



Kirby Energy Storage Project

EDF Renewables

Committee of the Whole- City of
Vaughan

Sep 19th, 2023

Communication C3.
Presentation 2
Committee of the Whole (2)
September 19, 2023



Agenda

1. Company Overview
2. Canada Overview
3. IESO LT1 RFP
4. BESS overview
5. Kirby project



Overview

EDF Renewables North America is a project developer, owner, and operator with end-to-end solutions for every market...



As developer, owner and operator of one of the largest renewable energy portfolios and second largest project pipeline on the continent, EDF Renewables is active in every market across North America.



With our history of innovation, and deep experience developing and operating renewable energy assets, we bring a full-suite of solutions for grid-scale, distribution-scale, asset optimization and onsite energy.



Our outstanding capabilities allow us to utilize our in-house experts, providing maximal efficiency and end-to-end oversight of any size of energy project.

...with the capabilities, financial strength and global footprint to help you secure your energy future.

EDF Renewables North America

16 GW developed

Grid-Scale Power



13 GW service contracts

Distribution-Scale Power



44 GW pipeline

Onsite Solutions



35+ years experience

Asset Optimization



1,650+ employees

Capabilities & Global Footprint

EDF Renewables North America

is a subsidiary of EDF Renouvelables, the dedicated renewable energy affiliate of the EDF Group.

EDF Group

A global leader in the generation of carbon-free electricity.

Builder, owner, and operator of distribution and transmission lines, gen-ties, and all associated infrastructure and delivery systems.

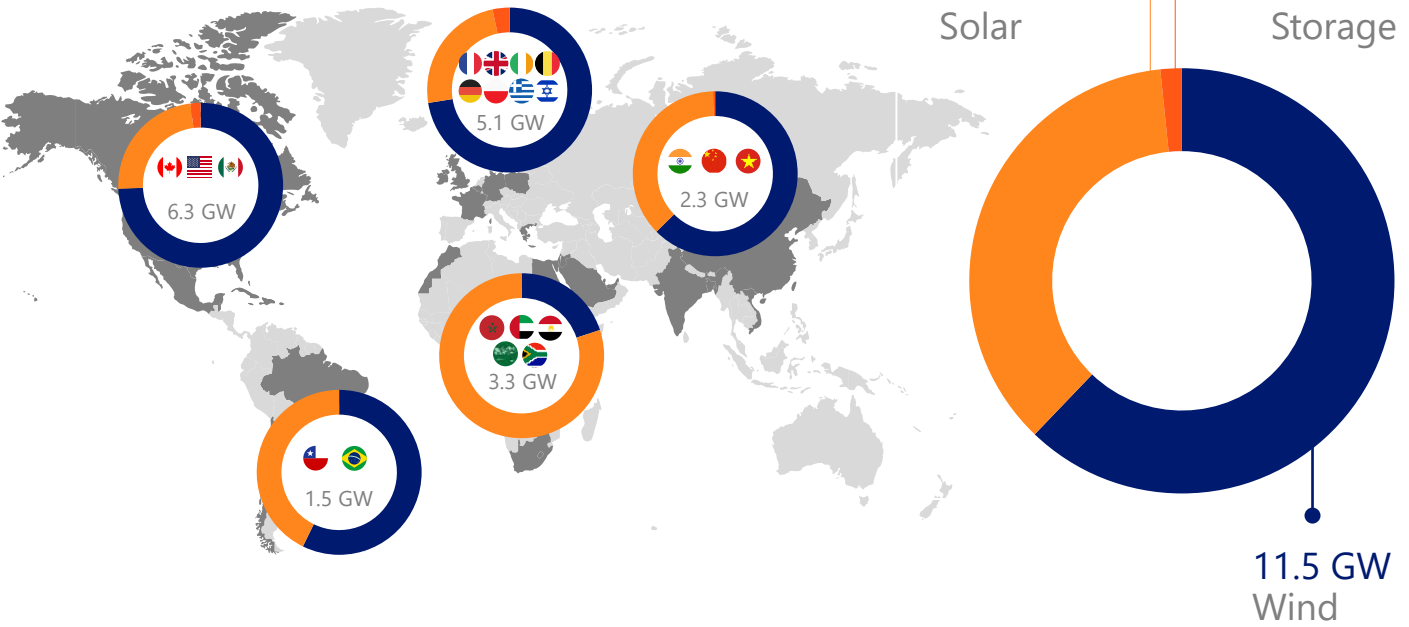
Operator of a global network of customers, clients, and partners across every conceivable industry.

A key international player in the energy transition.

