec is geographically very large and distinct from New York,

located well north of load centers near the U.S. border – averaging a distance of nearly 900 miles from New York City. This geographic separation between generation and demand will add resiliency to the New York grid once the HQ system is connected to Zone J via CHPE. After analyzing 30 years of NOAA-declared storm events for New York City and Montréal, PA Consulting identified 245 distinct daily storm events in New York City. Of these events, in only 16 instances was Montréal also experiencing a storm event. In other words, the observed coincidence of storm events in New York City and Montréal over the past 30 years is less than 10%. This lack of correlation between the two geographies and the connection CHPE enables between them will increase the resiliency of New York's grid by minimizing the impact of an extreme weather event on New York's power supply.

In addition, CHPE's buried HVDC transmission line will avoid outage risks that are typical of overhead power lines. More specifically, overhead power lines are vulnerable to wind events (directly as well as indirectly, via branches or other debris) and lightning strikes, and can accumulate snow and ice in winter. CHPE can also help avoid future overhead transmission buildout that would otherwise be needed to accommodate greater amounts of upstate New York wind and solar, which would otherwise need to be built in place of CHPE's 10.4 TWh of clean energy. Phase 1 upgrades to address transmission needs in the next decade are already underway and expected to cost \$6.8 billion, with additional Phase 2 upgrades needed to support CLCPA compliance but not yet scoped. Most of these upgrades would be accomplished with overhead transmission lines, which weaken the resiliency of the New York grid by increasing its exposure to storm events. CHPE's buried HVDC transmission line will not be impacted by storm events and therefore strengthens the resiliency of New York's grid.

# **Environmental Benefits to Disadvantaged Communities**





Finally, reducing CO<sub>2</sub> emissions by 3.9 million metric tons per year will help combat climate change impacts, which often have a disproportionate impact on Disadvantaged Communities.

# 12.3 Carbon Mitigation and Tracking

To the extent discernable at the current stage of development, Proposers should describe and explain the anticipated carbon intensity in Project design, sourcing, construction, operation, and maintenance. Proposers should also describe and explain any available process by which the Proposer will be able to account for embodied carbon on an ongoing basis through development, construction, and operation of the Project. This could include the sourcing and manufacturing of primary components such as modules, inverters, turbines, cables, substations, energy storage facilities, and other electric equipment, but should also consider associated activities such as construction, Operation & Maintenance (O&M), and decommissioning. This could also include opportunities to support carbon mitigation efforts in collaboration with New York State manufacturing sources.







Hydro-Québec has always sought to reduce the GHG emissions associated with its operations.

In 2009, on a voluntary basis, Hydro-Québec began calculating the GHG emissions resulting from all of its activities and thus established its carbon footprint in accordance with ISO 14064 standards. This allowed Hydro-Québec to better understand the sources of its GHG emissions and to take action in reducing the most significant ones. Also, this calculation has allowed a comparison of Hydro-Québec's current carbon footprint with its 1990 footprint, and enabled it to track its contribution to Québec's carbon reduction target. Since 2010, Hydro-Québec has published its annual <u>carbon footprint</u> in its yearly sustainability report. Since 2015, all sources of its emissions have been verified, each year, by a qualified auditor in accordance with ISO 14064 standards.

Hydro-Québec has reduced its carbon footprint by 90% when compared to its 1990 levels. This massive reduction is largely attributed to its decommissioning or repurposing of seven thermal generation stations, including the closure of the Tracy oil-fired generating station in 2011, which alone was an annual source of emissions of more than one million tons of GHGs. Hydro-Québec also takes into consideration the carbon emissions associated with electricity imported from neighboring grids. In the past few years, these neighboring grids have also decarbonized.

Finally, Hydro-Québec has also put into place a number of initiatives to reduce emissions from its operational activities, such as integrating renewable technologies into its off-grid thermal generating stations in remote locations, as well as adding electric vehicles to its fleet.

Hydro-Québec's GHG reduction efforts do not end there. Hydro-Québec has made a commitment to be carbon neutral in its operations by 2030. To do so, it has established a direct emissions reduction target of 35% by 2027 compared to its 2018 levels. Furthermore, Hydro-Québec has already announced that it will link its biggest off-grid remote region to the main grid, thus reducing by 94% the GHG emissions from its largest thermal power generation (which is currently off-grid).

For further information see: <u>https://www.hydroquebec.com/data/developpement-durable/pdf/co2-</u> emissions-electricity-2019.pdf. With regard to the Québec Line, recent research highlights that transmission, distribution and operations (including losses) represent only about 10% of the carbon footprint associated with electricity generated and delivered in Québec.<sup>125</sup> To expand on this knowledge, Hydro-Québec recently initiated research to document the carbon dynamics associated with transmission lines, specifically the biogenic carbon impact of power-lines on forest land. This research is specific to overhead lines, but certain results could be extrapolated for underground/underwater lines.

#### **Transmission Developers**

# **Low-Carbon Construction**

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12-13



#### Section 13 PROJECT SCHEDULE

7.6.13 A Proposer must demonstrate that its Project can be developed, financed, and constructed within a commercially reasonable timeframe. Proposer is required to provide sufficient information and documentation showing that Proposer's resources, process, and schedule are adequate for the acquisition of all rights, permits, and approvals for the financing of the Project consistent with the proposed milestone dates that support the proposed Commercial Operation Date. Proposers are required to provide a complete critical path schedule for the Project from the notice of award to the start of commercial operations. For each Project element listed below, provide the following:

# **Transmission**

Hydro-Québec has extensive experience in developing, building and commissioning large-scale transmission projects. The schedule developed for the Québec Line builds on the best planning and scheduling practices that are continually enhanced by Hydro-Québec when implementing major transmission system installations and modifications.

