

**CITY OF ONEIDA
DEPARTMENT OF PLANNING AND DEVELOPMENT**

Christopher N. Henry
Director
chenry@oneidacity.com



109 North Main Street
Oneida, New York 13421
Tel.: 315-363-7467
Fax: 315-363-2572

**COMBINED PLANNING COMMISSION ZONING BOARD OF APPEALS
COVER SHEET**

Fee Schedule (please make checks payable to City of Oneida)

- Site Plan Review– 1,000 sq ft or less \$50
- Site Plan Review– 1,001 to 5,000 sq ft \$100
- Site Plan Review– 5,001 to 10,000 sq ft \$300
- Site Plan Review– 10,001 sq ft or larger \$1,000
- Conditional Use Permit \$100
- Site Plan Modification \$50
- Area Variance \$50
- Use Variance \$200
- Zoning Amendment \$100

FOR OFFICE USE:

Application Number: _____
Date of Fee Collection: _____
Date of Public Hearing: _____
Date Received by Planning: _____
Date of Final Action _____
Action Filing Date _____

Location of property 0 Brewer Road (Note: The site entrance is located at 4949 Forest Avenue, Lincoln, NY)

Zone A Ward 1 Tax Map # 46-2-42.3

Property Owner (If Different):

Address: 143 Prospect Street
City/State/Zip Code: Sherill NY 13461
Phone: (315) 794-4075
Email: _____

Applicant:

Address: 22 Century Hill Dr, Ste 303
City/State/Zip Code: Latham NY 12110
Phone: (978) 221-3093
Email: bsmith@newleafenergy.com

Signature of Owner Date

Patrick Starke
Print Name of Owner

 03/21/2023
Signature of Applicant Date

Brandon Smith, New Leaf Energy (formerly Borrego)
Print Applicant Name

Description of Proposal (Attach additional pages if necessary):

The applicant is seeking approval to construct a single wind turbine with associated features and infrastructure. The exact model to be installed as part of this project is unknown at this time. The application is made based the largest dimensions under consideration for the single wind turbine, which is a maximum blade height of 560 feet and turbine base diameter of 18 feet. Other permanent features include a gravel access road, a gravel crane pad, utility communication tower, underground electrical lines and a small run of overhead electrical lines and poles off Forest Ave.

Explain why your proposal is in harmony with the character of the area, and will not have a negative impact on other persons or properties in the area (attach additional pages if necessary):

Project shall meet requirements of City Law, Section 190-26.2 Wind Energy, and Chapter 143 as it applies to wind energy conversion systems (WECS). A variance is requested to allow for a taller turbine. The project is setback a significant distance from public and private property, therefore an increase in height from 450' to 560' will not have an adverse impact on the area.

Date Modified 8/9/2022

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APPLICATION FOR A
CONDITIONAL USE PERMIT

Name of Proposed Development:

Oneida Wind Energy Project

Location of Site:

0 Brewer Road (Site entrance at 4949 Forest Ave, Lincoln, NY

Tax Map Number: 46-2-42.3

Current Zoning Classification: A-Ag

FOR OFFICE USE:

Application Number: _____

Date of Public Hearing: _____

Date Received by Planning: _____

Date of Final Action _____

Action Filing Date _____

Approved Denied

Ward: 1

Applicant:

Name: Oneida Wind 1, LLC. c/o Brandon Smith, New Leaf Energy

Address: 22 Century Hill Dr, Ste 303
Latham NY 12110

Phone: 978-221-3093

Owner (if different):

Name: Patrick Starke

Address: 143 Prospect Street
Sherill NY 13461

Phone: (315) 794-4075

Proposed Use(s) of Site: The applicant is seeking approval to construct a single wind turbine with associated features and infrastructure. The exact model to be installed as part of this project is unknown at this time. The application is made based the largest dimensions under consideration for the single wind turbine, which is a maximum blade height of 560 feet and turbine base diameter of 18 feet. Other permanent features include a gravel access road, a gravel crane pad, underground electrical lines, utility communication tower, and a small run of overhead electrical lines and poles off Forest Ave

Plot Plan: attach a copy of the parcel showing the dimensions of the lot, buildings, and required setbacks.

