



LAKE ERIE *connector*

INFORMATION PACKAGE

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WHAT IS THE **LAKE ERIE** **connector**

The **Lake Erie Connector** (LEC) is a proposed 117 km, bi-directional, high-voltage direct current (HVDC), underwater electricity transmission line. The LEC will deliver 1,000 MW of power directly between Ontario and the largest electrical market in the world – 13 U.S. Midwestern and Mid-Atlantic states.

The project will connect the Ontario **Independent Electricity System Operator** (IESO) and the **U.S. PJM Interconnection** (PJM) regional transmission organizations serving these markets. The LEC would allow Ontarians to optimize existing assets to generate hundreds of millions of dollars in revenue by exporting excess power when it is not needed and importing competitively priced power when there is high provincial demand in the future.

SNGRDC has been in discussions with **ITC Investment Holdings Inc.**, regarding economic participation in the LEC project. SNGRDC is holding an investment review and welcomes the community to learn more and engage in the conversation.

PROJECT BENEFITS

- ▶ This project is being developed by **ITC Investment Holdings Inc.**, a large independent electricity transmission company and subsidiary of Canadian utility **Fortis Inc.**, a leader in North American regulated electric and gas utility industry.
- ▶ **First direct electricity trading path** between Ontario and a large, multi-state regional transmission market in the U.S.
- ▶ The LEC is **fully permitted** in Canada and the U.S.
- ▶ Early site work is anticipated to **begin in 2023** and the project could enter **commercial operation as soon as 2025**.
- ▶ Ontario is expected to see **\$3 billion in savings** over 30+ years of the project.
- ▶ **Greater market access**, each region will have the ability to manage their energy needs and respond to shifting supply & demand, outages, and system planning requirements.
- ▶ Improve the reliability and security of the respective energy grids through maximized use of existing assets - **without taxpayer subsidies**.
- ▶ **Clean energy access** with potential to reduce emissions profiles in both regions.

ENVIRONMENTAL ASSESSMENTS

ARCHAEOLOGY ASSESSMENTS

CONVERTER STATION; STAGES 1-4

A 30 by 40 m site was completely excavated; over 9,000 items recovered, 96% stone fragments. No further cultural heritage value or interest identified.

TERMINAL STATION (CONNECTION TO ONTARIO POWER GRID ON OPG LAND); STAGES 1-2

No archaeological resources identified.

MARINE (LAKE ERIE); STAGES 1-2

No further archaeological assessment recommended.

NATURAL HERITAGE COMPONENT

SOILS & VEGETATION → Minimal net effects, not significant

WATER QUALITY & QUANTITY → Minimal net effects, not significant

FISH & FISH HABITAT → Minimal net effects, not significant

WILDLIFE & WILDLIFE HABITAT → Minimal to no effects

SPECIES AT RISK → Minimal to no effects

TRADITIONAL LAND & RESOURCE USE → No effects, not significant

Note: Further assessments were completed. Further details addressed on webinars.

LAKE ERIE connector

PROJECT CAPACITY: 1,000 MW



01 PROBLEM



RENEWABLE
ENERGY WASTE



INEFFICIENT ENERGY
GENERATION



UNEVEN SUPPLY
TO MEET DEMAND

02 EXISTING ALTERNATIVES



OVERHEAD
TRANSMISSION
LINES



BATTERY STORAGE

03 SOLUTION: LAKE ERIE CONNECTOR



INCREASE
PHYSICAL
TRANSMISSION



MINIMAL EFFECTS
ON LANDSCAPING



GRID INTEGRATION

04 TIMELINE



SEPTEMBER 2013
First contact with SNGR



MID 2022
Anticipated IESO contract



AS EARLY AS 2025
Commercial operation



2014-2017
Permit approvals



OCTOBER 2021
SNGR asked SNGRDC to take
the lead on project discussions



LATE 2022/EARLY 2023
Early site work



ADDITIONAL BENEFITS

- ▶ Deliver more **affordable, cost-effective electricity** to customers.
- ▶ **Electricity trading** between power markets.
- ▶ Improve **reliability and security** of the respective energy grids.
- ▶ Maximizing use of existing assets **without taxpayer subsidy**.



