



Appendix U1

# **Public Information Session 1 Material**

# Appendix U1

Public Information Session Material,  
October 26, 2022

# List of Appendices

Appendix U1.1: Advertisement and Event Materials

Appendix U1.2: Pattern Energy Sustainability Report

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## Appendix U1.1: Advertisement and Event Materials

## Letter of Invitation From Pattern Energy.



Pattern Energy (Canada)  
Toronto Office  
119 Spadina Avenue Suite 502  
Toronto, ON M5V 2L1  
(416) 263-8025

October XX, 2022

Xxxxx Xxxxx  
Xxxxxxx  
111 Main Road, Xxxx NL  
X1X 1X1

### **Re: Argentia Renewables – Open House**

Dear,

As one of Canada's leading renewable energy development and operations companies, Pattern Energy is pleased to advise Members of the \_\_\_\_\_ that we have commenced development work on Phase One of the Argentia Renewables Project (the "Project"), a wind powered green hydrogen and ammonia production and export facility located at a dockside location on Port lands. As part of the initial planning stages of the Project, we are offering an opportunity for key local stakeholders, to attend an Open House session regarding Pattern Energy, the Argentia Renewables project, future plans, and our approach to community consultation.

**Pattern Energy invites you to join an Open House session happening Oct. 26<sup>th</sup>, 2022, at the Town of Placentia Town Hall. The event will take place from 7:00 p.m. to 9:00 p.m., with light refreshments served.**

Pattern Energy seeks to continue consulting the community throughout the fall of 2022 with respect to Argentia Renewables, which will involve the construction of an approximately 150-200MW wind energy project on private lands owned by the Port of Argentia. The wind project would include the construction of approximately 35 wind turbines, a network of access roads, electrical transformers and related substation equipment which would be dedicated to the production of green hydrogen and green ammonia.

In subsequent phases of the Project, Pattern Energy would seek to increase productive capacity by expanding the wind project to Crown lands in areas proximate to the Port of Argentia, pursuant to the Government of Newfoundland & Labrador's policies with respect to Crown land usage for wind energy.

Pattern Energy is actively partnering with several local companies to advance our development activities with respect to Argentia Renewables, including Growler Energy, a locally owned and operated renewable energy developer. Growler Energy will participate in the session with Pattern Energy.

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Pattern Energy (Canada)  
Toronto Office  
119 Spadina Avenue Suite 502  
Toronto, ON M5V 2L1  
(416) 263-8025

We look forward to sharing information about this exciting project and opportunity for Newfoundland and Labrador and hope to see you at the Open House.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Davis".

---

Frank Davis

*AVP Green Hydrogen Development and  
Canada Country Head  
Pattern Energy Group LP*



Public Information Session Facebook Image.

# Argentia Renewables

Open House  
October 26



Public Information Session Print Flyer.

# Argentia Renewables

## Open House

### October 26, 2022

7:00 p.m.–9:00 p.m.

Placentia Bay Cultural Arts Centre

Please join us for an introduction presentation and a Q & A session as we get to know you better. Light refreshments will be served.



[ArgentiaRenewables.ca](http://ArgentiaRenewables.ca)





## Appendix U1.2: Pattern Energy Sustainability Report

2022 | Sustainability  
Report



# About the Report

This is Pattern Energy's third sustainability report. It has been prepared in accordance with the GRI Standards: Core option. It also uses the GRI G4 Electric Utilities Sector Disclosures document and is informed by the Sustainability Accounting Standards Board wind and solar energy sector disclosures and United Nations Sustainable Development Goals. The performance metrics disclosed in the report relate to the calendar year 2021 (January 1, 2021, to December 31, 2021). The affiliated Disclosures Index is available at [www.patternenergy.com/sustainability](http://www.patternenergy.com/sustainability).

Except where indicated, the practices and metrics disclosed in this report apply to our U.S. and Canada business activities and assets. Metrics associated with our assets in Japan, which are managed by our Japanese affiliate Green Power Investments Corporation (GPI), and our U.S. commercial solar and energy storage affiliate Solect Energy, are out-of-bounds for this report, unless otherwise noted. Where applicable, data limitations and exclusions are described. References to Pattern Energy may include our predecessor entities.

No external assurance has been sought specifically for this report. As part of our commitment to continually improve our sustainability disclosures, we welcome stakeholder input. Please send your comments to [sustainability@patternenergy.com](mailto:sustainability@patternenergy.com).

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## Message from Our CEO

On August 16, 2022, the world changed. On that date, the President of the United States signed the most historic climate legislation ever enacted by a major country, the Inflation Reduction Act (IRA).

The IRA established the country's commitment to reducing carbon emissions across all sectors of the economy while helping transition communities that have historically relied on the fossil fuel industry. The legislation paves the way for technologies to accelerate the transformation, focusing on fair pay, job training, and domestic manufacturing. It includes clean energy credits beyond wind and solar, benefiting clean hydrogen, clean fuels, and carbon capture.

Our challenges are not behind us as we enter this period of energy transformation, the like of which we have not seen since the Industrial Revolution. The Ukraine war is a humanitarian and energy crisis that brings urgency to finding ways to work together across borders. There is a need to replace the use of dirty Russian natural gas in Europe with cleaner U.S. natural gas and aggressively build out renewable sources of energy in the U.S. and Europe to create a more secure world with lower global carbon emissions.

There has not been enough attention on the widespread support the IRA received. The public and diverse sectors of the economy - including utilities, oil and gas companies, renewable energy companies, organized labor, the financial community, and many more - supported the IRA. We must continue this inclusive approach to the energy transition. The IRA and the Infrastructure Investment and Jobs Act (IIJA) can bring stakeholders together to accomplish what we have not achieved to date.

An inclusive approach means using industry growth to create widespread economic benefits by investing in diverse communities and workers, building a robust domestic supply chain, and even expanding critical mining operations in a socially responsible way. We must engage Indigenous communities, agricultural communities, energy-transitioning communities, and underserved communities. We need to invest in training and development programs. If we don't diversify and support our workforce, we will not meet the challenges and opportunities before us.

Pattern has begun our work on these issues. We have created sustainability goals that drive diversity, equity, and inclusion in our workforce, value chain, and industry. Our strategies include aggressive recruiting, development opportunities for our staff, a supplier diversity program, and coordinating with our sector in the Energy Transition for All initiative.

As we grow our workforce, we're evolving our culture and work environment to promote from within, encourage internal movement between teams, and support professional development. I am profoundly proud of our culture and our employees. We have strong employee engagement and satisfaction scores, reflected by Pattern being one of The San Francisco Chronicle's Top Workplaces in the Bay Area and being awarded the highest rank for a renewable energy company.



Our Pattern culture gives us a competitive advantage. We have an entrepreneurial company feel where employees are involved in multi-faceted roles. We empower individual thinking and encourage open dialogue and diverse ideas. We're fast-paced, passionate, and dynamic. Our engaged workforce is pioneering new ground in our industry and working on transformational projects.

In 2021, we completed Western Spirit Wind, the largest single-phase wind installation in the Americas, on time and on budget. Over a thousand workers installed 377 wind turbines spanning three counties, totaling 1,050 MWs of capacity, and its accompanying 155-mile transmission line. The facility will contribute tens of millions of dollars to the local economy during its operations and supply clean power for nearly a million people in the West. This work in New Mexico provides a platform we are building on as we develop SunZia Wind – an installation three times the size.

We are advancing renewable energy development in multiple markets by identifying where we can cost-effectively decarbonize the grid. Our strategy includes connecting areas of the country with different weather patterns to give customers differentiated renewable energy that meets the time and shape of their needs.

Our portfolio generated nearly 14,000 GWh of clean energy in 2021 – equal to the electricity use of approximately 3.3 million people – and contributed roughly \$75 million to local economies through property taxes, land leases, and community donations.

Pattern had many milestones that you can read about in our report. From completing our first wind repower and U.S. solar project to starting construction activities on our first offshore wind and storage project in Japan and wind project in Alberta. We diversified our business strategy by acquiring Solect Energy and expanding into the Commercial and Industrial (C&I) solar market. In 2022, we furthered this growth by purchasing Dynamic Energy.

We also grew our core competencies by building a Fundamentals and New Markets group, enhancing our Energy Management team's capabilities, and forming a Business Improvement Committee. We expanded our management approach to stakeholder engagement, instituted a fleetwide Land Agent Code of Conduct, and completed a 3-year climate research project on the impact of global weather disruptions.

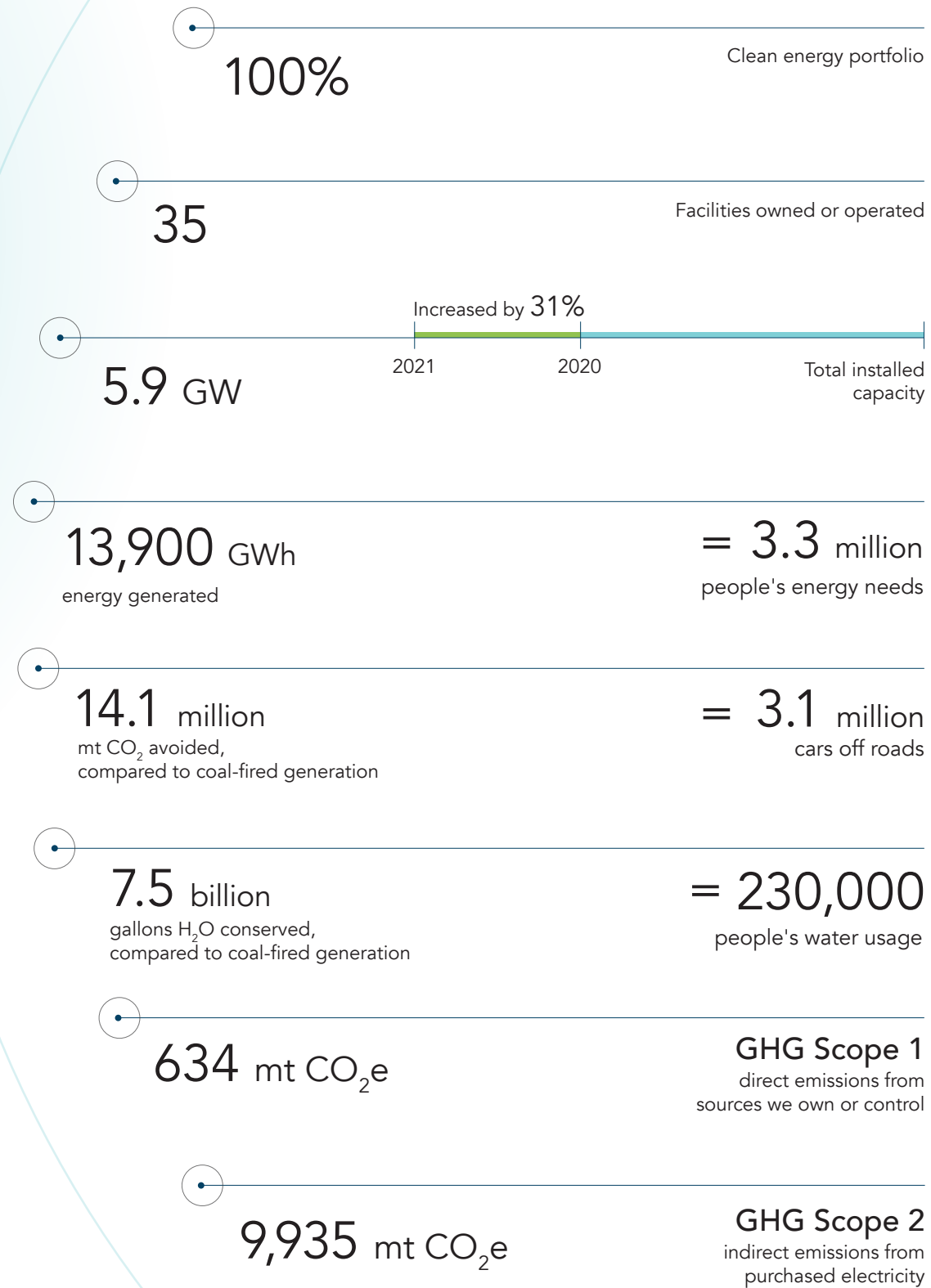
Notably, we continued emphasizing our efforts on diversity, equity, and inclusion by conducting a DEI-focused employee survey, hosting employee focus groups, and requiring all people managers to undertake unconscious bias training. I'm pleased that we maintain pay equity, continue to lower employee turnover, and increase the percentage of women holding management and senior management roles. I am proud of where we have come in recent years, but there is still much to do as a company and an industry.

The historic IRA and IIJA legislation provide unprecedented opportunities for the energy industry to drive the transformation to a low-carbon economy in a more equitable way. It is now up to Pattern and the industry to use these opportunities wisely.

Mike Garland, CEO  
Pattern Energy

# Sustainability At-a-Glance

## Generate Sustainable Energy



## Support Our Communities



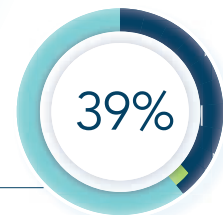
### Promote Diversity, Equity, and Inclusion



Racial & ethnic diversity in U.S. workforce



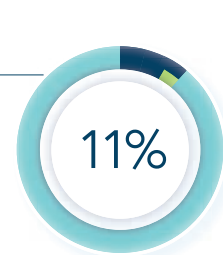
Female employees



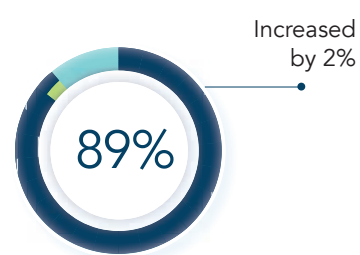
Management roles held by women



Senior management roles held by women



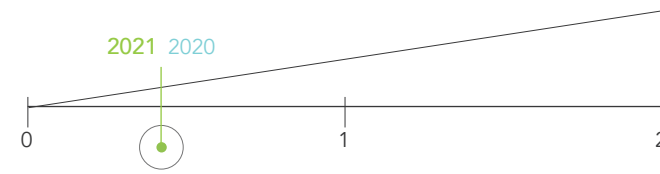
Employee turnover



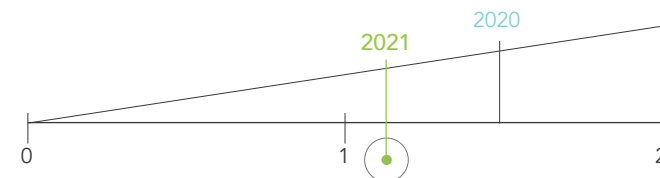
Employee retention rate

Increased in 2021

### Reinforce Our Culture of Safety



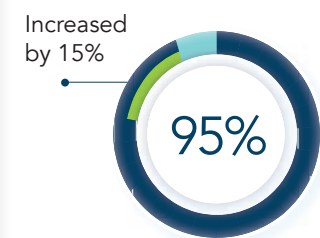
0.21 Employees TRIR



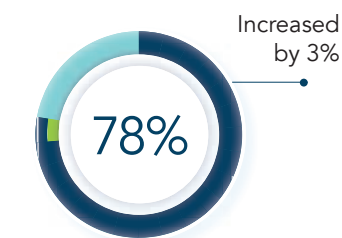
1.16 Employees + Contractors TRIR

Driving toward zero injuries and a Total Recordable Incident Rate (TRIR) of 0.0.

### Engage and Empower Our Teams



Employee survey response rate



Employee survey satisfaction score



## Our Company



### Overview

Pattern Energy Group LP (Pattern Energy or Pattern) is one of the world's leading private renewable energy and transmission companies, with a utility-scale power portfolio spanning the United States, Canada, Japan, and Mexico.

Pattern is a partnership among the Canada Pension Plan Investment Board (CPP Investments™), private equity funds managed by Riverstone Holdings LLC, and certain members of Pattern management.

Headquartered in San Francisco, California, we have offices in Houston, San Diego, Albuquerque, Toronto, Tokyo, and Amsterdam. We expanded our Amsterdam office in 2021 with a team of offshore wind professionals to support our Japanese offshore efforts.

We operate our renewable energy business as an integrated platform – from project origination and development, pre-construction activities, and project finance through project construction to facility operations and asset management.

Our operational fleet includes 35 utility-scale renewable energy facilities, totaling nearly 6,000 MW of installed capacity, selling low-cost energy to utilities serving millions of people and commercial customers to power their businesses, including stores and data centers.

Through strategic partnerships, bold greenfield initiatives, and the building of HVDC transmission to connect markets, we are moving a 25+ GW global development pipeline forward. We are investing in our teams and core competencies to support our growing portfolio.

In 2021, we created a Fundamentals and New Markets team to focus on market analysis and intelligence and broaden our approach to power markets. We grew our Energy Management team's capabilities to include transmission scheduling, enhanced market hedging, risk and credit management, settlements, and collateral margining management.

We also formed a Business Systems group and Project Management Office to support our new Business Improvement Committee meeting its objectives. The Business Systems team prioritizes process improvements and implements transformative initiatives at the company, and the Project Management Office manages processes and improvements for project development through construction.

Pattern develops, owns, and operates renewable energy assets in Japan through our Japanese affiliate, Green Power Investment Corporation (GPI), in which we acquired a majority stake in 2015. We have also been active in Mexico since 2015, when Pattern entered a joint venture with CEMEX Energía to develop renewable energy projects in the country.

We diversified into the commercial and industrial (C&I) solar market in 2021 by acquiring Solect Energy, a recognized leader in commercial solar and storage solutions based in Hopkinton, Massachusetts. We furthered this expansion with the acquisition of Dynamic Energy in 2022.

### What Guides Us

Pattern's mission is to transition the world to renewable energy. Our company commitments, values, and objectives drive us to pursue this mission every day.

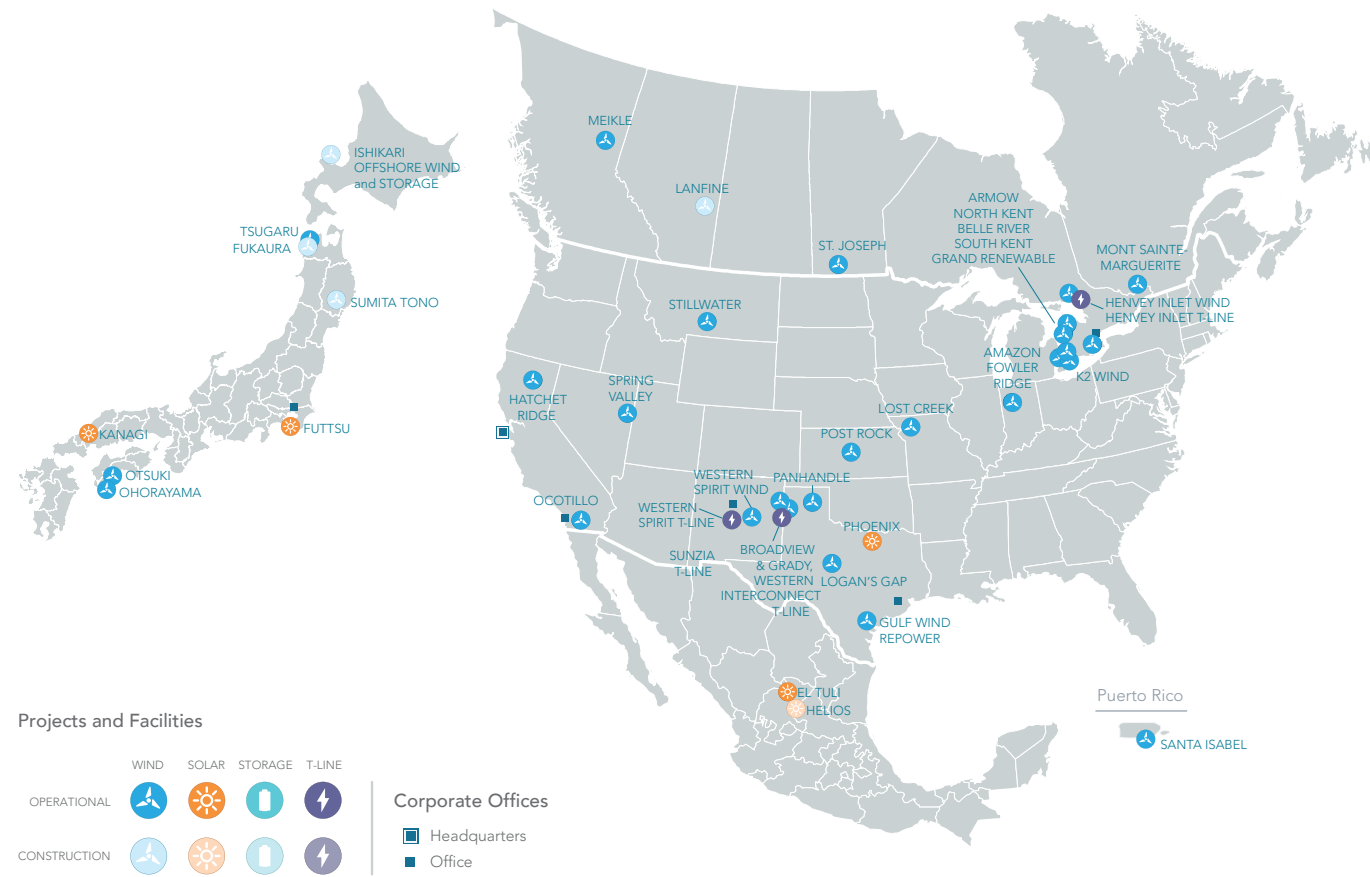
We have four commitment statements fundamental to our business, guiding us to safely develop, construct, and operate renewable energy facilities while respecting the environments, communities, and cultures that host them. We also commit to providing a workplace and culture that is diverse, equitable, and inclusive, where all employees feel they belong.