Signature of Applicant

03/17/2023

Date

Conditional Use Permit Fee: \$100 Please make a check payable to the City of Oneida

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APPLICATION FOR SITE PLAN

Name of Proposed Development:

Oneida Wind Energy Project

Location of Site:

0 Brewer Road (Entrance at 4949 Forest Ave, Lincoln NY)

Tax Map Number: 46-2-42.3

Current Zoning Classification: A-Ag

FOR OFFICE USE:

Application Number: _____

Date of Public Hearing: _____

Date Received by Planning: _____

Date of Final Action _____

Action Filing Date _____

Approved Denied

Ward: 1

Applicant:

Oneida Wind 1, LLC. c/o
Name: Brandon Smith, New Leaf Energy
Address: 22 Century Hill Dr, Ste 303
Latham NY 12110
Phone: 978-221-3093
Email: bsmith@newleafenergy.com

Plans Prepared By:

Name: Camie Jarrell PE, GHD Consulting Services
Address: 285 Delaware Ave, Ste 500
Buffalo NY 14202
Phone: (716) 362-8879
Email: camie.jarrell@ghd.com

 _____
Signature of the Applicant Date 03/17/2023

Owner (if different):

Name: Patrick Starke
Address: 143 Prospect Street
Sherill NY 13461
Phone: (315) 794-4075

Please see owner authorization letter attached

Signature of the Owner Date

Proposed Use(s) of Site:

The applicant is seeking approval to construct a single wind turbine with associated features and infrastructure.

City, County, State, and Federal Permits Needed (list type and department/agency):

NYSDEC - SPDES Permit for stormwater discharges
NYSDDAM - Notice of Intent

Total Site Area (Square feet or acres): 154.5 acres

Anticipated Construction Time: 2024 (6-9 months)

Will Development be Staged? No

Current Condition of Site (buildings, vacant, etc.):

Vacant

Current Land Use of Site (agricultural, commercial, undeveloped, etc.):

Undeveloped/Agricultural

Estimated Cost of Proposed Improvements: \$ 5,000,000

Anticipated Increase in Residents, Employees, Customers/clients, etc.: None

Describe proposed use, including primary and secondary uses, ground floor area, height, number of stories per building. For residential structures, include number of dwelling units by size (# bdrms), number of parking spaces. For non-residential structures, include total floor area and total sales area, number of parking spaces. Use separate sheet if needed.

The exact model to be installed as part of this project is unknown at this time. The application is made based the largest dimensions under consideration for the single wind turbine, which is a maximum blade height of 560 feet and turbine base diameter of 18 feet. Other permanent features include a gravel access road, a gravel crane pad, underground electrical lines and a small run of overhead electrical lines and poles off Forest Ave.

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Continue to the next page for procedures->

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APPLICATION FOR AN AREA VARIANCE

The appeal concerns property at the following address:

Zone _____ Ward 1

Tax Map # _____

FOR OFFICE USE:

Application Number: _____

Date of Public Hearing: _____

Date Received by Planning: _____

Date of Final Action _____

Action Filing Date _____

Approved Denied

Applicant:

Name: _____

Signature _____

Address: _____

Date _____

Phone: _____

Email: _____

If the property on which the Area Variance is being requested is not owned by the applicant, the applicant must submit a statement by the property owner authorizing the applicant to appeal on his/her behalf.

The applicant's appeal from a decision of the Code Enforcement Officer concerns the following:

- Denial of an Application for a Building Permit (attach to Application)
- Denial of an Application for a Certificate of Occupancy (attach to Application)
- Denial of an Application for a Certificate of Compliance (attach to Application)

Date of Code Enforcement Officer's Decision: _____

Proposed Activity: Single wind turbine

Type and size of variance requested: _____

Reason for variance: _____

Describe the character of the neighborhood: _____

Area Variance Fee: \$50 Please make a check payable to the City of Oneida

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Project Location 0 Brewer Road (Entrance at 4949 Forest Tax Map # 46-2-42.3
Ave, Lincoln NY)

Applicant Name Oneida Wind 1 LLC c/o New Leaf Energy, Brandon Smith

Applicant Address (If Different): 22 Century Hill Dr Ste 303, Latham NY 12110

Zone A - Ag Ward 1 File # _____

Area Variance Application Checklist of Documents

<u>Applicant</u>	<u>City</u>	<u>N/A</u>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover Sheet
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Area Variance Application (or Variance Signage App.)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Codes Officer Denied Permit
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location Map from Assessor
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Associated Fee(S)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site Map (This may be a sketch with Dimensions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Neighbor Statements (or proof contact was attempted)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Photos or Drawings
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other _____

Notes:

This is only a guide and may not reflect all that is required for your application. Further, Be sure to submit 14 printed copies and 1 Digital Copy to the Director of Planning and Development at 109 N. Main Street, Oneida 13421. Additional required items will be provided by the Director of Planning and Development.