ECONOMIC PARTICIPATION OPTIONS FOR SNGRDC

OPTION 01	EQUITY OWNERSHIP	7.5% OWNERSHIP	~\$44M OVER 40 YEARS	~\$90M OVER 55 YEARS
OPTION 02	PARTICIPATION PAYMENTS	0% OWNERSHIP	~\$30-40M OVER 40 YEARS	~\$58M OVER 55 YEARS
OPTION 03	NO PARTICIPATION	\$0	Six Nations has the option not to participate. In this case there will not be payments of any kind.	

*** NOTE:** As the LEC project is fully permitted, the project will be constructed with or without Six Nations economic participation.

IN ADDITION TO THE ABOVE OPTIONS

ITC Investment Holdings Inc., have committed to a **Community Benefits Agreement (CBA)** with **Six Nations of the Grand River Elected Council (SNGR)**, subject to SNGR approval of the agreement.



CBA PAYMENT STRUCTURE

INITIAL PAYMENT:

\$100,000
after execution of CBA

ANNUAL PAYMENT DURING CONSTRUCTION:

\$225,000
to be paid at financial close date of the project and annually for three years after (totalling **\$900,000**)

ANNUAL PAYMENT COMMENCING AT COMMERCIAL OPERATION DATE:

Approximately
\$118,000
year which would continue until the project is abandoned or decommissioned

ITC INVOLVEMENT

ITC Investment Holdings Inc. is the developer of the **Lake Erie Connector** project. They acquired the rights to develop the LEC project from the **Lake Erie Power Corp.**

ABOUT ITC

ITC Investment Holdings Inc. is the parent company of **ITC Holdings Corp.**, the largest independent electricity transmission company in the United States and a subsidiary of Canada-based **Fortis Inc.**, a leader in the North American regulated electric and gas utility industry.

SNGRDC INVOLVEMENT

SNGRDC is reviewing the LEC project as an investment opportunity. Involvement will be determined following the **Investment Review** period.

COST STRUCTURE

ITC Investments Holdings Inc. is developing this project as a private developer, which means there will be **no incremental cost to Ontario ratepayers.**

HOW DOES ENERGY WORK IN ONTARIO?

The IESO **secures electricity products and services** on behalf of all grid-connected customers in Ontario. It also **manages the Ontario market**, securing electricity from various sources including nuclear, gas-fired, renewable, imports from other markets, as well as demand response in energy efficiency.

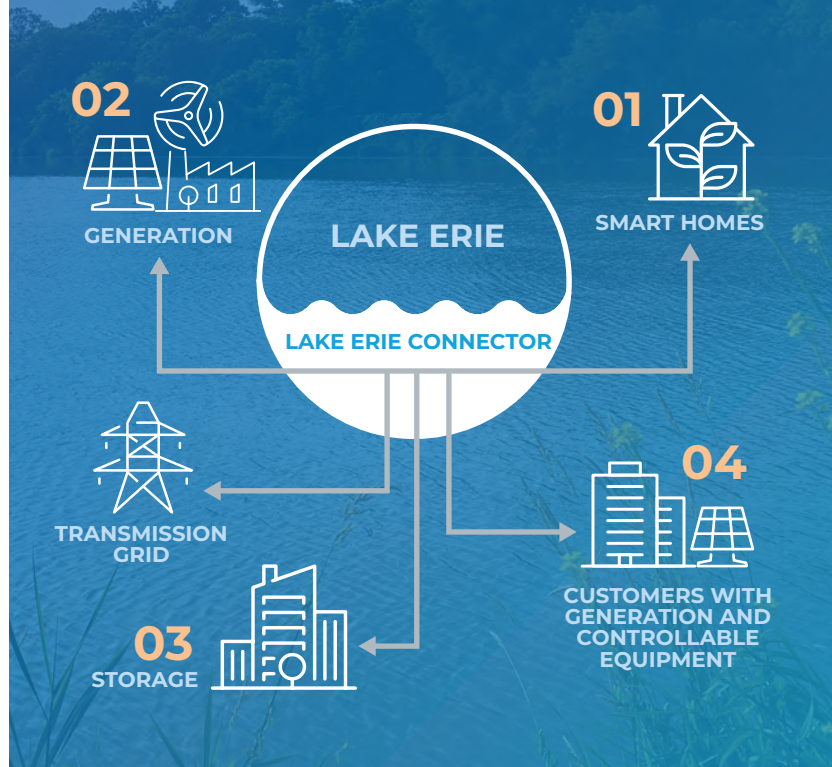
Energy continues to be produced **during off-peak hours.** The LEC cable will connect a **secondary market** to utilize clean energy power consumption.