Our Statements of Safety and Health, Community and Cultural, Environmental, and Diversity, Equity, and Inclusion Commitments are signed by our CEO and displayed in each of our offices and operational facilities. Our management systems, programmatic approaches, and strong governance provide the foundation for meeting these commitments.

Additionally, Pattern's core values of creative energy and spirit, pride of ownership and follow-through, and a team-first attitude, lead us to innovative solutions to challenges, develop projects for long-term success, and prioritize collaboration and collective outcomes over individual achievements.

Pattern leadership supports us in reaching our mission by creating annual thematic, defining, and standard operating objectives for the company. Every department and employee make yearly goals to contribute to the company meeting its collective objectives.

# Utility-Scale Portfolio



Map not to scale. Portfolio as of December 31, 2021. Visit [PatternEnergy.com](https://www.patternenergy.com) for current portfolio details.

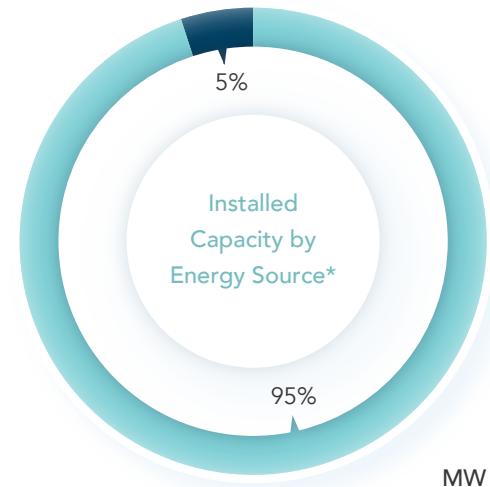
## Construction

Project	Country	Province, Prefecture	Installed Capacity (MW)	Target Commercial Operation Year
Helios Generation	Mexico	Zacatecas	150	2022
Lanfine Wind	Canada	Alberta	150	2022
Sumita Tono Wind	Japan	Iwate	113	2023
Ishikari Wind Offshore	Japan	Hokkaido	112	2023
Fukaura Wind	Japan	Aomori	80	2024

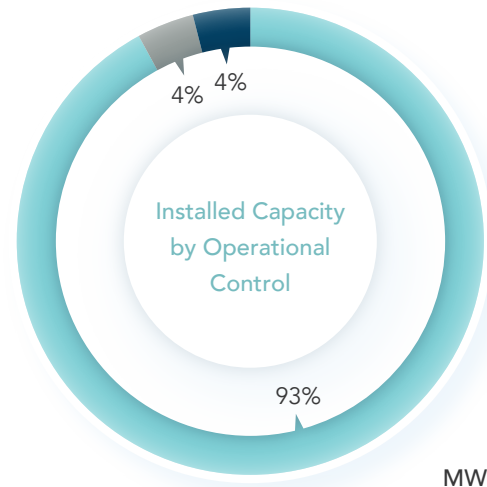
## Operations

Facility	Country	State, Province, Prefecture, Territory	Installed Capacity (MW)	Commercial Operation Year
Otsuki Wind	Japan	Kochi	12	2006
Hatchet Ridge Wind	U.S.	California	101	2010
Lost Creek Wind	U.S.	Missouri	150	2010
St. Joseph Wind	Canada	Manitoba	138	2011
Spring Valley Wind	U.S.	Nevada	152	2012
Santa Isabel Wind	U.S.	Puerto Rico	101	2012
Post Rock Wind	U.S.	Kansas	201	2012
Ocotillo Wind	U.S.	California	265	2012, 2013
South Kent Wind	Canada	Ontario	270	2014
Panhandle Wind	U.S.	Texas	400	2014
Grand Renewable Wind	Canada	Ontario	149	2014
K2 Wind	Canada	Ontario	270	2015
Logan's Gap Wind	U.S.	Texas	200	2015
Amazon Wind Farm Fowler Ridge	U.S.	Indiana	150	2015
Armow Wind	Canada	Ontario	180	2015
Futtsu Solar	Japan	Chiba	31	2016
Kanagi Solar	Japan	Shimane	10	2016
Meikle Wind	Canada	British Columbia	179	2016
Belle River Wind	Canada	Ontario	100	2017
Broadview Wind	U.S.	New Mexico	324	2017
Ohorayama Wind	Japan	Kochi	33	2018
North Kent Wind	Canada	Ontario	100	2018
Stillwater Wind	U.S.	Montana	80	2018
Mont Saint-Marguerite Wind	Canada	Quebec	143	2018
Grady Wind	U.S.	New Mexico	220	2019
Henvey Inlet Wind	Canada	Ontario	300	2019
Tuli Energy	Mexico	Zacatecas	150	2019
Tsugaru Wind	Japan	Aomori	122	2020
Phoenix Solar	U.S.	Texas	83	2021
Gulf Wind Repower	U.S.	Texas	271	2021
Western Spirit Wind	U.S.	New Mexico	1,050	2021

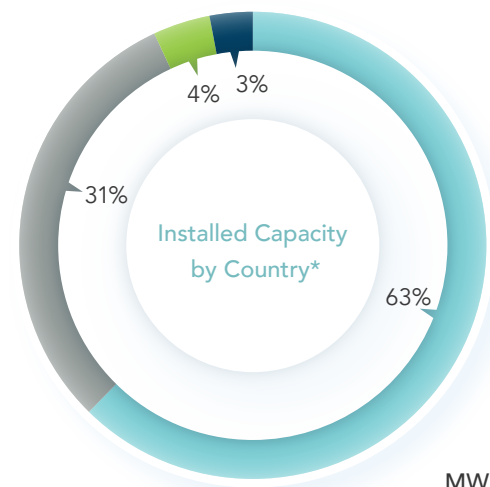
## Performance Metrics



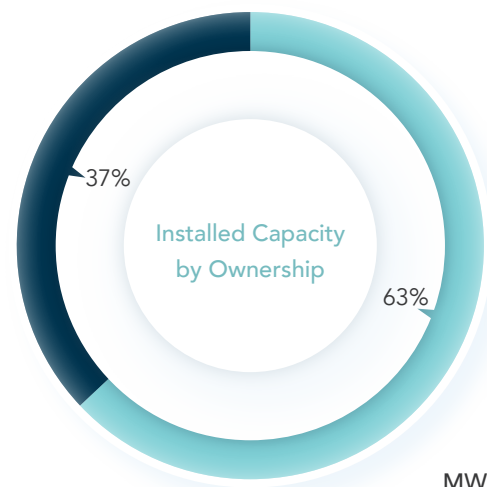
	MW
Wind	5,661
Solar	274
<b>Total</b>	<b>5,935</b>



	MW
Pattern Energy	5,494
GPI	208
Third-party	233



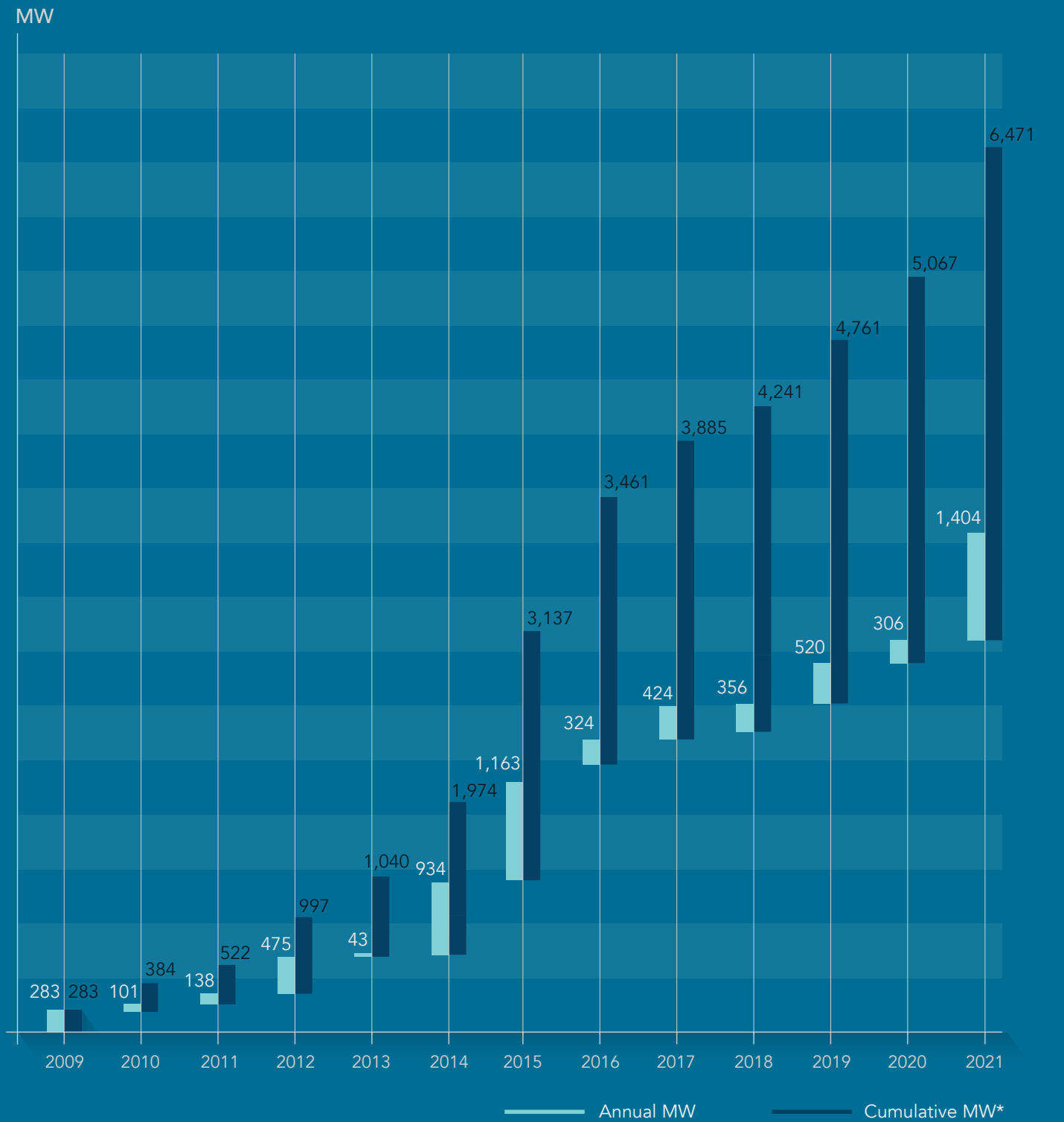
	MW
United States	3,748
Canada	1,829
Japan	208
Mexico	150



	MW
Pattern Energy or affiliate	3,728
Other	2,207

\*Pattern Energy currently operates or holds ownership interest.

## Installed or Acquired Capacity by Year



\*Represents cumulative total of utility-scale renewable power installed or acquired by Pattern each year, irrespective of ownership percentage. The cumulative total includes three sites that we no longer own or operate, making it greater than our current owned and operational capacity. Solar power is represented as MWac.

## Development Pipeline

Pattern's renewable energy pipeline contains bold initiatives that can help facilitate the global transition from fossil energy to a sustainable future. We are committed to reducing the amount of fossil fuel generation on the grid while improving grid infrastructure to support more renewable power.

Our development strategy is diversified, from creative partnerships and strategic placements near coal plant retirements to high voltage transmission-enabled renewables and greenfield wind and solar standalone and hybrid projects. We are driving development forward on a 25+ GW pipeline and have grown our Origination and Power Marketing team to support this activity.

In 2021, examples of our development projects included our 600 MW Uplands Wind project in Wisconsin and the 700 MW Heritage Prairie Renewable project in Illinois. Heritage Prairie Renewable is a hybrid wind and solar project jointly developed by Pattern and ConnectGen.

Pattern's Joint Venture with Talen Energy Corporation (Talen) called PT Energy Transitions continued development activities on its portfolio, consisting of up to 1,400 MW of utility-scale renewable energy projects and representing approximately \$2 billion of investment. Development activities focused on two near-term solar projects, a hybrid solar and wind project, and four early-stage solar projects.

We expect to commence construction on multiple solar projects over the next several years. The first is the 100 MW Montour Solar One project adjacent to Talen's legacy Montour conventional generating station in Pennsylvania. Montour is among Talen's coal-fired facilities that will cease burning coal by the end of 2025.

Our largest development underway is the 3,500 MW SunZia Wind project in New Mexico that will generate energy equal to the electricity needs of 2.5 million Americans once operational. We expect to start construction on SunZia Wind in 2023.

Global development pipeline

25+ GW

## Transmission-Enabled Renewables

As the country accelerates a transition to more clean, renewable energy, new infrastructure is required to access and deliver these resources to where they are needed. The Pattern team has deep experience developing and building high-voltage transmission infrastructure.

This expertise is evident as early as our inception when our team had developed, financed, and managed the construction of the 53-mile, 345 kV HVDC undersea Trans Bay Cable, the first and only merchant transmission line in California. Since then, we have built over 500 miles of transmission infrastructure to connect our renewable energy sites to electric grid systems and transport our clean electricity over long distances.

In Canada, through our partnership with Henvey Inlet First Nation's subsidiary Nigig Power Corporation, we developed and constructed a 62-mile (100 km) 230 kV transmission line spanning four local jurisdictions in Ontario to deliver energy generated by our 300 MW Henvey Inlet Wind facility to the Hydro One transmission system.

Before completing construction on the 155-mile, 345 kV Western Spirit Transmission line in 2021 to bring energy from our 1,050 MW Western Spirit Wind facility to market, we developed, constructed, and continue to operate the 33-mile, 345 kV Western Interconnect line that delivers energy from our 324 MW Broadview Wind and 220 MW Grady Wind facilities. Our New Mexico sites have long-term, firm, point-to-point transmission service agreements to move their output through the Public Service of New Mexico, Tucson Electric Power, and the Arizona Public Service transmission systems.

We are building on our experience to complete the development of two transformative interregional lines using high-voltage direct current (HVDC): the SunZia Transmission Project and the Southern Spirit Transmission Project. HVDC is the most efficient, reliable, and cost-effective technology to move large amounts of power over very long distances.

## SunZia Transmission

SunZia Transmission is a 550-mile bi-directional ± 525 kV HVDC transmission line that will carry New Mexico's wind energy to areas with high power demand, delivering fossil fuel-free, affordable electricity to the Western United States.

Pattern is privately developing and funding SunZia Transmission. The project partnered with the New Mexico Renewable Energy Transmission Authority (RETA) for development in New Mexico. We expect to begin construction of the line in 2023 and operations in 2025.



Southern Spirit Transmission is a way to provide reliable power to the Southeast, but in times of crisis, such as Winter Storm Uri, certain Southeastern markets could have sent reliable power to Texas if the line had existed.

### Cary Kottler

Senior Vice President, North America Development  
Pattern Energy



## Southern Spirit Transmission

Pattern is developing Southern Spirit Transmission to create a backbone between the Texas and Southeastern transmission grids. The bi-directional line will allow the grids to share power, especially in periods of high energy demand.

The project will facilitate a valuable connection to diverse energy resources, providing significant reliability benefits and access to affordable energy throughout the region. The state-of-the-art design uses ±525 kV HVDC technology.

Southern Spirit will begin in Louisiana at the Texas border and extend approximately 400 miles to Mississippi. It will connect to Texas through the Rusk to Panola Transmission project in partnership with Garland Power & Light.

With a target start of construction in 2024, Southern Spirit expects to deliver widespread direct and indirect job creation and economic benefits, in addition to providing consumer savings when it reaches its in-service date in 2027.

## Construction Projects

Pattern's construction team had a historic year in 2021 that highlighted our diverse expertise and experience across technologies, terrains, and countries.

Completing construction on our 1,050 MW Western Spirit Wind project and its 155-mile 345 kV transmission line in New Mexico on time and within budget would be monumental for any year. It was especially so during a global pandemic requiring extra precautions to keep construction workers safe. Blattner Energy constructed the wind facility, GE Renewable Energy supplied the wind turbines, and EC Source constructed the transmission line.

Construction entailed more than 1,000 workers building 550 miles of access roads, installing 1,100 transmission structures, and erecting 377 wind turbines spanning three counties. The facility creates substantial economic benefits for New Mexicans while delivering its power to customers in the West, helping the region meet its demand for renewable energy.



I was proud to support the Western Spirit Transmission project every step of the way. As we build more transformative infrastructure projects like this, New Mexico will grow our ability to export cleanly generated electrons to hungry energy markets in neighboring states and import thousands of good-paying jobs and billions of dollars of private investment back into our communities.

**U.S. Senator Martin Heinrich**

Additionally, we completed two major construction projects in Texas. Working with M.A. Mortenson Construction and using panels manufactured in the U.S. by First Solar, the 83 MWac Phoenix Solar project became operational, selling most of its power to Digital Realty. Technological advances allowed Pattern to repower our Gulf Wind facility along the Texas coast to capture more wind energy per turbine, increasing production and reducing the cost of electricity.

Working with RES Americas and Siemens Gamesa, we reused the 118 original Gulf Wind turbine pads, foundations, and collection system, while replacing the turbine nacelles, towers, and blades. About 75% of the old turbine blades were recycled or sold to a wind turbine services company that can reuse them. The 271 MW repowered facility came online in 2021, with Austin Energy purchasing its power under a 20-year agreement.

Pattern expanded our Canadian footprint into Alberta by kicking off construction of Lanfine Wind at the end of 2021 with Borea Construction. The project is spurring economic development and contributing to local causes. We expect to complete installation of the 35 Vestas 4.3 MW wind turbines and reach commercial operation by the end of 2022.

With our Japanese affiliate GPI, we had construction activity on several projects, including the 113 MW Sumita Tono Wind project in Iwate Prefecture and the 112 MW Ishikari Offshore Wind project in Ishikari Bay, Hokkaido Prefecture. In addition to its fourteen 8 MW offshore wind turbines, Ishikari Wind will have a 100 MW/180 Megawatt-hour battery energy storage system.

In Mexico, our joint venture with CEMEX Energía completed construction activities on our 150 MW Helios Generation solar project in Zacatecas, and the facility began producing energy in 2021. However, there were delays in the project receiving its commercial operations declaration from the government, and the government forced the project to cease delivering energy to the grid in 2022. Pattern leadership met with authorities in Mexico, including President Andrés Manuel López Obrador, and are confident a resolution is on the horizon.



If we're going to make this decade one of exponential climate action, we need more than just bold goals and lofty long-term promises — we need real solutions and results today. Bringing this state-of-the-art facility online makes it our largest wind project to date — providing clean energy for hundreds of thousands of Angelenos and bringing us one major step closer to becoming a city powered without fossil fuels.

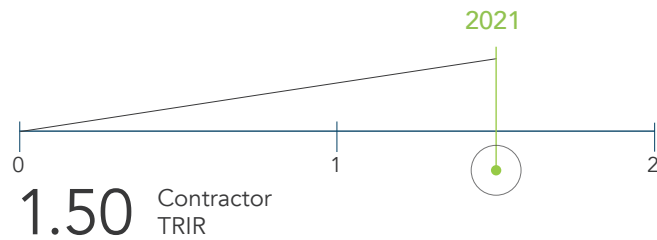
**Los Angeles Mayor Eric Garcetti**



## Explore: GPI in Japan



30%  
Women  
Employees



Pattern develops, owns, and operates renewable energy assets in Japan through our Japanese affiliate, GPI. GPI functions independently with its own management team and Board of Directors, and Pattern has representatives on both. GPI collaborates with Pattern's business units and adopts our policies and practices where they align with Japan's business culture and law.