GUIDELINES AND CRITERIA TO SUPPORT ZONING APPEAL

AREA VARIANCE

Please see below for responses to the standard New York State Area Variance criteria:

1. Whether or not an undesirable change will be produced in the character of the neighborhood or a detriment to nearby properties will be created by the granting of the Area Variance.

The installation of a 560-foot (total tip height) turbine instead of a 450-foot turbine (maximum allowable per Town code) does not result in a change of character of the neighborhood, nor will it create a detriment to the nearby properties. Tall wind turbines are an allowable special use, and the project involves the installation of a single wind turbine and associated gravel access road. The change in turbine height does not alter the size of the project or the area coverage. The gravel access road also remains the same in size and location. The Town Board has determined that tall wind turbines are an appropriate use in this neighborhood by allowing them as a special use, a legislative determination that the use is in harmony with general zoning plan and will not adversely affect the neighborhood. The higher turbine does not create a change in the allowable uses or an impact on the character of the neighborhood.

2. Whether or not the benefit sought by the Applicant can be achieved by some method, feasible for the applicant to pursue, other than an Area Variance.

An area variance to deviate from the City Code maximum wind tower height of 450-ft. is needed because wind turbines of that height are no longer available in today's market. Achieving comparable power output from legacy 450-ft. turbine technology would require multiple turbines, which could not be sited on this parcel due to required spacing and setbacks.¹ There are no other alternatives nor redesigning that will achieve the applicant's goal of constructing a wind turbine as manufacturers have moved to higher, more efficient and powerful turbines to increase energy production. The benefit of a renewable energy source, which under community wind project will be provided to the local electrical grid, cannot be achieved by other methods at this site. Additionally, granting the Applicant's request for a 560-ft. tower is the minimum variance necessary as this is the minimum height of turbine towers on the market today. Therefore, it is not feasible to purchase a wind turbine that meets the Town's zoning requirements as the standard height of wind turbines has increased to 560-ft.

3. Whether or not the requested Area Variance is substantial.

The increase in turbine height is not substantial. A higher turbine will not appear substantially different to the surrounding area. When comparing the numerical difference of the wind turbines of 450-ft. versus 560-ft., this may appear to be a substantial increase. The ZBA should not look at the substantiality of the variance in a vacuum; instead, it should evaluate the totality of the relevant circumstances. This determination is not a purely mathematical calculation, but should consider the unique facts and circumstances, including whether the variance sought will have a negative impact on the community. This deviation in turbine height will be insignificant and will not cause negative impacts to the community. Please see the attached visual simulations which show a comparison of a 450' turbine with the proposed turbine. The visual appearance with the change in height will be minimal and the Project complies with all other applicable local laws.

¹ There have been significant advances in wind blade technology in recent years, "including greater size and more height (which means the turbine can tap higher wind speeds), with less noise," Kevin Hand, How New Wind Turbines Produce Far More Energy, Wall Street Journal, May 16, 2021, available at <https://www.wsj.com/articles/wind-turbine-renewable-energy-11620848318>.

4. Whether or not the proposed variance will have an adverse effect or impact on the physical or environmental conditions in the neighborhood or district.

The Project will not adversely affect or impact the physical conditions of the neighborhood or district. As discussed above, the visual impacts of this deviation in height are negligible. Additionally, the advancement of turbine technology results in a decrease in noise production from the turbine at increased heights. An increase in tower height will not pose a negative environmental impact to the community. The project features that impact the area (i.e., wetlands, trees, surface waters) remain the same under increased tower height. Additionally, the area of the base of the tower does not change, therefore, the project will not increase in lot coverage. Thus, the requested tower height variance will not negatively impact the physical features or environment of the community.