Transmission Developers, Blackstone and the contractors selected for CHPE have significant experience developing, constructing and bringing complex energy infrastructure projects into operation. Examples of this include CHPE's advanced stage of development and successes with permitting, as many of the items considered critical path in this Section have already been completed or are in-process for CHPE. Specific project examples are also listed in Section 3.2.


#### Subsection 13.1 Schedule and Critical Path

1. Identify the elements on the critical path and start and end dates. The schedule should include, at a minimum, preliminary engineering, financing, acquisition of real property rights, Federal, state and/or local permits, licenses, environmental assessments and/or environmental impact statements (including anticipated permit submittal and approval dates), completion of interconnection studies and approvals culminating in the execution of the Interconnection Service Agreement, financial close, engineer/procure/construct contracts, start of construction, construction schedule, and any other requirements that could influence the Project schedule.









#### Subsection 13.2 Permissible Offshore Construction Windows

2. If any aspect of the Project involves construction through aquatic or other sensitive environments, describe the anticipated permissible construction windows, and how the construction milestones will be accommodated within these windows.



In accordance with the New York State Public Service Commission Article VII Permit issued to CHPE, the construction windows for the Lake Champlain, Hudson River, Harlem River and East River portions along CHPE's route are designated as follows:

# Table 13.2: Underwater Construction Windows Lake Champlain, The Hudson, Harlem and East Rivers

Location	Construction Window		
Lake Champlain			
U.S./Canada Border to Crown Point	May 1 to August 31		
Crown Point to Dresden	September 1 to December 31		
Hudson River, Harlem River, East River			
Cementon – New Hamburg	August 1 to October 15		
New Hamburg – Stony Point	September 15 to November 30		
Stony Point – Rockland Lake State Park	OVERLAND		
Rockland Lake State Park – Harlem River	July 1 to October 31		
Harlem River – East River	May 15 to November 30		

These underwater construction windows have been incorporated into CHPE's construction schedule and are well understood by the contractors.

## <u>Lake Champlain</u>



## Hudson and Harlem Rivers

Subsection 13.3 Status of All Critical Path Items

3. Detail the status of all critical path items, such as receipt of all necessary siting, environmental, and NYISO approvals







Due to the maturity of CHPE's development process, all of the material siting, environmental, and NYISO approvals have already been obtained or filed and are not considered critical path items for CHPE. Further detail on these items, as well as the critical path items for CHPE are listed below.

Non Critical Path Items	Status
U.S. Department of Energy Presidential Permit	Issued
Environmental Impact Statement	Issued
U.S. Army Corps of Engineers Permit	Issued
NYS Article VII Certificate of Environmental	Issued
Compatibility and Public Need	





### Subsection 13.4 Proposed Critical Milestones

4. Proposers must propose events constituting critical milestones prior to Commercial Operation, and the anticipated dates for achieving critical milestones. Proposed critical milestones should include key events during the permitting, development, and construction of the Project and associated New Transmission that are necessary prerequisites to achieving Commercial Operation.





#### Section 14 OPERATIONAL FLEXIBILITY AND PEAK COINCIDENCE

7.6.14 Proposers should describe how the Project contributes to Operational Flexibility and Peak Coincidence in Zone J. If a Resource is claimed to be dispatchable, Proposers should clarify limitations on dispatch such as minimum output, ramp rate, and minimum up and down times. The portion of Resource portfolio that is dispatchable, as well as the flexibility of dispatchable Resources, will be considered.

All Proposers are encouraged to submit a P(50) 8760 schedule of aggregate Zone J energy deliveries to supplement the 12 x 24 delivery schedule provided in the Offer Data Form, Delivery Profile worksheet. The 8760 delivery schedule should represent the aggregate of all Project Resources into the Zone J Delivery Point. Data should be submitted on an Excel spreadsheet and uploaded as an attachment to the Proposal Narrative. Proposers should indicate if the P(50) delivery schedule is normalized based on historical output from a given weather year. For Projects that include Energy Storage, Proposers are encouraged to provide an 8760 delivered energy schedule with storage utilized, and an 8760 profile for deliveries without storage.
















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14-6



#### Section 15 COMMUNITIES ENGAGEMENT PLAN

7.6.15 Through this solicitation, NYSERDA seeks to actively support the outcomes envisioned by New York State's nation-leading climate legislation, the CLCPA, including its target of delivering 40 percent of the overall benefits from New York State's climate programs to Disadvantaged Communities. The Step Two Proposal must present a reasonable Communities Engagement Plan with a thoughtful approach to build Project support and respectfully respond to opposition. Proposers awarded a contract are encouraged to consult with NYSERDA before and during the implementation of their Communities Engagement Plan and will be required to update NYSERDA on their community engagement progress and plans in their quarterly progress reports. A thoughtful Communities Engagement Plan should include:

1. a description and analysis of affected communities, and

2. a plan for regionally targeted education and marketing strategies that include advertisements and/or direct mailings, outreach events and activities such as exhibiting at local events, hosting open houses, and targeted engagement with local community groups.

The Communities Engagement Plan should describe how the Project offers benefits related to economic development and the creation of local jobs, reduced energy burden, avoided health costs, added climate resiliency, avoided environmental costs and added environmental benefits, low-income and Environmental Justice population participation, and avoided social costs. The Communities Engagement Plan may also comprise community benefits agreements and opportunities to build not only community opportunity and capacity regarding the Project's development, construction, and operations, but also opportunities to build community equity in a project. All such community expenditures and activities would constitute eligible economic benefit claims to support a project's evaluation under this RFP, which are to be described in the Incremental Economic Benefits Plan. The Communities Engagement Plan should also demonstrate alignment with the CLCPA and this solicitation's stated prioritization of benefits, including job creation, to Disadvantaged Communities.