EDF Renouvelables Global Capacity

Owned / Installed Capacity: 18.5 GW gross

Capacity by Technology



WE ARE EVERYTHING ENERGY

Financial Strength & Innovation

For 80 years,

EDF has strategically developed, deployed, owned and operated large-scale projects across the world.



As **innovators**, EDF has introduced and utilized every type of low-carbon technology, including nuclear, hydro, onshore and offshore wind, concentrated and photovoltaic solar, lithium ion and flow battery energy storage, and electrolytic green hydrogen production.

As an investment-grade, creditworthy counterparty, EDF has successfully balance sheet-financed multi-billion-dollar large-scale projects, both single-handedly and in Joint Venture partnerships with some of the largest global energy companies.

EDF Group



~80
years experience



167,000
employees



91%
production free
from CO₂ emission



38.5+M
clients worldwide

EDF Renouvelables



18.5 GW
installed
worldwide



22
operating countries



4,500
employees



30 TWh
green electricity



Experience in Canada



15 Years
in Canada

EDF Renewables has been developing and operating clean energy projects across the country.



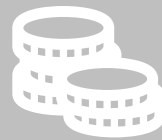
2,445 MW
of projects

Put into service, under construction or contracted across the country.



4,172 MW
pipeline

We continue to expand our energy expertise with projects in various stages of development.



\$5.2+B
invested

Since 2008 in Canada, including support of local wildlife habitats for bats, honeybees and Monarch butterflies.



Partnerships with Indigenous Communities

“Partnering with EDF Renewables has been one of the more progressive business partnerships that we’ve engaged in. We want to be able to produce electricity that is much needed by Albertans, Canadians, and North Americans.”

CHIEF ROY FOX
Blood Tribe (Standoff, Alberta)

EDF Renewables portfolio has more than 1,700 MW of projects in partnership with Indigenous communities.



United States

Arrow Canyon 200 MW, Nevada, 2023
Chuckwalla 200 MW, Nevada, 2023
Playa Del Sol 50 MW, Nevada, 2023



Canada

Cypress, 247 MW, Alberta, 2023
Romney, 60 MW, Ontario, 2019
Barlow, 10 MW, Ontario, 2019
Pendleton, 12 MW, Ontario, 2019
Nicolas-Riou, 224 MW, Quebec, 2018
Rivière-du-Moulin, 350 MW, Quebec, 2015

EDF Renewables and Energy Storage



Existing EDFR Storage Project outside of Chicago, online since 2015.

EDF Renewables currently has 19 storage projects built or in development in North America for our customers, ranging from businesses, to EV charging solutions, to energy management and demand response.

<https://www.edf-re.com/what-we-do/storage/>

Why batteries, why now?

Battery storage is the capture of energy produced at one time for use at a later time.



- The IESO is moving forward with the largest procurement of energy storage in Canada. They hope to obtain 1,600MWs to come online by 2028. Energy storage will be a key enabler in meeting Ontario's growing need for electricity.
- As explained in the IESO Resource Eligibility Interim Report, failure to integrate energy storage, especially if combined with extreme weather events often experienced in Ontario, could create conditions similar to those seen in California where shortfalls resulted in rotating blackouts.
- Battery storage is of interest to the IESO as it is a flexible, modular resource that can be placed where it has the most value, including growing urban centre's, such as the City of Vaughan.
- The procurement submission date is **December 12th, 2023**. With Contract award in Q2 2024 and projects in operation by 2028
- A key component of the procurement submission is to obtain a Municipal Support Resolution. This does not remove local planning or permitting processes, but is more to demonstrate that the municipality supports the technology in principle at the time of bid. Developers will still need to obtain all local permits and approvals before they can construct.

