



Heritage Prairie Wind – Union Hill

Heritage Prairie Wind Overview

Project Overview

- Heritage Prairie Wind is a proposed 500-600 MW wind project located in both Livingston and Kankakee Counties.
- The project area was selected due to its strong wind resource, compatible land use, and proximity to existing transmission infrastructure.
- Construction is scheduled to start in 2Q 2025 and commercial operations to begin by 4Q 2026

Interconnection

- The project will connect to the local transmission grid at the point of Interconnection (“POI”) located on the ComEd transmission system by tapping the existing 345kV Wilton Center – Loretto and 345kV Braidwood – Davis Creek transmission lines.
- The project was studied through the PJM interconnection queue process and received an Interconnection Service Agreement representing the full capacity of the project.

Project Status

- Pattern Energy and ConnectGen have been working with local landowners since 2017 and have partnered with hundreds of landowners throughout Livingston and Kankakee Counties.
- The project recently received approvals from the villages of Dwight, Campus, Buckingham, Herscher, Reddick, and Limestone for proposed turbines located within 1.5 miles of the village boundaries.

Community Outreach

- Pattern Energy and ConnectGen have been actively engaged in the community since 2017 and are committed to transparent and proactive communication.
- We have a local project development office located in Herscher, Illinois.

Project Partnership

Heritage Prairie Wind is a joint-venture between Pattern Energy Group and ConnectGen that brings two of the nation's leading renewable energy developers together

Company Backgrounds

Pattern Energy

One of the nation's largest private renewable energy companies with a proven track record across the US which has developed over 6 GW of operating renewable energy projects worldwide

ConnectGen

An independent renewable energy company focused on greenfield development of high-quality wind solar and battery storage projects with a development portfolio over 20 GW

Strong Project Team

- Brings decades of renewable energy development, construction and operations experience
- Pattern Energy has a global portfolio of 30 utility-scale renewable energy and transmission projects
- ConnectGen leadership team has collectively developed, financed, constructed and operated more than 10,000 MW of utility-scale renewable energy projects across the United States and Canada
- Extensive experience developing and executing renewable energy projects in Illinois

Ability to Execute

- The Heritage Prairie project team has fully integrated greenfield development, engineering, construction management, procurement, operations, origination and financing experience
- Team has broad industry relationships with key industry stakeholders including consultants, turbine OEMs, EPC/BOP constructors, and capital markets to support the project

Tax Benefits

An Economic Impact Analysis (EIA) was conducted to determine the economic impact Heritage Prairie Wind is expected to have on the local community. The EIA was performed by Dr. David G. Loomis from Strategic Economic Research, LLC. Dr. Loomis is a Professor Emeritus of Economics at Illinois State University, is the Co-Founder of the Center for Renewable Energy, and has over 20 years of experience in the renewable energy field.

The projected tax revenue from Heritage Prairie Wind, as identified in the EIA, are presented in the table below. In addition to the direct tax revenue shown below, the project is expected to generate hundreds of jobs as well as produce other indirect benefits to the community (e.g. workers eating at local restaurants, staying at local hotels, etc).

Total Projected Tax Revenue from Heritage Prairie Wind							
	TOTAL	County	Townships	Schools	Fire Districts	Road Districts	Misc.
30-Year Total	\$160,910,744	\$22,100,394	\$5,292,613	\$115,309,064	\$10,030,308	\$6,400,036	\$1,778,330
Annual Average	\$5,363,691	\$736,680	\$176,420	\$3,843,635	\$334,344	\$213,335	\$59,278

Kankakee County - Projected Tax Revenue from Heritage Prairie Wind							
	TOTAL	County	Townships	Schools	Fire Districts	Road Districts	Misc.
30-Year Total	\$73,264,524	\$10,204,123	\$2,091,987	\$52,070,149	\$4,798,800	\$3,376,177	\$723,288
Annual Average	\$2,442,151	\$340,137	\$69,733	\$1,735,672	\$159,960	\$112,539	\$24,110

Livingston County - Project Tax Revenue from Heritage Prairie Wind							
	TOTAL	County	Townships	Schools	Fire Districts	Road Districts	Misc.
30-Year Total	\$87,646,220	\$11,896,271	\$3,200,625	\$63,238,914	\$5,231,508	\$3,023,859	\$1,055,042
Annual Average	\$2,921,541	\$396,542	\$106,688	\$2,107,964	\$174,384	\$100,795	\$35,168

Environmental

Pattern and ConnectGen perform rigorous investigation and study of the natural, cultural, and human environments to support siting, design, and permitting. Results of these studies support the Project's commitment to avoid, minimize or mitigate the Project's effects.

