Welcome

Argentia Renewables
Open House

Thank you for coming.
We look forward to
visiting with you.

Your questions
and comments are
important to us.



Sign-In
Form

Comment
Form

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Good Planning Involves the Community

Argentia Renewables



Pattern Energy equally commits to listening to and respecting the landowners and communities that host our projects through relationship building, open communication, and the reception of feedback. We encourage you to call or email our team to start a conversation.

Community Outreach

ArgentiaRenewables@patternenergy.com

(844) 486-3323

Media Inquiries

Matt.Dallas@patternenergy.com

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Pattern Energy

Argentia Renewables

Pattern Energy is a leading developer, operator and owner of renewable energy infrastructure projects and facilities across North America. Our mission is to transition the world to renewable energy through the sustainable development and responsible operation of facilities with respect for the environment, communities, and cultures where we have a presence.

Our approach begins and ends with establishing trust, accountability, and transparency. Our company values of creative spirit, pride of ownership, follow-through, and a team-first attitude drive us to pursue our mission every day. Our culture supports our values by fostering innovative and critical thinking and a deep belief in living up to our promises.

Headquartered in San Francisco, USA, Pattern has a portfolio of power facilities and transmission assets producing and transporting nearly 6,000 MW of power across North America, serving various customers that provide low-cost, clean energy to millions of consumers.



Partners & Consultants

Argentia Renewables

PORT OF ARGENTIA

The Port of Argentia will be the host of the Project, while also utilizing the Port's infrastructure to welcome construction materials and shipping vessels throughout operation.

sem

SEM Ltd. has been engaged as the principle environmental consultant to lead the Environmental Assessment process and to support in stakeholder relations activities.

Growler Energy

Growler Energy is the local development partner for the Argentia Renewables Project.

CANADIAN PROJECTS LIMITED
A TETRA TECH COMPANY

Canadian Projects Ltd. is providing civil engineering and technical design services for the wind project. CPL has worked on several prior Pattern projects.

Miawpukek First Nation

Miawpukek First Nation and Pattern have entered into an MOU to collaborate on the project.

SNC·LAVALIN

SNC Lavalin has started the Pre-FEED engineering work for the hydrogen and ammonia production facilities.

Core Commitments

Argentia Renewables

Safety and Health

We are committed to the safety and health of the public, our employees, and everyone who works with us.

Community and Culture

We believe acting as a good neighbour benefits both the areas where we have a presence and our company's long-term success.

Environment

We consider it our responsibility to produce and transport renewable energy in a way that respects the integrity of our environment.

Diversity, Equity, and Inclusion

We believe having diversity in our teams and providing an environment where employees are encouraged and empowered leads to a more engaged workforce and better business outcomes.



Project Overview

Argentia Renewables



Newfoundland & Labrador are uniquely positioned to meet the demand of the rapidly growing European market for green hydrogen.

Argentia Renewables will consist of a 300 MW wind-powered green hydrogen and ammonia production and export facility located at the Port of Argentia, the closest deepwater, ice-free port to Europe in the Western Hemisphere.

Wind energy will power dockside electrolyzers to produce green hydrogen that will be used as feedstock for ammonia production. The final product—carbon-zero/green ammonia—will be safely stored at the Port for export to European offtakers.

Green Fuels

— The project is expected to have an output of approximately 400 tonnes per day of green ammonia.

— Construction of a high voltage transmission line from the wind production facility on Port lands to the dockside green fuels production facility.

Investing in Canada

An initial capital investment of ~$1.7 billion CAD (including both wind and green fuels infrastructure), representing one of the largest renewable energy investments in Canadian history.

Project Schedule

2023–2024

Completion of environmental and feasibility studies, acquiring regulatory approvals, securing offtake arrangements

2024–2025

Target for final approvals and commencement of construction

2027

Target commercialization

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Site Selection & Design

Argentia Renewables

When selecting the Port of Argentia as the location for a Green Fuels project we considered a range of factors. We use these criteria to select sites, and then refine facility designs.