The following section will discuss community engagement associated with the New Transmission, which has resulted in a permitted and tailored solution to New York's clean energy and climate action needs that enjoys widespread support from communities and stakeholders not only along the route, but across the State.

#### **Community Engagement: CHPE**

#### Affected Communities

The CHPE portion of the Champlain Hudson Power Express will travel 339 miles through New York State from the Canadian border to New York City. 60% of the route is in waterways, 40% on land. There are 39 terrestrial municipalities that will serve as hosts for the project.











The CHPE team understands that despite the significant environmental gains and pollution reductions that will be the end result of the project, the construction of CHPE will have temporary impacts on communities along the 339 mile project route in New York State, particularly those along the terrestrial portion of the project route. These impacts will typically occur during a single construction season, but in certain segments may span multiple construction seasons. As part of its permitting process, CHPE has already completed an extensive Community Engagement Plan (see Public Information Plan available on the NYDPS-DMM website, Case 10-T-0139, Attachment AA, July 22, 2010) and intends to continue this effort during the pre-construction and construction phases of CHPE.

The highlights of that community engagement plan and the community engagement activities in the pre-construction and construction phases are described below.

#### **CHPE - Permitting Phase Outreach**

Community engagement has been a cornerstone in the development of the CHPE project since 2010. Since that time, Transmission Developers has engaged in both a regulatory outreach process, as well as their own informal and voluntary community engagement efforts. Transmission line projects take years to develop and require a sustained and transparent process to ensure both public understanding and support of any project. Transmission Developers is proud of the overwhelming support that CHPE enjoys from the North Country region down to New York City. CHPE's development team is acutely aware that the best mitigation efforts for these kinds of disruptions is arduous pre-planning and transparency along with ensuring each community is as fully informed as possible and has access to multiple methods for expressing concerns, asking questions and having those addressed promptly.

#### **Regulatory Outreach**

Beginning in 2009, Transmission Developers began meeting with elected officials, stakeholders and other interested parties, focusing on the proposed route. The following year, to ensure that the public was aware of, and engaged in the CHPE project proposal, Transmission Developers implemented the

Community Engagement Plan that was submitted to and approved by the New York Department of Public Service (NYDPS). In addition to one-on-one and group meetings, Transmission Developers established a comprehensive website to provide information about the CHPE project.<sup>150</sup>

## Permitting Phase

As the Article VII application review process for the CHPE project gathered momentum, representatives of Transmission Developers met with 21 elected federal representatives/staff, 47 elected New York State representatives/staff, state and federal regulatory agencies, the leadership of the City of New York and its boroughs, and key environmental and business organizations. Transmission Developers also held five public information meetings in Albany, Plattsburgh, Kingston, Scotia and Yonkers. It also provided electronic copies of the March 30, 2010 Article VII application to interested parties along the route, including 18 New York State Senators, 64 New York State Assembly members, and 91 municipalities (and their respective public libraries).

As part of the permitting process for CHPE, Transmission Developers was required to provide an analysis of historic and cultural resources within the project's Area of Potential Effects (APE). Transmission Developers supported the Section 106 consultation process with the American Indian Tribes with historic ties to the APE: the Delaware Nation, the St. Regis Mohawk Tribe, the Shinnecock Indian Nation, and the Stockbridge-Munsee Community, as well as the Bureau of Indian Affairs. The Native American communities did not attend any in-person meetings, but outreach continued throughout the permitting approval process. The cultural and historic resources outreach continues today, with recent engagement activity occurring in March 2021.

## Joint Proposal of Settlement

As part of the NYPSC process, fourteen organizations submitted a Joint Proposal of Settlement,<sup>151</sup> which, after significant negotiation, signaled support for the CHPE project. These signatories include:

Transmission Developers, NYDPS, NYSDEC, NYSDOS, NYSDOT, the New York State Department of Agriculture and Markets, the New York State Office of Parks, Recreation and Historic Preservation, the City of Yonkers, NYC, the Adirondack Park Agency, Riverkeeper, Inc, Scenic Hudson, Inc, the New York State Council of Trout Unlimited and the Palisades Interstate Park Commission.

# **CHPE Trust Fund (Joint Settlement)**

CHPE will provide \$117 million over 35 years to finance environmental programs through a new dedicated fund called the **Hudson River and Lake Champlain Habitat Enhancement**,

<sup>&</sup>lt;sup>150</sup> <u>http://www.chpexpress.com/</u>.

<sup>&</sup>lt;sup>151</sup> See <u>https://chpexpress.com/wp-content/uploads/2020/03/permit-PSC.pdf</u> (page 108 of PDF) for the Joint Proposal of Settlement.

**Restoration, and Research/Habitat Improvement Trust Fund** (Environmental Trust Fund). This fund will provide a dedicated stream of funding that will support programs targeted at improving the waterways where CHPE will be constructed. This fund is currently managed by an Oversight Committee that meets quarterly and has representation from State Agencies, Environmental Nonprofits and Transmission Developers. For more information on the fund including quarterly meeting minutes, please visit this link:

#### https://chpexpress.com/environmental-trust-fund.

The fund was established as part of the project's Article VII Permit (the order granting the Certificate of Environmental Compatibility and Public Need). The purpose of the fund is to provide assistance to projects that improve and enhance the aquatic environments in Lake Champlain, the Hudson River, the Bronx, Harlem and East Rivers, and New York Harbor. The Oversight Committee has already established potential funding projects which are detailed here:

https://chpexpress.com/environmental-trust-fund/proposed-projects/.