Studies completed or in progress include:

- Avian and bat use surveys
- Nesting bird surveys
- Threatened and Endangered species habitat assessment
- Wetland and Aquatic Resource delineation
- Archeological and Architectural Resource Investigations
- Airspace Constraints Study
- Communications Studies
- Shadow Flicker Study
- Sound Study

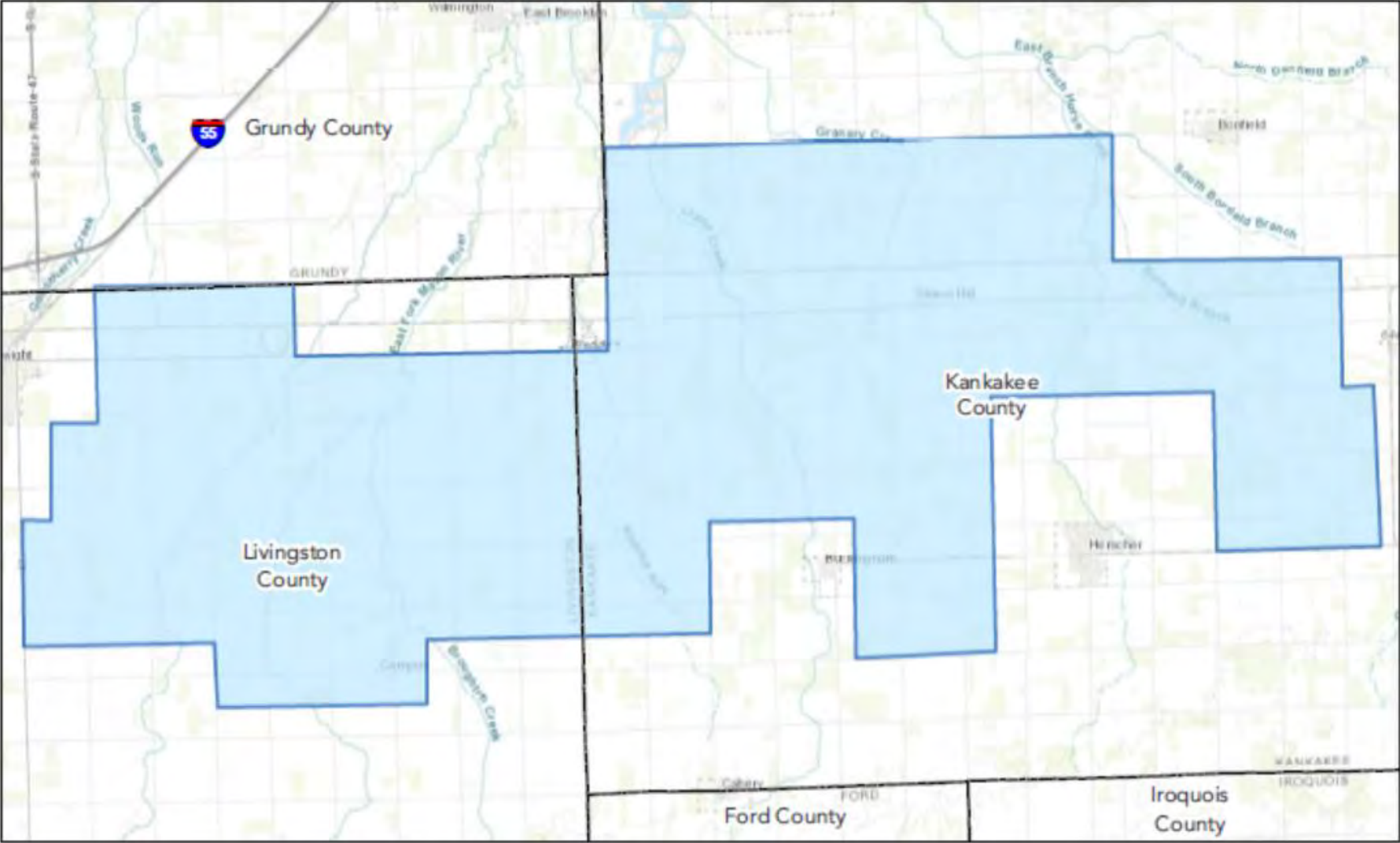


Setback Requirements

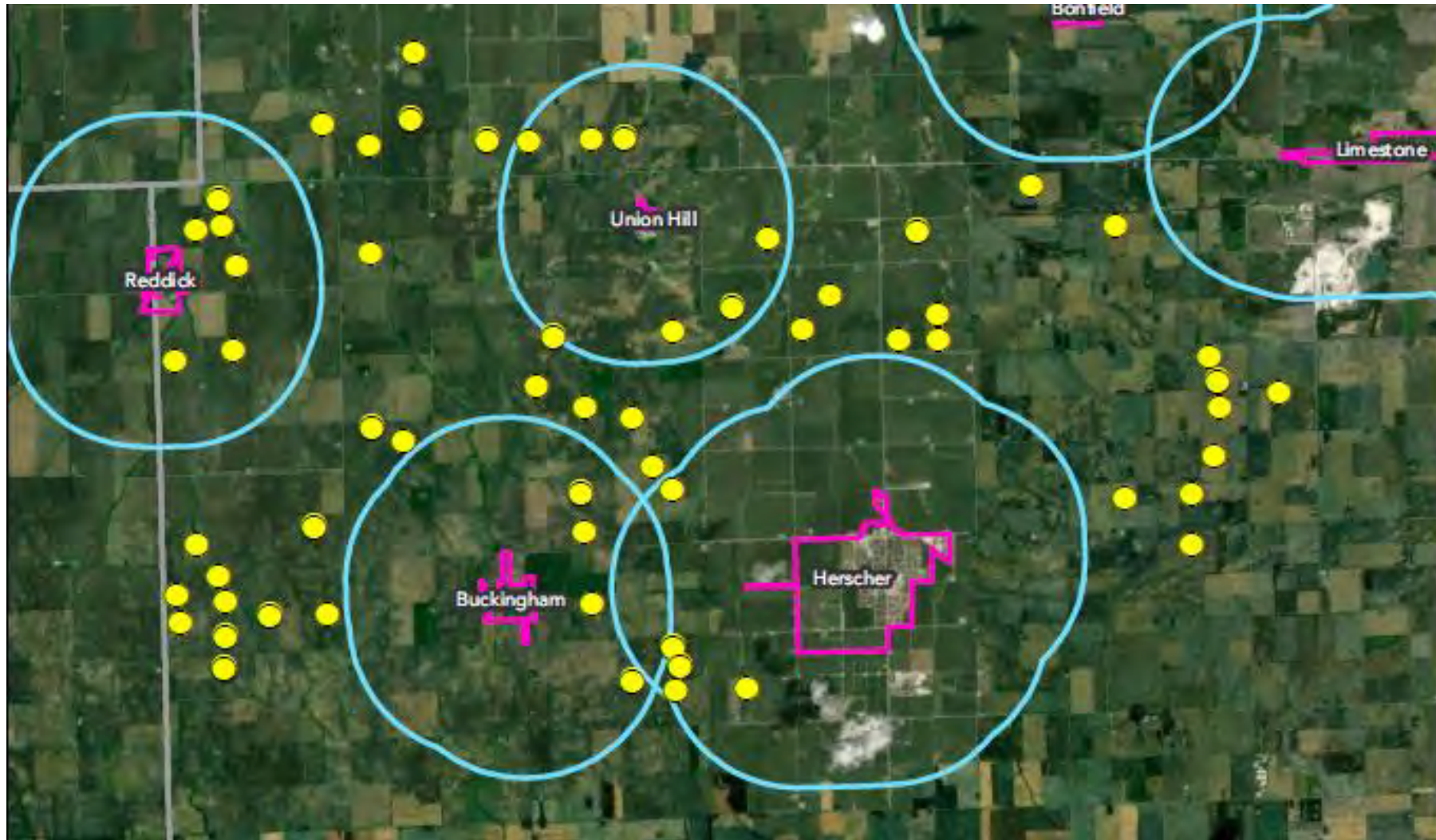
All turbine locations conform to the setbacks detailed (see below) in the Kankakee County Ordinance, Sec. 121-295. Siting of wind energy facilities.