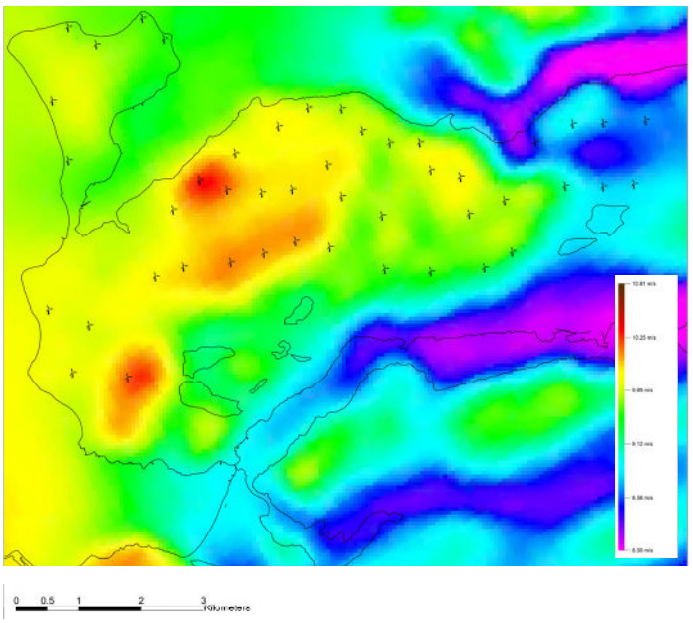
Project Criteria

- Closest port to Europe
- Access to 9,000 acres of private land
- Ice-free port with existing heavy industrial site to support project
- Engaged & supportive partners

General Site Characteristics

- Exceptional wind resource
- Avoids impact to critical wildlife habitat
- Proximity of wind turbine locations to port facility
- Brownfield site