#### Additional Permits & Consultation Meetings

Transmission Developers also engaged in required regulatory outreach during the USDOE Presidential Permit process, with meetings held by Transmission Developers, in conjunction with the USDOE, NEPA and the NYPSC.

Due to the submerged nature of portions of the CHPE project's route, beginning in 2009, Transmission Developers held a series of public meetings with the U.S. Army Corp of Engineers (USACE), the U.S. Coast Guard and other federal regulatory agencies and representatives of the maritime community in regard to navigation safety. These meetings were initiated by Transmission Developers to solicit input and to engage in a constructive dialogue regarding navigation safety measures. Lists of the meetings related to the Presidential Permit process, as well as communications and meetings with the maritime community can be found in <u>Attachment 15.1</u>.

#### **CHPE – Post-Permitting and Ongoing Outreach**

Since the issuance of permits, Transmission Developers' community engagement efforts have been led by Jennifer Laird-White (VP of External Affairs and former Mayor of Nyack, NY) and have focused on outreach related to recent route modifications with a focus on Rockland County, New York City, social and environmental justice NGOs, educational or work force development agencies and labor unions.

Among those expressing public support are Julie Tighe of the New York League of Conservation Voters, Adrienne Esposito of the Citizens Campaign for the Environment, NRDC's Kit Kennedy, Kathy Wylde from the Partnership for New York City, Heather Bricetti of the New York State Business Council, Trout Unlimited, LiUNA, IBEW and Operating Engineers, Mayor de Blasio,

# the Long Island Association, the North Country Chamber of Commerce and 36 different municipalities.

### **Rockland County**

In response to community concerns and engineering complications, Transmission Developers began a focused outreach in Rockland County to secure a route that was supported by elected officials, local business owners and residents. During outreach to North Rockland communities that would host an adjusted route, the Transmission Developers team spent two years meeting with over 1,000 residents including: public officials and employees, community groups, chambers of commerce, Lions Clubs and rotaries, senior citizen groups, hospitals, emergency service officials, environmental organizations, press and others and also hosted open houses and public events. Transmission Developers has sponsored local community events and spent time talking about the project with students at local schools and colleges. A complete list of meetings in Rockland County can be found in <u>Attachment 15.2</u>.

#### **Statewide Outreach and Resolutions of Support**

The Rockland County model of extensive outreach has been expanded and, from 2017 to date, has included organizations, elected officials, community groups and the like throughout New York State. As a result of this extensive statewide outreach, resolutions of support have been passed by all of the necessary terrestrial communities that will host the project

As the project advances, Transmission Developers and-Hydro-Québec will continue to meet with organizations throughout the state with a focus on New York City jobs training, labor unions, environmental NGOs and organizations working on equity for disadvantaged communities. Some of the state and city meetings that have already occurred were with the following:

- Regional Plan Association
- Queens Borough President Sharon Lee
- NYC Council Speaker's Office
- Council Member Costa Constantinides'
   Office
- NYC Economic Development Corporation
- Congress Member Carolyn Maloney's
   Office
- Trust for Public Land
- Solar One
- Hudson River Foundation
- Business Council of New York State
- Center for Economic Growth
- North Country Chamber of Commerce
- Partnership for NYC

- Long Island Association
- Workforce Development Institute
- Climate Jobs NY
- The Nature Conservancy
- Citizens Campaign for the Environment
- New York League of Conservation Voters
- Natural Resources Defense Council
- WE ACT for Environmental Justice
- Environmental Advocates of New York
- NYC Mayor's Office of Workforce Development
- NYC Mayor's Office of Climate Policy (Environmental Justice)
- Empire State Development

- New York State Department of Environmental Conservation
- NYS Senator and Environmental Committee Chair Todd Kaminsky
- NYS Assemblyman and Environmental Committee Chair Steve Englebright
- NYS Senator and Energy Committee Chair Kevin Parker
- NYS Assemblyman and Energy Committee Chair Michael Cusick
- NYC Council Member Diana Ayala

# **Rockland County Benefits Package**

- The Waterfront Alliance
- New Yorkers for Parks
- Bronx Borough President's Office
- Queens Borough Presidents Office
- Manhattan Borough Presidents Office
- NYCHA
- NYC Comptroller's Office
- Columbia University
- New York University
- Stony Brook University

CHPE has also established a benefits package for Rockland County, consisting of a \$31 million capital improvement fund for the host towns of Stony Point, Haverstraw and Clarkstown and the host villages of West Haverstraw and Haverstraw

This benefits package will offset construction inconveniences that will occur during construction of CHPE along a heavily travelled, commercial district of Route 9W in Rockland County and provide post construction upgrades to Route 9W, which is the primary business district in North Rockland and functions as a "Main Street" for five host communities. This stretch of 9W includes the Village of Haverstraw which, as defined by NYSERDA is part of the State's disadvantaged community census tracts and by NYSDEC as an environmental justice community. The details of the Rockland County community benefits package are covered in a MOU, which has been signed by the five host communities (see <u>Attachment 15.2</u>).

## **Information Sharing**

During outreach activities, detailed information continues to be shared with stakeholders on the positive economic, energy, health, climate and community benefits of CHPE.<sup>152</sup>

The Transmission Developers and HQ teams have employed a number of methods for informing the public of upcoming meetings, necessary outreach contact numbers and project-related specifics. These methods will continue to be utilized through project construction. These methods include:

<sup>&</sup>lt;sup>152</sup> Examples of studies shared include Two-Way Trade in Green Electrons: Deep Decarbonization of the Northeastern U.S. and the Role of Canadian Hydropower <u>http://ceepr.mit.edu/publications/working-papers/719</u> and Analysis of Environmental and Economic Impacts of Hydropower Imports for New York City through 2050 <u>https://nicholasinstitute.duke.edu/publications/analysis-environmental-and-economic-impacts-hydropower-imports-new-york-city-through</u>. The Proposer also intends to share the PA Consulting report included as <u>Attachment 16.1</u>.

