Project Nujio'qonik Progress Update

April 20, 2023

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- Crown Lands bid
- Evaluating EA Guidance for Onshore Wind Energy Generation and Green Hydrogen Production
- Northland
- Ongoing regulatory consultations on specific guideline requirements
- MET Campaign
- Schedule pressure

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ENERGY
CONFERENCE

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The Record

POLITICS

Atlantic hydrogen projects tracking well for 2025 production start: Wilkinson

By **Mia Rabson** The Canadian Press
Mon., April 3, 2023 | 4 min. read

OTTAWA - Seven months after Canada and Germany agreed to build a new hydrogen supply chain across the Atlantic Ocean, the 2025 target date for the first shipments is on track, Natural Resources Minister Jonathan Wilkinson says.

"There's been a lot of activity," he said in a recent interview.

"I am hopeful that certainly by the end of the year we will be in a position where we can actually say that there are projects that are actively moving ahead."

He expects final investment decisions by the fall on at least two of four projects being contemplated in Nova Scotia and Newfoundland and Labrador.

G7 in Japan: April 2023

"The Government of Canada is building relationships with key countries that are "going to create economic opportunities for Canadian businesses, like hydrogen on the east coast of Canada where we are looking to start shipping hydrogen to Germany by 2025."

- Jonathan Wilkinson, Minister of Natural Resources, Government of Canada

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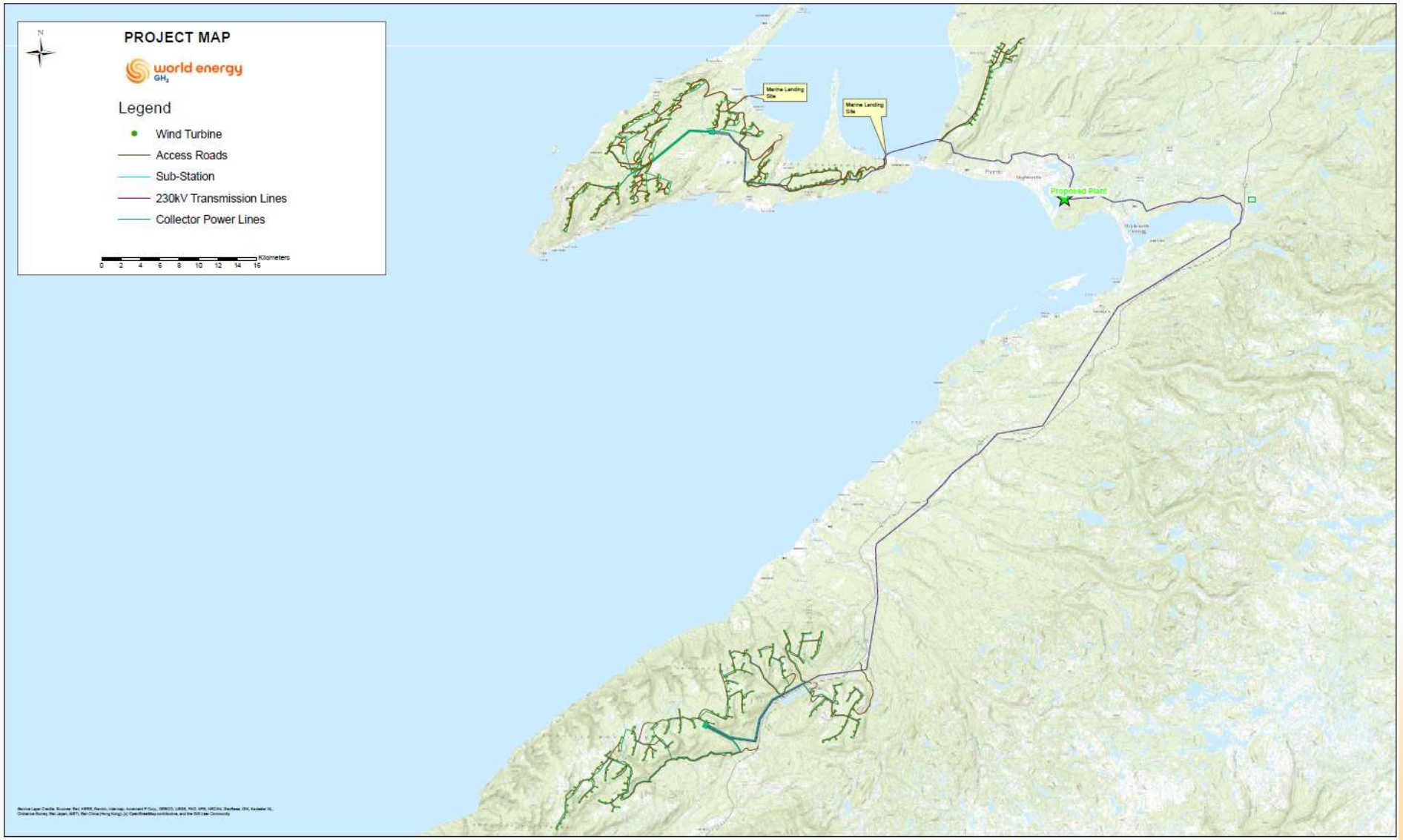
Freeland & EnergyNL

Full Project Site

Overview



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Port au Port Infrastructure

Changes / Updates

- 139-164 WTGs (6.1-7.2MW)
- Preliminary circuiting (34.5kV)
- Added / updated preliminary road / collector and transmission routing
- Changed isthmus crossing to subsea cable vs duct bank – significantly eliminating congestion south of Port au Port
- Update layout to removed WTGs and roads withing PPWS
- Marine Landing Sites added for WTG logistics (avoid congestion)