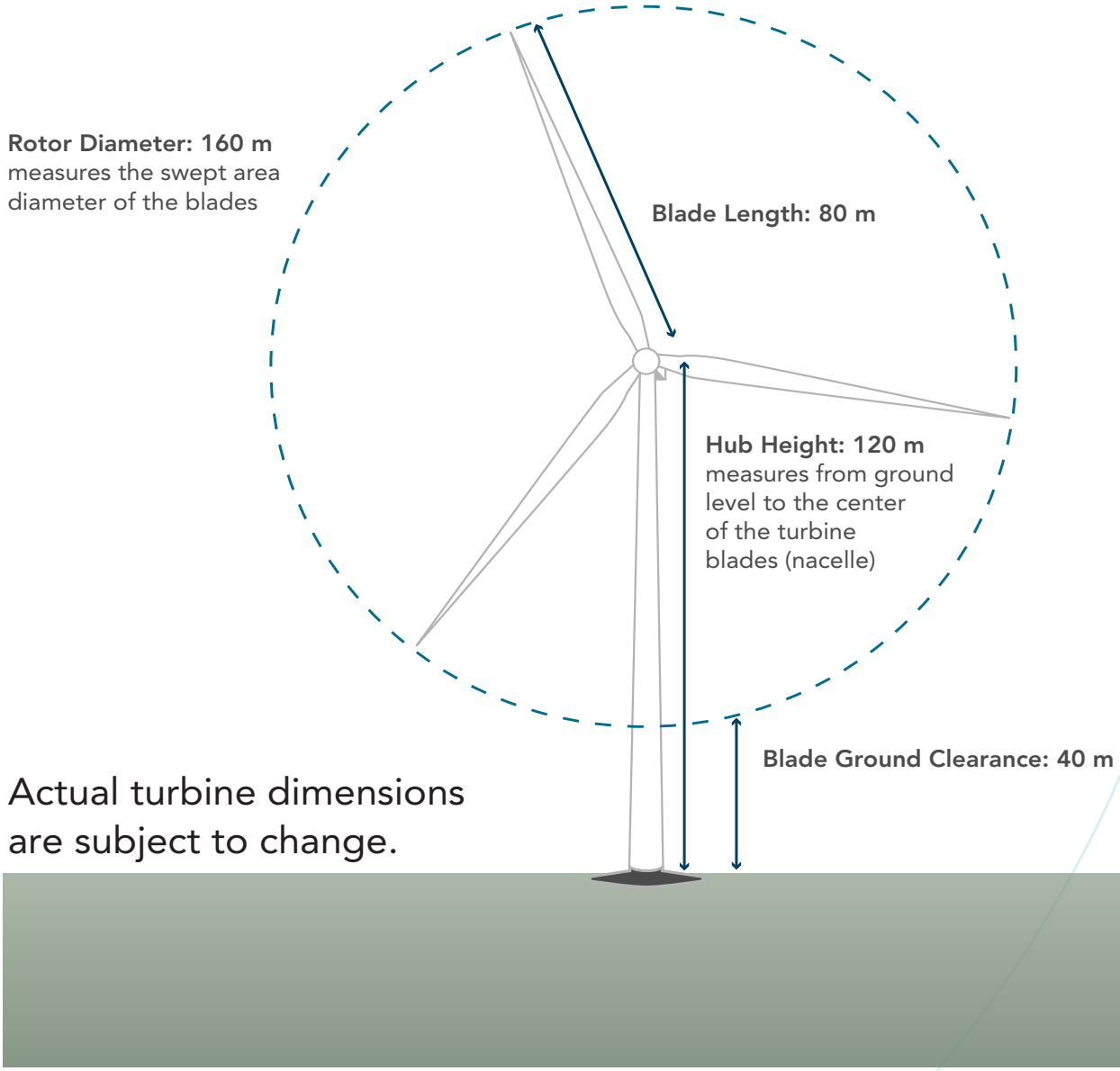




Turbine Technology

Argentia Renewables

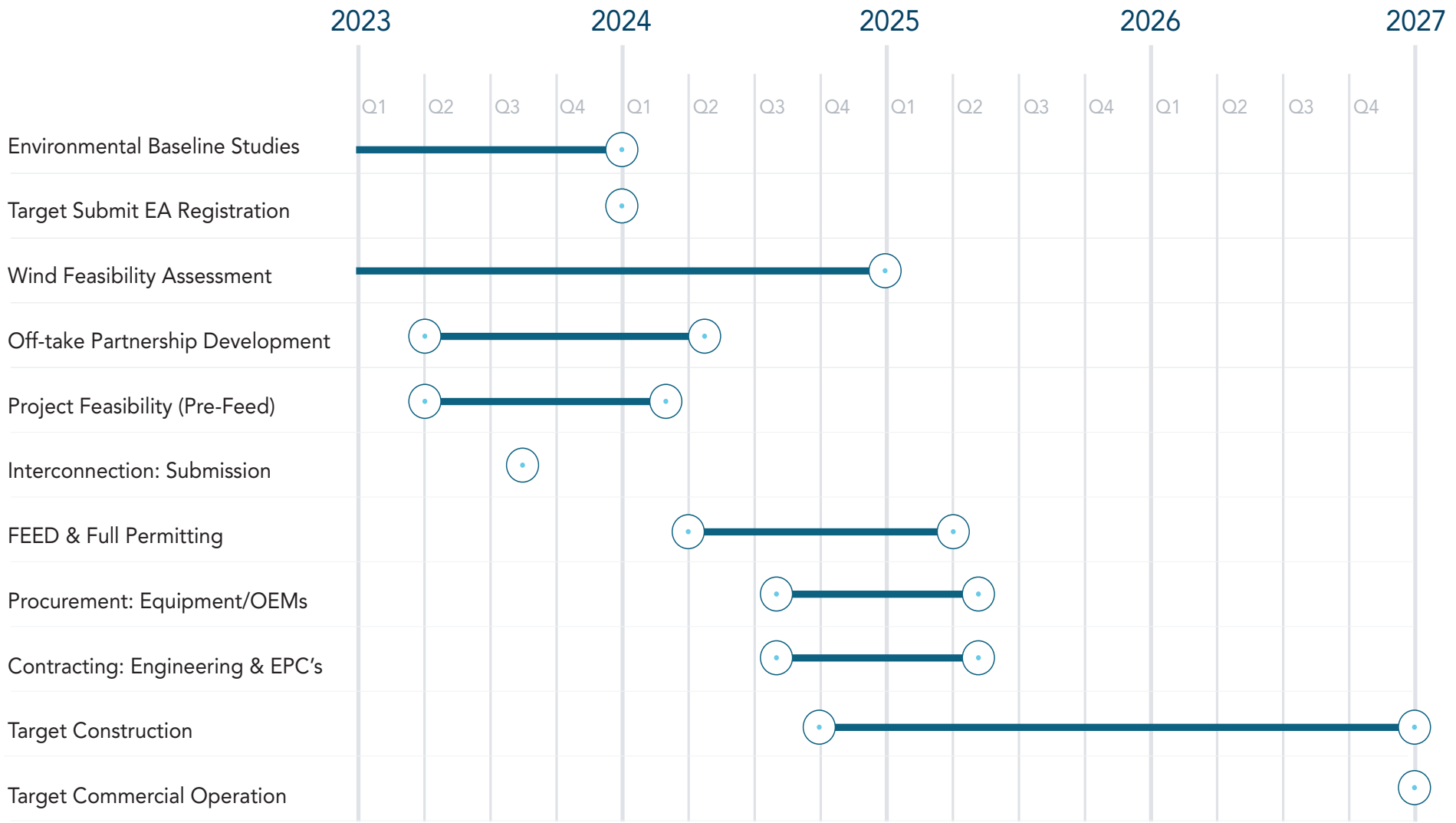
Wind can be harnessed to transform kinetic energy into electrical energy. Wind turbines do this with blades mounted on towers, which are turned by the wind, causing them to turn a shaft that is attached to a generator. This creates an electrical current that is carried by cables to the electric grid that connects to your home.