Headquartered in Tokyo, GPI has a team of professionals covering all areas of expertise necessary to operate and manage a full-scale renewable energy business. In keeping with principles innate to Japanese culture, GPI shares Pattern's values and commitments, such as attention to safety, respect for nature, and creating meaningful relationships.

GPI operates three wind and two solar energy facilities, totaling more than 200 MW of renewable power and producing clean energy and economic benefits for the country. Additionally, GPI has three wind power facilities under construction and over four gigawatts (GW) of wind capacity in their development portfolio, which includes approximately 1.4 GW with Feed-in-Tariff certifications.

Pattern and GPI have built an in-house team of leading experts in offshore wind power. Following more than 15 years of planning, construction activities increased on the Ishikari Offshore Wind project in 2021. Located approximately three kilometers from the shore of Ishikari Bay in Hokkaido, the 112 MW facility will feature the first installation of 8 MW offshore wind turbines in the country and an onshore battery storage component with 100 MW x 180 MWh of capacity.

The 14 Siemens Gamesa wind turbines used for the Ishikari Offshore Wind project and the turbine supporting structure received ClassNK certification to confirm the turbine model meets the stringent technical standards required by the Japanese government to approve construction. Installation of the turbines offshore requires the making of a specialized vessel to transport them.

Environmental assessments in Japan are comprehensive, may take multiple years to complete, and require approval from the Ministry of the Environment. The GPI team strives to mitigate potential environmental impacts and preserve critical habitats. Building meaningful relationships is also an essential component of every project, from development through construction and operations.

In 2021, the Ministry of Environment published "Casebook of Cooperation between Developers and Local Communities - Realizing the Sustainable Development Goals through Development Projects." The engagement initiatives of GPI's Kanagi Solar and Ohorayama Wind facilities represented two of the seven case studies featured in the publication.

Through its engagement with local communities, GPI contributes to educating school children about renewable energy. They host tours at their operational Ohorayama Wind and Tsugaru Wind facilities and the Sumita Tono Wind project under construction. There has been an increased interest in school field trips, and in 2021, the three sites provided tours to more than 300 students. The GPI employees enjoy the opportunity to teach children about wind energy, share the amazing features of wind turbines, and generate local pride in having renewable energy in their communities.

We believe Japan has tremendous potential for growth in renewable energy. Pattern and GPI will continue harmonizing our strengths and sharing best practices while respecting tradition and cultural norms. GPI is well-positioned to continue helping the Japanese government reach its sustainability goals.



We will proceed with construction work while being considerate of the environment, safety, and local communities. It is an honor to promote the creation of clean energy in a manner that protects the cultural values of the region and enhances critical infrastructure for the country.

**Mitsuru Sakaki**

Director and President of GPI



## Spotlight: Solect Energy

Pattern acquired our first commercial solar and energy storage company in 2021. Founded in 2009, Solect Energy is the New England market leader for commercial and industrial (C&I) solar and energy storage development, construction, and solar services.

The company is headquartered in Hopkinton, Massachusetts, and had approximately 80 employees at year-end, with 27% female. Solect's three primary business lines are solar and storage development, project and construction management, and operations and maintenance (O&M) solar services.

With over 500 customers, 650 completed projects, and over 150 MW under O&M agreements, Solect has a strong brand reputation as a trusted partner among its customers and the industry. For the past seven years, Solar Power World has ranked Solect as a leading commercial solar developer and EPC firm in the U.S. and North America.

Solect has a diverse customer base, including government agencies, cities and towns, and non-profits who want to capture the many benefits of solar power. Going solar reduces energy costs and the carbon footprint for its customers. Solar allows a customer to forecast the cost of electricity use for the long term with a low, guaranteed rate, providing a hedge against volatile energy prices.

Solect classifies its projects as either "commercial projects" or "retained projects." System ownership is the difference: commercial projects are financed by their owners, and Solect owns the retained projects. At the end of 2021, their portfolio was approximately 40% commercial and 60% retained projects.

Solect manages project development activities, which include due diligence to investigate system feasibility, utility integration, commercial feasibility, building structural assessments, and determining whether the inclusion of a battery energy storage system makes sense based on the customer's needs.

Once a project enters the construction phase, Solect manages installation with employees focused on construction logistics, procurement, and safety and an installation contractor that Solect has worked with for over a decade. Solect has a go-to local network of electrical contractors for the wiring, and Solect manages safety throughout the construction process.

In nearly 100% of commercial projects, customers choose Solect to continue to operate and maintain the project beyond the one-year warranty period. Solect manages long-term operations and maintenance for all retained projects and enters into a Power Purchase Agreement (PPA) and site control instrument with the customer.

Once the utility grants Solect permission to operate the project, Solect transfers project ownership to its wholly-owned subsidiary, Solect Energy Lessee LLC. The Solect subsidiary then contracts with Solect's Services Group to handle the ongoing operations and maintenance, production monitoring, and solar incentive administration. This structure works well for customers that do not have a tax appetite or liquidity to purchase the system.

Solect enters many of its PPAs through Power Options®, especially in the Massachusetts market. PowerOptions® is an energy-buying consortium that provides non-profit, public sector, and municipal energy solutions of any size across Massachusetts, Connecticut, and Rhode Island. It has over five hundred non-profit and public entity members in the consortium, spending \$200M+ annually on energy. Its collective strength yields optimal pricing and stability for its membership.



Solect has won three separate PowerOptions® Requests-for-Proposals (RFPs) since 2016. In 2021, PowerOptions® chose Solect as the exclusive provider for its combined Solar + Storage program without size limitation. The term of the new agreement runs through the end of 2025. Including a battery storage component with a solar installation provides financial incentives, addresses demand charges, adds functionality, and enables resiliency.

Solect is a values-centric company with proven, seasoned, and disciplined executives. Many of the executive and senior leadership teams have been with Solect since its inception, and the company has relatively low employee turnover.

Employees have clearly defined roles, quantifiable goals, and are empowered to succeed. The executive team performs quarterly strategic planning, analysis, and benchmarking of key performance indicators and sets quarterly goals and objectives for all operational disciplines.

Pattern and Solect are integrating many of our governance practices and policies, such as our approach to solar panel procurement and ensuring no human rights concerns in the supply chain. Solect employees will also complete Pattern's compliance training on anti-bribery, anti-corruption, and anti-harassment. Other areas of integration involve Pattern's health and safety, government relations, sustainability, and diversity, equity, and inclusion.

In 2021, Solect completed a solar parking canopy system at the Brophy Elementary School in Framingham, Massachusetts. Solect has completed two other projects with the City of Framingham: a solar rooftop and canopy system with energy storage at a middle school and a solar rooftop system at the public library.



## Our Approach to Sustainability



### Governing Our Sustainability

Pattern views sustainability as core to our mission to transition the world to renewable energy and is committed to advancing our Environmental-Social-Governance (ESG) practices and disclosures. From the top of our organization, Pattern's Board of Directors discusses ESG-related topics at every meeting. Examples include cybersecurity, risk management, health and safety, supply chain, and employee engagement and satisfaction.

We updated the Board of Directors' Nominating, Governance, and Compensation Committee Charter in 2021 to include ESG oversight. We present annually to the entire Board on our sustainability program and how we respond to stakeholder demands and market trends.

Our External Affairs Department leads the program, including coordination between departments to meet goals, data management and analysis, and stakeholder engagement and communications. An internal Sustainability Advisory Committee consists of leaders from cross-functional disciplines to help shape and implement our ESG objectives and strategies. Additionally, over 30 Subject Matter Experts encompassing all departments provide metrics and insights to inform our reporting and program evolution.

While monitoring ongoing international efforts to converge ESG reporting frameworks, Pattern continues to use the GRI Standards as our program's foundation. We also align our reporting with the United Nations Sustainable Development Goals and the Sustainability Accounting Standards Board. We reference the Equator Principles to strengthen our project-level practices and the Task Force for Climate-Related Financial Disclosures to improve our approach to climate risks. Our first submission to the GRESB Infrastructure Assessment in 2021 identified areas where we can improve documentation of our practices.

As our company grows and our sustainability program matures, so does our governance of ESG topics. Management systems document our approaches to meeting Pattern's formal commitment statements at our operating facilities. Now we are establishing methods to verify how we meet these commitments during project development. We created a stage-gating process to apply a standard investment management workflow to every project. Our Investment Committee will not approve funding for the next development stage until the project meets milestones in the prior stage-gate.

### Managing Our Supply Chain

Pattern expects our suppliers to conduct business lawfully and ethically, respect human rights, and share our commitments to safety, communities, and the environment. Responsible procurement practices help meet these expectations and enhance the ripple effect of positive impacts created by our efforts to transition the world to renewable energy.

Our procurement practices begin with due diligence during supplier selection. We use a specialized third-party service to vet our suppliers that are considered medium to high risk from a safety perspective for construction and operations activities. ISNetworld assesses current and potential suppliers based on Pattern's criteria and risk matrix, including health and safety programs, records, and liability insurance. Additionally, we activated ISNetworld's ESG Assure feature to have suppliers answer an ESG questionnaire.

Working with our industry, suppliers, and specialized consultants, we further enhanced our due diligence on the sources of raw materials in the solar supply chain to mitigate risks of human rights concerns. In December 2021, U.S. President Biden signed the Uyghur Forced Labor Prevention Act (UFLPA), which went into effect in June 2022. Importers must provide evidence to the U.S. Customs and Border Protection to demonstrate their supply chains did not use forced labor. Pattern updated our contracts for solar suppliers to ensure compliance with the UFLPA.

We established an internal ESG Supply Chain Working Group with interdepartmental representation, including corporate and capital procurement, operations supply chain, and legal, to strengthen the sustainability of our supply chain. The team developed a Supplier Code of Conduct (SCOC) that considers internationally recognized human rights standards, industry best practices, and requests from our stakeholders, such as reporting on supplier diversity. Third-party experts are working with us to finalize and implement the SCOC.

Additionally, we are developing a Supplier Diversity Program by defining the program's boundaries, objectives, targets, and implementation stages. The program will capture performance metrics and identify areas for improvement. Other outcomes in 2021 included increasing efficiencies in our operations supply chain that helped mitigate the impact of the pandemic on parts delivery and decreasing turbine downtime during major corrective work.



## Engaging Our Stakeholders

Stakeholders, both internal and external, are at the center of our sustainability program. Pattern defines our stakeholder groups as those that can affect or be affected by our performance. We strive for our sustainability program to link sustainable growth to our business interests by engaging with our stakeholders to identify actions we can take to create shared value.

We proactively communicate our ESG disclosures to stakeholders through the sustainability page of our website and by publishing an annual Sustainability Report. We also share ESG-related stories on our website, social media outlets, and employee intranet, The Current.

Pattern responds to ESG disclosure requests from various stakeholders. In 2021, we answered ESG requests from our investors, project lenders, current and prospective customers, and insurance underwriters. We receive formal ESG inquiries quarterly, annually, and ad hoc. Most come in the form of questionnaires based on various recognized ESG frameworks.

Demand for enhanced sustainability practices and disclosures continues to increase. Inquiries trending over the past year include shareholders requesting carbon impact accounting and climate risk assessments, project lenders seeking alignment with the Equator Principles framework, investors and customers emphasizing diversity, equity, and inclusion practices and metrics, and customers inquiring more about our projects' community benefits and environmental assessments. We apply what matters to our stakeholders to improve our approaches and disclosures.

In addition to our ESG program-specific activities, stakeholder engagement is a foundational component of our company's approach to doing business. Without input and support from external stakeholders, we could not build renewable energy projects. Throughout this report are descriptions and stories about how we work with diverse stakeholder groups during every stage of a project's lifecycle – from development and construction to operations and asset management.

Pattern employees are also key stakeholders that provide valuable feedback to inform our actions. Our Human Resources and Workplace Operations and Experience team leads a variety of mechanisms to engage employees – examples include quarterly roundtables, surveys, the intranet, Affinity Networks, and monthly Town Halls. We have an

Employee Engagement Task Force that analyzes the results of surveys and creates engagement Key Performance Indicators to improve responses to specific survey questions over time.

Stakeholder engagement enables us to capture diverse input and perspectives to meet our business and sustainability objectives. It helps us design better projects for communities, deliver products to meet customers' needs, provide employees with the benefits and opportunities to support retention, and contribute to a workplace culture that promotes inclusivity.

### Stakeholders

#### INTERNAL

- \_\_\_\_\_ Affinity Networks
- \_\_\_\_\_ Board of Directors
- \_\_\_\_\_ Diversity, Equity, and Inclusion Council
- \_\_\_\_\_ Employees
- \_\_\_\_\_ Executive, Leadership, and One Pattern Teams

#### EXTERNAL

- \_\_\_\_\_ Auditors
- \_\_\_\_\_ Colleges and universities
- \_\_\_\_\_ Customers and off-takers
- \_\_\_\_\_ Federal, regional, and local elected officials
- \_\_\_\_\_ Indigenous Peoples
- \_\_\_\_\_ Industry associations
- \_\_\_\_\_ Industry subject matter experts
- \_\_\_\_\_ Insurance Underwriters
- \_\_\_\_\_ Lenders and bond holders
- \_\_\_\_\_ Nongovernmental organizations
- \_\_\_\_\_ Nonparticipating, nearby landowners
- \_\_\_\_\_ Participating landowners
- \_\_\_\_\_ Permitting authorities
- \_\_\_\_\_ Project area communities
- \_\_\_\_\_ Rating agencies
- \_\_\_\_\_ Regulators and government agencies
- \_\_\_\_\_ Shareholders
- \_\_\_\_\_ Vendors and suppliers

## Advancing Our Industry

Pattern works to grow the renewable energy industry responsibly by collaborating with our industry peers and other stakeholders across our trade associations. Areas of cooperation entail funding research, sharing and developing best practices, championing solutions to market barriers, growing demand for renewable energy, and supporting the development of our workforce.

Our trade association participation includes leadership positions on the Board of Directors of national associations in the countries where we are active and in alliances focused on regional advocacy with legislatures, agencies, and grid operators. Pattern staff chairs and engages in association committees and working groups to further our collective objectives.

Launching at the start of 2021, the American Clean Power Association (ACP) united the influence of the U.S. renewable energy industry to further our shared goals, unifying the wind, solar, storage, and transmission companies driving the clean energy transition. Pattern helped lead this effort, and our CEO, Mike Garland, is a Director on the ACP Board.

In 2021, the Canadian Renewable Energy Association (CanREA) celebrated its first anniversary of consolidating technology-specific national associations to create one voice for wind, solar, and energy storage solutions. Pattern's Country Head, Frank Davis, sits on the CanREA Board.

Our SVP of External Affairs and Market Development, Sarah Webster, joined the Board of the Advanced Energy Economy (AEE), our trade association representing over 100 companies

employing 3.2 million U.S. workers. AEE's mission is transforming public policy to enable the growth of advanced energy businesses by educating, engaging, and advocating in states, wholesale electricity markets, and at the federal level.

At the state and regional levels, Pattern helps to lead the industry through our Board and Executive Committee positions in trade associations, including Interwest Energy Alliance, Clean Grid Alliance, Advanced Power Alliance, and ACP-California. Pattern also plays an active role across the Western U.S. to form an organized market to improve reliability and maximize carbon reductions.

We participate in other organizations to align with key stakeholders and advance specific aspects of our business. Our involvement with the Clean Energy Buyers Association engages energy customers to work toward the association's aspiration of a 90% carbon-free U.S. electricity system by 2030 and to cultivate a global community of energy customers driving clean energy. Additionally, our leadership and participation in the Energy and Wildlife Action Coalition and Renewable Energy Wildlife Institute help us promote research to minimize, avoid, and mitigate interactions between renewable energy and wildlife.

Pattern's Project Director for Mexico Business Development, Pablo Gottfried, represents us on the Executive Committee of the Asociación Mexicana de Energía Eólica (Mexican Wind Power Association). Our involvement in the Asociación Mexicana de Energía Solar (Mexico Solar Energy Association) is through our partnership with CEMEX Energía. Pattern's Japanese affiliate GPI is a Japan Wind Power Association member.





## Spotlight: Energy Transition for All

Pattern helped create the Energy Transition for All initiative through the ACP Board of Directors in 2021. The initiative aims to benefit workers, communities, and those historically left behind as we transition to a clean energy economy. ACP published the Energy Transition for All report in 2022, detailing eight company-led and five industry-led commitments under three pillars: expanding opportunities for workers, creating value for communities, and leading in diversity and inclusion.

We have an excellent foundation to continue building our diversity, equity, and inclusion (DEI) program to meet the company-led commitments in the report. Examples of our initiatives focused on enhancing diversity, equity, and inclusion include:

- Encouraging employee-led Affinity Networks
- Supporting a diverse internal DEI Council
- Publishing Statement of DEI Commitments
- Hosting an annual DEI Month
- Conducting staff engagement surveys on DEI topics
- Requiring managers to take unconscious bias workshops
- Offering paid internships

We are taking action to improve diversity in our workforce and leadership through recruitment, employee development, and succession planning. We have the most room for growth to meet the supplier-related commitments in the Energy Transition for All initiative.

Through our internal Supply Chain Working Group and with guidance from expert consultants, we are developing a Supplier Diversity Program. Our steps entail assessing the diversity of our current suppliers, capturing diversity information for new suppliers, and defining the program's boundaries, objectives, and targets. The program will ensure we can meet customer demands for supplier diversity reporting.

Working collaboratively with our industry to share best practices and support industry-wide DEI efforts helps us collectively meet the challenges and opportunities before us and transition the world to renewable energy.



## Determining ESG Materiality

Sustainability experts facilitated an ESG materiality assessment following our company's reorganization in 2020 that applied the GRI Materiality Principle to identify and prioritize topics for our work and reporting. The assessment deemed 21 topics as material for our sustainability reporting and 13 as areas to prioritize for value creation and strategic significance.

GRI defines materiality along two dimensions: (1) the significance of social, environmental, and economic impacts, and (2) the importance of those impacts to our stakeholders for informing their assessments and decisions.

The group leading the analysis identified 22 topics by weighing these two dimensions relative to Pattern's activities. They considered ESG reporting standards, the reporting practices of renewable energy companies, and ESG inquiries from our stakeholders.

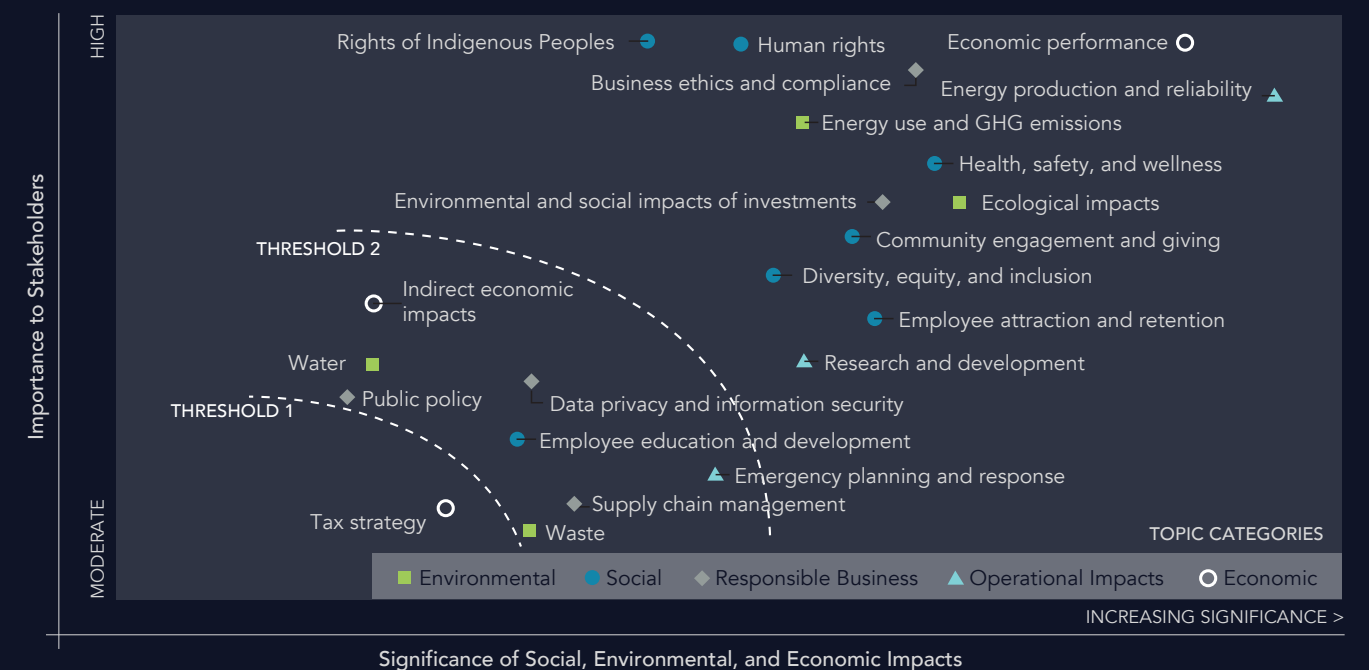
The analysis of topic significance referenced the GRI Standards, United Nations Sustainable Development Goals, Sustainable Accounting Standards Board, Equator Principles, applicable laws and regulations, industry initiatives and research, and our stakeholder inquiries.