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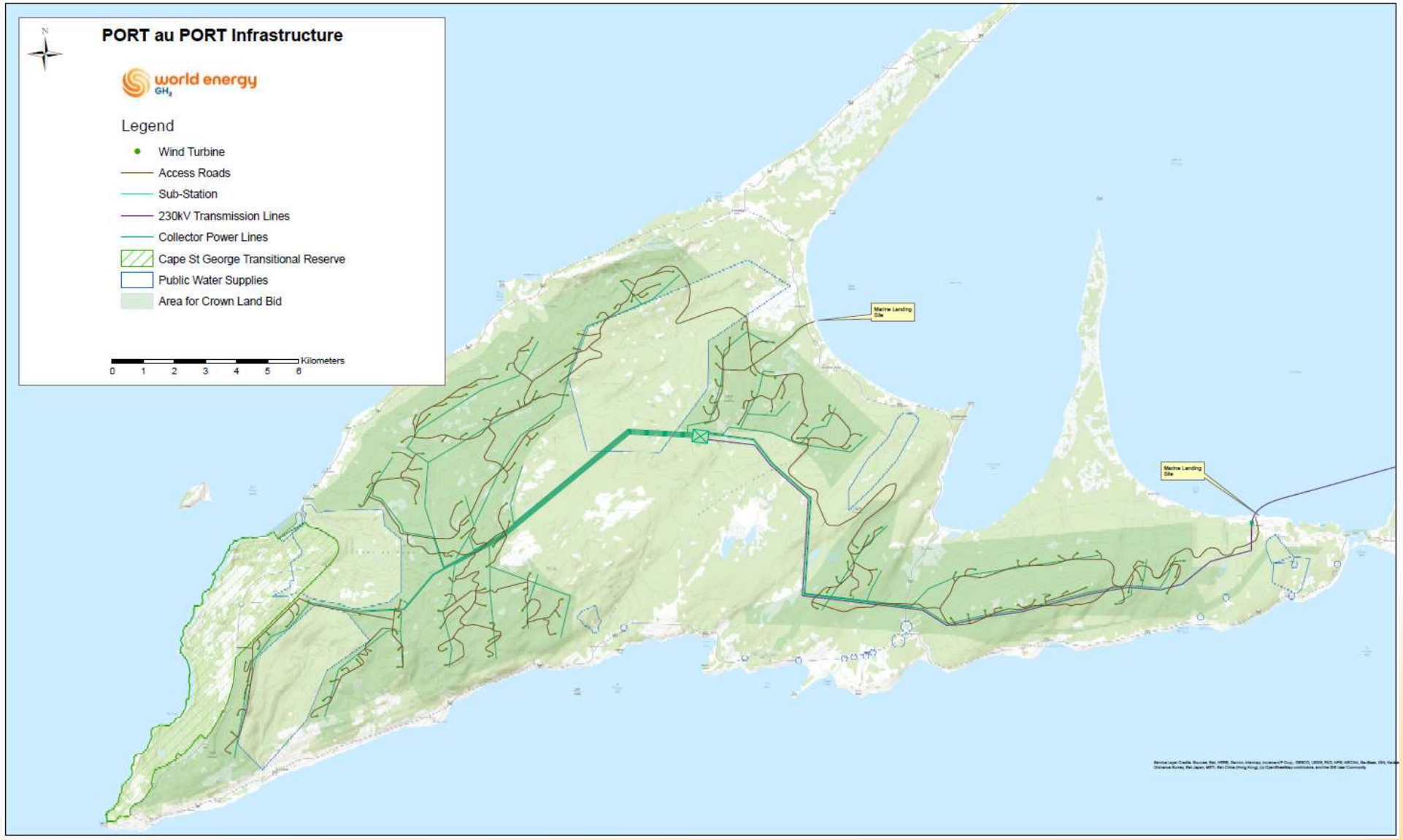
Port au Port

- Avoids PPWS area
- All within nominated areas



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Port au Port – Subsea Cable

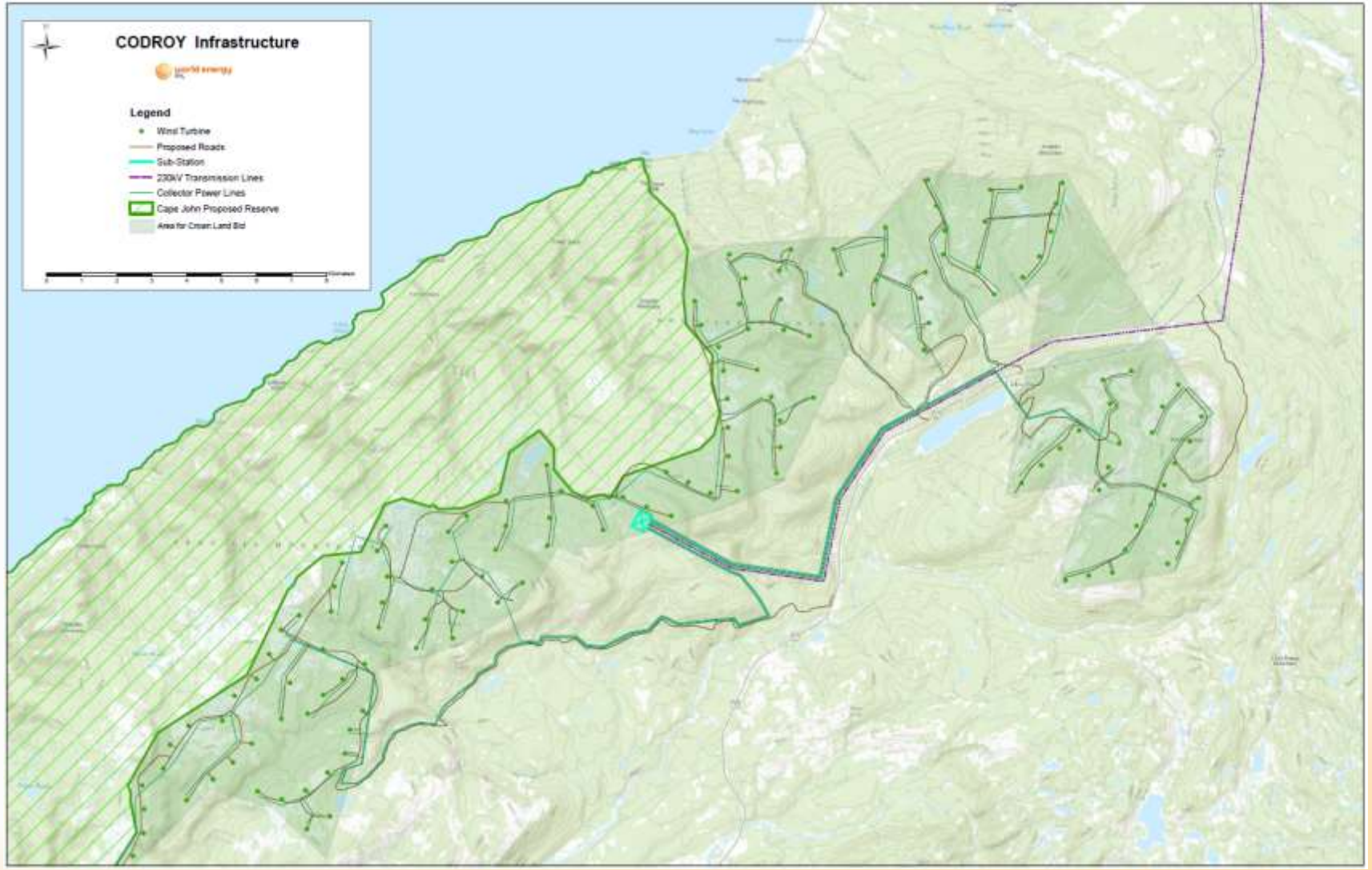
- ~6km in length
- Trenched

Previous

Codroy Infrastructure

Changes / Updates

- 139-164 WTGs (6.1-7.2MW)
- Preliminary circuiting (34.5kV)
- Added / updated preliminary road / collector and transmission routing
- Update layout to removed WTGs and roads withing PPWS