- An in-depth and dedicated website to facilitate public access to information on the project that is updated regularly to reflect the evolution and progress of CHPE, chpexpress.com, along with social media pages. Video descriptions of the project will be available online.
- Advertisements in local publications and flyers in public spaces and throughout communities to notify residents of upcoming meetings or share general project information;
- Translation of materials describing key elements of the project or announcing public meetings into Spanish and Creole in communities where those languages are predominant;
- Dedicated outreach personnel whose primary responsibilities were to ensure that residents have regular access to company employees who can answer questions, troubleshoot concerns or provide information; and
- Regular appearances on panels at conferences and sponsorships of events that include discussions of the project.

## **CHPE - Pre-Construction and Construction Phases**

During CHPE's pre-construction and construction phases, Transmission Developers will manage the project's community outreach objectives and systems already in place and will seek additional opportunities to engage with leaders of community organizations, state and local elected officials, landowners and other interested parties.

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#### Public Support from Stakeholders

Numerous stakeholders have publicly expressed their support either for CHPE or for bringing Canadian hydropower to New York City. Examples include:

"Politicians have talked for 60 years about developing transmission lines to bring clean, lowcost renewable energy from upstate and hydropower from Canada to downstate New York, but it never became a reality. It was too bold, it was too ambitious, it was too complicated, it was just too much. Well, not anymore, and enough talking – it's time for us to now act." **Governor Cuomo**, State of the State Address, January 13, 2021

"The City government of New York City, in an average day, uses as much electricity as everybody in the state of Vermont. And within the next five years, we will convert all of our electricity that the City government uses to renewable sources. All of it will come from renewable energy. 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 applaud Governor Cuomo for championing renewable energy projects as part of New York's post-COVID economic recovery. 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 to achieve the State's goal of 100% clean energy by 2040, while also creating green jobs."

Julie Tighe, President of the NYLCV, May 2020

"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

"The buried and resilient electric transmission line will create more than 2,000 constructionrelated jobs for New Yorkers, add millions in tax revenue annually to local governments that desperately need the funding and bring firm, green energy to New York City, satisfying the power needs of over 1 million residents for more than 50 years. The project will do this while reducing harmful emissions and helping the Governor and Mayor move towards a more renewable, sustainable future."

Christopher Erikson, Business Manager for IBEW-Local 3, Gotham Gazette, July 15, 2020

"NYLCV supports the Champlain Hudson Power Express and the development of renewable energy sources to power the New York electric grid. By investing in this green resource, we can reduce emissions and fossil fuel use."

New York League of Conservation Voters (NYLCV) website, December 2019

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

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

Letters received in support of this Proposal are included in Attachment 15.3.

#### New Transmission Community Engagement/Community Benefits and Opportunities

#### Local Workforce Opportunities

Transmission Developers and HQ are committed to hiring from the local workforce whenever possible. As part of their community engagement efforts, the Project will work closely with contractors to ensure that the workforce includes local labor, women, people of color and residents of disadvantaged communities, available jobs are properly advertised, and recruitment is detailed and thorough.













## An Evolving Relationship with Indigenous Communities and Nations

Sustainable development values underlie Hydro-Québec's interaction with local communities potentially impacted by its activities. This of course includes Indigenous communities.<sup>156</sup> One of Hydro-Québec's key objectives is to maintain long-term, mutually beneficial relationships with Indigenous communities and nations.

In keeping with this spirit, Hydro-Québec has, over the last 40 years, signed over 40 project-related agreements with Indigenous communities, which take into account their values, legal rights and interests, as well as cultural and environmental concerns. These agreements provide substantial economic and non-economic benefits to Indigenous communities on various subject-matters including environmental protection, employment, procurement, training as well as accommodation of traditional activities.

In 2019, Hydro-Québec joined the Canadian Council for Aboriginal Business and signed up for the Progressive Aboriginal Relations (PAR) certification.<sup>157</sup> In doing so, Hydro-Québec reaffirmed its commitment to:

- Offer a welcoming workplace for Indigenous employees;
- Be an excellent business partner for Indigenous businesses;
- Act as an electricity service provider with a willingness to meet the expectations of its Indigenous customers; and
- Manage its infrastructures and operations in a manner that takes into account the Indigenous perspective.

For more information on Hydro-Québec's relations with Indigenous peoples, see <u>https://www.hydroquebec.com/data/a-propos/pdf/partnership-indigenous-communities-2017g422a.pdf</u>.

# <sup>156</sup> In this Proposal, the terms "Aboriginal" and "Indigenous" are both used to refer to the original peoples who, prior to the arrival of the Europeans in North America, lived on the land now known as Canada. <sup>157</sup> For more information about the Canadian Council for Aboriginal Business, see the following webpage: https://www.ccab.com/about-ccab/.

Relationships with Québec Indigenous communities are continuously evolving. Recent examples of this evolution include:

- In February 2020, the Québec government and the Cree Nation announced the signature of a Memorandum of Understanding entitled the "Grand Alliance" concerning the development of the Eeyou Istchee James Bay region in the North of Québec. This Grand Alliance led, in December 2020, to the announcement that the Québec government will protect more than 20% of the Eeyou Istchee James Bay region representing roughly 15,000 square miles (equivalent to the size of Switzerland);<sup>158</sup> and
- In February 2021, a historic partnership initiated by Innu communities in Québec was announced to build a 200 MW wind farm called Apuiat.<sup>159</sup> The agreement provides for the signing of a 30-year contract whereby Hydro-Québec will purchase the electricity to be produced by the Apuiat wind farm, which will be jointly owned by several Québec Innu communities and Boralex Inc.