An online survey informed the evaluation of stakeholder perspectives. Approximately 70 internal and external stakeholders took the survey, including members of Pattern leadership, suppliers, government agencies, and community members — eight percent of respondents identified as Indigenous Peoples.

We believe the outcomes of this process reflect the merit of stakeholder engagement and shape how we prioritize our sustainability work. We plan to complete a new ESG materiality assessment every three years to inform our sustainability strategic roadmap during that timeframe.

## Materiality Matrix



# Environmental Responsibility

## Our Commitment

Pattern's Statement of Environmental Commitments applies to our entire enterprise and guides us to deliver renewable energy to consumers in a way that respects the integrity of our environment. We aim to minimize adverse impacts through proper assessment, planning, avoidance, and mitigation.

We comply with laws and regulations as our minimum standard and implement industry best practices where local requirements are not as stringent. Our sound performance record, with no significant noncompliance issues, fines, or penalties, is a result of our multidimensional approach.

Ensuring fleet compliance with regulatory requirements and obligations in facility permits and contracts is a top priority for our Operations Environmental team. Pattern has established a system to track environmental metrics and reporting activity, assign tasks and accountability, and generate quarterly compliance reports for our leadership. Pattern's Enterprise Risk Management process monitors facility and enterprise-level environmental risks.

## Management Approach

Pattern's approach to meeting our commitments begins with relevant regulations and voluntary industry guidelines informing our due diligence, risk assessment, and mitigation practices for project development. In 2021, we improved the governance of our approach by documenting it in a standard investment management workflow we now apply to every project. Pattern's Investment Committee will not approve funding for the next development phase until the project meets the previous stage's milestones.

The first stage requires an environmental and permitting assessment, including a Critical Issues Analysis, by our environmental permitting team. The second stage requires consultations with applicable agencies, field surveys, Phase I Environmental Site Assessment studies, the determination of mitigation strategies, and sound and visual impact studies if warranted. The third stage requires the project to obtain all material permits.

During project construction, crews complete cultural and natural resources training and work alongside our environmental team and third-party construction monitors to maintain compliance with permitting requirements. Construction activity halts to properly assess the situation if crews discover an unexpected plant, animal, cultural artifact, or paleontological finding.

Pattern's Environmental Management System (EMS) covers our processes and procedures related to audits, spills, waste, and wildlife for our operating fleet. We conduct annual Environmental Awareness training for facility field teams. In 2021, we combined requirements for managing spills, waste, and wildlife into a comprehensive online training tool. We added mechanisms, such as pop quizzes, to maximize engagement, promote dialogue, and reinforce key learning objectives.

## Environmental Practices

- Conduct environmental risk screenings and comprehensive wildlife studies to assess a site's suitability for development.
- In Canada, comply with Indigenous, federal, provincial, and local permitting requirements, regulations, and laws.
- In the U.S., comply with Tribal, federal, state, and county permitting requirements, regulations, and laws.
- Adhere to the U.S. Fish & Wildlife Service Wind Energy Guidelines and Eagle Conservation Plan Guidance.
- Observe the Avian Power Line Interaction Committee (APLIC) guidelines and standards for transmission lines.
- Incorporate feedback from people in communities and natural resource agencies to help us design projects in a manner that respects wildlife and their habitats.
- Collaborate with industry peers and conservation organizations on approaches to improve and advance industry siting best practices.
- Construct projects using best practices to conserve natural resources, protect wildlife, prevent site erosion, and manage waste.
- Create, evaluate, implement, and monitor a Bird and Bat Conservation Strategy for each wind energy site.
- Maintain an Environmental Management System and an Emergency Response and Preparedness Action Plan for facility operations.
- Actively train our workforce on our EMS, environmental compliance, and best practices.
- Maintain a Greenhouse Gas Inventory Management Plan.
- Work to monitor, report, solicit feedback, and continually improve our overall environmental performance.

## Discover: Respecting Cultural Resources at Western Spirit Wind

Pattern completed construction on our Western Spirit Wind facility in 2021, which entailed 1,050 MW of wind power installed across four sites and approximately 65 miles of gen-tie transmission lines to connect the project sites to the main 155-mile Western Spirit Transmission line.

Our team kicked off environmental studies on about 500,000 acres of land in the region in 2016. The work entailed thousands of hours of biological and cultural resource field surveys. With the scale and complexity of the area, identifying, avoiding, and minimizing impacts on natural resources posed unique challenges. One challenge was minimizing impacts on the cultural resources in the area's rich archaeological record spanning thousands of years.

The project region contains archaeological resources across dozens of sites and isolated artifacts. Archaeologists with local expertise identified areas in the project area with a greater likelihood of containing cultural resources and conducted field surveys in those areas, including on private lands where such resources are not subject to formal protection. Based on their results, we worked with the engineering and construction team to avoid and minimize impacts to all identified cultural sites on private and state land.

This iterative and collaborative exercise resulted in a historic wind energy installation that respected the historic cultural resources in the area.



## Spotlight: Awarding Environmental Stewardship in Operations

Our field operations teams frequently demonstrate Pattern's values in implementing stewardship practices and conservation achievements. The annual Environmental Stewardship Award recognizes their leadership efforts and promotes sharing best management practices by providing ideas that may be useful at our other operating facilities.

Staff nominated eight facilities in 2020, the first year of the award, and seven facilities in 2021. The Award Section Committee considers whether the nominees follow Pattern's Environmental Management System, uncover cost-savings, improve the quality of the natural environment, and support good community relations.

The program recognized our Logan's Gap Wind site in 2021 for its Recycling Initiative. The idea began when Facility Manager Juan Maldonado read that his daughter's school was collecting cardboard for recycling. Instead of throwing away the cardboard that site supplies and parts arrived in, Juan delivered them to the recycling center in town, and the school received credit.

Juan started thinking about other items the site could recycle, like light bulbs that can reach three feet long and small electronics. He found a local service that provides ready-to-ship containers for collecting recyclable items. The company sends the site an empty box to fill and ship back with the recyclable items. The site also started recycling scrap metal and large batteries from the turbines by taking them to the scrap yard and receiving money back.

Logan's Gap Wind opened the initiative to their site team, allowing them to bring anything they want to recycle, and Juan will deliver it to the recycling center. While there are no regulations to recycle these materials, the team enjoys helping the local school and the environment by encouraging recycling at home and work.

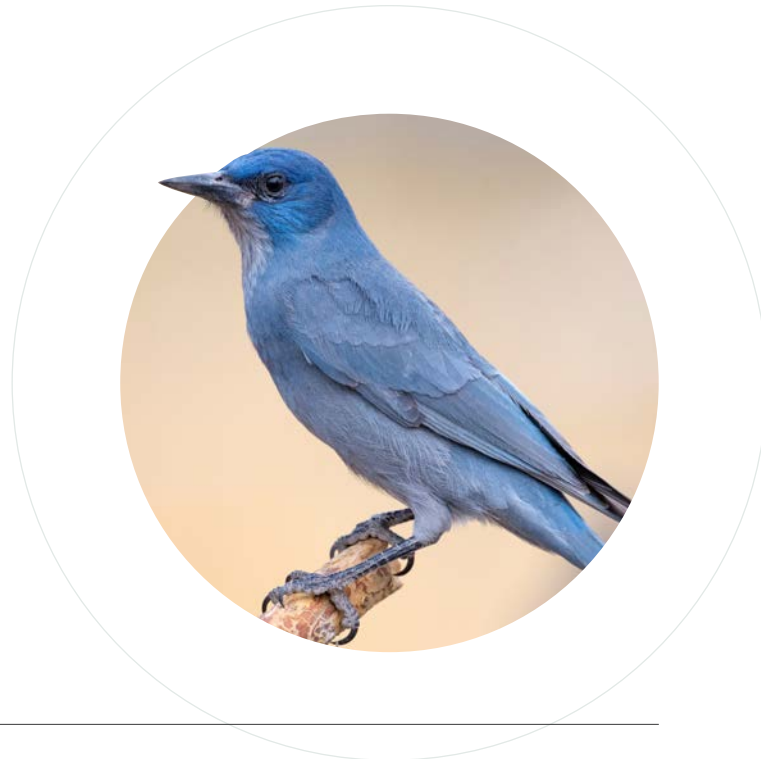


## Protecting Biodiversity

We strive to conserve natural resources, including wildlife and associated habitat while building the vital renewable energy sources needed to create a cleaner, sustainable planet for all species.

Pattern conducts extensive environmental studies and assessments before building a project to understand the potential risks to natural resources and wildlife, allowing the design of our projects to avoid and minimize possible impacts. Once a facility reaches operations, we monitor its effects and adjust operations to reduce and mitigate such impacts if needed.

We are committed to furthering the collective understanding of how wildlife interacts with renewable energy and play a leadership role in collaborative efforts to advance research. Our position on the Board of Directors of the Renewable Energy Wildlife Institute creates opportunities to support research that can help the industry expand while protecting and conserving wildlife.



Far from being at odds, renewable energy and wildlife organizations are reliant on each other for success. Climate change is too big a threat. We will continue to work together to achieve a cleaner, brighter future for us all.

### Op-Ed By Elizabeth Gray and Mike Garland

CEO, National Audubon Society and CEO, Pattern Energy

Organizations	Involvement
Renewable Energy Wildlife Institute	Founder; Board of Directors; Co-Chair of the Research Committee and Outreach Committee
Energy and Wildlife Action Coalition	Founder; Member of Steering Committee, Policy Committee, and all technical committees
Avian Power Line Interaction Committee	Participant
American Clean Power Association (ACP)	Chair, Eagle Subcommittee; Participant on all wildlife-related committees and subcommittees
ACP Migratory Birds Committee and ACP Bats Committee	Participant
Canada Renewable Energy Association	Founder and participant, National Siting and Environmental Issues Group
Canada Wind Energy Bird and Bat Monitoring Database Steering Committee	Industry Representative

## Explore: Collaborative Partnerships on SunZia Wind and Transmission

Our most significant development effort to date is the 3,500 MW SunZia Wind project in New Mexico and its 550-mile HVDC transmission line that will carry the energy west to meet market demand. The SunZia Wind and Transmission project provides an example of Pattern's responsible development and stakeholder engagement approach.

Working collaboratively with diverse stakeholders – environmental organizations, landowners, communities, and Tribal and government entities - has helped us proactively address concerns, establish the most environmentally conscientious project layout and path for the transmission line, and deploy new research and innovative mitigation strategies.

SunZia Transmission's extensive Environmental Impact Statement (EIS) permitting work under the National Environmental Policy Act has been underway for years. The process entails 25 cooperating agencies and analyzes potential impacts on environmental resources, wildlife, water, cultural sites, aesthetics, and recreational assets. The SunZia Wind project is on all private or state lands, so we voluntarily follow the USFWS's Wind Energy Siting Guidelines to assess, minimize, avoid, and mitigate potential impacts.

We instituted a robust engagement effort for the SunZia Wind and SunZia Transmission project involving local, regional, and federal environmental non-profit organizations to share our risk analyses and mitigation plans for feedback. We held quarterly workshops to address areas of concern, present studies by third-party experts, and analyze mitigation options together.

One outcome is that we are deploying emerging technology to illuminate the transmission line wires at river crossings with ultraviolet light that birds can see but humans cannot. We are funding research with the Audubon Society to continue testing the efficacy of this technology.

Another result of the collaborative approach is that we are funding a study with USFWS to tag cranes with advanced telemetry units to better understand the flight patterns of the Sandhill cranes in the Middle Rio Grande Basin.

A consultant completed a statistical analysis to determine where there was a risk of collision with the project infrastructure, which we applied to our project design and mitigation measures. This analysis became peer-reviewed published science and can also inform future development.

Additionally, we asked environmental stakeholders how we could go over and above traditional avian collision risk analysis for bird flight diverters. As a result, we will mark areas of SunZia Transmission with bird diverters that would not have come up in a traditional assessment.

Pattern finds our approach to seeking input from diverse conservation stakeholder groups contributes to our ecological mitigation efforts being an iterative process for our development work and can raise the bar for the industry.



When we started on the SunZia Wind project, there were conservation groups opposed to what we were planning due to their concern for the welfare of cranes that fly through the area. We take our commitment to the environment seriously at Pattern, so we took the time to talk to everyone involved, and we funded research into cranes. We think it's important to listen, build trust, and support the communities we are in.

### Adam Cernea Clark

Senior Environmental and Natural Resources Manager, Pattern Energy

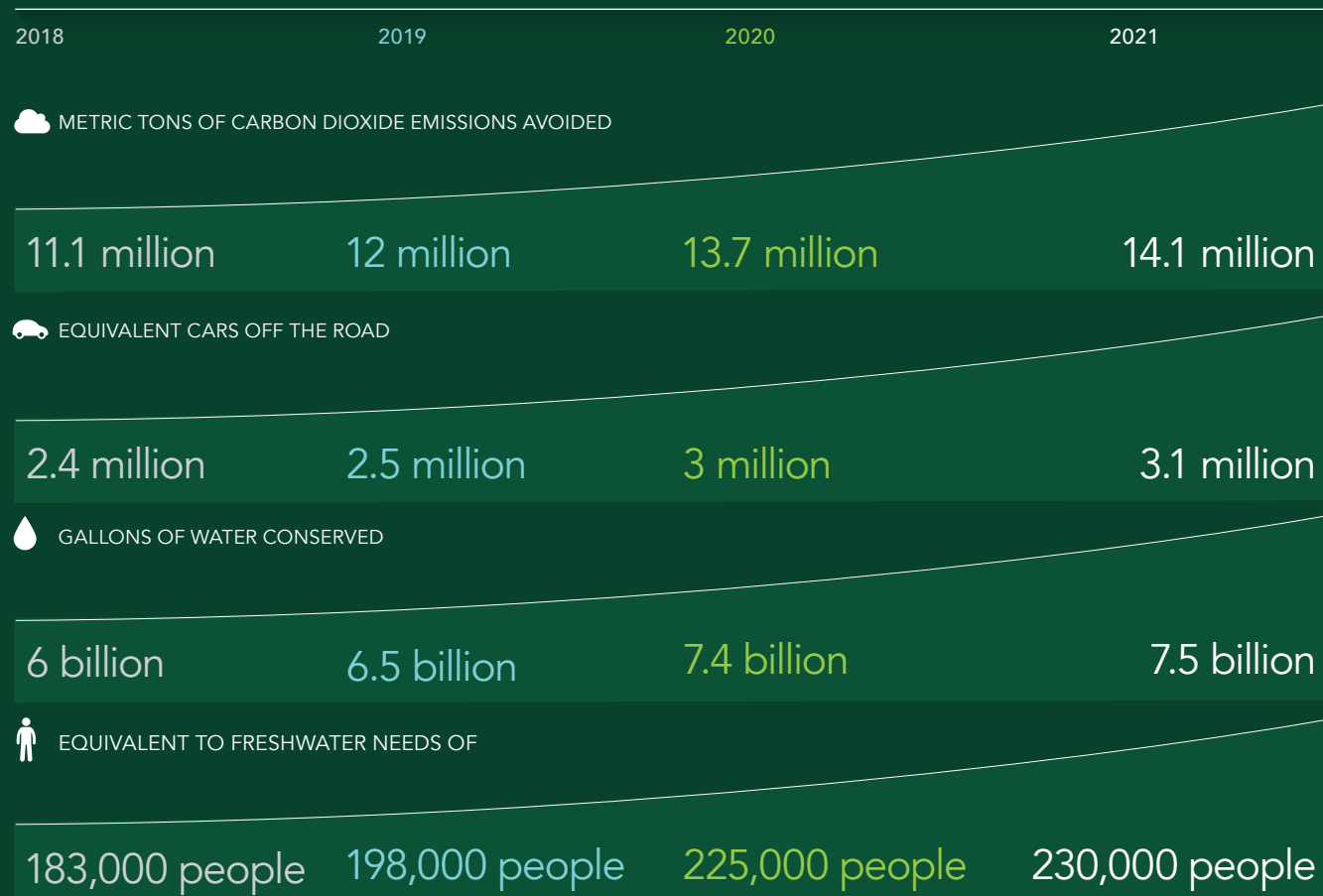


## Performance Metrics

### Energy Generated by Year

	2018	2019	2020	2021
Generation (Gigawatt-hours)	11,100 GWh	12,000 GWh	13,630 GWh	13,900 GWh
People's needs met	2,800,000	3,050,000	3,240,000	3,280,000

### Benefits of Our Generation Compared to Coal-Fired Generation



## Assessing our Climate Impacts

Wind turbines and solar panels do not directly emit emissions to operate, and our enterprise-wide power consumption is minuscule compared to our clean energy production. However, we understand emissions are associated with our activities to run our business, manufacture the equipment we use, and construct our projects.

Evaluating our direct and indirect greenhouse gas (GHG) emissions provides the foundation for identifying ways to reduce and mitigate our comprehensive carbon footprint. The GHG Protocol, launched in 1998, is the global standard framework for measuring and managing GHG emissions from private and public sector operations, value chains, and mitigation actions. It categorizes GHG emissions as Scope 1, 2, and 3.

We onboarded the Persefoni carbon accounting platform to track our 2021 GHG Scope 1, 2, and 3 emissions. Our GHG Inventory Management Plan documents our sources and processes for collecting, analyzing, and verifying this data.

GHG Scope 1 includes direct emissions from sources we own or control, such as stationary backup generators at our facilities and our fleet vehicles. In 2021, we added the impact of our fleet vehicles to our total Scope 1 emissions.

GHG Scope 2 covers emissions from purchased electricity for heating and cooling our corporate and site offices and backfeed power when needed for turbines, substations, and switchyards.

Pattern's U.S. corporate offices are certified as LEED or LEED Gold and follow Pattern's Office Environmental Policy. Our headquarters are Green Business Certified to align with City of San Francisco-specific sustainability practices in addition to the building's LEED Certification.

The amount of electricity we consume at our offices and operating sites is minimal compared to our clean energy production. Still, we are investigating where there are green power purchasing options from utility providers that service our areas to reduce this impact.

GHG Scope 3 covers indirect emissions associated with our value chain. For 2021, we calculated staff business travel and waste generated by our office headquarters. We do not currently track waste from our operating facilities because the amounts are too minimal to meet regulatory thresholds. Further, we mapped our spending on purchased goods and services and capital goods to the categories required to estimate the impacts of their GHG emissions.



Habitat loss and climate change are the two biggest threats to biodiversity. Understanding that our work of transitioning the world to renewable energy is part of the solution, I am proud to be part of the Pattern environmental team. Our objectives include addressing our environmental impacts during operations and striving to be an industry leader in advancing technology to address data management, monitoring, and mitigation.

### Danna Small

Senior Manager, Operations Environmental, Pattern Energy

EMISSIONS FROM OUR BUSINESS ACTIVITIES	
GHG Scope Emissions	Carbon Dioxide Equivalent (CO <sub>2</sub> e) in Metric Tons (mt)
Scope 1 (Direct)	634
Scope 2 (Indirect)	9,935
Scope 3 (Value Chain)	717,329

Note: Greenhouse Gas Emissions calculated in accordance with the Greenhouse Gas Protocol and based on Pattern Energy's operational control of our North American renewable energy facilities and offices with more than one employee.

AVOIDED EMISSIONS FROM OUR CLEAN ENERGY		
Reporting Boundary	Generation (MWh)	Carbon Dioxide Equivalent (CO <sub>2</sub> e) in Metric Tons (mt)
Total Installed Capacity	13,900,353	5,951,908
Operational Control	12,602,523	5,273,431

Note: Avoided emissions based on Combined Marginal Emission Factor (Regional) for U.S. assets, Average Emission Factor (Regional) for Canada assets, and Average Emission Factor (National) for Japan and Mexico assets.

## Managing Climate Risks

Pattern references the Task Force on Climate-related Financial Disclosures (TCFD) guidance in assessing the physical and transition risks a changing climate may create for our business. Measuring and managing these risks is essential to the long-term success of our company.

