



Frequently Asked Questions Nanticoke Open House

March 4, 2015



What is the route of this electricity transmission line?

The proposed route of the Lake Erie Connector is from Nanticoke, Ontario beneath Lake Erie, to Erie County, Pennsylvania.

What are some potential benefits of this project?

The Lake Erie Connector will create a new electricity transmission corridor between the Ontario IESO and PJM, helping improve the security and reliability of the grid. The Lake Erie Connector will create a new electricity transmission corridor that will connect the Ontario IESO and PJM electricity grids (PJM is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia in the United States). This project will help improve security and reliability of the electricity grid. It also is expected to facilitate efficient electricity trade and create jobs, and benefit the economies of both regions.

How could this project impact homes and businesses?

Our project development team is working closely with local and regional planners and with local residents and other stakeholders in Canada and the United States to minimize impacts to local residents. As with all transmission projects where ITC is involved, we work cooperatively with landowners to ensure the most appropriate route is established to the benefit of all stakeholders and the environment.

What regulatory approvals will be needed?

Multiple approvals will be required in Canada and the United States at the national, provincial/state and local levels. Permitting, engineering and environmental application-related activities are underway. The interconnection process has been initiated with the IESO and PJM.

What is HVDC Transmission?

High-voltage direct current (HVDC) uses direct current to transmit electricity, in contrast with more common alternating current (AC) systems. HVDC systems are often built as an overlay to a robust AC system or for unique circumstances. HVDC transmission lines are especially appropriate for underwater applications. HVDC systems have a long record of reliable performance around the world. As an analogy, an AC line is like a highway, with multiple interconnections to the regional electrical grid that act as on- and off-ramps. A DC line is more like a tunnel, with an entrance and an exit but no interconnections along the line.

Where does the electricity come from?

There are a variety of generation sources in Ontario, PJM and neighboring regions. The shippers who purchase capacity to transmit surplus power on the Lake Erie Connector will determine the source of the electricity they transfer.

Is this transmission project safe?

Yes. The HVDC technology, including the HVDC and AC cables and converter stations that comprise the project, are safe and reliable. The cables are well insulated, do not contain liquids or gels, and are made from nonflammable materials.



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How do you install the cables beneath Lake Erie?

Horizontal direct drilling (HDD) will be used to transition the HVDC cables from the shore into the Lake. In the Lake, two HVDC cables that are each approximately six inches in diameter will be bundled together. A ship will lay the HVDC cables along the bottom of the Lake utilizing low-impact jet plow technology to create a temporary trench that is only slightly wider than the cable itself, and which will be immediately filled by natural forces. For a short distance near the shore, the HVDC cables will be installed in a trench excavated in the bedrock, that may require low intensity blasting.

Are there any other transmission lines similar to this one?

Above-ground, underground and underwater HVDC systems are in use all over the world. There are a dozen HVDC projects installed in North America, and over a hundred projects installed worldwide. For example, the Cross Sound project, which transfers electricity between Shoreham, Long Island and New Haven, Connecticut, is a transmission line using underwater HVDC cables beneath Long Island Sound. Placing transmission cables beneath waterways is an established and safe way to move power and has been used for over half a century.

What is the environmental impact of this new transmission line?

The use of safe and reliable HVDC technology will ensure that this electricity transmission line has little to no adverse impact on the environment. ITC has long regarded environmental sustainability as integral to its operations as we pursue our vision to modernize North America's power grid. From planning our projects with the best interest of the environment to recycling at our facilities, ITC focuses on sustainability efforts that set a positive example for the other businesses and the communities we serve. These efforts have been recognized at the local, state and federal level.

Will overhead transmission lines be used?

Limiting visual impact is important, and the current project plan envisions the large majority of the cable being installed underwater and underground, with the exception of a short length of AC Cable which will emerge from underground outside the Nanticoke TS Switching Station and will then cross overhead into the station.

Does HVDC generate induced currents from EMF?

No. Direct current is constant (similar to the Earth's magnetic field) and does not create fluctuating electromagnetic fields ("EMF").

Can the cable be damaged once it is placed under Lake Erie?

This is highly unlikely. The cables will be placed safely and securely beneath the lakebed. In the unlikely event that the cable is damaged, the system can identify the location and shut down within fractions of a second. Protocols are in place at both converter stations to ensure safety.

Will the costs of this transmission project change my utility bill?

No. The costs for this project will be privately funded and will not be collected from Ontario electricity consumers. Lake Erie Connector is a privately contracted DC transmission line, which means that we are responsible for making this project an economic success.



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How long will this transmission line be in service?

There are numerous examples of similar types of projects that have been in operation for decades.

Is there potential for some effects on residences in Nanticoke, Ontario?

There is some potential for short term effects during construction, specifically related to the HDD installation of the HVDC cables under the shoreline of Lake Erie near Hickory Beach Lane. The HDD equipment and excavation will be located near the end of Haldimand Road #55, close to the east entrance to Hickory Beach Lane. ITC is reviewing options for the positioning of the HDD equipment and the cable route under the shore, including proximity to private property. Based on the outcome of this review, ITC will follow-up as appropriate with private landowners. Potential effects from the HDD installation process would be short term (over a few months) and could include noise from the equipment (options for shielding are being considered), traffic (temporary closure of the east entrance to Hickory Beach Lane. A management plan for the HDD drilling fluid which is largely a clay/water mixture (non-toxic) will be developed.

How much upkeep needs to be done on the transmission system to keep it working properly?

The converter stations in Nanticoke and Erie County will undergo routine maintenance. The HVDC cables will be constantly monitored, but do not typically require maintenance.

When will the project application be submitted to the National Energy Board?

ITC Lake Erie plans to submit the National Energy Board Election Certificate application by the summer of 2015.

Where can I access project reports such as the project description and technical studies?

Project information and documentation can be accessed on the project website at <http://www.itclakeerieconnector.com/>.

Who can I contact if I have questions?

There are several ways to connect with us including our website (www.itclakeerieconnector.com). You can also mail us c/o HDR Corporation, 100 York Boulevard, Suite 300, Richmond Hill ON, L4B 1J8. Also, please feel free to contact either of the following:

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