Actual turbine dimensions are subject to change.

Target Project Timeline

Argentia Renewables

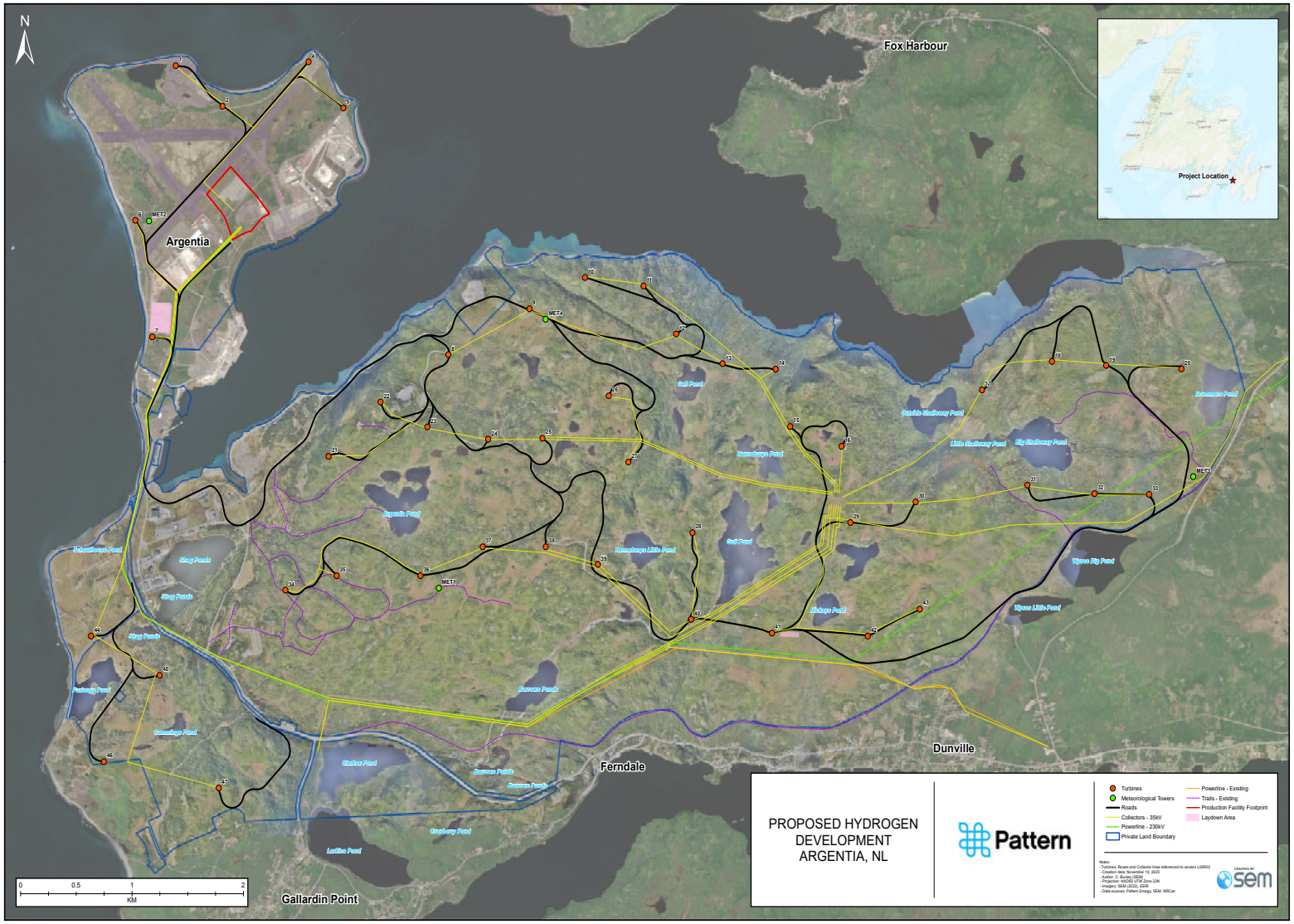


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Project Map

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Preliminary layout subject to public review

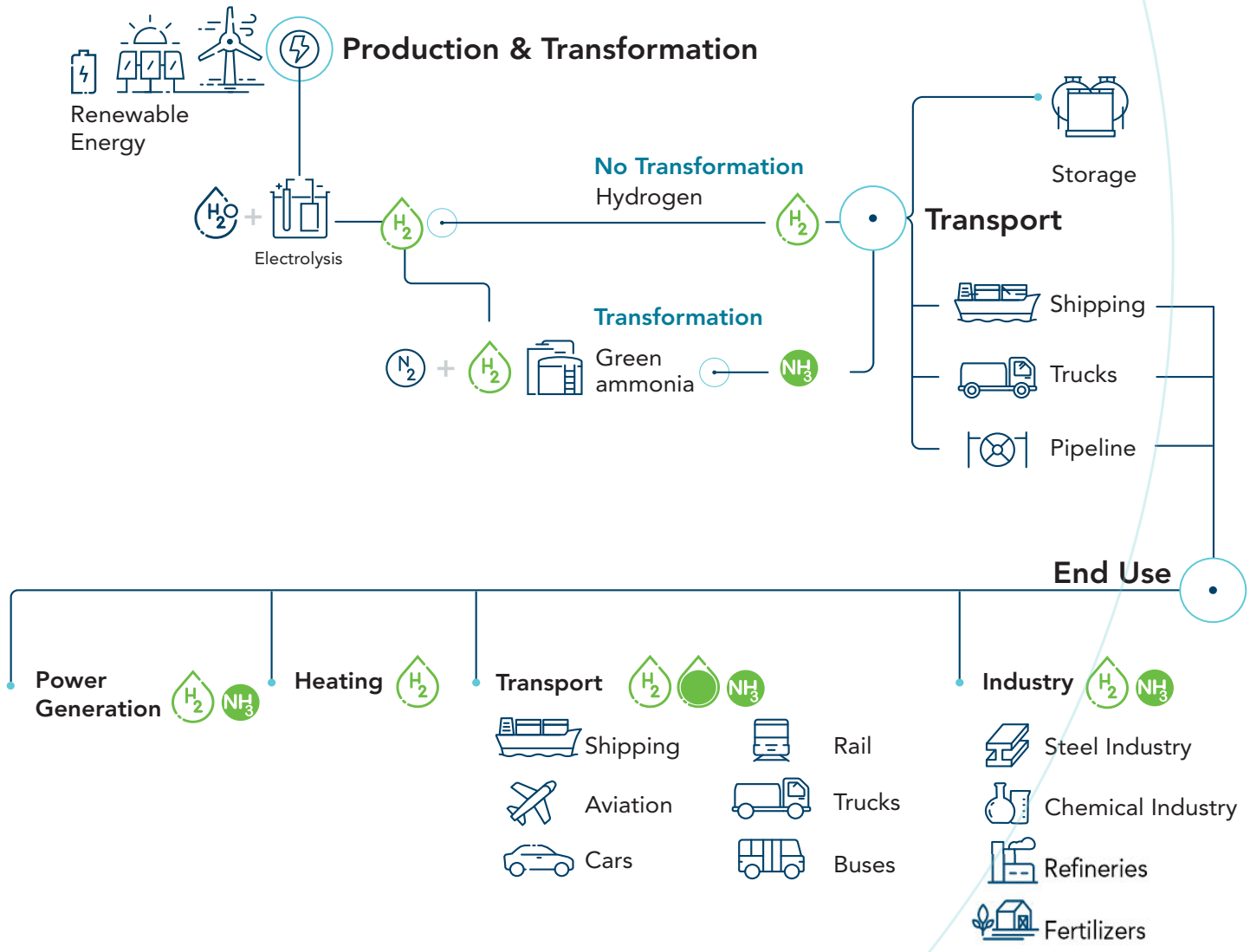
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Green Fuels