Physical risks can be acute or chronic, and assessing their potential impact on our business involves consideration of the hazards, exposures, and vulnerabilities. We consider physical risks from periodic event-driven extreme weather and natural disasters to long-term changes in weather patterns and the resources we use to generate clean energy. Transition risks are not as tangible and involve the impacts on our business from the societal and economic shifts to a low-carbon economy. These may include policy, technological, market, and reputational risks.

Climate change presents opportunities and risks for our business. Because our activities help reduce climate-changing emissions from the power sector, we benefit from increased demand for our product from utilities, corporate purchasers, and government policies with renewable energy targets. However, changing weather patterns and extreme weather events can influence our site production, availability, and markets.

Our Enterprise Risk Management program provides a systematic process for identifying and mitigating risks, covering corporate and project-level risks in Risk Registers. Pattern's Board of Directors receives quarterly updates, and the Executive Team receives monthly updates on risks, mitigation plans, compliance, and internal controls. We account for climate-related threats in various ways, including classifying extreme weather events as a primary risk in our Corporate Risk Register.

Pattern's multi-dimensional approach to climate risk mitigation begins at the start of a new development prospect, where our due diligence process involves an assessment of the ecological nature of the area and the renewable energy resource. We conduct technical risk assessments with construction and engineering experts during the project design phase to ensure the project infrastructure can materially withstand extreme wind speeds, temperatures, and tropical cyclones.

Climate vulnerability assessments address risk at the operational asset level and minimize potential damage if a severe weather event occurs. We further mitigate impacts to our fleet through sophisticated forecasting, modeling, and coordination between our Energy Management and Meteorological teams.

Our meteorologists provide advanced notice when potential weather disruptions are on the horizon and hour-ahead to six-months ahead production forecasts to help manage market risks where we have exposure. This assessment extends beyond predicting the availability of our energy resources at our facilities and includes weather intelligence that may impact power demands and, therefore, power prices in our markets.

There are times when extreme weather impacts our financials, such as through market pricing or hindering our ability to deliver energy, more than it physically affects our operating facilities. Examples include Hurricane Maria in Puerto Rico and Winter Storm Uri in Texas. We are improving our approach to mitigating these risks by promoting grid hardening with policymakers, evaluating financial products to address commodity price risks, identifying ways to reduce wildfire risks, and improving our ability to respond quickly during natural disasters and extreme weather events.

We are also investing in groundbreaking research to assess and mitigate climate risks. In 2021, we concluded a three-year research effort involving consultants and a university using the most sophisticated regional and global climate models to analyze our long-term wind resource risk exposure, looking out to 2050 and even 2100. The analysis helps us understand how sensitive our energy resource is to the ongoing impacts of climate change on global weather patterns.

The three groups we selected to conduct the research approached the study questions differently, providing a robust scientific approach to answering our study questions. Participants provided a literature review of over 200 white papers, historical wind speed analysis, and future climate scenario estimates. All provided a peer commentary on the other participants' reports.

Our climate modeling analysis looked at varying scenarios to understand how different future global climate outcomes may impact our energy resources. The research entailed 35 future climate scenarios simulated by climate models within the Coupled Model Intercomparison Projects (CMIP) using CMIP5 and CMIP6. The Intergovernmental Panel on Climate Change recently used these climate models for their Fifth and Sixth Assessment Reports.

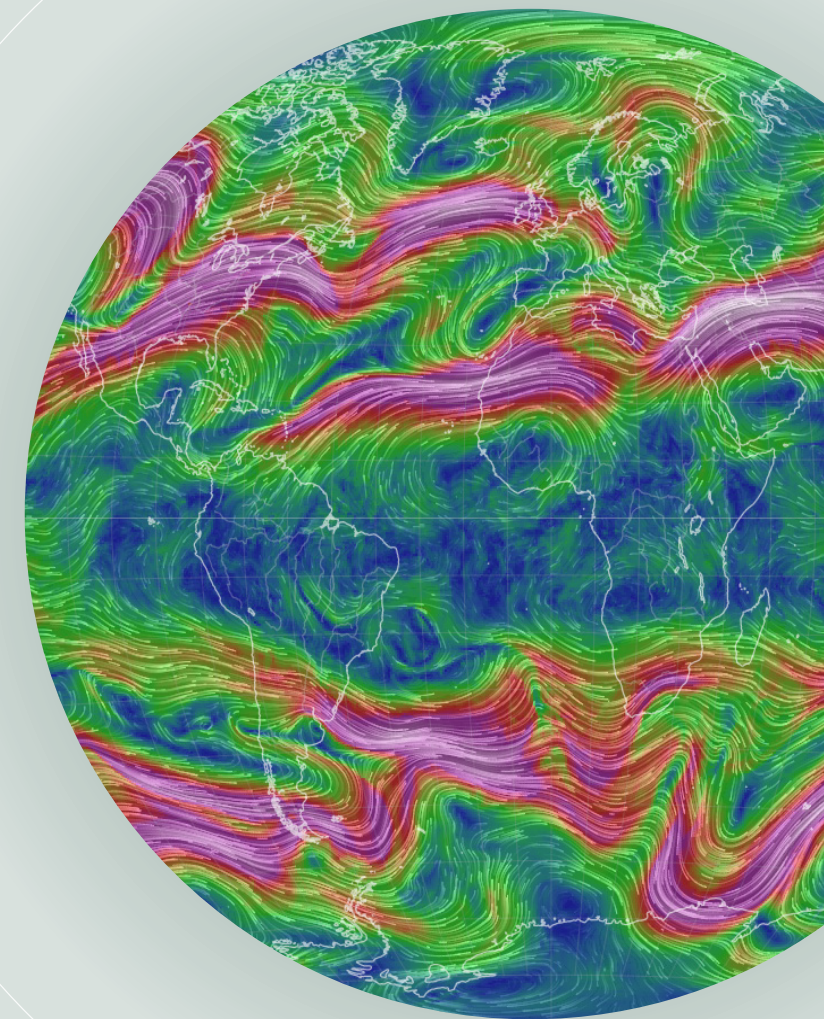
Understanding what drives the energy resource across our fleet helps improve our forecasting and inform commercial decisions. The study correlated our fleet behavior to climate indices, which will help enhance our sub-seasonal to seasonal forecasting capabilities.

One of our studies looked at high wind gusts at our facilities and changes in frequency distributions of the wind resource to see if there was an increase in low and high wind periods. We may pursue further research into the frequency and impacts of extreme weather events.

The findings did not foresee a material decline in our wind resources overall, and we believe we can adjust to minor changes over time through technological advances. Future uses of the study findings may entail assessing long-term impacts on financial scenarios and building economic models based on this best available science. We will continue to invest in additional studies and follow the science as it matures.

Cornell University was one of the study participants and gave several presentations on their work, including at the American Meteorological Society conference and The American Clean Power Association's Resource Assessment conference. They are also pursuing publishing this work in the Journal of Applied Meteorology and Climatology (JAMC).

By assessing physical and transitional risks and the severity of impacts, we can better anticipate and mitigate conditions that might hamper our ability to deliver energy to the marketplace and identify opportunities to improve, always striving toward our mission of transitioning the world to renewable energy.



# Social Responsibility



## W O R K F O R C E

### Our Commitment

Pattern values our employees and dedicates the resources necessary to create a workplace that promotes a sense of belonging. We commit to supporting our employees throughout their tenure at the company, from onboarding, internal communications, and professional development opportunities to performance management and career planning.

Five years after our company leadership announced the Pattern 2020 initiative to be the best place to work in the industry, Pattern's headquarters was ranked the highest for a renewable energy company in The San Francisco Chronicle's Top Workplaces in the Bay Area and ranked 34th overall.

### Management Approach

The Pattern 2020 initiative emphasized building a company culture responsive to employees' needs based on four pillars that continue to be a focus in our workplace today: Talent Acquisition, Talent Engagement, Talent Development, and Talent Retention.

Our program begins with Talent Acquisition: our position description questionnaire, recruiting process, and employee referral program. Next, Talent Engagement kicks off for our new hires with a Pattern culture orientation and learning curriculum.

Talent Development refers to our training programs and offerings to support employee growth and career advancement throughout their tenure with the company. Talent Retention covers our employee benefits program and our efforts to provide staff with a positive experience.



Pattern wants to continue growing our leaders from within by investing in talent development, internships and mentorships, while also taking concrete actions to increase diversity, equity, and inclusion at all levels of our organization.

#### Debbie McAdam

Senior Vice President, Human Resources and Workplace Operations, Pattern Energy





We support our employees' personal and professional growth through our integrated talent management system. In addition to training on performance-oriented competencies to help employees advance their careers, we offer resources to enhance soft skills and social awareness, such as our workshops on unconscious bias. Our monthly Training and Professional Development Newsletter highlights available instructor-led workshops and learning playlists containing training and books to broaden understanding of topics.

### Susan Criswell

Senior Talent Development Specialist,  
Pattern Energy



## Talent Engagement

Employee engagement is a top priority at Pattern, and our leadership values the feedback employees provide by continually incorporating it to improve our programs and work environment. In 2021, our Human Resources and Workplace Operations and Experience team held quarterly roundtables for all staff, facilitated one in-depth employee survey and five "pulse" surveys, and led 12 Town Halls.

We use Culture Amp to administer our employee surveys, results reporting, and benchmarking, including participation rates and satisfaction scores. Participation in our 2021 in-depth employee survey was 95%, a 15% increase from the previous one, and it resulted in a 78% employee satisfaction score, up 3%. Surveys help identify organizational strengths and weaknesses, which can direct resources needed to address problems and pursue opportunities that support retention.

Employees utilize our employee intranet, The Current, to access company information, share announcements, and engage with staff. More than 75% of employees accessed The Current every month of 2021, and we launched a mobile app to make it more available for our field employees. We also created a Help Center for new employees and expanded the Pattern Wiki that serves as an institutional knowledge base for employees to find policies and helpful information.

Our Town Halls cover diverse topics throughout the year, and they start with a State of the Company briefing by our CEO or another executive team member. Other topics vary by month and may include highlights from various departments and teams, project updates and stories from our sites, progress reports on company goals, and engagement opportunities from our Affinity Networks. On average, approximately 60% of employees watch our Town Halls live, with many more watching the recordings posted on The Current.



## Talent Development

In 2021, we formalized our programmatic approach to employee development throughout the employee lifecycle and launched several large initiatives, including a succession planning program, mentorship program, and career planning curriculum. We also continued and grew professional development opportunities, such as 360 Feedback and the DARE to Lead program.

The comprehensive succession planning program considers internal talent, talent development opportunities, and critical roles we expect to need to fill. The system identifies areas for talent development based on data analytics and leadership competencies. The program helps us fill open roles from within the company, providing possibilities for career advancement. In 2021, internal placements made up more than 20% of the 160 positions filled during the year.

Our structured mentee-driven mentorship program also helps the company develop talent from within and is open to all employees to help them reach their full potential. The program allows interested employees to tap into senior employees' knowledge, skills, networks, and experience to further their development and careers. The mentors and mentees undergo training to contribute to successful outcomes of the mentorships.

DARE to Lead is for new and existing leaders to hone their skills in competencies chosen by Pattern leadership and mapped to the DARE framework. We had 28 graduates in our DARE to Lead program in 2021, totaling over 100 graduates in the program's first five years. Participants receive Discovery Insights and Leadership Profiles during the program kickoff to learn about their communication and management styles. Over the following eight months, they partake in monthly meetings, online learnings, and in-person training sessions on situational leadership and crucial conversations.

The 360 Feedback process is a powerful development tool to provide employees with candid, anonymous feedback on essential skills and Pattern leadership competencies. This feedback helps employees increase measurable effectiveness by identifying where they stand on aptitudes that matter most for success, their strengths and areas for development, and potential derailing behaviors.

## Talent Retention

Talent Retention depends on creating an enjoyable work experience and providing competitive, equitable, and comprehensive employee compensation and benefits. Our Total Rewards team evaluates our programs annually to ensure they meet these objective and address employee feedback.

An annual pay equity review by a third party is a core part of our philosophy to provide equal pay opportunities for all employees. The assessment looks at salary differences by gender and race. The results found the steps we take to ensure we pay our employees equitably are working.

The benefits Pattern offers our employees include company-provided medical, dental, and vision health insurance, flexible spending accounts, health savings accounts, life and supplemental life insurance, and short-term and long-term disability insurance. We also have wellness plans, retirement plans, sick leave, paid parental leave, and vacation and holiday paid time off.

Additionally, we have employee perks such as gym membership options and snack programs for our office employees, a referral bonus program, interactive virtual activities, and in-person events to network and celebrate holidays, cultures, and birthdays. Employees win prizes through quarterly challenges and receive gifts for birthdays, life events, work anniversaries, and retirement.

## Internship Program

We integrate our interns into our Pattern culture and give them access to company Town Halls and The Current. Our summer internship program creates opportunities for college students to apply their academic knowledge, prepare for entering the post-graduate workforce, and learn about the renewable energy industry.

Interns have managers who direct their day-to-day activities and mentors who provide guidance on professional development and introduce them to other employees at the company. A program manager oversees the implementation of the internship program, coordinates the program's activities, and ensures interns have an engaging and worthwhile experience.

Interns receive exposure to our executives, participate in activities organized by our Affinity Networks, and interface with our subject matter experts to learn various aspects of the business. The internship projects add value to our company and provide the interns with hands-on experience. They present their project results to Pattern leadership at the program's conclusion.

Since the program's inception in 2018, more than 60 students from over 20 schools have completed internships with us, with over 20% returning after their academic studies to join Pattern for full-time employment.



43/70

## Workforce Practices

- Prioritize diversity of all forms in our talent acquisition and recruitment activities.
- Offer employees competitive compensation and benefits.
- Provide new hire orientations and ongoing learning opportunities.
- Maintain a matrix with training needs, opportunities, expectations, and metrics.
- Uphold an equal opportunity policy that promotes DEI.
- Develop and act on strategic action plans to contribute to meeting our DEI commitments.
- Support the Pattern Energy DEI Council to provide input into our DEI initiatives.
- Provide opportunities for employees to gain awareness of each other's experiences and perspectives.
- Develop talent by hosting a summer internship program.
- Encourage, support, and resource our employee-led Affinity Networks.
- Regularly update our employee handbook to reflect shifting workplace dynamics.
- Maintain an open-door policy where employees feel free to express their concerns to management in confidence.



As someone who values a good work-life balance, I'm happy with Pattern's approach. We get a generous amount of PTO each year and other benefits, such as a monthly wellness stipend helping us live an active and healthy lifestyle. Everyone works hard at Pattern, but the company offers flexibility to let us focus on life outside of work, and our benefits team is always looking for ways to improve.

### Javier Lehtinen

Turbine Reliability Engineer, Pattern Energy (and former intern)



## Explore: Prioritizing Diversity, Equity, and Inclusion

Pattern is committed to a diverse, equitable, and inclusive workplace where all employees belong, regardless of personal backgrounds, characteristics, or abilities. We believe having diversity in our teams and our leadership while providing an environment where employees from underrepresented groups are encouraged and empowered leads to a more engaged workforce and better outcomes for all our stakeholders.

Our Statement of Diversity, Equity, and Inclusion (DEI) Commitments pledges we will take actions to result in lasting change. We formed a DEI Council that includes cross-functional representation from our executive leadership, Affinity Networks, and workforce to help the company meet these commitments. The DEI Council drives action and aligns DEI efforts with our overall business strategy.

In 2021, we took several steps to move DEI initiatives forward. We launched a DEI-specific employee survey to measure sentiment, gather ideas, and create a baseline for future surveys. The survey had a 76% response rate. We required all managers of employees to take unconscious bias training, resulting in a 100% completion rate with more than 150 managers taking the course. We engaged a third-party consultant to conduct Listening & Learning Circles, and insights gleaned from these ten 90-minute focus group sessions informed our DEI program.

We are committed to maintaining gender and racial pay equity, developing leaders through internship and mentorship programs, supporting our employee-led Affinity Networks, and empowering employees through our annual DEI Month.

Pattern kicked off our second DEI Month in October 2021 with a keynote speaker about celebrating and respecting uniqueness. Other activities entailed Asian American and Pacific Islander trivia power hour, a panel discussion on using books to talk to kids about diversity, exploring diversity through music, painting with pride, a Hispanic Heritage Month celebration, and a speaker on Indigenous communities and allyship.

Pattern also collaborates with our peers to share ideas, best practices, and resources as an industry. In 2021, we helped lead our U.S. trade association, the American Clean Power Association (ACP), in creating an Energy Transition for All initiative that resulted in ACP publishing an affiliated report in 2022. The report describes eight company-led and five industry-led commitments under three pillars: expanding opportunities for workers, creating value for communities, and leading in diversity and inclusion. One of Pattern's commitments through this initiative is to develop a supplier diversity program to measure and grow our spending with diverse and local businesses.



## Spotlight: Affinity Networks

Pattern encourages employees to build a sense of community, which has resulted in six employee-led Affinity Networks: Women in Renewable Energy (WiRE), Blacks in Renewable Energy (BiRE), Pattern PRIDE, Asian and Pacific Islanders in Renewable Energy (AsPIRE), Pattern Care Givers, and Renewable Energy and Latinx (REAL).

Our Affinity Networks have over 400 employee members combined, with many employees in more than one. They align with our company's goals by providing inclusion, professional development, and networking opportunities to their members. Pattern supports Affinity Networks through an executive sponsor and resources to help them meet their objectives.

Affinity Networks advance Pattern's commitment to give back to the communities around our offices and sites by developing new partnerships and organizing volunteer and donation campaigns. BiRE has formed a relationship with Houston's Energy Institute High School. In 2021, BiRE supported the school through a supply drive, a Teacher Professional Development Day sponsorship, and presentations to students about Winter Storm Uri in Texas and renewable energy technology.

Lauren Haller led the creation of the BiRE Affinity Network in 2019 and Pattern's first DEI Month in 2020. The Association of Corporate Counsel Houston Chapter and The Texas Lawbook honored her with the 2020 Award for Achievement in Diversity and Inclusion. In 2021, Lauren was promoted to Senior Director at Pattern, joined the Houston Area Urban League's Board of Directors, and was the focus of a Houston Chronicle story.



At every step of the way, Pattern leadership has been both a cheerleader and a champion for efforts surrounding diversity, equity, and inclusion. Pattern truly believes in listening to and partnering with its employees to create a more diverse, equal, and inclusive environment.

**Lauren Haller**  
Senior Director, Operations Counsel, Pattern Energy



I wanted to create a safe place for members of the AAPI community to convene, feel represented, and be embraced by the company. Especially at a time when everyone was working virtually and isolated, I wanted to provide ways for the community and allies to connect.

**Sunni Whitmore**  
Policy and Market Development Analyst, Pattern Energy

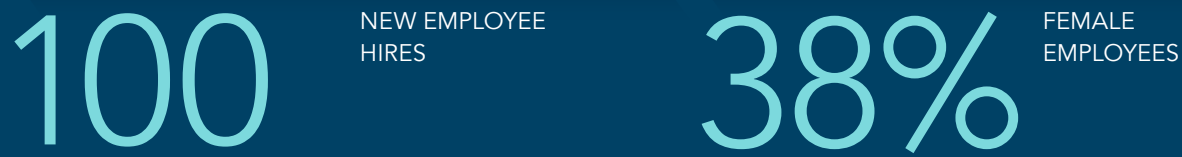
Sunni Whitmore joined Pattern as a Policy and Market Development Analyst on the External Affairs team in early 2021. After seeing Affinity Networks as a great way to create visibility and solidarity for their members, she formed the AsPIRE Affinity Network only a few months later. She had met many individuals who identified with the Asian American and Pacific Islander (AAPI) community at Pattern and wanted to build a safe space for people experiencing hate outside of the company directed towards their community at the start of the pandemic.

AsPIRE announced its creation during AAPI Heritage Month with a panel of employees that shared their culture and experiences of being Asian in America. AsPIRE provides Pattern employees opportunities to learn about AAPI history, engage with the culture, and further cultivate Pattern's inclusive and diverse atmosphere.