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Project Location

EIS Project Boundary

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Active Sensor Summary – Port au Port

PORTFOLIO | DEVICE CONFIG | RESOURCE DATA | SERVICE HISTORY | DOWNLOADS

Order DNV VMD data

Export device stats

- Portfolio
- Canada
  - Port au Port, NL
    - Lidar 1581 (S
    - Site 1
    - Site 3
    - Sodar SEN3a
    - Lidar 1582 (S

Port au Port, NL

Name	Type	Latitude	Longitude	Height (m)	Mean wind speed (m/s)	Time since data received (days)	Status
Lidar 1581 (Site 1)	Lidar	48.533	-58.898	2	9.6	0.7	Active
Lidar 1582 (Site 3)	Lidar	48.602	-59.008	2	9.9	0.7	Active
Site 1	Mast	48.532	-58.898	60	8.4	0.0	Active
Sodar SEN3a (Site 4)	Sodar	48.547	-59.089	2.5	9.8	0.5	Active
Site 3	Mast	48.601	-59.008	60	8.7	1.0	Active

Active service cases

Created

Overview of Activities in the Marine Environment

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Overview of Activities

- Background on the Port
- Improvements to existing dock
- Jettyless mooring and loading system
- Dredging at Port of Stephenville
- Marine outfall from Wastewater Treatment Plant
- Marine shipment of supplies (to the Port) and liquid ammonia (from the Port)
- Barging of wind turbine components to Port au Port Peninsula
- Marine cable crossing at Port au Port Bay

Port of Stephenville

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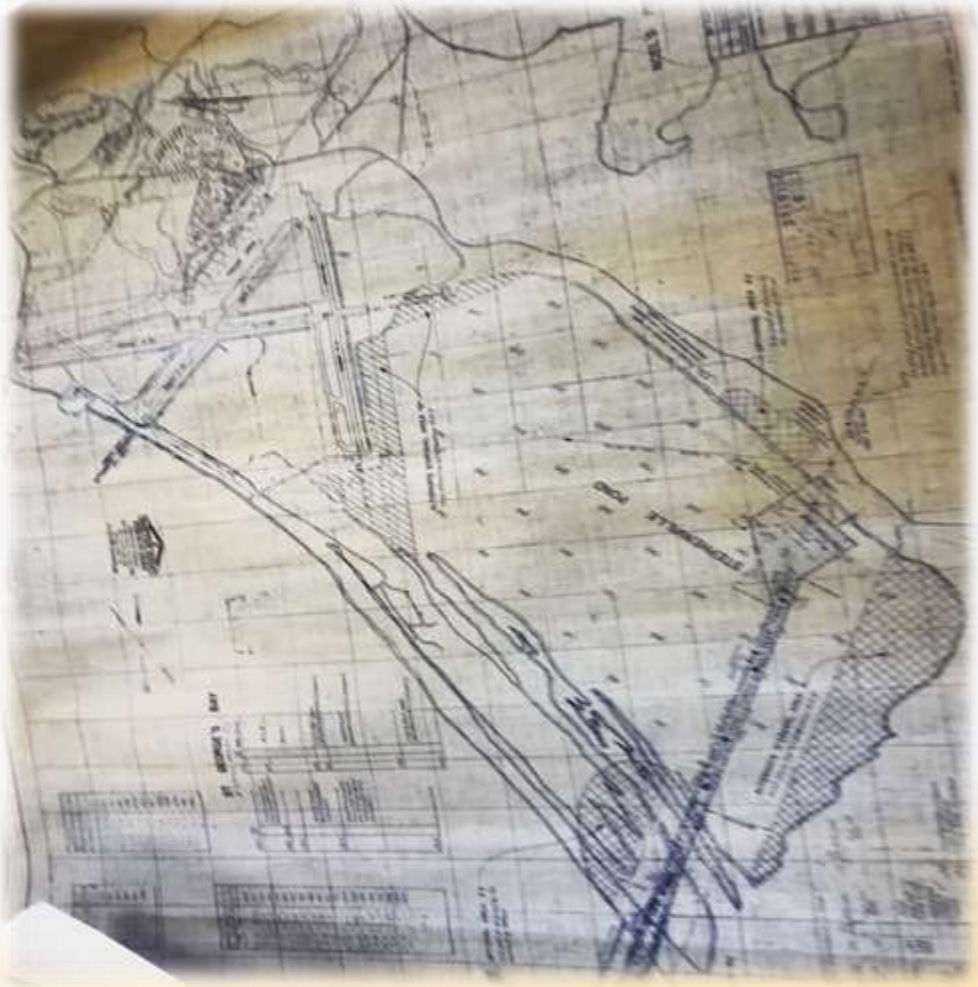
Port of Stephenville

Stephenville Pond



About the Port

- Year-round operation
- Dock is 293m, water depth 10.1m at dockside
- Navigational channel 80 x 2100m
- Last dredged to11m in 2004
- Compliant with all Canadian Federal Port Standards
  - ✓ International Ship and Port Facility Security Code (ISPS)
  - ✓ Compulsory Pilotage
  - ✓ Navigation Aids