SNGRDC has received approval from SNGR Elected Council to pursue a potential equity investment in the project. **SNGR Elected Council will make the final investment decision.**

INDUSTRY OVERVIEW

The electricity grid must always be balanced between the **amount being generated** and the **amount being consumed**, otherwise the province would experience a blackout. In Ontario, grid stability is regulated and controlled by the **Independent Electricity Systems Operator (IESO).**

The IESO Must ensure stability **24 hours a day, seven days a week.**



ENVIRONMENTAL BENEFITS

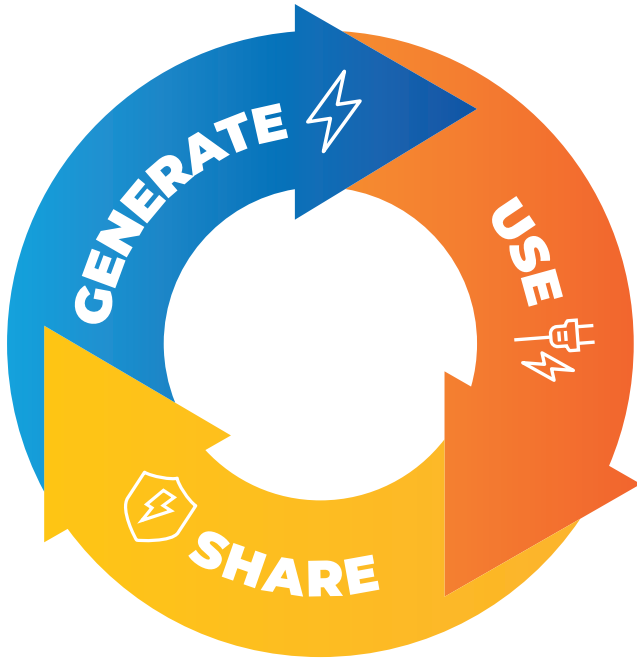
Reduce carbon emissions by

2-3 MILLION TONNES PER YEAR

Import on demand from non-emitting generators in the U.S.



WHAT IS CURTAILMENT?



Curtailement is the act of reducing or restricting energy delivery from a generator to the electrical grid. **It is an industry term that means the power was not needed in Ontario, and could not be exported, so it was dumped.**

Six Nations loses money and electricity created through green energy every time curtailment is implemented.

The Lake Erie Connector will **increase the market** and allow Ontario to **redirect the energy** at a competitive price, rather than dumping it.

HOW COULD THE LAKE ERIE CONNECTOR AID IN GRID STABILITY?

Energy sharing can help maintain the **balance between supply and demand** on an electricity system while enhancing efficiency of system components. Either side of the connector would have the capability to draw power as needed.

HOW DOES ONTARIO CURRENTLY MANAGE GRID STABILITY?

There are multiple ways the IESO balances grid stability, however the current available options result in approximately \$700 million in annual energy loss.

01

Load shedding temporarily deprives some electricity consumers of supply to avoid widespread power cuts. This is only used as a last resort.

02

Agreements are made with professional customers to regulate consumption and/or production (**curtailment**) for a period of time.

03

Export Surplus Energy to neighbouring grid operators (to USA, Quebec).



FOR MORE INFORMATION

In order to provide the **Six Nations community** an opportunity to review the proposed **Lake Erie Connector** investment opportunity, project information is posted to www.snfuture.ca. Community members are invited to participate in a Zoom webinar and submit questions and comments on the **SN future platform** or via email at info@snfuture.ca.

Six Nations
FUTURE