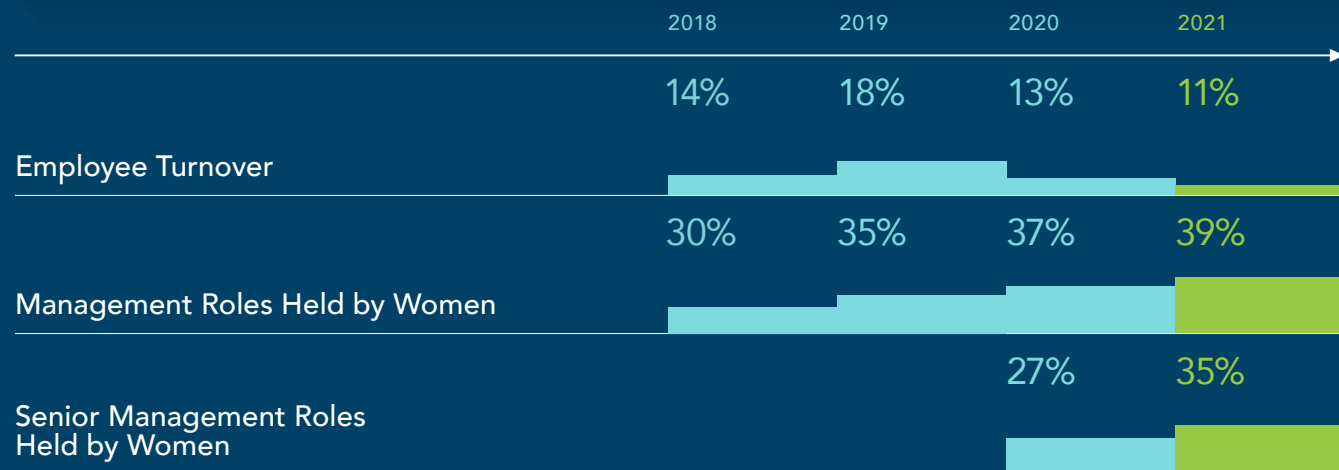


## Performance Metrics

### Workforce Overview



Note: Metrics are applicable to Pattern employees in the U.S. and Canada. Pattern had 8 employees outside of the U.S. and Canada in 2021.

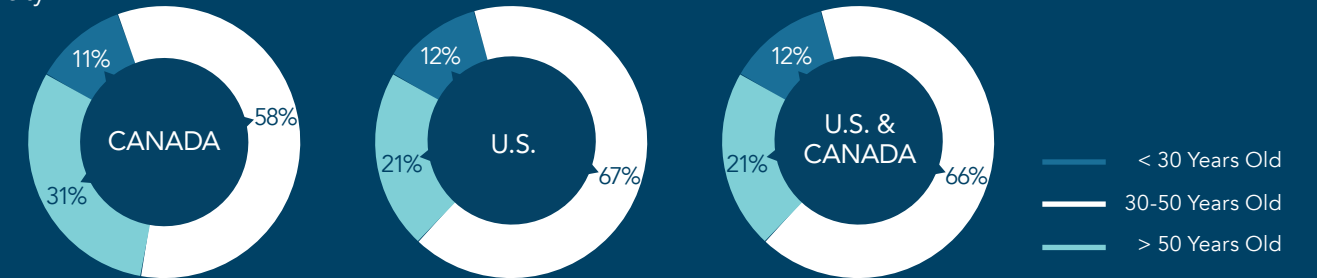


## Age and Gender Diversity by Country

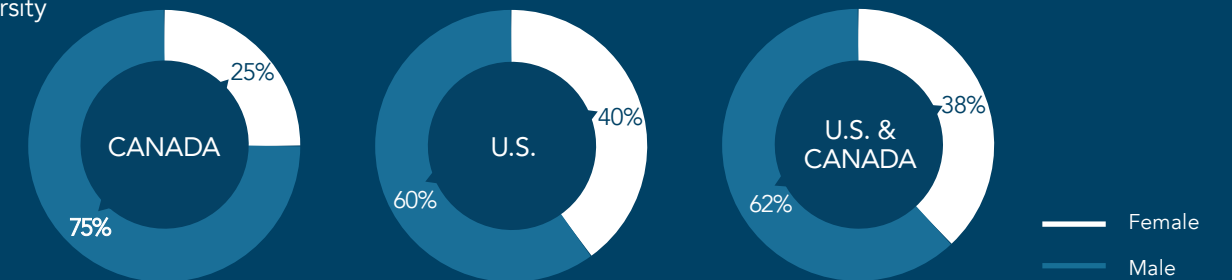
### Total Employee Count



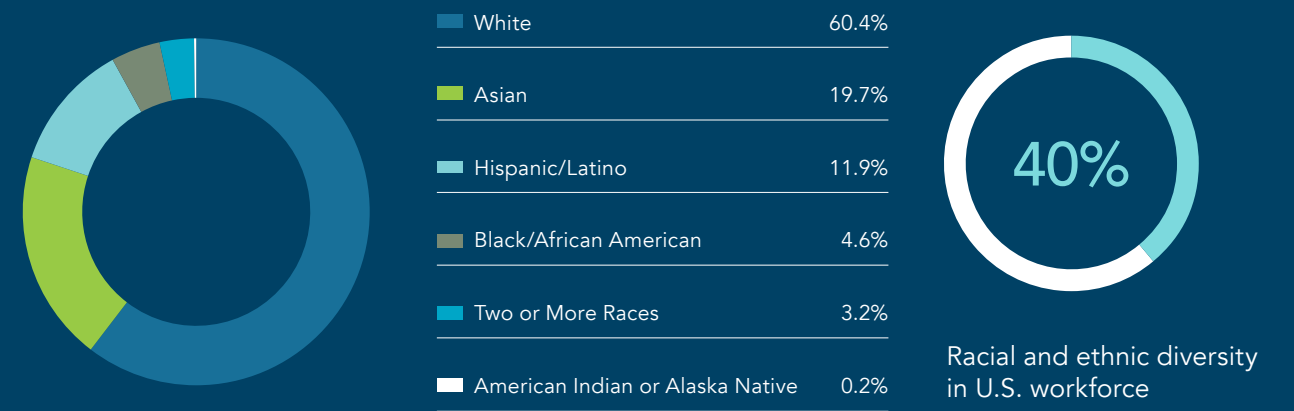
### Age Diversity



### Gender Diversity



## U.S. Workforce Racial and Ethnic Diversity



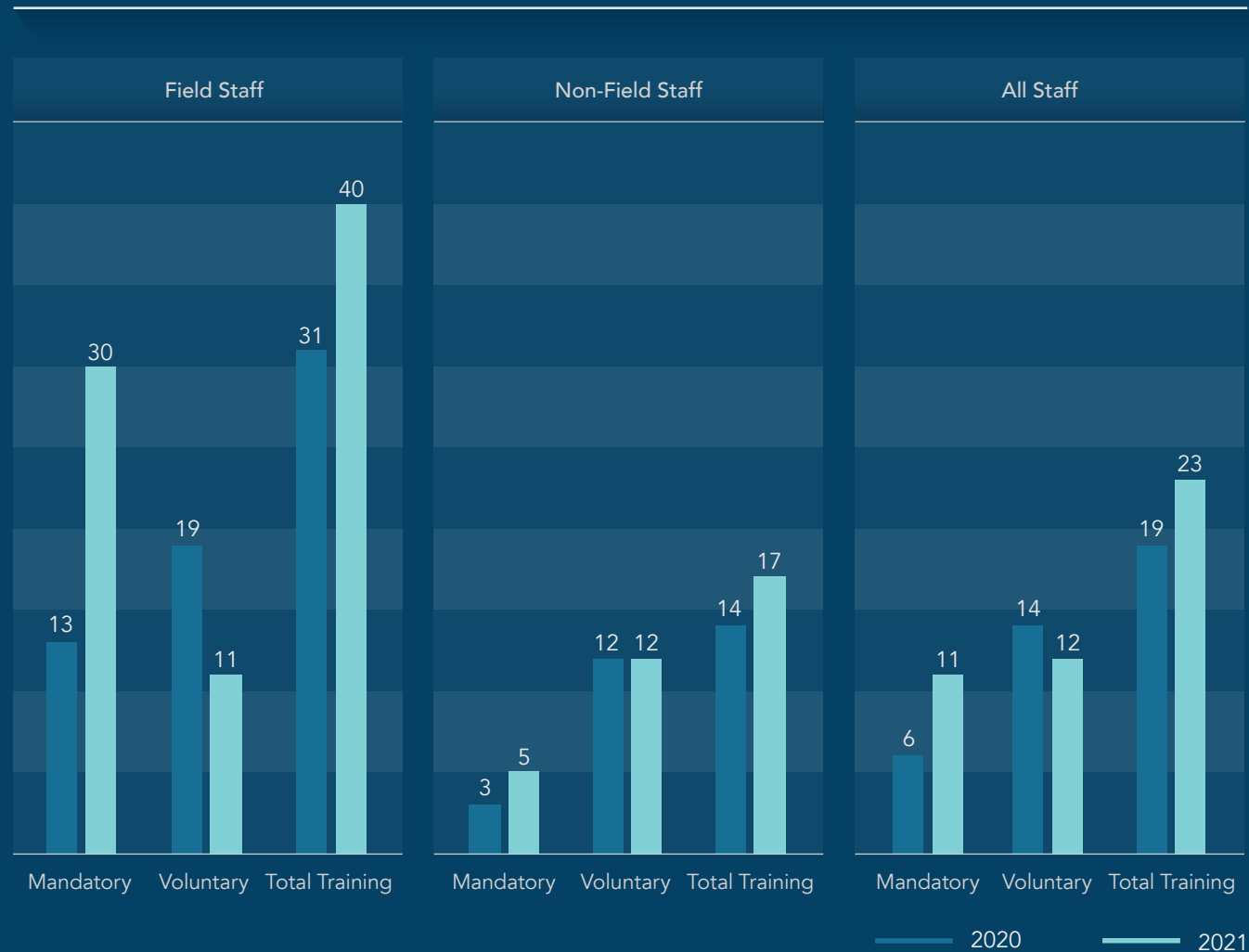
Note: Does not include the 44 employees Pattern had outside of the U.S. as of December 31, 2021, where 36 of those employees work in Canada, and this is not a federally supported question. Hispanic/Latino refers to all multiracial, white, and nonwhite respondents who identified Hispanic/Latino as their ethnicity. White is non-Hispanic/Latino.

### Pattern Energy Workforce Training Hours

	Mandatory Training Hours	Voluntary Training Hours	Total Training Hours	Average Training Hours per Employee
Non-Field Staff	1,638	4,278	5,917	17
Operations Field Staff	3,760	1,336	5,096	40
<b>All Staff</b>	<b>5,398</b>	<b>5,614</b>	<b>11,013</b>	<b>23</b>

Note: Applies to 481 Pattern Energy employees' training activities during the 2021 calendar year. Excludes GPI and Solect Energy.

### Average Training Hours by Training, Staff, and Year



## HEALTH AND SAFETY

### Our Commitment

Safety is our highest priority as a company. Pattern is committed to the safety and health of our employees, contractors, and the people in the communities where we develop, construct, and operate our renewable energy projects. Our Statement of Safety and Health Commitments outlines our approach to providing an environment that supports an injury-free workplace.

Constructing large, complex projects and operating energy facilities includes inherent occupational health and safety risks. As we manage our ever-growing fleet across various jurisdictions, we continue to evolve our safety program to mitigate these risks.

### Management Approach

Pattern has developed a robust safety culture to support meeting our goal of zero injuries. Our approach includes a safety management system, training program, contractor screening and oversight, performance tracking, and regular reporting to Pattern leadership.

In 2021, we initiated a monthly Executive Safety Review Panel with construction and operations leadership to proactively identify preventative safety measures we can deploy. The panel discusses incidents that result in an actual or potential Occupational Safety and Health Administration (OSHA) recordable injury, such as serious near misses.

The construction or facility manager presents the nature of the event and root cause analysis, and the panel discusses ways to prevent occurrences in the future. This approach focuses on the actual and potential severity of incidents, which can help identify preventable measures instead of relying on traditional reporting metrics that tend to be lagging safety performance indicators.

We base our safety policies and procedures on federal regulation standards where we operate and industry best practices. Our overarching Safety Management System (SMS), consisting of over 25 policies and procedures related to daily facility operations, provides the foundation for meeting our formal safety commitments. We review and maintain the SMS annually and refreshed our drug and alcohol policy in 2021.

Pattern has emergency preparedness and crisis management procedures for potential safety incidents. The site teams frequently review their Emergency Response Plans, conduct safety drills and training exercises, and utilize work process controls in the Pattern Job Safety Environmental Analysis form. In an emergency, Pattern's Operation Control Center manages internal notifications and acts as the offsite Emergency Coordinator until the Facility Manager or designee can respond accordingly.

Pattern takes a comprehensive approach to contractor management. We start with a third-party prequalification firm for our contractors and subcontractors conducting work we consider medium to high safety risk. ISNetworld examines safety management programs to ensure they align with minimum regulatory standards and Pattern's established requirements for contractors. The firm also performs annual contractor audits.

Our construction team only contracts with Balance of Plant (BOP) and Engineering-Procurement-Construction (EPC) companies with years of experience building renewable energy projects and transmission lines. The BOP and EPC contractors hire and manage their subcontractors. We work closely with them to support a safe working environment at our sites and ensure that the contractors' safety teams fulfill their obligations.

We use first-tier manufacturers with proven technology and performance records for our wind turbines. Most of our operating sites use the Original Equipment Manufacturer (OEM) turbine technicians to provide operations and maintenance (O&M) services. Pattern also employs facility and assistant managers at our sites, and our safety team completes regular inspections.

Our solar sites use state-of-the-art panels, including First Solar panels at our Phoenix Solar facility that began operations in 2021. First Solar manufactures its panels in the U.S. and has a recycling plant dedicated to recycling them at the end of their operational life. NovaSource Power Services performs O&M services for Phoenix Solar and provides Pattern monthly safety reports. They received a Pattern Distinguished Supplier Partner Award in 2021.

Pattern has a formal process when contractors are involved in incidents. The incident severity determines the specific timeframes when contractors must report incidents to Pattern and whether they form an incident review team. Contractors lead Root Cause Analysis investigations, and Pattern staff participates in the assessment. The process could take days or weeks depending on the type of incident, contributing factors, and remediation needed.



We conduct additional safety due diligence with contractors on-site, such as reviewing work control packages that collect job-specific information, including work instructions and certifications for employees and equipment. Project construction contractors provide site-specific plans for safety, emergency response, severe weather, fire prevention, and other topics.

**Joseph Card**

Senior Environmental Health & Safety Manager  
Engineering & Construction, Pattern Energy



## Training and Awareness

Our health and safety training programs aim to prevent workplace hazards. We launched a more robust safety training for field staff in 2021, and we socialize lessons learned at every site with all facility managers. We also reward the sites and fleet vehicle drivers with the best safety records.

We have a safety awareness campaign that focuses on a new safety topic each month and how the issue applies to the workplace and beyond. Campaign promotion occurs for all employees through our employee intranet, flyers posted around our offices, and construction and operations department calls. The monthly safety topics are instilled in our site teams through repetition and parallel online safety training courses assigned to field staff.

Examples of topics covered by the 2021 campaign include fire prevention and safety, workplace ergonomics, heat stress, significant injury prevention, electrical safety, and hazard communications. We also have a Mental Wellness program with resources available to employees year-round and put extra emphasis on mental wellness during an annual campaign in May.



The Pattern safety team regularly engages in our national trade associations' safety committees to help shape the industry's safety-related activities. Examples of the committees where we are active include Safety Standards, Safety Campaigns, COVID Networking, and Owners and Operators. We believe sharing best practices, safety metrics, and ideas for addressing our collective challenges is essential to improving the overall safety of our industry.

**Robert Milligan**

Operations Health & Safety Manager, Pattern Energy



## Health and Safety Practices

- Follow all applicable health and safety laws and regulations as our minimum standard.
- Engage our employees to identify potential hazards and develop proper mitigations.
- Provide training to all employees so they may recognize and mitigate risks.
- Promote safety-awareness campaigns to empower employees to hold each other accountable and contribute to our culture of safety.
- Empower our workforce to use their "stop work" authority to halt activity if they perceive a hazard that may endanger themselves or others.
- Identify root causes and learn from any accidents.
- Construct our projects and operate our facilities using best practices to prevent injury to employees, contractors, and the public.
- Contract with companies that share our values and commit to supporting our vision of an injury-free workplace.
- Implement our Safety Management System to provide a programmatic approach to meeting our safety commitments at operating facilities.
- Provide formal training to all field personnel and briefings for contractors and visitors to our sites on possible hazards.
- Collaborate with industry peers, experts, and contractors on best practices to advance industry safety performance.
- Work to monitor, report, and continually improve our metrics.

## Explore: Pandemic Response

Our response to the pandemic demonstrated our company's resiliency and dedication to the health and safety of our workforce. We mitigated the commercial impact on our business through preparations we had made for such an event and the swift actions we took in response to it.

We immediately established a cross-functional COVID Response Task Force, closed offices to non-essential employees, and distributed personal protective equipment supplies to our essential workers in an equitable and timely manner. We maintained strict compliance with Occupational Safety and Health Administration and other regulations.

Our Business Continuity and Disaster Recovery Plan guided us in a quick change to a work-from-home environment for non-essential employees. We kept our offices closed to non-essential employees throughout 2021 and implemented a phased return-to-work approach in 2022 using an internally developed online wellness survey.

A comprehensive virtual environment enabled employees to securely access the resources they needed from anywhere on any device.

We implemented a Pandemic Response Plan as part of our Safety Management System for operating facilities and limited in-person drills and inspections. Our safety team performed checklist inspections with the site teams instead of traveling to sites for in-person assessments. Operating sites typically hold in-person annual safety drills that include local first responders. Due to COVID concerns, most of our facilities had tabletop drills in 2021 instead of in-person. During tabletop drills, teams discussed various scenarios and reviewed the results of past in-person exercises.

To mitigate the impact of the pandemic on our extensive construction activities – over 1,500 MW under construction in the U.S. and Canada – we enforced strict protocols, including demanding COVID preparedness and business continuity plans from all contractors.

Our development project teams transitioned well to a virtual environment and held online public meetings to continue stakeholder engagement activities on projects. However, there is no replacement for in-person interactions when building and maintaining local relationships, and our project teams missed being in the field and meeting with stakeholders in person.



## Spotlight: Measuring Safety

Safety incidents are reported to management when they happen and discussed with staff more broadly on regional and department calls. Executive leadership receives weekly enterprise-wide safety reports, and the Board of Directors receives quarterly reports.

We track observations, near misses, recordable injuries, lost days due to injuries, fleet and contractor-owned vehicle accidents, property damage, and other metrics for construction projects and operating facilities, including field contractors.

Our new safety software program is helping us expand our metrics tracking. In 2021, we started capturing serious near misses, sometimes referred to as high potential (HiPo) incidents or serious injury fatality (SIF) events, and started looking at actual and potential metrics.

We also use data collected in our ISNetworld platform to view Total Recordable Incident Rates (TRIR) across our contractors. We've identified methodological differences in how companies determine TRIR, making it challenging to find meaningful benchmarks.

Pattern believes industry participants should share safety data so we can better understand our performance relative to our peers and create benchmarks to track progress over time. We voluntarily share our safety data and encourage our contractors to do the same.

We have a self-perform business model at five U.S. operating facilities, representing 30% of our installed capacity in the country. Self-perform means Pattern employs the technicians that manage operations and maintenance activities at these sites rather than a third-party service provider. Our self-perform facilities had zero reportable injuries in 2020 and 2021.

The perfect safety record for our self-perform sites demonstrates our safety management methods are working where we have more oversight of turbine technicians. We are working with our O&M service providers to enhance their safety practices to reduce reportable injuries.

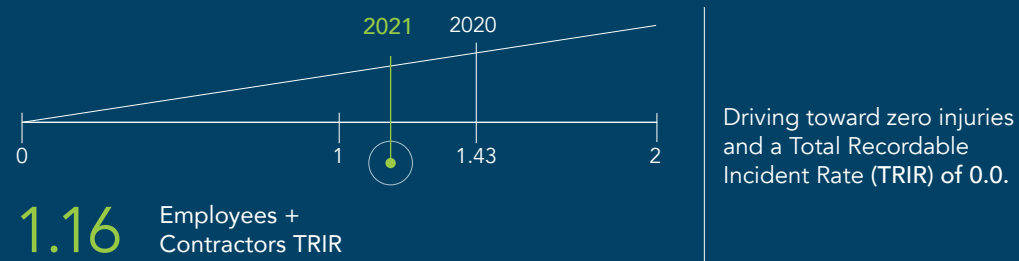


## Performance Metrics

### 2021 Metrics

	Total Recordable Injuries	Total Recordable Injury Rate	Lost Time Injuries	Lost Time Injury Frequency Rate
All Employees	1	0.21	1	0.21
All Contractors	23	1.46	6	0.38
All Employees + Contractors	24	1.16	7	0.32

Note: Metrics cover U.S., Canada, and Mexico employees and contractors, including subcontractors.