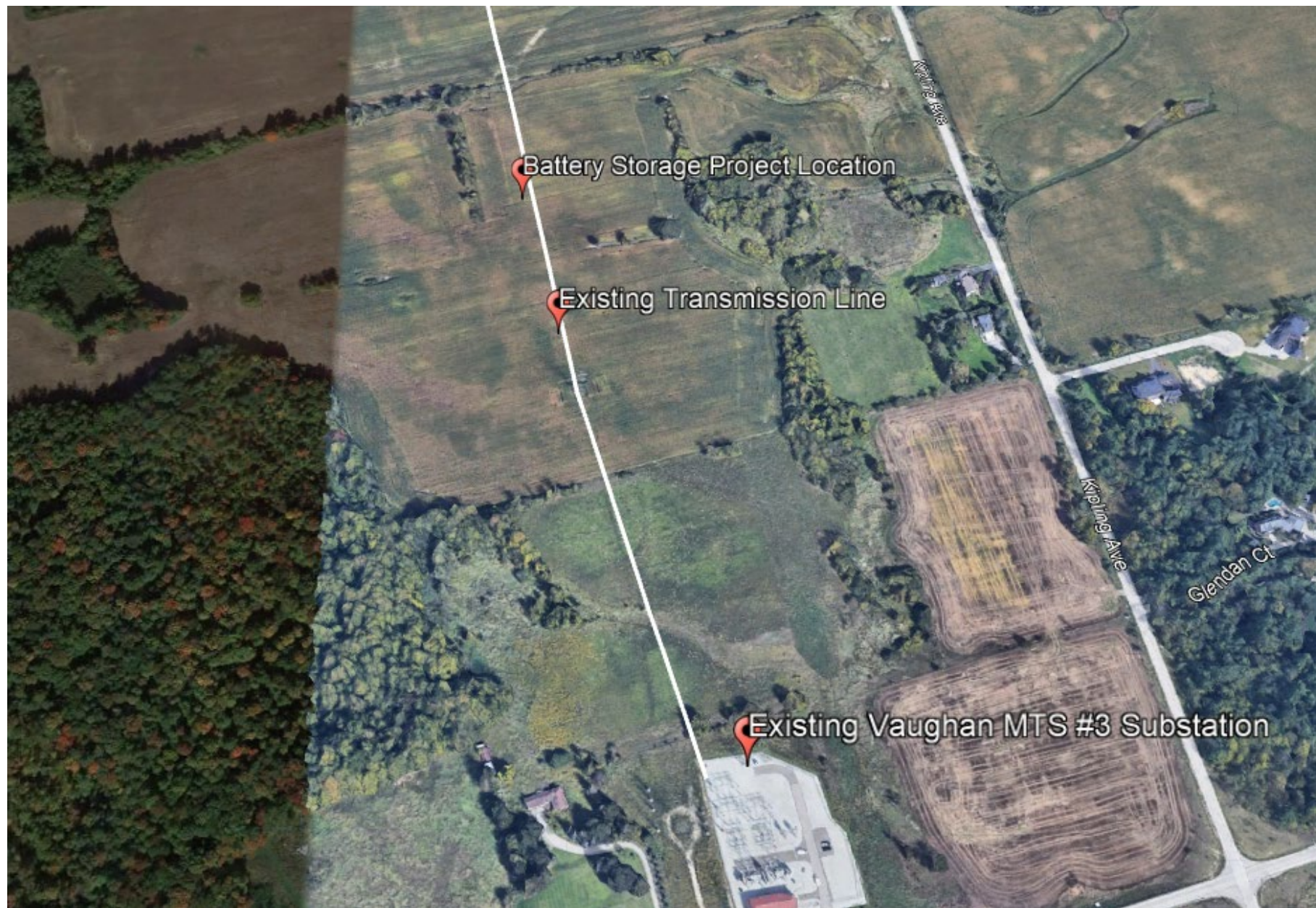
Consultation Process

- ❁ Community engagement and public consultation are two of our top priorities. We commit to being present and available in the community to ensure all voices are heard.
- ❁ Public consultation will continue throughout the project lifecycle, in the form of:
 - ❁ Information sharing with municipal leaders prior to the council presentation in order to understand better what are the needs/concerns
 - ❁ A dedicated website with details about the project (nameplate capacity, layout, location, explanations about energy storage systems, etc)
 - ❁ Public community meeting to be scheduled with the purpose to provide information about the project to the community and also clarify any doubts that might exist (communication will be in advance)



Kirby Project

- Up to 200 MW capacity (to be confirmed by IESO with deliverability test results)
- 4 hours system
- Project infrastructure area is approximately ~10 acres
- Commercial Operation Date: 2028



Facility Operations 24/7/365

- EDF Renewables will have a local team of operations personnel to monitor and maintain the system to the highest of standards.
- Emergency Preparedness and Response Plan will be written with feedback from the first responder community.
- The facility **will be monitored** 24/7 365 days per year from operations control center in San Diego California.
- Maintain electronic cyber and physical security perimeter requirements.



Resolution Request

EDF Renewables is requesting:

That City of Vaughan work with EDF Renewables to evaluate further details regarding the feasibility of the project and the requirements of the IESO under the LT1 procurement, and if appropriate, prepare recommendations for providing a Municipal Support Resolution in advance of the bid deadline



CONTACT

Achieve Your Sustainability Goals – Because the Future Depends on Us

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