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Green fuels, such as green hydrogen, are currently produced globally at scale for various industrial applications, including chemical/steel/concrete manufacturing, oil refining, and more. Unlike carbon intensive hydrogen, green hydrogen is produced by a process called electrolysis utilizing only renewable energy and water as inputs and emits no carbon when produced.



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Construction

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Foundations

Foundations, consisting of rebar and concrete, support the turbines. The most common design is a spread foot foundation that is about 18–20 meters wide and 2.5 meters deep. After construction only the turbine tower visibly shows, which is approximately 4.5 meters wide.



Turbine

Turbine towers arrive in three to four tubular pieces that are installed individually with a crane. The nacelle (a cover that houses the generating components) sits atop the tower. Three blades are connected to a hub, which is raised by a crane and affixed to the nacelle.



Collection System

A network of cables collect the electricity generated from each turbine. Configurations vary, but typically the cable is buried 1 meter below grade. Cable size ranges between 750 to 1500 MCM, depending on the position of the turbine within an electrical circuit.



Access Roads

Roads to each turbine allow access for construction, operations, and maintenance. Access roads are typically 5–6 meters wide.

* Photos represent construction for a wind project with 85-meter (279 feet) tall turbines. Dimensions and design specifications vary based on the turbine model and geotechnical analysis and soil conditions.

Construction

Argentia Renewables



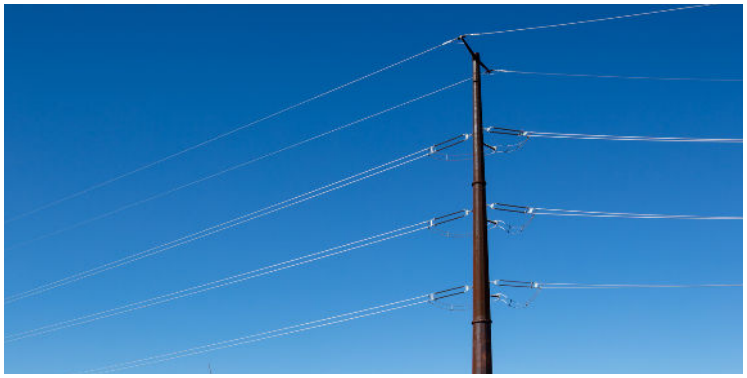
Substations

A substation is built to collect the energy generated by the turbines and used to step up the voltage to connect to transmission lines.



Meteorological Towers

Meteorological towers are used to verify wind characteristics.



Transmission Lines

Transmission lines connect power to the grid. The length of the lines and structure types vary depending on the facility location and distance to the utility transmission system.



Operation & Maintenance Buildings

O&M buildings are the central command centers for wind facilities. The building houses offices and space for turbine maintenance.

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Local Business Opportunities

Argentia Renewables

Pattern Energy strives to benefit the communities where we operate.

With this goal in mind, we are committed to using qualified local and regional vendors and contractors when possible.

These efforts create more jobs and offer the community additional economic benefits.

Please visit us at ArgentiaRenewables.ca or scan the QR Code below to submit your business information.

Construction

- Road Construction and Site Grading
- Foundation excavation and backfill
- Road maintenance and asphalt paving
- Concrete supplier
- Aggregate supplier
- Electricians
- Foundations and site concrete
- O&M facility and builiding construction
- Landscaping
- Security, fencing, water, power, sanitation facilities, etc.



Maintenance

- Communications maintenance
- HVAC contractor
- Hardware supply
- Waste control and removal
- Solid waste disposal
- Landscape and groundskeeping
- O&M building maintenance
- Road maintenance
- Electrical supply
- Truck fleet leasing and maintenance
- Crane services and rentals
- Janitorial services

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Good Neighbours Produce Meaningful Partnerships

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Economic Investment

An initial capital investment of ~$1.7 billion CAD (including both wind and green fuels infrastructure), representing one of the largest renewable energy investments in Canadian history.