## COMMUNITY AND CULTURE

### Our Commitment

Pattern believes the best way to build successful facilities is to work closely with landowners, community members, and local officials. With an emphasis on relationship-building and open communication, we pride ourselves on engaging communities, addressing feedback we receive, and supporting local priorities through community giving.

Our Pattern Statement of Community & Cultural Commitments is published on our website and hanging in every office and operational facility, serving as a continual reminder to our employees and stakeholders of our commitments and demonstrating our desire for transparency and accountability.

### Management Approach

Our approach to developing, constructing, and operating renewable energy and transmission projects with respect for the communities and cultures where we have a presence begins with establishing trust and accountability. When we identify an area for development, we work with landowners, individuals, groups, and local leaders to learn about the area.

Doing our due diligence and asking questions about where we develop is critical to our management approach. Our research and local engagement inform our Risks & Opportunities Assessment to help our team better understand the area and incorporate feedback into our process. This analysis leads to creating a project-specific Community Engagement Plan and helps us proactively engage with people who may have concerns about a project.

In 2021, we improved our documentation and governance of our approach to meeting our community commitments during project development. Through a stage-gating process, we apply a standard management workflow to each project.

Our Investment Committee approves funding for the next development stage after a project meets critical milestones in the prior stage-gate. The process requires a Risks and Opportunities Assessment in the first stage of early development, and the second stage requires a Community Engagement Plan.





**We have diverse audiences with different needs on how they prefer to receive and share information. We strive to engage thoughtfully and effectively with all audiences, whether that be through public meetings, presentations, in-person office hours, or online forms and websites. Pattern aims to communicate early and often, incorporate the feedback we receive, and work to ensure our projects create lasting positive impacts for the communities where we operate.**

**Adhar Johnson**

Director, External Affairs and Public Engagement, Pattern Energy

During project development, we strive to set expectations about what construction and operations will look like, how our relationships with landowners and communities will evolve over the next thirty years, what communications they should expect from us, and what community benefits may entail.

We have dedicated more resources to help meet our vision for community engagement and our growing development pipeline. In addition to adding Pattern employees, we have a group of consultants specialized in engagement and fully integrated into our project teams to help us execute activities where and when needed. They support our efforts by conducting area research, building tailored engagement plans, representing Pattern in our communities, and managing local community liaisons.

Just as these individuals represent Pattern and are an extension of our team, we utilize the services of third-party land agents to develop relationships with landowners, answer their questions about leases, and coordinate land access for development studies. We train these representatives to reflect our Pattern values and commitments.

To ensure we remain true to our commitment to open, honest, and equitable treatment of landowners, Pattern employees and representatives must abide by a Code of Conduct. We also created a "Landowner Line" that landowners can call to ask questions or provide feedback about their experience with Pattern employees or representatives.

The Code of Conduct states that any employee, firm, or individual doing work on behalf of Pattern will be respectful in all communications with landowners and community stakeholders. Among its requirements are that all interactions with landowners are factually correct, made in good faith, and reflect fair dealing.

In developing the 1,050 MW Western Spirit Wind and Transmission project, we listened to landowners and communities to learn their desires and address concerns. Our engagement efforts helped us avoid the use of contested eminent domain cases along the project's 155-mile transmission line route that involved 440 unique property owners.

Our engagement with landowners and the community does not end after project development. We pride ourselves on taking a long-term approach to community outreach and benefits. As with the Environmental and Safety Management Systems, our Community Management System (CMS) provides a framework for meeting our community and cultural commitments at our operating facilities. The CMS applies fleetwide and documents our management approach, providing guidance on the planning process and roles and responsibilities.

We have community relations plans unique to each facility during operations that document our engagement, communications, and giving activities. These are continually updated as our actions evolve from community feedback and experiences.



**Farmers and ranchers leasing their land to Pattern are vital partners in the success of our renewable energy projects – they are our most valued resource. The invitation to share the use of their land for years to come is a privilege we take very seriously.**

**Deann Lanz**

Senior Director, Land, Pattern Energy

**Partnerships with Indigenous Nations**

Pattern has four operating facilities that involve joint ventures with Indigenous Nations. Henvey Inlet Wind is the largest wind facility under a First Nation partnership in Canada. Henvey Inlet First Nation, through its subsidiary Nigig Power Corporation, partnered with us in 2014 to jointly develop, construct, and operate the 300 MW Henvey Inlet Wind site and its associated transmission line.

Six Nations of the Grand River Development Corporation is a partial owner of the Grand Renewable Wind facility. Walpole Island First Nation (Bkejwanong Territory) is a partial owner of the Belle River Wind and North Kent Wind facilities.

We strongly believe in the value and opportunity that exists through meaningful partnerships with Indigenous communities. In 2021, we documented our experiences and lessons learned to share as institutional knowledge with our development teams by creating our Principles and Best Practices for Indigenous Engagement. We also conceptualized the creation of a Pattern Indigenous Peoples Advisory Council (PIPAC), which we formed in 2022.

The PIPAC aims to inform Pattern employees about history, contemporary issues, and future opportunities as specified by Indigenous Peoples and to engage with Indigenous communities in meaningful discussions about sustainability, energy transition, and climate change. We hope to accomplish these objectives in ways that spark curiosity, honor traditions, and celebrate culture in an environment of respect.



**It is important we recognize the rights and histories of Indigenous Peoples worldwide and support the shared objectives of truth and reconciliation as contemplated in the United Nations Declaration of the Rights of Indigenous People. As Pattern employees, we can help create more favorable conditions for Indigenous Peoples.**

**David Durrant**

Market Development and Stakeholder Relationship Manager, Pattern Energy



## Community and Culture Practices



- Conduct Risks and Opportunities Assessments at the beginning of project development.
- Create Community Engagement Plans that are site-specific to document the strategies and actions we take to meet our commitments in every project area.
- Proactively seek local input on what communications and engagement tools are most effective for each community.
- Solicit input and build local relationships while respecting and considering all points of view.
- Identify and assess potential community and cultural impacts to inform our planning and decision-making.
- Explore ways to support the growth of healthy and vibrant communities where we work through sponsorships and donations.
- Share information using communication tools that are accessible and relevant to our diverse audiences.
- Conduct all communications and interactions with prospective and participating landowners with respect, factually correct information, and good faith commitments.
- Interact with local businesses and civic organizations to create opportunities to involve local vendors and suppliers in our projects.
- Design and construct our projects and operate our facilities in a manner that complies with all siting regulations as a minimum standard.
- Maintain a Community Management System that describes the programmatic approach to implementing our commitments across our operating fleet.
- Work to monitor, report, and continually improve our overall performance, incorporating feedback into our outreach and giving programs.

## Explore: Building Connections

Creating opportunities to have meaningful conversations is what public engagement is all about – whether at a formal public meeting, a restaurant, or momentarily with someone jumping off the combine harvester to talk to you. These conversations are necessary to build a thoughtful project.

While we have had to get creative with virtual public meetings and engagement activities during the pandemic, nothing can replace sitting down, face-to-face, and talking to people. We talk to as many people as possible to collect their thoughts and concerns during project development. We value receiving questions from stakeholders because it gives us a chance to do our job better by addressing topics of concern, showing people how we act on our commitments, and applying their input to the project.

The in-person and virtual public meetings we held in 2021 included Uplands Wind in Wisconsin, Silverthorn Renewables in Montana, and our solar projects in Pennsylvania. After every public meeting, the project team convenes to discuss the value of our interactions and how we can apply the feedback received to improve our projects. We build meaningful partnerships with landowners and communities through thoughtful engagement and work together to find mutually beneficial solutions.

We continue to build community connections during facility operations. In 2021, we implemented a Sharing Stories Campaign for our operating sites. Each site publishes a quarterly electronic newsletter. The first story in each newsletter focuses on a local organization, cause, or event to help bring awareness to its importance for the community.

We publish these stories on each facility's webpage, where people can sign up for the site's newsletter. We enjoy the opportunities that telling stories create for building connections with local stakeholders. We also build relationships during operations by giving presentations and hosting tours for students and community groups at our sites.



**My favorite part of this job is the kids. I love it when students come here on a field trip to see what we do and learn how we make wind energy.**

**Ken Hammond**

Facility Manager, Hatchet Ridge Wind, Pattern Energy





## Spotlight: Pattern Gives Back



My favorite part of working for Pattern Energy is being in the community, seeing where there are needs, and being able to help meet them. When I donate on behalf of Pattern, I get the satisfaction of seeing the impact those dollars make, and it makes me proud to work for a good, ethical company.

### Carrie Kline

Site Logistics Coordinator, Amazon Wind Farm Fowler Ridge, Pattern Energy

Pattern's facilities give back to their local economies long-term through landowner lease payments, property taxes that support civic and emergency services and local schools, and contributions to local causes through sponsorships, donations, and formal benefit agreements. Our giving activities are diverse and support community initiatives, the environment, health and wellness, and youth through education and recreation.

When discussing community needs to design our benefit programs, we are honest about our capabilities and budget. For the historic 1,050 MW Western Spirit Wind project, we invested in lights-out radar technology that will allow the turbine lights to remain off unless an aircraft approaches the project boundary. We contributed to a wind technical program to help develop the local workforce. We also donated to two community foundations to support charitable giving and to restore a historic school building that will be used as a community space.

Five more of our facilities support community foundations that administer grants to local organizations and causes through annual grant cycles. In 2021, the Burney Regional Community Fund, created in 2010 with a contribution from our Hatchet Ridge Wind facility, awarded grants to the Burney Fire District and Hat Creek Volunteer Fire Department, among many other grant recipients.

Supporting fire departments is a theme across our fleet. Our Broadview Wind facility spans the New Mexico and Texas border. The site team answered when they heard the Bootleg Volunteer Fire Department in Hereford, Texas, could use help purchasing personal protection equipment. The Bootleg firefighters frequently handle wildfires and brush fires and have responded to emergency calls across the state line.

Many of our sites support youth sports in their communities. In 2021, examples included Mont Sainte-Marguerite Wind's sponsorship of the Saint-Georges dek hockey league, Gulf Wind's contribution to the Ricardo Yellow Jacket Youth Football League, and Santa Isabel Wind's support for the Los Potros de Santa Isabel and the Santa Isabel Ponies: baseball teams.

We value the opportunity to help cultural awareness in our communities. The Tri-County Museum has been a mainstay of King City near Lost Creek Wind since the American Bicentennial Celebration when an antique dealer donated the defunct railroad depot to the community for the museum. Other museums our sites supported in 2021 included the Imperial Valley Desert Museum near Ocotillo Wind, the Carson County Square House Museum near Panhandle Wind, and the St. Joseph Museum near St. Joseph Wind.

Pattern Energy also gives back to the communities around our corporate offices through organized volunteer and giving efforts spearheaded by our Workplace Operations and Experience team and Affinity Networks. These initiatives include our annual Pattern Fights Hunger Campaign to generate support for food banks and our Holiday Giving Drive for organizations such as Toys for Tots.

Last year was our first full year utilizing the Cauze platform that encourages employees to give back and supports Pattern corporate-matching opportunities. Employees personally donated over \$50,000 to nearly 40 organizations in 2021. The nonprofits receiving the most funds were the Houston, Alameda, and Eastern New Mexico Food Banks, Houston Friends of Energy Institute, and the Lindsay Wildlife Experience.

In 2021, we automated our process for receiving and reviewing community-giving requests by building an online form that facilitates internal approvals. We launched the new system in 2022. The process allows us to capture more details about our community giving, improve efficiencies and documentation in our approval process, and enhance analytics to strengthen our reporting.

Our giving activities follow our Anti-Corruption Policy and adhere to local and international laws. Community giving is a foundational commitment and philosophy for Pattern, but it is also critical there are no real or perceived conflicts of interest associated with our sponsorships and donations.



We refer to them as the Pattern family because they really are like family. They have proven themselves, and how they proved themselves is they are a part of our parades, a part of our county fair... they are a part of the Valley, and I can't imagine not having Pattern here now.

### Myra Pancrazio

Executive Director,  
Estancia Valley Economic Development Association

## Performance Metrics



	Million
Landowner leases	\$43
Tax payments	\$25
Community donations	\$7
	<b>\$75</b>

## Governance



### Our Commitment

Pattern is committed to governance that sets the tone for a robust risk management and business ethics culture. We understand it is essential not to get complacent and to emphasize the importance of business ethics with our staff, new employees, and third parties.

We continually review governance controls to monitor compliance with our business ethics and anti-corruption policies and have mandatory compliance training for employees. We proactively work toward aligning our governance practices with recognized and respected ESG frameworks to meet shareholder requests and demonstrate industry leadership.

### Management Approach

An independent director leads our Board of Directors, which consists of our CEO, shareholder representatives, and independent directors. The Board of Directors follows procedures and standards in the company's Limited Partnership Agreement. It established an Audit Committee and a Nominating, Governance, and Compensation Committee to assist in its oversight activities. Committee charters adopted in 2021 cover various topics, including board oversight of governance matters.

Pattern examines our governance policies annually to determine if updates are needed based on best practices. We updated all policies in 2021. Employees must abide by our Code of Business Conduct and Ethics and Anti-Corruption Policy. We track compliance through questionnaires, and our controls certification process requires 100% compliance.

Pattern's procedures for recruitment, advancement, and retention of employees forbid discrimination based on any criteria prohibited by law. We design our policies to ensure employees are treated, and treat each other, fairly and with respect and dignity. All employees are required to comply with our policy on equal opportunity, nondiscrimination, and fair employment.

Our employees have access to a Governance Center Wiki through our employee intranet, to make it easy to find company policies. We require annual training on specific policies, and our integrated talent management system tracks compliance. Mandatory training topics include global compliance, anti-corruption, workplace harassment, and discrimination prevention. Managers of people are also required to take unconscious bias training.

Pattern's Whistleblower Policy states that any employee may submit a good faith complaint to management without fear of dismissal or retaliation. We launched a new global whistleblower platform through NAVEX Global in 2021 called Ethics Point. The platform provides telephone hotlines for each country where Pattern operates. NAVEX Global representatives who speak the native language will take complaints and tips over the phone. In addition, there is a web portal and mobile app to accept electronic submissions in five languages.

Our Enterprise Risk Management (ERM) program includes identifying and mitigating ESG-related risks across the enterprise and at the project level. Risks are categorized, tracked, and analyzed, and evaluations of short, medium, and long-term outlooks consider various scenarios. The risk management framework assists risk owners in applying a standardized approach.

Risk owners cover strategic, financial, reputational, operational, and compliance risks and explore a wide range of risk topics, including climate change, energy resources and production, health and safety, cybersecurity, political, regulatory policy, capital markets, supply chain, and our workforce. In 2021, we updated our Energy Market Risk Policy by incorporating recommendations from our Internal Audit Committee.

We have a compliance tool called Pattern Project Agreement Compliance Tracker (Pattern PACT) that tracks current and future third-party compliance obligations. Pattern PACT centralizes compliance tracking across different business units and standardizes how we manage our obligations.

The Executive Team and Risk Owners receive monthly updates on risk, mitigation plans, compliance, and internal controls. The Board of Directors receives quarterly updates and reviews all material risks. We improved our quarterly Compliance Officer Reports for the Board of Directors in 2021 by streamlining, ranking risks, and integrating our Japanese-affiliate GPI.

## Spotlight: Managing Cybersecurity Risks

Pattern understands the risks of cybersecurity threats, and we plan accordingly. Our Information Technology (IT) Security Policy documents our management approach to cybersecurity, data protection, and privacy, and our Board Audit Committee receives quarterly cybersecurity updates.

We have many layers and redundancies of cybersecurity measures for our corporate and facility networks and our Operations Control Center. We practice our response plans, perform exercises to test them, and hire third-party companies to do network penetration testing.

As a North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection (CIP) medium entity, we must adhere to extensive NERC CIP compliance measures and perform penetration testing once every 15 months. We work with a third party to continually monitor our environment with us. We use a cloud-based incident management system to log all activities of our six teams within the Technology Services Department.

Pattern's IT Security Policy leverages the National Institute of Standards and Technology (NIST) Special Publication 800-53 as a security framework. Our IT-managed control systems are a subset with processes aligned to NERC CIP standards. We also use the Department of Energy's Cybersecurity Capability Maturity Model (C2M2) to drive strategy for our control systems.

We have an open and democratic environment in our Technology Services department that encourages creativity and innovation to pioneer renewable energy solutions. We are transforming our industry's status quo approaches to cybersecurity to reduce cybersecurity risks.

## Explore: Formalizing Business Improvements

In 2021, we formed a Business Improvement Committee (BIC) to focus on continuous process improvements using technology to transform our business practices. Three teams support the work directed by the BIC.

The Project Management Office focuses on managing our processes during project development and construction stages, including implementing best practices in project, risk, and investment management.

The Business Systems Group is an enterprise-wide process improvements team that evaluates and prioritizes the company's business system needs. It presents system-related improvements to the BIC in coordination with business units and aligned with company-wide goals and objectives. The team manages associated processes, business intelligence and reporting, and financial systems management.

The Technology Services Group is an integrated technology team that positions Pattern for future growth. Technology Services include field services, information security, service desk, service delivery, and application services.

- Created a stage-gating process requiring projects to meet material milestones during each stage before Pattern's Investment Committee approves funding for the next project stage.
- Improved document management and response time through a Contract Lifecycle Management platform.
- Strengthened investment risk management through an investment risk tracking report.
- Streamlined and improved development-construction financial reporting by forming a Project Controls Group.
- Ensured Pattern was ready for Western Spirit Wind and Transmission operations.
- Designed processes and systems for our expansion into energy markets.

## Governance Practices

- Apply our Code of Business Conduct and Ethics throughout the organization.
- Regularly review, update, and educate our workforce on certain policies, including our Anti-Corruption Policy.
- Refresh employees' understanding of, and compliance with, key corporate policies through mandatory training and certifications.
- Notify and brief essential partners, including contractors who represent us, of our strong Anti-Corruption Policy.
- Assess skill sets of management and the Board of Directors in succession planning.
- Honor our values and commitments, which serve to guide us in every decision we make.

## Performance Metrics

Board size

9

Independent directors

33%

Board members from underrepresented groups

33%

Female board members

22%



# Sustainable Growth



Pattern's proven track record in bringing complex renewable energy projects to market well-positions us to help achieve the increasingly aggressive renewable energy and decarbonization targets set by governments and corporations.

We increased our installed capacity by 31% from year-end 2020 to year-end 2021 and intend to double our portfolio between 2021 and 2026. We expanded our Origination and Power Marketing team's capabilities to support our transformative development pipeline.

Pattern is connecting areas of the country that have different weather patterns – such as Illinois and Pennsylvania, Texas and the Southeast, and New Mexico to the West – to give customers differentiated renewable energy that meets the time and shape of their needs.

In collaboration with the Board of Directors, we developed a five-year corporate strategic plan in 2021 that we will evaluate and update annually. The initiative puts us on a course to capitalize on the growth environment of our industry and company by identifying and prioritizing our opportunities where we have competitive differentiation on projects, technology, and geography.

Pattern is growing our business in utility solar, C&I solar, and utility-scale wind as core parts of our strategy. We are investing in our business capabilities and teams to expand our core competencies and skillsets to execute our strategic plan and meet the needs of our transformative projects.

In 2021, we established a Fundamentals and New Markets group focused on market analysis and intelligence that works closely with our development and investment teams to provide strategic market insights. Additionally, we grew our energy management capabilities to include enhanced market hedging ability, risk management, credit management, settlements, and collateral margining management.

We are confident that our sustainable business model, talented workforce, and strategic discernment allow us to scale to meet growing market demand and create long-term value for our company and stakeholders.



I love that I engage directly with the end user of our power generation assets. Our customers consist of utilities, municipalities, and other load-serving entities. Many are down-to-earth public servants who genuinely care about providing their retail customers with clean, reliable, and affordable power. It is energizing to offer unique solutions that have a material impact on climate issues for their power systems.

**Monica Opderbeck**

Assistant Vice President, Origination & Power Marketing, Pattern Energy

## Spotlight: Green Bond Report

Pattern Energy Operators LP published a Green Financing Framework to raise funds to support our sustainable business activities. Our 2020 Green Bond proceeds were fully allocated within the first year of the Green Bond Issuance. The proceeds supported the repowering, construction, and refinancing of 891 MW of installed wind power, including Gulf Wind, Henvey Inlet Wind, North Kent Wind, and Grady Wind.

The allocations included:

- Repurchases of past green bonds.
- Repayment of a term loan and corporate revolver (indebtedness previously undertaken for eligible projects).
- Investments in eligible green projects directly or through the savings from refinancing made possible by the proceeds.