Certain Indigenous communities in Canada have expressed opposition to the New Transmission.<sup>160</sup> They argue that some hydropower generating facilities built several decades ago infringe upon their asserted Aboriginal rights and title and that the electricity produced by such facilities should not be exported to the United States before their historical grievances are settled.

Historical grievances can and are appropriately dealt with through existing political and legal processes in Canada. Indigenous communities throughout Canada are using these processes, including certain communities who have advocated against Hydro-Québec's electricity export projects.

Electricity deliveries from Québec to the State of New York do <u>not</u> and will <u>not</u> in the future affect the Indigenous communities' ability to resort to the political and legal processes designed to address historical grievances related to hydropower generating facilities.

<sup>&</sup>lt;sup>158</sup> For more information: <u>https://www.autochtones.gouv.qc.ca/centre\_de\_presse/communiques/2020/2020-02-</u> <u>17-en.asp; https://www.cngov.ca/wp-content/uploads/2020/12/comm\_grandealliance\_2020-12\_17-gr\_rv-2020-</u> <u>12-16\_fr.pdf.</u>

<sup>&</sup>lt;sup>159</sup> <u>http://news.hydroquebec.com/en/press-releases/1684/quebec-moves-forward-with-the-large-scale-200-mw-apuiat-wind-farm-project/</u>.

<sup>&</sup>lt;sup>160</sup> For example, the <u>letter filed in October 2020</u> with the U.S. Department of Energy by Innu Nation of Labrador, along with the Center for Biological Diversity and North American Megadam Resistance Alliance, in the context of the Champlain Hudson Power Express Canadian hydropower transmission corridor.

Hydro-Québec's projects to increase its electricity exports to the United States will generate important benefits not only for the environment and for North America as a whole, but also more specifically for the Province of Québec and its citizens, including its Indigenous citizens.

In conclusion, Hydro-Québec's practices with respect to its relations with Indigenous communities have evolved considerably over the last decades. The company has learned a great deal from its Indigenous counterparts. Hydro-Québec remains firmly committed to continue building relationships with Indigenous communities and nations that are rooted in authenticity, respect, and openness.

## **Community Engagement: Hydro-Québec**

To develop and implement the best possible project, Hydro-Québec involves stakeholder groups from the time of project announcement through the commissioning of equipment. Prior to making requests for government authorizations, Hydro-Québec conducts extensive public engagement that takes host communities' concerns and expectations into account. This process helps ensure the social acceptability of the project.

This approach aims to provide communities an understanding of the project, respond to stakeholders' information needs and note community concerns regarding the project. To ensure inclusiveness and proper representation throughout the process, Hydro-Québec communicates with representatives at various levels of government, as well as official representatives of host communities, concerned property owners, citizens, community organizations, contractors, suppliers and local media, among others.

In the case of transmission projects, such consultations with stakeholders are helpful in determining the line route that will have the least social, environmental, technical and economic impacts. Such direct communications allow the Hydro-Québec project development team to better understand and respond to host community needs and expectations.

## HYDRO-QUÉBEC'S PUBLIC ENGAGEMENT APPROACH

## **Project Presentation**

The project team identifies the community or communities impacted by the project and proactively meets to present the rationale for a new project and the study area, and to go over the upcoming public consultation process.

## **Public Consultations**

After conducting technical and environmental studies and collecting preliminary findings about the host environment, the project team identifies a line route (and possibly certain route variants).

The team then determines:

- How the public consultation process will be conducted;
- The line route(s); and
- The pros and cons of each line variant.

Considerable public engagement takes place at this stage in the project process. Discussions with community organizations, potentially affected landowners, land users, and citizens help to further Hydro-Québec's analysis and respond to expressed concerns. The emphasis during this phase of the project is to achieve the greatest possible consensus with such groups.

Hydro-Québec aims to blend its power transmission facilities harmoniously into their surrounding environments. The best way to achieve this and mitigate impacts is to work together to make the best possible choice regarding the location of the transmission facilities. By taking into consideration stakeholder questions and concerns, Hydro-Québec optimizes the proposed project and ensures its acceptability to host communities.

# Presenting the Optimized Project and Mitigation Measures

At this stage, the team presents the optimized project, including the selected line route, along with any additional studies and discussions with the relevant communities. The team also consults with communities to validate appropriate mitigation measures, such as:

- Adapting work periods to local conditions and the general environment, such as building in winter to limit soil compaction on farmland caused by construction machinery; and/or
- Landscaping around the substation to mitigate the visual impact.

# **Government Authorization Phase**

It is only once the technical studies, environmental studies and public consultation process have been completed that Hydro-Québec submits authorization requests to the appropriate government authorities, as required under applicable laws and regulations.<sup>162</sup>

# Engineering, Procurement and Construction Phase

Once a project has been approved, the project team performs detailed engineering and ensures that all required services, equipment and materials are procured. The resources needed for the jobsite are also coordinated at this time. Communications with stakeholders continue throughout the construction period.

<sup>&</sup>lt;sup>162</sup> See Section 11 for more information on government authorizations for the Québec Line.

#### Québec Line

#### SUMMARY OF 2012-2013 PUBLIC ENGAGEMENT

As part of the 2012-2013 project facilities study, Hydro-Québec hosted more than 50 in-person meetings with several groups of stakeholders, including four public open houses, with favorable discussions and consultation efforts with these stakeholders. At that time, the project consisted of the construction of a 36-mile long underground DC line between the Hertel substation on Hydro-Québec's grid and the Canada-United States border. It also included the installation of a new AC/DC converter at the Hertel substation.