Job Creation

Creates construction jobs, including equipment operators, electricians, laborers, and more. We prioritize hiring locally when possible. Once operational, permanent staff will operate and maintain the facility.

Business Opportunities

Creates an economic boost and brings opportunity for local businesses to provide materials and services.

Lasting Revenue

We believe in giving back to the communities that host our development projects and operational facilities. We contribute to local causes through sponsorships and donations throughout all project phases, and we implement Community Benefit Programs at operational facilities.



Harnessing the Power of the Wind to Advance Economic Development and Decarbonize Simultaneously

The development of wind energy and Green Fuels infrasturcture offers the only clear and cost-effective pathway to decarbonizing sectors of the economy that require hydrogen as a feedstock, such as heavy industry and transportation.

Pattern Energy's resources, experience, and market credibility position our company to meet the many challenges associated with commercializing green fuels export projects in remote locations.

Working with world class partners, local companies, community hosts and residents, local governments, and First Nations, we are committed to making these projects a reality.

Target Schedule

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About Us

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Headquartered in San Francisco, USA, Pattern has a portfolio of power facilities and transmission assets producing and transporting nearly 6,000 MW of power across North America, serving various customers that provide low-cost clean energy to millions of consumers.



Environmental assessment is a critical process to ensure the responsible development of projects while protecting our environment.

SEM's Approach to Environmental Assessment:

The Provincial Environmental Assessment process is administered by the EA Division of the Department of Environment and Climate Change, under the Environmental Protection Act and the Environmental Assessment Regulations.

EA identifies the important environmental effects associated with a project, identifies measures to mitigate against any adverse effects, and determines the significance of residual environmental effects.

We take careful steps to ensure all aspects of the proposed project are thought out:

- Comprehensive Environmental Baseline Studies
- Early and Ongoing Regulator and Stakeholder Engagement
- Early and Ongoing Indigenous Engagement

After Registration:

There are three possible Pathways once an EA Registration has been received and reviewed by the EA Division.

1
Release from EA

If sufficient information is provided in the registration document to assess the project, it may be released from EA with conditions.

2
Environmental Preview Report (EPR)

If additional readily available information is needed, the Proponent will be required to complete an EPR.

3
Environmental Impact Statement (EIS)

If additional original data or studies are needed, the Proponent will be required to complete an EIS.

Our Goals:

- Adhere strictly to EA Division's "Guidance for Registration of Onshore Wind Energy Generation and Green Hydrogen Production Projects"
- Facilitate transparency and seek support from local residents, regulators, and stakeholders
- Submit a comprehensive EA Registration Document
- Act as responsible stewards of the environment

Argentia Renewables Timeline:

Year 1
Pre-Feasibility, Project Conceptualization

Year 2
Feasibility Study 1 / 2, Project Description, EA Registration Submission

WE ARE HERE

Year 3
EA Release, Permitting / Conditions, Detailed Design (FEED), Site Preparation

Year 4-5
Continued Permitting, Environmental Protection, Construction

Year 5+
Operation and Maintenance

Year 30+
Continued Maintenance or Rehabilitation and Closure

Baseline studies ensure the proposed project has minimal negative effect on the environment - for plants, animals, and humans.

● Complete ● In Progress ○ Planned

Freshwater Environment

Surface Water Sampling ●	Fish & Fish Habitat Assessment ●	Water Balance Analysis ●

Atmospheric Environment

Air Quality Survey ●	Noise Survey ●	Emissions & Energy Desktop Survey ●

Terrestrial Environment

Rare Plants ●	Species at Risk ●	Breeding Birds Surveys ●
Spring Migration Surveys ●	Fall Migration Surveys ●	Winter Migration Surveys ○
Bat Detector Survey & Anaylsis ●	Boreal Felt Lichen Survey ●	

Marine Environment

Marine Environment Characterization ●

Socio-economics

Human Environment Analysis ●	Regional Economic Analysis ●	Social Services & Quality of Life Study ●
Traditional, Cultural, & Historical Survey / Archaeological Significance ●		