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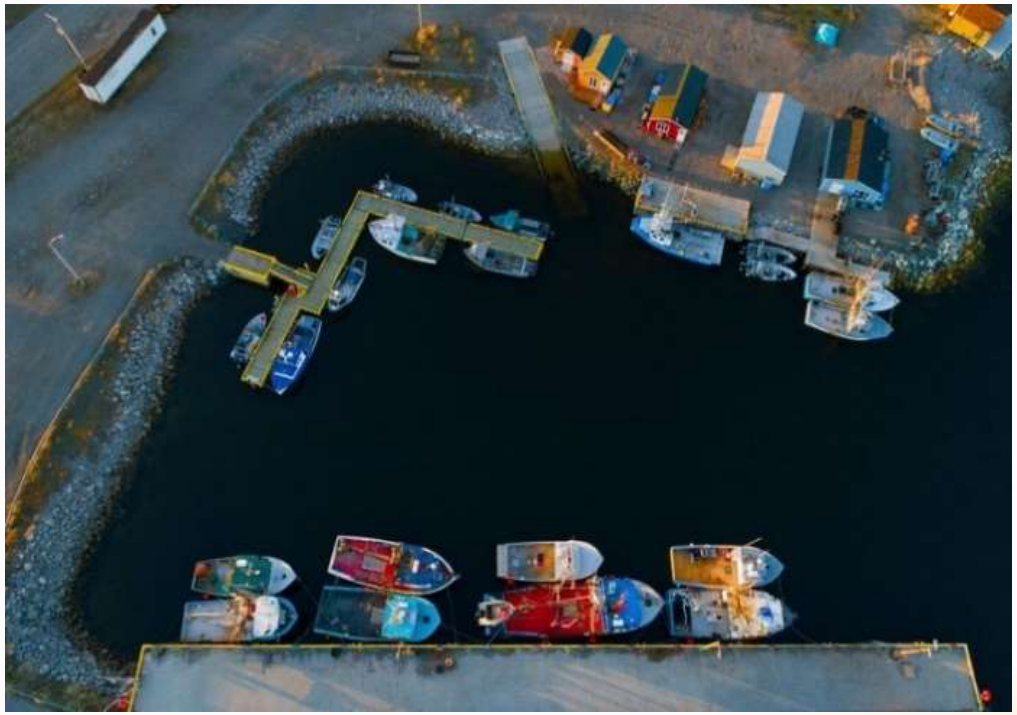
Little Port Harmon

1. Small boat basin and a public dock on the west side of the channel
2. Fishing and recreational vessels ranging from 20’ to 65’ are docked there regularly
3. There is also a community of cabin owners on the west side of the channel



Upgrades to Existing Dock

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Overview of Upgrades

1. The Marine Terminal will likely require upgrades to reinstate the dock to its original load rating and condition
2. Detailed engineering analysis of the dock structure scheduled for Summer 2023
3. Work scope to be developed based on results; we anticipate:
    - Repairs or replacement to the pile supports – due to normal tidal erosion
    - Strengthening requirements for loading arms, mooring and fendering systems

Port of Stephenville under construction 1951

Jettyless Mooring System

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Jettyless Mooring System Option

1. WEGH2 is considering a jettyless floating offloading system
2. Popular system with increased export of green fuels worldwide
3. With cryogenic hoses connected, these systems are floated to the vessel's side by tugs and secured to the vessel's hull with a specialized mooring system
4. Option could provide greater versatility to the Port

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Floating Structure Constructed Locally

- Primary systems components will be imported
- Potential for developing of new technology and skills locally
- Oversight and regulatory approvals; manufacture, WEGH2 & DNV

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Dredging

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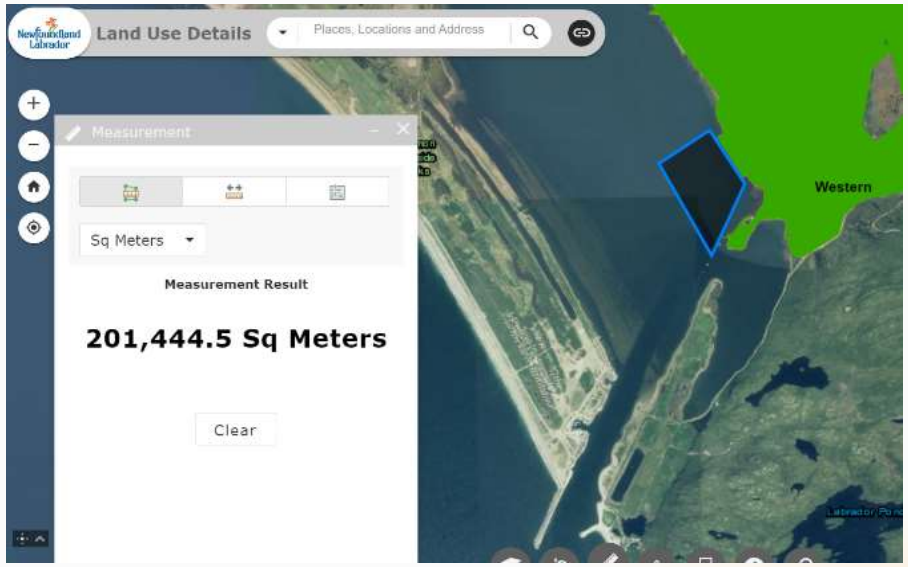
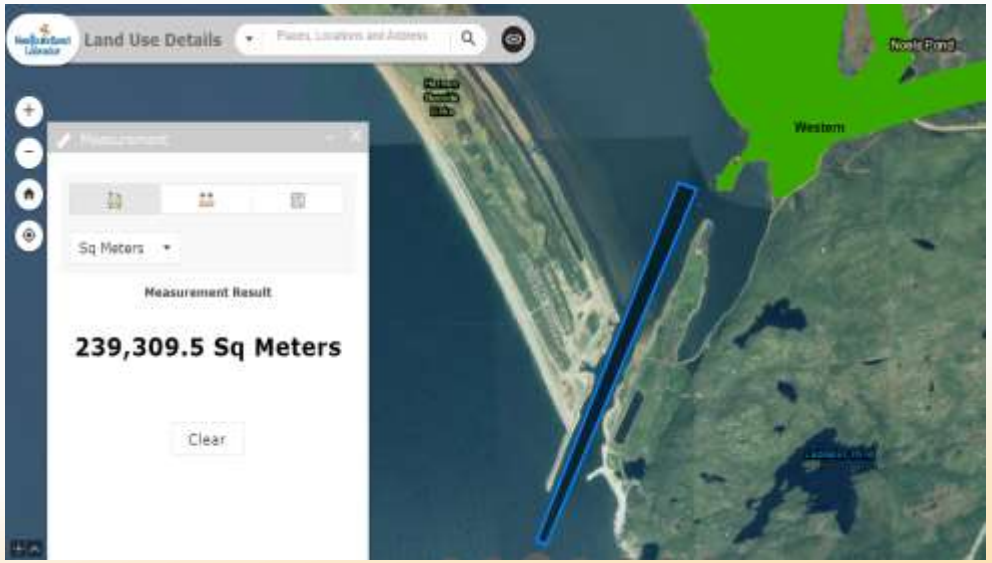
Project Requirements

1. A November 2017 storm resulted in displaced material migrating into the channel and reducing depths to 8.6 m near the mouth of the channel

2. Detailed bottom survey using bottom sonar and sub-bottom profiling will commence this year to determine the composition of the seabed down to 5 m below the sea floor