Municipal authorities in the communities along the line route expressed support for the project.

The public engagement process took place in three stages:

#### 1. General Information

Hydro-Québec held a dozen meetings between November 2012 and March 2013 to present the project to the official representatives of the communities located in the study area, including representatives from municipalities, provincial constituencies, and community organizations with an agricultural, socio-economic or environmental focus.

#### 2. Public Consultation

Between May and June 2013, Hydro-Québec held over 20 meetings with the various stakeholder groups affected by the project, including in the form of open houses, to present the line under study as well as to obtain input from the host community, identify its concerns and answer questions.

#### 3. Information on the Solution Selected

The two initial stages of consultation lead to the determination of a selected solution, i.e. the route preferred by the most stakeholders. A dozen information meetings on the selected solution were then held between August and October 2013, including an open house.

The results of the public participation process were presented at these meetings, including:

- the project and the selected solution; and
- main concerns expressed, as well as Hydro-Québec's answers and commitments.

These activities also allowed Hydro-Québec to hear comments and concerns about the project.

#### **RESTART OF CONSULTATION ACTIVITIES IN 2020**

Several years have passed since the 2012-2013 public consultation. In order to consult stakeholders on the proposed route modifications to the north and south of the 2012-2013 project route, Hydro-Québec initiated a new phase of public engagement in November 2020 and is continuing that process in 2021. Hydro-Québec's recent public consultation activities are designed to explain certain modifications made to the original project, to identify the line route with the least impact and to optimize the Project by taking into account the needs and concerns of host communities.

To do this, Hydro-Québec is implementing a communications and engagement plan with host communities that includes four main steps:

### 1. Project Presentation (November 2020-May 2021)

This step aims to remind stakeholders of the main elements of the Project, to inform them of new elements, and to consult with them on the proposed changes to the north and south of the route as compared to the route chosen in 2013. Virtual meetings (due to COVID-19) have already been held with representatives of 10 municipalities, 3 regional county municipalities, 3 provincial constituencies, regional environmental groups and the Union of Agricultural Producers.

#### 2. **Project Consultation (May-August 2021)**

This step involves informing citizens interested in and affected by the Project, as well as collecting their comments and concerns, which will help determine the route with the least impact and appropriate mitigation measures to implement during construction.

Various means of communication will be used during this process including online consultations, postal bulletins, continuous updates of the project website, publications on Hydro-Québec's social media networks, advertorials, media relations, and public information meetings (virtual or in person according to COVID-19 guidelines).

## 3. Presenting the Optimized Project and Mitigation Measures (August-October 2021)

Hydro-Québec will inform local organizations and citizens interested and affected by the project of the optimized project after the applicable technical and environmental studies and consultations are carried out.

Hydro-Québec's public engagement approach will help to develop the Québec Line with the most minimal impact from a social, environmental, and technical point of view.

Means similar to those used during the project consultation stage will be used during this phase (such as virtual or in-person meetings, website updates, newsletters, and media relations).

# 4. Communications during Construction Phase

During construction, affected communities will be continuously informed of the progress of the work. Personalized follow-ups will also be carried out directly with affected landowners.

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#### Section 16 INCREMENTAL ECONOMIC BENEFITS PLAN

7.6.16 Incremental Economic Benefits expected to accrue to New York because of the development, construction/modification, and operation of the Project will be evaluated as another non-price evaluation component. Incremental Economic Benefits are those that a Proposer can demonstrate: (1) will accrue because of an award under this RFP, and (2) would not have accrued but for the award of a contract under this RFP.

Incremental Economic Benefits can be claimed as of January 1, 2021. Except for projects with existing Tier 1 Agreements that propose to convert to Tier 4 Agreements, as described in Section 2.1, Incremental Economic Benefits previously claimed with respect to a facility that is subject to a pending award under a previous solicitation or that is the subject of a current NYSERDA contract are not eligible for evaluation. Tier 1 projects that propose to convert to Tier 4 may have their Incremental Economic Benefits reclaimed under this RFP.

Only those Incremental Economic Benefits falling within the categories defined below, and entered in the Offer Data Form, will be considered. In no instance will NYSERDA or its Scoring Committee consider any indirect or induced economic effects benefits or those created by any "multiplier effect" or other attribution method under which the creation of peripheral spending and jobs might be credited to direct capital infused into the economy.

Because New York State has not yet formally defined Disadvantaged Communities, this RFP relies on interim criteria for communities that meet the spirit of the Disadvantaged Communities objectives of the CLCPA, described in the Acronyms and Definitions list above. Step Two Proposals will be awarded more points by the Scoring Committee if the Proposer can demonstrate benefits of the Project's development are afforded to communities located in Disadvantaged Communities.

Proposers must provide complete information along with the supporting documentation or requested data in the following six categories, delineated by three types of economic input activities and by short-term and long-term Incremental Economic Benefits. Incremental Economic Benefits may be claimed in one of three input activity categories:

**Category 1: Project-specific spending and job creation in New York State;** 

Category 2: Transmission and other infrastructure, supply chain, and community economic development in New York State;

**Category 3: Other activities that provide opportunities for the New York workforce and communities.** 

For each of the six categories, total inputs (expenditures, jobs, activity metrics) for all of New York State and the subtotal of inputs to Disadvantaged Communities are to be specified.