- (1) **Setbacks.** All setbacks for commercial wind energy facility towers shall be measured from the center of the base of the wind tower. The following setback requirements may be waived subject to the written consent of the owner of each affected nonparticipating property.
 - a. Commercial wind energy facility towers shall be set back a minimum distance of 1.1 times the maximum blade tip height of the wind tower to the nearest point on the outside wall of any participating residences.
 - b. Commercial wind energy facility towers shall be set back a distance of at least 1.10 times the maximum blade tip height of the wind tower measured from the nearest point on the property line of any nonparticipating property.
 - c. Commercial wind energy facility towers shall have a zero setback from any participating property line.
 - d. Commercial wind energy facility towers shall be setback a minimum distance of 2.1 times the maximum blade tip height of the wind tower to the nearest point on the outside wall of any nonparticipating residence in existence or which has received a building permit as of the date of the date the application is filed for the special use permit.
 - f. Commercial wind energy facility towers shall be set back a minimum of 2.1 times the maximum blade tip height of the wind tower to the nearest point on the property line of any fish and wildlife area, nature preserve commission protected lands, or protected lands.
 - g. All wind energy conversion system towers shall be set back a distance of at least 1.10 times the maximum blade tip height of the wind tower to the nearest edge of the property line, easement or right-of-way containing the overhead communication and electric transmission lines. This requirement does not include overhead utility service lines to individual houses or outbuildings.
 - h. Commercial wind energy facility towers shall be setback a minimum of 2.1 times the maximum blade tip height of the wind tower to the nearest point on the outside wall of any occupied community building.
 - i. Commercial wind energy facility towers shall be setback a minimum of 1.1 times the maximum blade tip height of the wind tower to the center point of any public road right-of-way.
 - j. Commercial wind energy facility towers shall have a zero setback from overhead utility service lines to individual houses or outbuildings.
- (2) **Height.**
 - a. The blade tip height for wind towers in commercial wind energy facilities shall be determined by a "Determination of No Hazard to Air Navigation" by the Federal Aviation Administration under 14 CFR Part 77.

Overall Wind Project Footprint



Kankakee County Proposed Turbines



Proposed Turbines & Specifications

A final turbine has not yet been selected for the project. The table below shows two turbines that are being considered, along with the relevant specifications for the turbines (including foundations).

Manufacturer	Vestas	GE
Turbine Model	V163-4.5	GE 3.8-154
Nameplate Capacity (MW)	4.5	3.8
Rotor Diameter (m)	163	154
Hub Height (m)	113	117
Tip Height (m)	195	194
Tip Height (ft)	638	636
Foundation Depth (ft)	11	11
Foundation Diameter (ft)	87	74

Turbine Operations & Maintenance

Pattern Energy manages its operating fleet from its Operations Control Center (OCC) in Houston, Texas. The OCC provides real-time monitoring (24/7 and 365 days per year) of over 5,500 MW of operating projects across the United States, Canada, and Puerto Rico.

- Monitors and controls wind turbines to prevent downtime; ability to remotely start, stop, and reset wind turbines
- Monitors regional and local climate
- Allows onsite operators to concentrate on day-to-day equipment and safety activities
- Maintains communication with project sites and regulatory agencies
- Monitors certain environmental activities
- Supports other central functions such as safety, power marketing, regulatory compliance
- IT systems include sophisticated data historian, monitoring, alarming, and trending services; systems are hosted off site for maximum reliability and flexibility
- Scalable platform and staff to support growth beyond current portfolio



Oil Spill Prevention & Remediation

- Pattern monitors turbine alarms on a real time basis from its Operations Control Center (OCC), including oil levels within the turbines. If an oil level low alarm is triggered the turbine will be shutdown for inspection.
- Oil leaks are rare, but if an oil leak does occur, the turbine has built in sumps up tower, located underneath the gearbox and hydraulic reservoirs, which are designed to catch any potential oil and prevent it from moving down tower.
- Very rarely does the oil move beyond the sump. In extremely rare cases, oil that moves down tower is collected in the concrete basin at the bottom of the turbine.
- If oil were to move externally to the tower, the oil will stay onto the tower and would not be expected to impact the soil. In these rare cases, the tower is cleaned and if there are any drops of oil found on the ground, it would be remediated in accordance with the sites filed Spill Prevention Control and Countermeasure (SPCC) plan.
- Each site is equipped with oil spill kits. Each site has its own specific SPCC plan and performs regular inspections in accordance with that plan.
- Tier II filings are made for each of our sites as required.