3. Area to be dredged is estimated as 442,000 m². Assuming an average depth of 10 m at LLW and dredging to 12 m, an estimated 900,000 m³ of dredging material will be generated





Dredging-related Activities

1. Method of dredging has not been determined; however, it will most likely be a combination Trailing Hopper Suction Dredger (THSD) and clams shell bucket from a barge

2. Project time: four to eight weeks based on seabed composition and dredging depth
3. Bathymetric and sub-bottom profiling to commence this summer
4. Disposal at sea is preferred option currently

Marine Disposal of Wastewater from the Treatment Plant

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Treatment Design

- Two waste streams assumed:
  - High total suspended solids (TSS) from pre-treatment stages such as filter backwash or the cooling water blowdown
  - High total dissolved solids (TDS) and very low TSS from a double pass reverse osmosis concentrate streams and polishing treatment
- Treated effluent will be discharged to the ocean from the hydrogen / ammonia site through a marine outfall
- Treated effluent will meet the discharge limit under the Schedule A of NLR65/03: *Environmental Control Water and Sewage Regulations* under the *Water Resource Act*
- Discharges will also meet federal ECCC / DFO requirements

Marine Traffic

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Port Utilization

- Frequently used by Coast Guard vessels
- Fishing vessels of all sizes, year-round, e.g., offloading crab, shrimp and lobster in the season
- 2 to 3 vessels annually, load smolt from Northern Harvest Smolt
- Large bulk carrier with salt once per year
- 2 to 3 loads of scrap metal annually to general cargo vessels
- Asphalt barges, as required
- Vessel delivering cargo to support local construction
- Ad-hoc use for vessel layups and repair

Vessels For Export

Estimate of vessels required at each phase

Project Phase of Production	Vessels Required per Month Based on a 35,000m³ capacity
Port au Port	2
Codroy	4
Potential Future Expansion	6

Barging of Components to Port au Port

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Transportation of Project Materials and Equipment

- Work on the Port au Port site is planned to include 2 temporary marine landing sites for delivery of project materials by barge
- Access points have been identified: Aguathuna and West Bay
- This will greatly reduce traffic on public road systems during delivery of major project components requiring specialized delivery approaches

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Transportation of Project Materials and Equipment

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Transportation of Project Materials and Equipment

1. The landing sites would be basic - short landing pad constructed of clean rock, to be removed at the end of the Project

2. Components would be transferred from a primary laydown location by tug and barge to one of the two proposed landing sites

Barge and Ramp System for Wind Turbine Transport

- Ramps can be installed with limited impact on the beach and seabed
- Habitat surveys and a request for project review application to DFO are planned at both sites
- Consultation with local stakeholders are also planned

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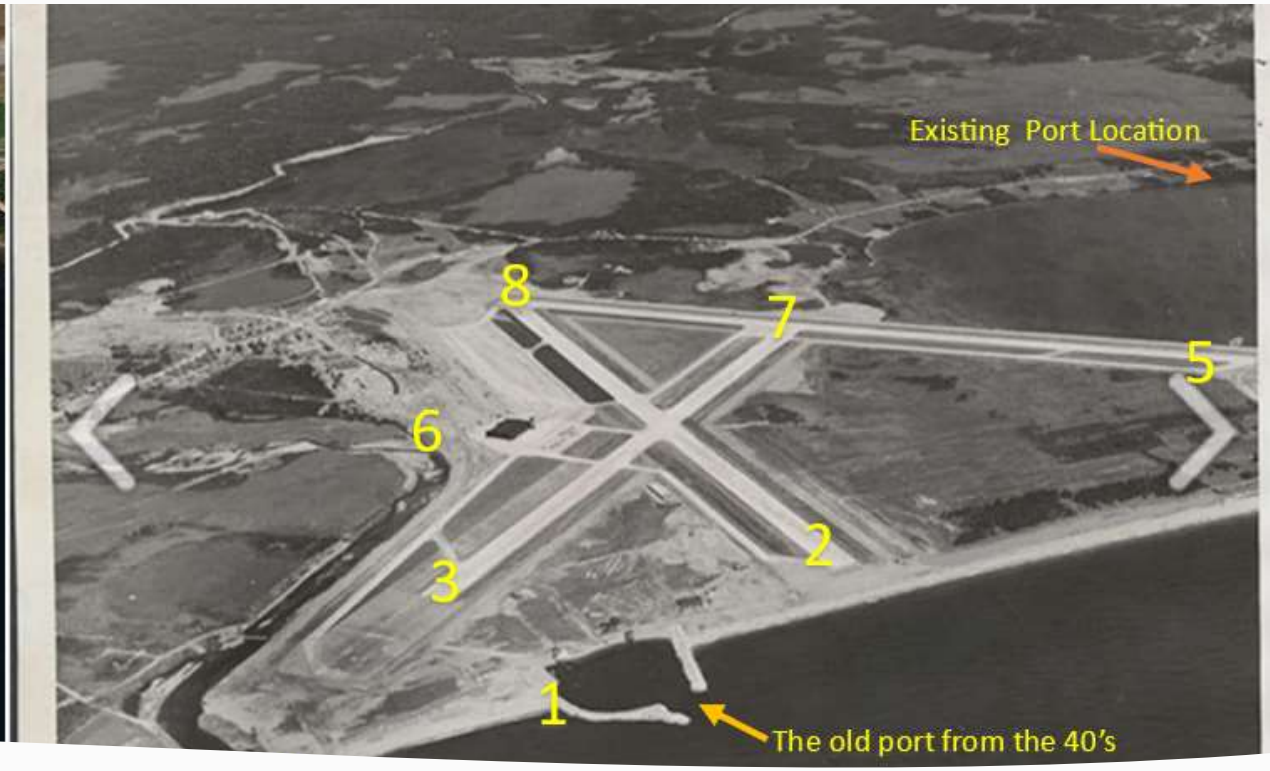

Alterative Landing Site for Turbine Components

- Brought to our attention by Mayor Rose
- Located at the original port in 1941, denoted as #1
- Photo on the right shows the original port

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Alterative Laydown Site for Turbine Components

- Abandoned Runways
- Develop a landing ramp
- Secure a large barge, 150 – 200 m to 9 m of water
- Turbine transport vessels have a draft of 5.5 m to 7 m
- Temporary piles could be installed for maintaining position