5. Whether or not the alleged difficulty was self-created, which consideration shall be relevant to the decision of the board of appeals, but shall not necessarily preclude the granting of the Area Variance.

This request is not self-created because it is due to the advance in technology in wind turbines and the increased efficiency of longer blades, which has resulted in turbines complying with the City Code being unavailable. The Applicant does not have control over the change in technology or the market availability of wind turbines and cannot construct an allowable use without the variance. It is also respectfully submitted that even if viewed as self-created, it is not a dispositive factor, and the self-created nature of the variance must generally be considered through the lens of the impact the variance will have if it is granted, which, as noted above, is minimal.

CONCLUSION:

It is respectfully submitted that the benefit of the proposed variance to the Applicant outweighs the potential detriment to the neighborhood and community. When evaluating the five factors, the requested area variance should be granted.

JOURNAL REPORTS: ENERGY

How New Wind Turbines Produce Far More Energy

Lighter materials and improved design have enabled blades to get much longer and more efficient at capturing the wind

By [Kevin Hand](#) [Follow](#)

May. 16, 2021 10:00 am ET

Wind turbines have become bigger, more powerful, and more cost-efficient to operate in recent decades.

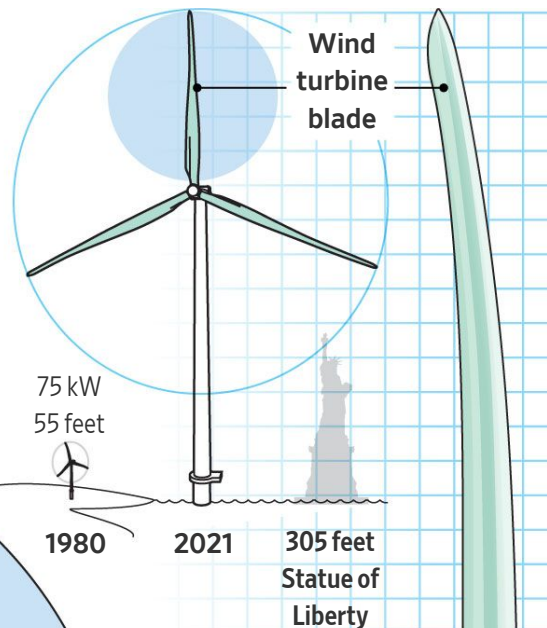
A key improvement has been modern blades that are far more sophisticated in design, from aerodynamic properties to materials. This has enabled a variety of other improvements to the turbine, including greater size and more height (which means the turbine can tap higher wind speeds), with less noise.

Here's how the blades have evolved and some key changes that have enabled the scaling up.