Decommissioning Requirements

The Kankakee County Ordinance requires that the wind project have two important items in place related to decommissioning:

1. An executed **Agricultural Impact Mitigation Agreement (AIMA)**, which has specific requirement related to decommissioning and financial assurances (i.e. surety bond) for those activities. The project has a signed AIMA in place with the Illinois Department of Agriculture, which binds the project to these requirements.
2. A **decommissioning plan** and surety bond in an amount reflected in the decommissioning plan. A decommissioning plan, including the estimated cost of decommissioning, is currently being developed for the project by an independent 3rd party.

Sec. 121-295. Siting of wind energy facilities.

All commercial wind energy facilities shall fully comply with Public Act 102-1123 as amended and all other State and Federal laws, rules, and regulations that pertain to siting, construction, operating and maintaining the facility.

- (a) Required submittals. The following submittals are required to accompany an application for a building permit and must be approved by Building Division staff prior to the issuance of a building permit. This is in addition to any required submittals customarily required to accompany an application for a building permit.

(1) An executed Agricultural Impact Mitigation Agreement (AIMA) with the Illinois Department of Agriculture.

(2) A "Determination of No Hazard to Air Navigation" by the Federal Aviation Administration under 14 CFR Part 77.

(3) The results of an industry standard computer modeling program that indicates that any occupied community building or nonparticipating residence will not experience more than 30 hours per year of shadow flicker under planned operating conditions.

(4) A report that indicates that the project is in compliance with sound limitations established by the Illinois Pollution Control Board under 35 Ill. Adm. Code Parts 900, 901, and 910.

(5) A decommissioning plan and surety bond in an amount reflected in the decommissioning plan. This decommissioning plan, the surety bond amount, and intervals of review and renewal shall be identical to those specified in the executed AIMA.

Decommissioning Process

The following is a summary of the decommissioning process, which will comply with the project's executed Agricultural Impact Mitigation Agreement (AIMA) as well as all applicable state and federal regulations:

1. Mobilize cranes to the site for each wind turbine.
2. Drain all gearboxes, transformers, and hydraulic systems of fluids and put into appropriate containers before dismantling. Transport and dispose of all such fluids in accordance with all state and federal environmental regulations.
3. Dismantle and remove the rotor, nacelle and towers and transport components off site.
4. Use an air hammer or comparable equipment to break up the concrete foundation pedestals and transformer pads (if any) and load into dump trucks for disposal in compliance with all applicable state and federal environmental regulations.
5. Within the foundation excavation limits, the steel and cable shall be removed. Where possible, the steel and cable items shall be separated and recycled.
6. Backfill the holes with the soil that was excavated and regrade the foundation areas to as close as reasonably possible to the original ground contours. These areas shall be returned as close as reasonably possible to pre-construction conditions suitable for current adjacent land.
7. Other than those roads that the landowners wish to retain, access roads owned by the project that lead to the wind turbines will be removed and restored in a manner consistent with current adjacent land use. Areas will be regraded as close as reasonably possible to the original ground contours.

Turbine Recycling

The industry has already created a robust recycling program for major components of turbines:

1. **Towers** are made up almost entirely of steel, which can be melted and repurposed into other products
2. **Nacelles** contain metals such as steel, copper and aluminum that can also be recycled or repurposed into other products
3. **Blades** can be used in several applications, including recycling into composite materials such as decking and automotive parts, or used as feedstock for cement production to reduce the amount of coal and other raw-material

The major wind turbine manufacturers (OEMs) and main component suppliers that Pattern and ConnectGen work with have all committed to targets for recyclable or zero-waste turbines (for example, Vestas has committed to a 100% recyclable blades by 2030 and a Zero-Waste turbine by 2040; LM blades, owned by GE has committed to 100% recyclable blades by 2030).

Pattern and ConnectGen will only partner with companies that have a robust plan in place to properly recycle wind turbine components that are removed from projects it owns and operates.