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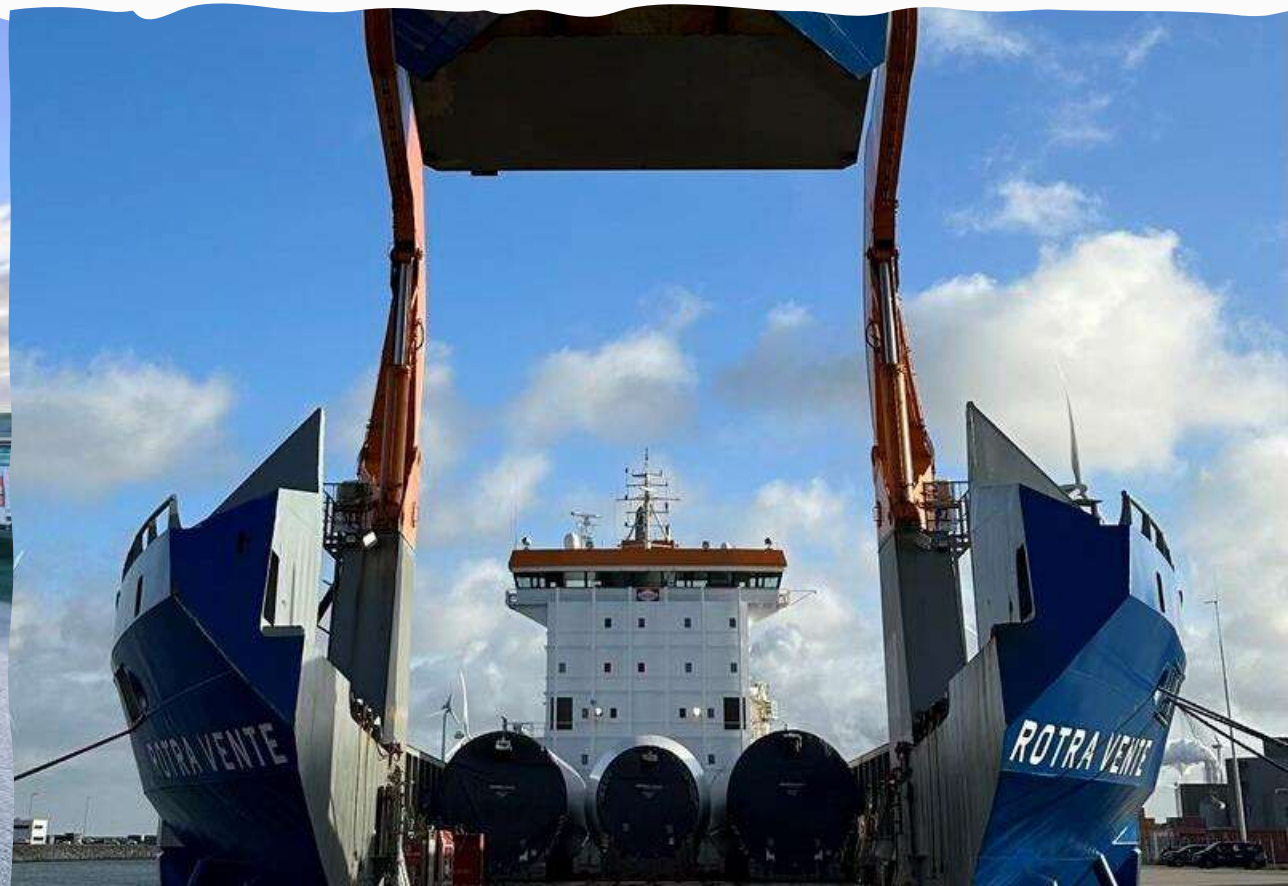
Vessels for Turbine Transport

- Rotra Vente
- Year: 2017
- Type: RoRo Heavy Cargo Deck Carrier
- Length (m): 141,60 m
- Deck Area (m^2): 96,87 x 19,60 m
- Crane: Bow-Ramp
- Gross tonnage: 8817
- Draught: 7,10 m
- Other: Beam: 21,00 m
- Chartered by Siemens

The Rotra Vente has been specifically constructed to serve the next generation of windmill equipment