Independent audit and verification of the actual Incremental Economic Benefits of the Project and comparison to the level of claimed Incremental Economic Benefits will be required after the first three years of the Contract Delivery Term, when the Proposer will submit an Economic Benefits Report prepared by a New York State-certified, independent certified public accountant, demonstrating the actual Incremental Economic Benefits that
resulted from the construction and operation of the Project under the categories and within the eligibility requirements listed in the RFP. The Economic Benefits Report will be funded at the Proposer's expense. Should the Proposer fail to reasonably demonstrate that the Verified Total Dollars of Incremental Economic Benefits are at least 85% of Expected Total Dollars for the sum of total direct expenditures in categories 1 and 2, NYSERDA may at its option upon Notice to Seller, require additional economic investments in New York State comparable to the Economic Benefits Shortfall.

The Proposer should describe the degree to which the development, construction, and operation of the Project will directly create (add) Short-Term Jobs and Long-Term Jobs and make short-term and long-term payments for New York State goods and services, and tax or other payments to its municipalities and/or residents for input categories 1 and 2. Payments that will provide long-term royalties, production-based payments, land lease or land use payment premia or other forms of compensation are eligible. Payments for non-renewable fuels (e.g., natural gas) are not eligible for consideration in this category or in any Economic Benefits category.





- Reduction in local pollutants from downstate fossil fuel generators, which are often located in adjacent or to DACs. These reductions are forecasted to result in an average of 6 lives saved annually and total health benefits valued at \$1.9 billion, primarily from avoided cases of heart attacks and premature deaths, over CHPE's first 25 years of operation;
- Reduction in electricity bills by \$2.5 billion over 25 years for people living in DACs based on expected lower wholesale electricity costs created by CHPE;
- Reduction in CO<sub>2</sub> emissions by 3.9 million metric tons per year, which will help combat climate change impacts, which often have a disproportionate impact on DACs; and











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## 16.1 Categories 1 and 2



2. Establishment of a project office in New York State, including pre-development activities, leases/purchases, and related employment not claimed as jobs associated with operations and maintenance, plant management, long-term project development, or similar;



- **3.** Purchases of materials sourced from within New York such as, but not limited to, gravel, steel, concrete and similar materials, purchases and use of equipment and products manufactured or assembled within New York, and use of rental equipment or supplies sourced from within New York. Project component products (*e.g.*, wind turbines, solar panels) not manufactured within New York are not eligible for eligible for consideration;
- 4. New or increased local property tax payments (or payments in lieu of taxes) to school districts, cities, towns, or other taxing jurisdictions;
- 5. Host community payments, mitigation or conservation payments, or other funds that will directly benefit the host community, such as Proposer-funded projects that will not be linked to the Project (e.g., new building or infrastructure improvements to the host town(s), other capital projects indicated as desirable by the host town, funds established in the host town to benefit local residents, etc.);
- 6. Any premium for purchase payments and payments for leases of land in New York associated with securing rights to a Project site above market value but for use as a Project Resource site. Premia for land purchase payments will be pro-rated by the Scoring Committee for evaluation purposes to reflect the eligible time period for Economic Benefits claims.

Proposers are encouraged to work with communities hosting the Project to determine if there are long-term economic benefits that could be afforded to the town/city/county/school district/census tract.























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## 16.2 Category 3

Eligible Incremental Economic Benefits claims for input category 3 can include, but not limited to:

- 1. Hosting of local internships and programs for students in renewable energy education in partnerships with local school systems and/or local NGOs/foundations;
- 2. Hosting of clean energy sector occupation apprenticeship or training programs in partnership with community colleges, vocational schools, and/or NGOs/foundations;
- 3. Hosting of environmental justice programs.

Proposers are encouraged to work with the communities hosting the Project to determine if there are economic benefit opportunities that could be uniquely afforded to the town/city/county/school district/census tract.





To identify economic development opportunities for New York-based businesses, Transmission Developers has spent years establishing close working relationships with business organizations and local elected officials, as well as workforce development programs along the CHPE route. Transmission Developers has engaged with Economic Development Agencies on PILOT agreements and plans to utilize their resources to ensure local participation in the construction hiring process. Transmission Developers also has memberships with the Chambers of Commerce in Queens, Manhattan, North Country, Long Island, and Rockland.

To source labor and build clear career pipelines for job growth in New York State, Transmission Developers has met with many jobs training programs, academic institutions, local workforce development boards and other labor related stakeholders over the past several years to preview the project. Transmission Developers has also established a close working relationship with labor unions in New York State and will continue to work with all of these organizations to ensure a diverse and local workforce.

See Section 15 for details about Transmission Developers' community engagement plan.

## **Indirect Economic Benefits**

Transmission Developers and the Proposer have worked with PA

Consulting to ascertain the wholesale electricity market savings, net incremental economic output, the value of  $CO_2$  emissions reductions and health benefits and the new jobs created because of that activity. As detailed below, the total indirect economic benefits amount to \$46,315 million through the end of the Contract Tenor.

## Table 7

(All figures in US \$MM unless noted)

Indirect Economic Benefits Summary					
	1/1/21 through	Yr 4 through			
Category	Yr 3 of Ops	Yr 25 of Ops	Total		
Indirect/Induced Economic Output <sup>(1)</sup>	\$3,925.9	\$17,305.3	\$21,231.2		
Value of CO2 Emission Reductions (NY SCC)	\$1,973.5	\$21,185.5	\$23,159.0		
Value of Local Air Pollutant Emission Reductions	\$163.2	\$1,761.7	\$1,924.9		
Total Indirect Economic Benefits in NYS	\$6,062.6	\$40,252.5	\$46,315.1		

Source: PA Consulting May 2021 Report, Section A.1

(1) Includes electricity cost savings.

See <u>Attachment 16.1</u> for PA Consulting's complete Economic Benefits Report.