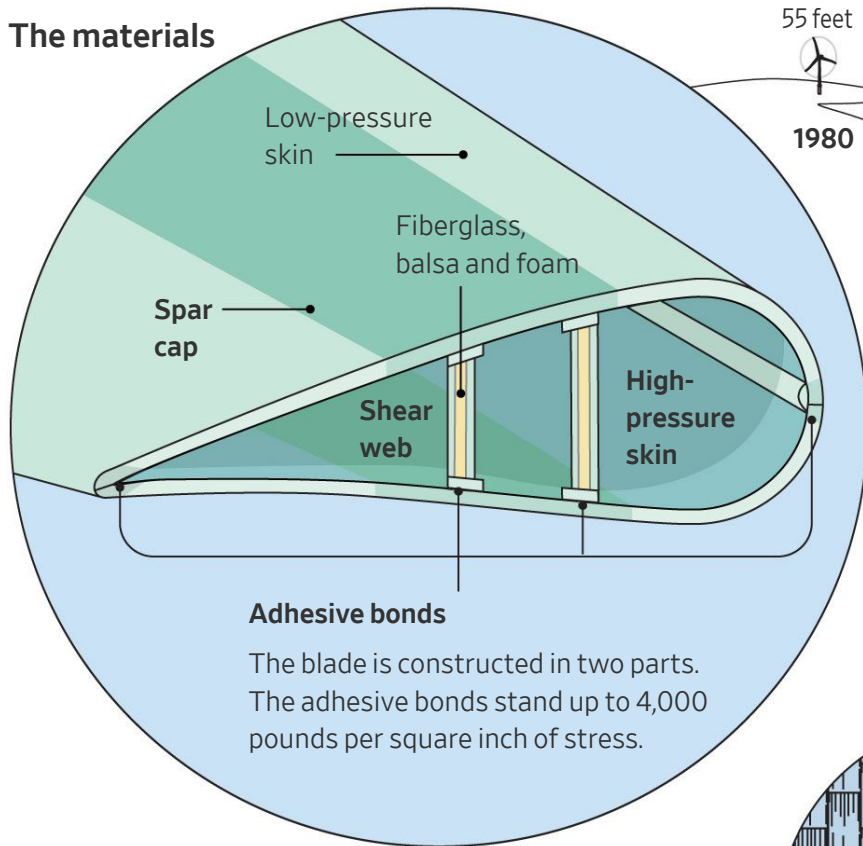
The size

Forty years ago typical wind-turbine blades were around 26 feet long. Today, with lighter materials, the blades have reached 351 feet, longer than the Statue of Liberty is tall, and are packed with new technology.

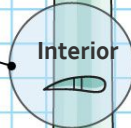
853-foot height
15,000 kilowatts of power



The materials

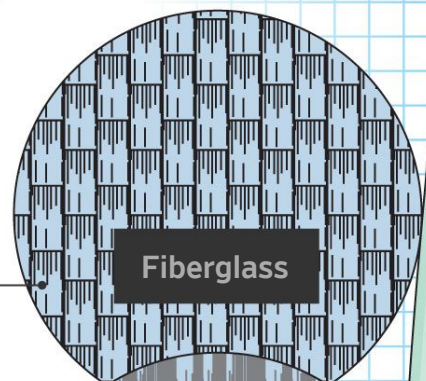


Adhesive bonds
The blade is constructed in two parts. The adhesive bonds stand up to 4,000 pounds per square inch of stress.



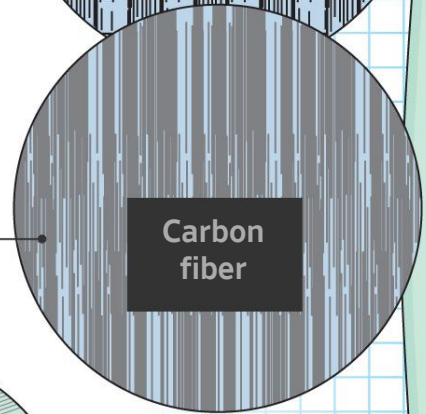
1980

Early wind-turbine blades were made from fiberglass and resin. The materials limited their size and thus their power output.



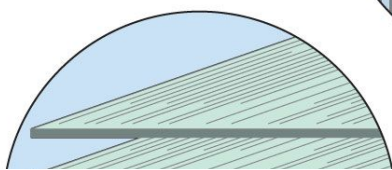
2021

Modern blades, made from carbon fiber and other advanced materials, are 90% lighter than 1980s blades would be if scaled to current turbine sizes. Because of their size and design, turbines with the new blades can produce up to 15,000 kW of energy.

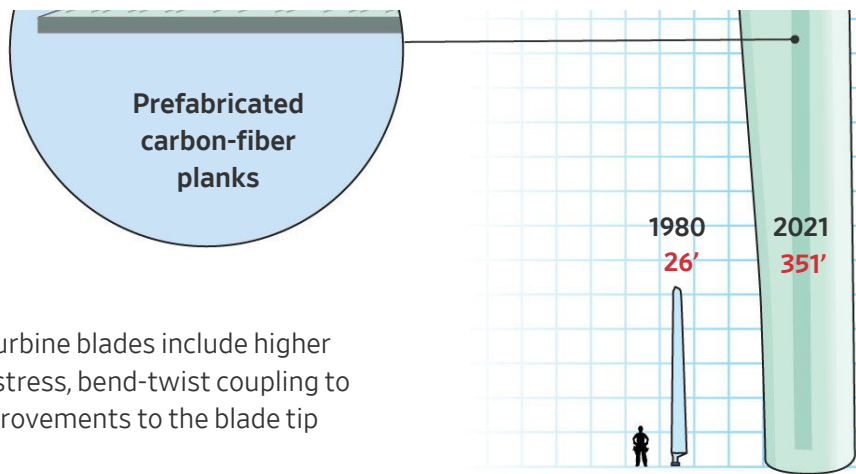


Spar cap

This section of the blade takes an enormous amount of stress. It is now reinforced