Vessels for Turbine Transport



Submarine Cable Crossing in Port au Port Bay

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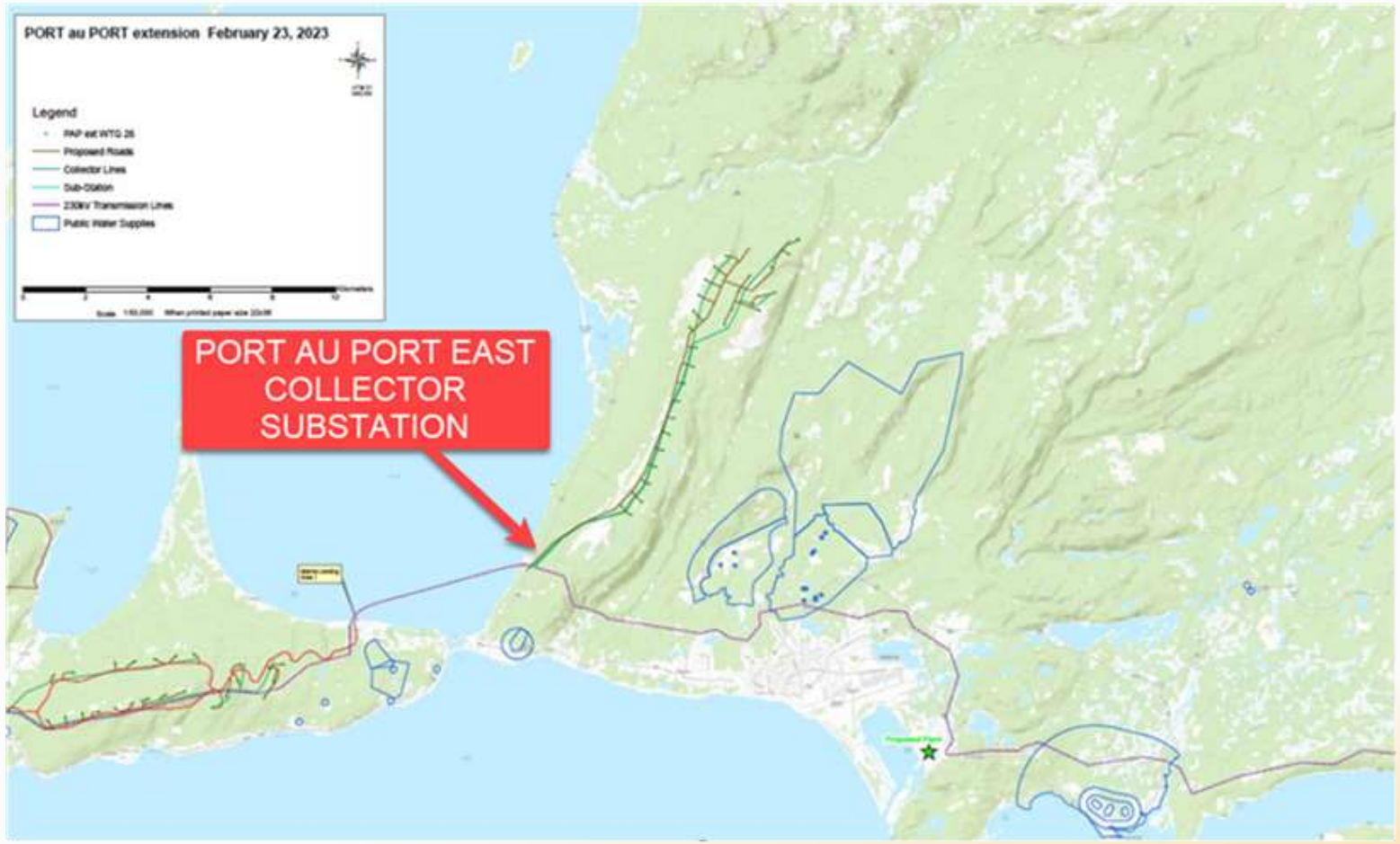
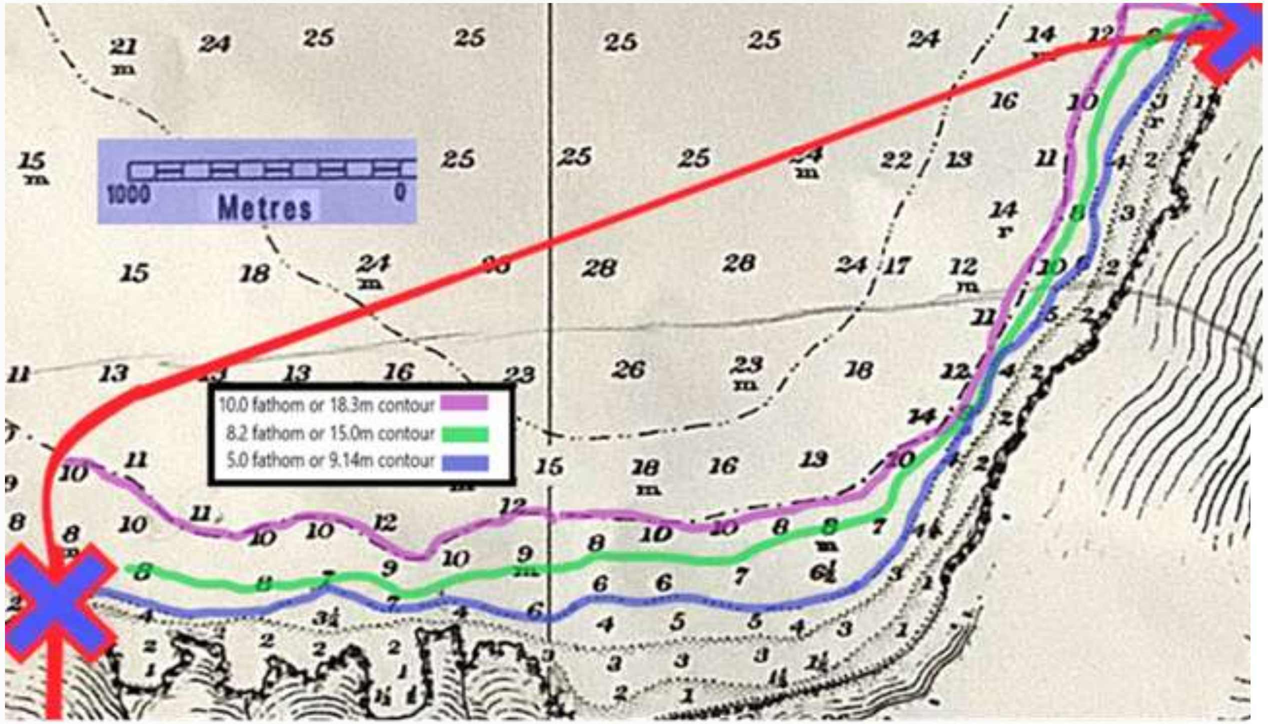
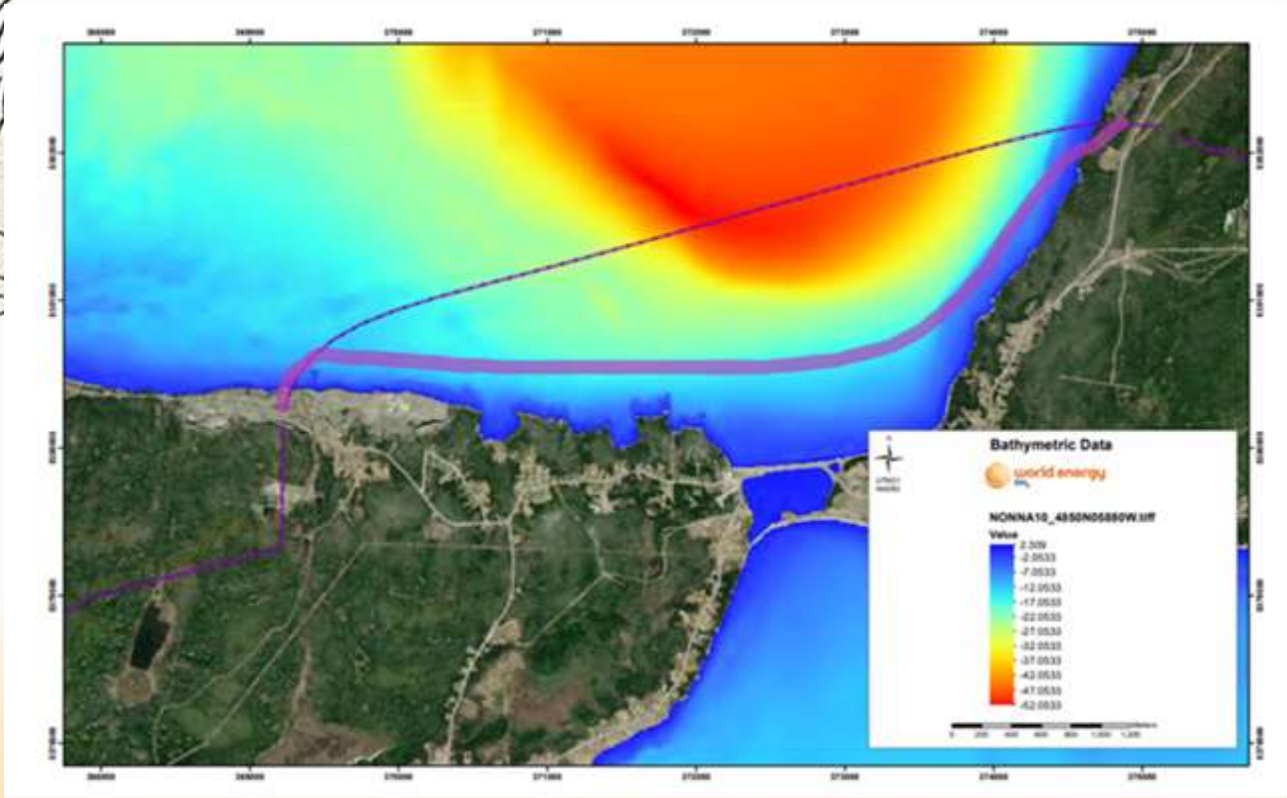
Submarine Cable Crossing