The annual production from these renewable energy facilities, totaling an estimated 3 million MWh, equals the electricity needs of about 300,000 homes. Compared to coal-fired generation, this clean energy has the following environmental benefits:

- Avoids 3.2 million metric tons of CO2 emissions each year, equivalent to removing nearly 700,000 cars off the roads.
- Conserves 1.7 billion gallons of fresh water, equal to the annual needs of more than 50,000 people.



### Proceeds

4.5% Senior Notes due 2028 Issued On August, 15, 2020	\$700M
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### Allocation\*

Repurchase of 5.875% Senior Notes due 2024	\$350M
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Repayment of Term Loan	\$250M
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Repaid Corporate Revolver and Reinvested in Wind Project Construction	\$100M
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Total Disbursements to Eligible Projects	\$700M
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\*All figures in \$USD and are approximate allocations.

## Discover: United Nations Sustainable Development Goals

Pattern supports the 17 Sustainable Development Goals (SDGs). The Member States of the United Nations adopted the SDGs in 2015 to end all forms of poverty, fight inequalities, and tackle climate change while ensuring that no one is left behind.

As a renewable energy company, Pattern generates affordable and clean energy and takes action to combat climate change. We continually seek ways to use innovation and technology to improve our performance – from producing more clean energy with our existing fleet and improving grid infrastructure to transport more clean energy to where it is needed.

We support many SDGs through our formal company commitment statements and our management approaches to meet them. Our commitments guide us to sustainably develop, construct, and operate renewable energy facilities in a safe, environmentally responsible manner and contribute to the communities that host them. We also commit to providing a workplace and culture that is diverse, equitable, and inclusive, where all employees belong.

Our charitable initiatives align with several SDGs by advancing community initiatives, enhancing ecological preservation, fostering health and wellness, producing local economic benefits, promoting the needs of youth through education and recreation, and supporting initiatives of Indigenous communities.

Pattern’s sustainability program documents our alignment with the UNSDGs and international ESG frameworks as it strives to link actions that create shared value for our stakeholders to our company’s growth. The Disclosures Index on our website describes our alignment with the UNSDGs, GRI Standards, and SASB.



**Our Fundamentals and New Markets group is creating value for the company by providing independent analysis on key market drivers and identifying new opportunities where we can most cost-effectively help decarbonize the electric grid. I am excited about Pattern’s trajectory and our ability to capitalize on the unprecedented growth opportunities ahead for the renewable energy industry.**

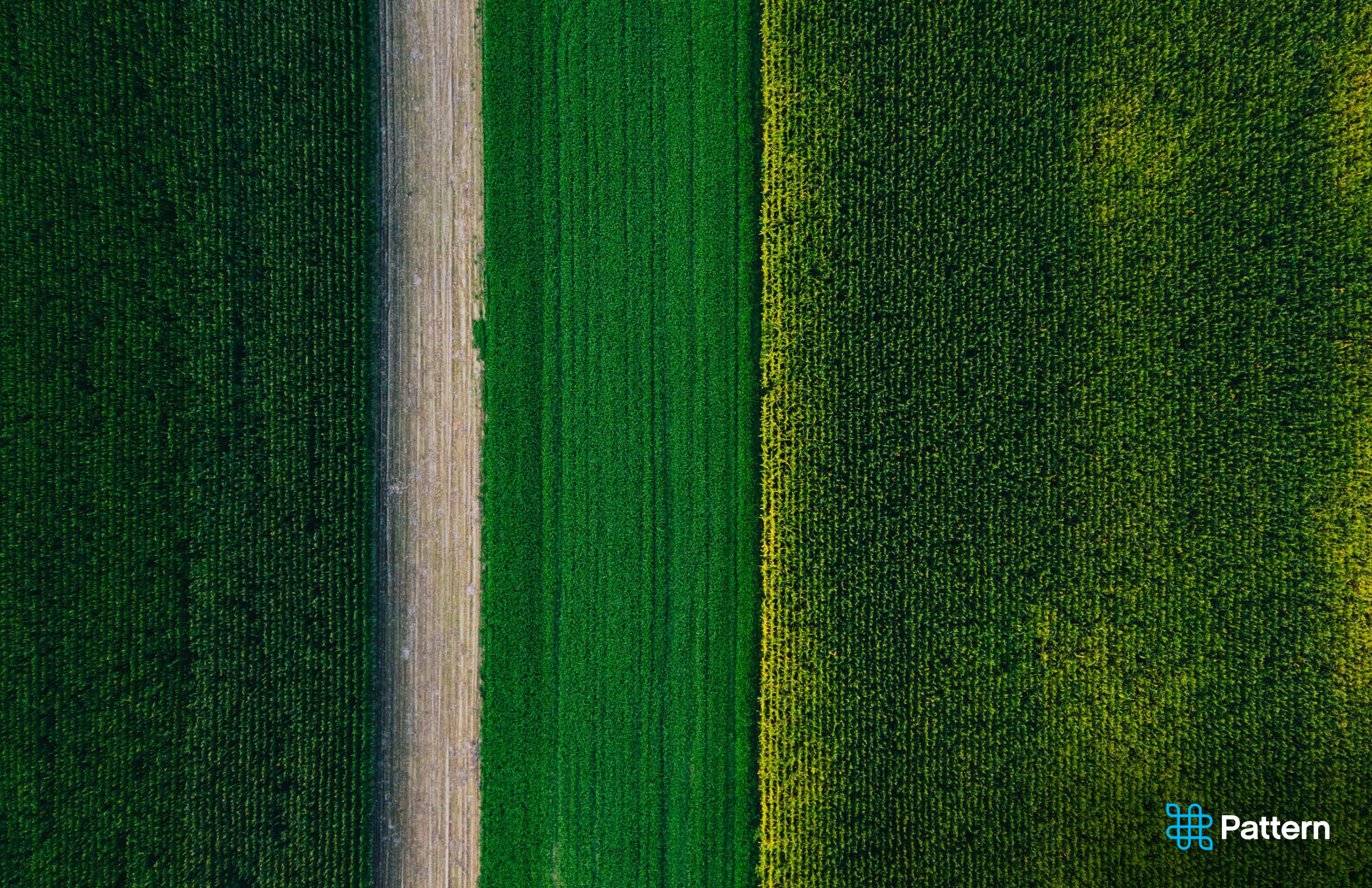
### Justin Sabrsula

Vice President, Fundamentals and New Markets, Pattern Energy



Together, we can transition the world to renewable energy.









[www.patternenergy.com](http://www.patternenergy.com)

## Appendix U1.3: Presentation Deck



***October, 2022***

Green Hydrogen and NL's Opportunity



# Pattern Energy

Pattern is one of the world's leading renewable energy generation, transmission, and energy storage companies, with operating and development footprints in the United States, Canada, Mexico, and Japan.



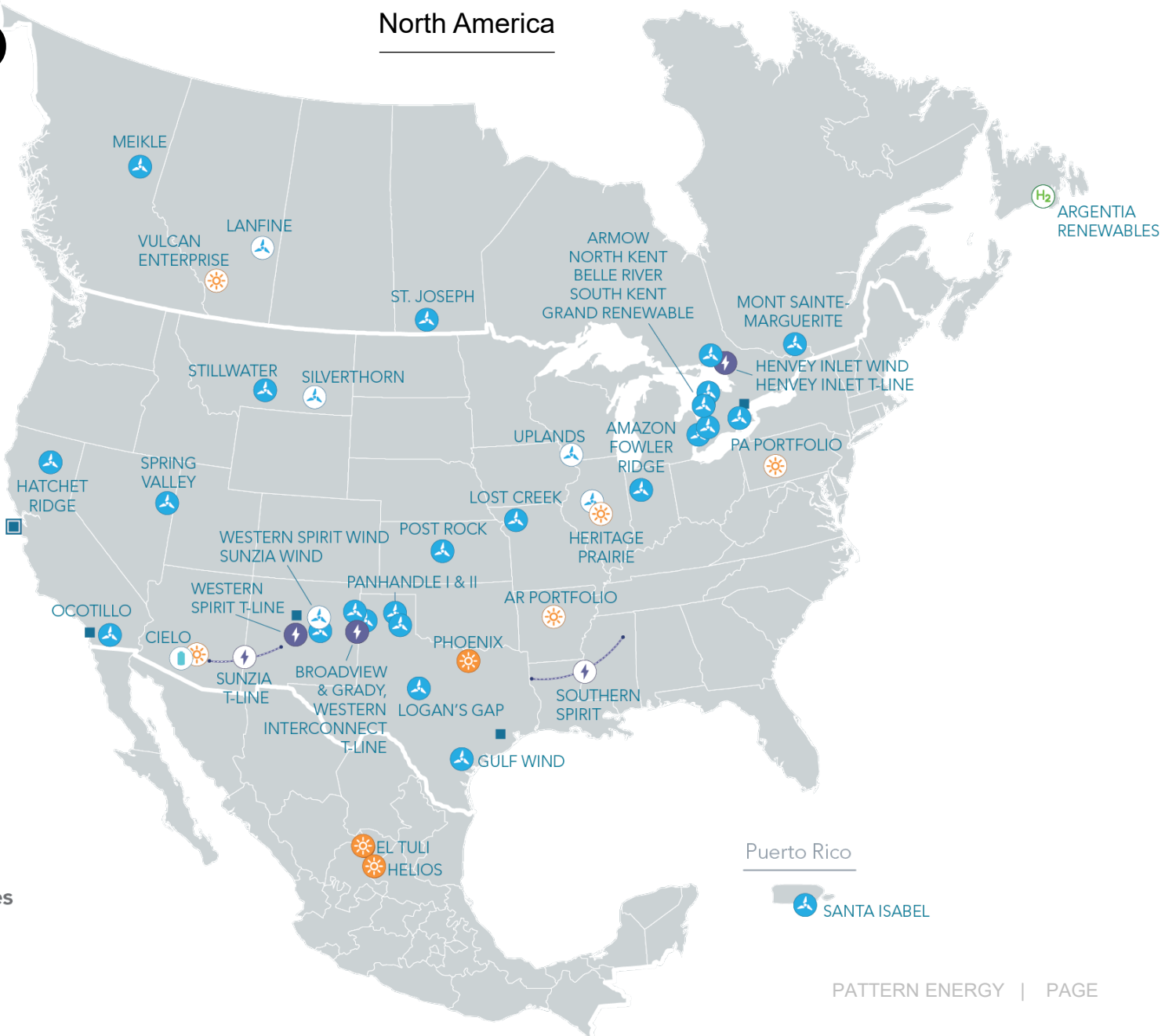
Headquartered in the United States and backed by the Canada Pension Plan Investment Board, our global portfolio includes more than 30 utility-scale renewable power facilities and transmission assets. Our facilities serve a diverse range of customers who provide low-cost energy to millions of consumers.

Pattern Energy in 2022 commissioned the **largest single-phase wind project in North America** – the 1,050MW Western Spirit Project in New Mexico.

# Global Portfolio

## North America

## Japan



### Projects and Facilities

	WIND	SOLAR	STORAGE	T-LINE	H2
OPERATIONAL					
DEVELOPMENT					

### Corporate Offices

- Headquarters
- Office

# Argentia Renewables



**Wind-Powered Green Fuels Export Hub  
Placentia Bay, Newfoundland & Labrador**

- Retired U.S. Army/Naval Base – Brownfield industrial flat development land with elevated backland area
- Ice-free, deep-water port with shortest N.A. shipping distance to EU
- High NCF renewables
- Supportive local politics & Federal incentives
- Working with: **Plug Power** (Co-dev); **Growler** (Co-Dev); **DNV** (wind model & technical); **SEM Ltd.** (Local Indigenous-owned environmental/regulatory); **CPL** (technical)



#### Phase 1: ~300 tpd of green ammonia (H2 carrier)

- 235MW wind project installed on 9,000 acres of private Port land
- 230kv grid connection nearby at Long Harbour
- Integrated Hydrogen electrolyzer & Green Ammonia plant
- Offtake: Multiple EU industrials – via Port of Rotterdam/Antwerp
- Capex \$1.1B

#### Phase 2: Scale-Up H2 & NH3 capacity

- >1GW of renewable energy capacity added to Placentia Bay Crown lands (awards Q2 2023)
- Capex \$3B (TBD)



# The “Hydrogen” Opportunity = NH<sub>3</sub>!

- Hydrogen itself cannot (**yet**) be efficiently liquified and shipped
- Ammonia is a critical feedstock for the production of nitrogen fertilizers (est. 45% of world’s food supply). 180MT annual production – must increase 3% each year (problem: it is now **falling**).
- 99% of global ammonia is made from hydrogen derived from natural gas – “Grey” ammonia is a significant carbon emitter and a growing carbon tax cost for producers
- In early / mid-20<sup>th</sup> century, all ammonia was made from electrolysis – 1960s/1970s natural gas proliferation changed that
- “Blue” ammonia involves the process of capturing and storing CO<sub>2</sub> from the hydrogen process – however most of this is used for enhanced oil recovery
- 24% of the world’s **exported** ammonia currently comes from Russia (largest exporter in the world)
  - Next largest: Trinidad and Tobago (23%)
- The EU is the world’s largest **importer** of ammonia

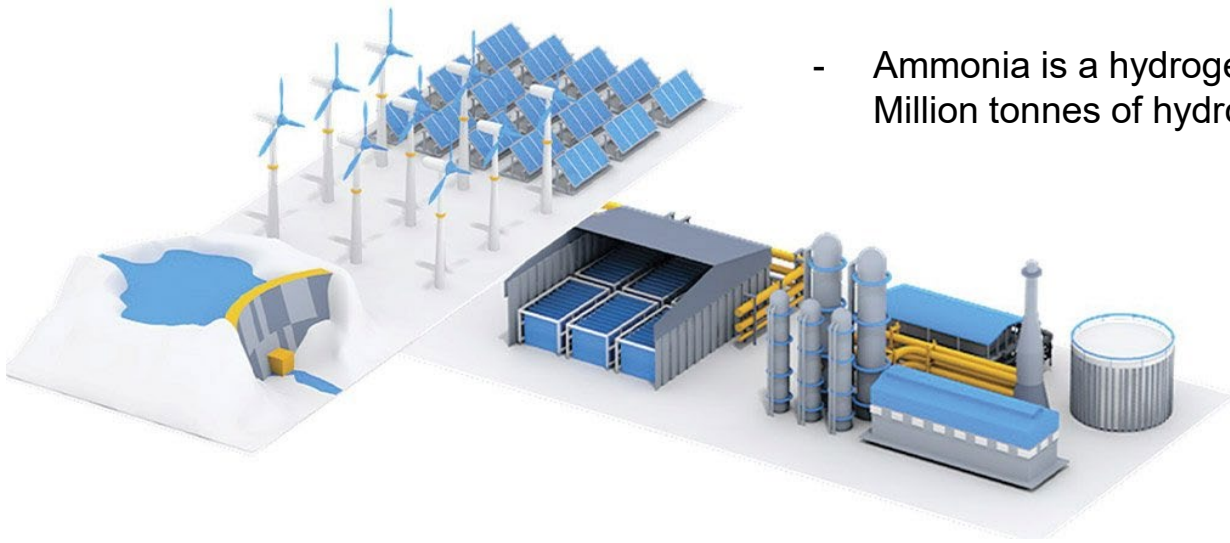




# The “Hydrogen” Opportunity = NH<sub>3</sub>!

**NL is uniquely placed to become a strategic long-term supplier of green ammonia to world markets**

- N.L. is ideally suited - High-capacity renewable energy regions with access to remote marine shipping infrastructure and competitive capex; stable, supportive politics; access to low-cost financing supported by Federal incentives
- I.R.A. will further constrain European domestic supply capability for green hydrogen – advantage for North American early moving projects – EU buyers will assign a premium to security of supply from stable markets
- Record high natural gas prices will favour green NH<sub>3</sub> as immediately competitive with grey / blue ammonia (ammonia trading at \$1650/tonne in Europe)
- Ammonia is a hydrogen carrier which can be “cracked” at the port of import - RePowerEU: 10 Million tonnes of hydrogen per year import target (2030) (~150GW of renewable power)

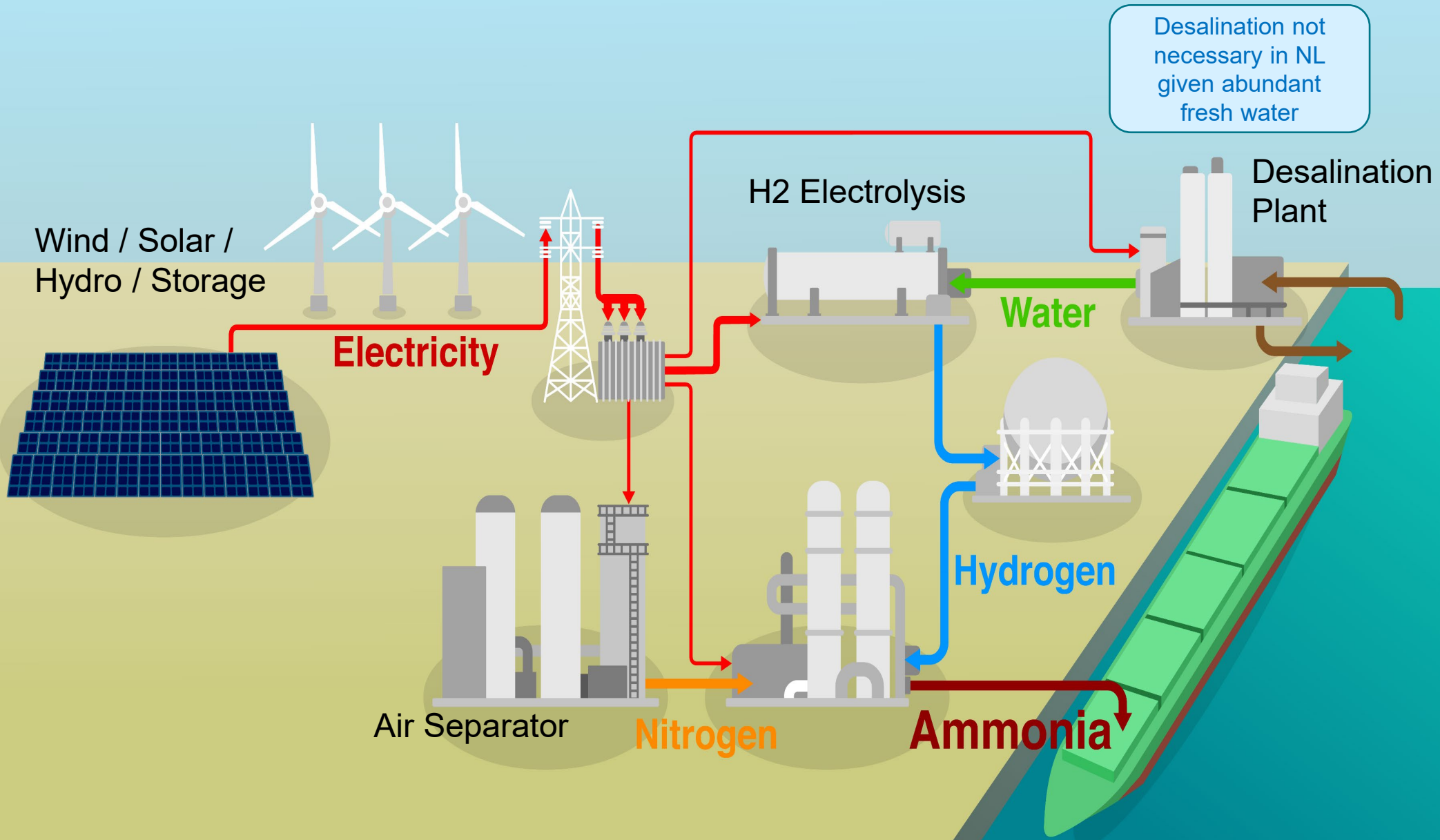


Model “small scale” green ammonia plant with alkaline hydrogen electrolyzers.

Source: Thyssen Krupp

# Green Ammonia – Process Diagram

Source: Green Ammonia Working Group ([www.gawg.org](http://www.gawg.org))



# Key Challenges / Issues

- Overcoming wind energy buildability challenges in rural coastal locations
- Understanding safety issues – ammonia is highly toxic
- Consulting with local communities & Indigenous peoples – not your average wind project!
- Large-scale electrolyzer OEM market will be constrained into mid decade – timing FID to technology supply is critical
- Lack of operational track record for large-scale electrolyzer installations and operations
- IRA in United States - **\$3.00/kg** – NFLD competitiveness vs US projects in high renewables areas where PTC green hydrogen can be made with VPPA-acquired power
- Clarity on EU hydrogen / ammonia import standards – currently in flux

AMER electrolyzer shipments by technology, 2022  
Source: BNEF