1. High-voltage transmission lines include a subsea cable crossing at the isthmus from the Port au Port Peninsula
2. Approximately 6.4 km in length
3. Geotechnical survey will be required to determine installation method, e.g., trenching vs mattress
4. Routing



Submarine Cable Crossing





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Regulatory Consultation on Marine Activity

- Primary discussion around permitting and required data collection associated with dredging, subsea cable lay, remote landing locations:
  - DFO; Marine Habitat
  - Environment and Climate Change; Marine Disposal
  - Transport Canada
- Initial surveys due to commence this summer

Community Engagement & Consultation

Updates

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Engagement & Consultation

Surveys and questionnaires

- Land and Resource Use Survey
  - Managed by Stantec
  - In-market April 3 - 17
- Traditional Land and Resource Use Survey
  - Managed by Qalipu First Nation
  - In-market April 20 – May 4
- Outfitters Questionnaire
  - Managed by the NL Outfitters Association
  - Dates TBC

Meetings with Stakeholders

Latest meetings

- Qalipu First Nation: February 15; March 11; March 16
- Flat Bay Indian Band: February 28
- St. George's Indian Band: February 28
- Three Rivers Mi'kmaq Band: March 16; April 6
- Town of Stephenville: April 4
- NL Indigenous Peoples' Alliance: April 18
- NL Aboriginal Women's Network (NAWN): April 21

Plus regular correspondence via email and phone

Engagement with Local Band Councils

Phased approach to engagement, consultation and mediation

- Newfoundland Association of Rural Mi'kmaq Nations (NARMN):
  - Benoit First Nation, Burgeo First Nation, Flat Bay Indian Band, Three Rivers Mi'kmaq Band, St. George's Indian Band
  - NARMN is inviting the recently revived Indian Head First Nation and Port au Port Band as well
- We are entering into a process that will help mediate challenging conversations and build trusting relationships across the region, especially in relation to our Project

Community Vibrancy Fund

- **$10 million Community Vibrancy Fund** for the construction phase of three project areas
  - To be paid over three years, and equally divided across the project areas, commencing with construction
- **Community committees:**
  - We're working with the Port au Port Regional Vibrancy Committee to allocate and administer the construction phase of the fund, and to negotiate the production phase of the fund
  - A similar committee will be developed in the southeast project area (BSGS – Codroy), and discussions have begun with community leaders
- **Taxes and taxes in lieu**
  - Commitment to paying the same amount of taxes in lieu to the project areas that we will pay in taxes to Stephenville

Community Office

- Staffed by a Community Liaison, John Hogan (from Kippens), and a Community Engagement Manager, Angela Gill (from Robinsons)
- Continuing to see approx. 20+ visitors per day
- Vast majority of visits and inquiries are regarding employment and training opportunities, and service / supply opportunities

Drop-in sessions: Bay St. George South – Codroy

McKay's

- March 7, 1 – 4 p.m. (6 ppl attended)
- March 8, 9 a.m. – 12 p.m. (8 ppl attended)
- March 15, 10 a.m. – 4 p.m. (7 ppl attended)
- March 22, 10 a.m. – 4 p.m. (4 ppl attended)
- April 19, 10 a.m. – 4 p.m. (3 ppl attended)

Flat Bay

- March 29, 10 a.m. – 4 p.m. (80 ppl attended)

St. George's

- March 30, 10 a.m. – 4 p.m. (29 ppl attended)

Upcoming: Open Houses

Public information sessions

- The purpose of these open house sessions is to describe all aspects of the proposed project, to describe the activities associated with it, and to provide an opportunity for all interested persons to request information or state their concerns
- The open houses will also help us meet our commitment to fulfill Section 58 (1)(b) of the Environmental Protection Act and Section 10 of the EIS Guidelines
- The promotional plan for the open houses has been shared with the Environmental Assessment Committee.

Open Houses: April 24 – 27

Public information sessions

- The open houses will include project information and updates, including wind farm and hydrogen plant development plans, the environmental assessment process and the studies being undertaken, as well as draft maps for discussion and input.
- Through 20 hours of open house sessions, over the course of four days, WE GH2 representatives and consultants with subject matter expertise will offer information and answer questions. Periodically, throughout each open house, presentations will be provided, followed by Q&A sessions.

Community Open Houses

Upcoming

- **Monday, April 24**: **Stephenville**, 2 – 7 p.m., Days Inn, 44 Queen St
- **Tuesday, April 25**: **Stephenville Crossing**, 2 – 7 p.m., Church of the Assumption, Hospital Road
- **Wednesday, April 26**: **Port au Port**, 2 – 7 p.m., Our Lady of Fatima Parish Community Centre, Piccadilly Crossroads
- **Thursday, April 27**: **Bay St. George South – Codroy**, 2 – 7 p.m., Three Rivers Lions Club, McKay's

Public Notice

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Public Information Sessions on the Proposed Project Nujio'qonik in the Stephenville, Port au Port, and Bay St. George South – Codroy areas shall be held at:

Monday, April 24: Stephenville
2–7 p.m. | Days Inn, 44 Queen Street

Tuesday, April 25: Stephenville Crossing
2–7 p.m. | Church of the Assumption, Hospital Road

Wednesday, April 26: Port au Port
2–7 p.m. | Our Lady of Fatima Parish Community Centre, Piccadilly Crossroads

Thursday, April 27:
Bay St. George South – Codroy
2–7 p.m. | Three Rivers Lions Club, McKay's

These open house sessions shall be conducted by World Energy GH2 (**info@WorldEnergyGH2.com** or **709-757-0183**), as part of the environmental assessment for this project.

The purpose of these open house sessions is to describe all aspects of the proposed project, to describe the activities associated with it, and to provide an opportunity for all interested persons to request information or state their concerns.

ALL ARE WELCOME

Questions

Thank You