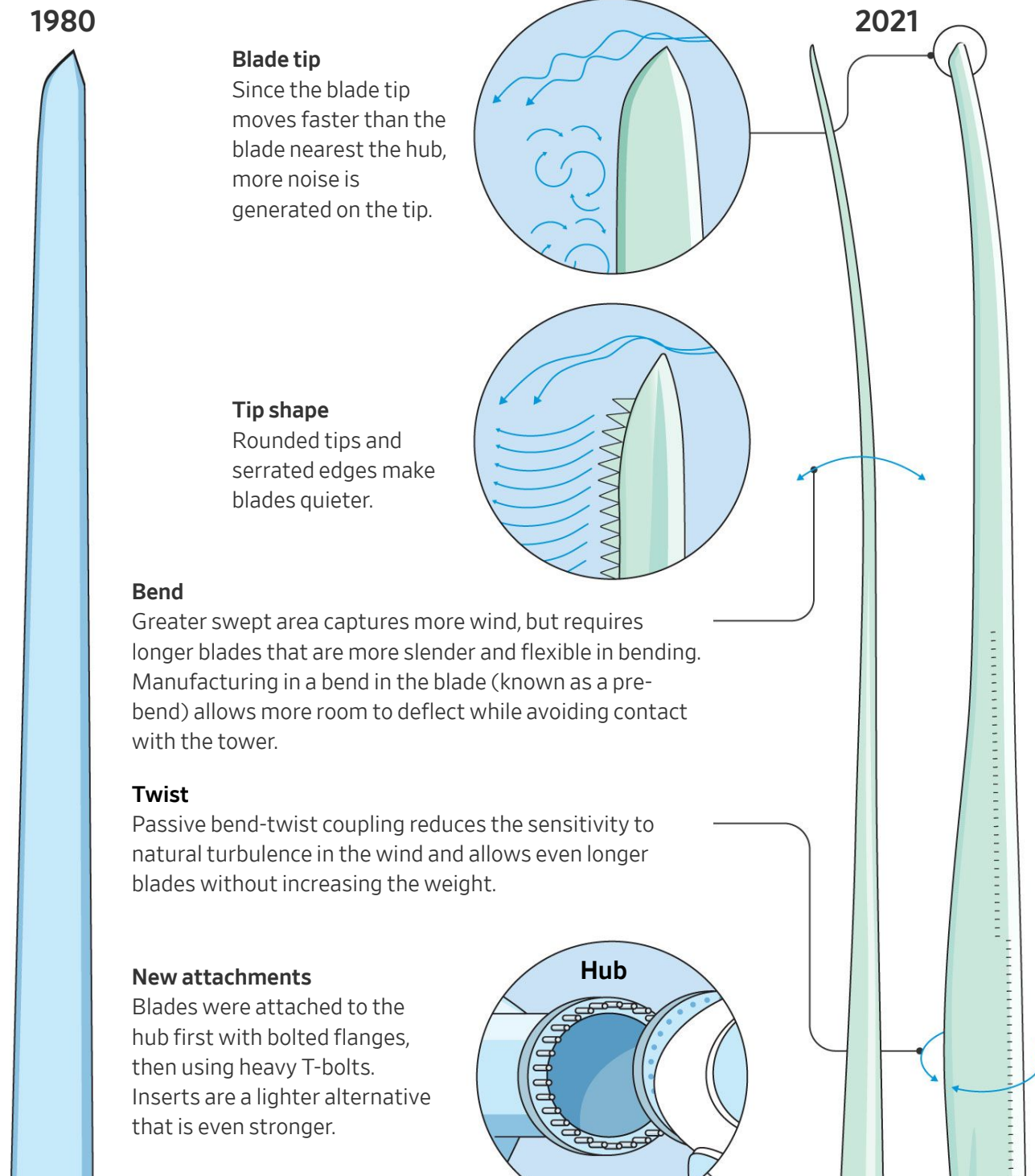


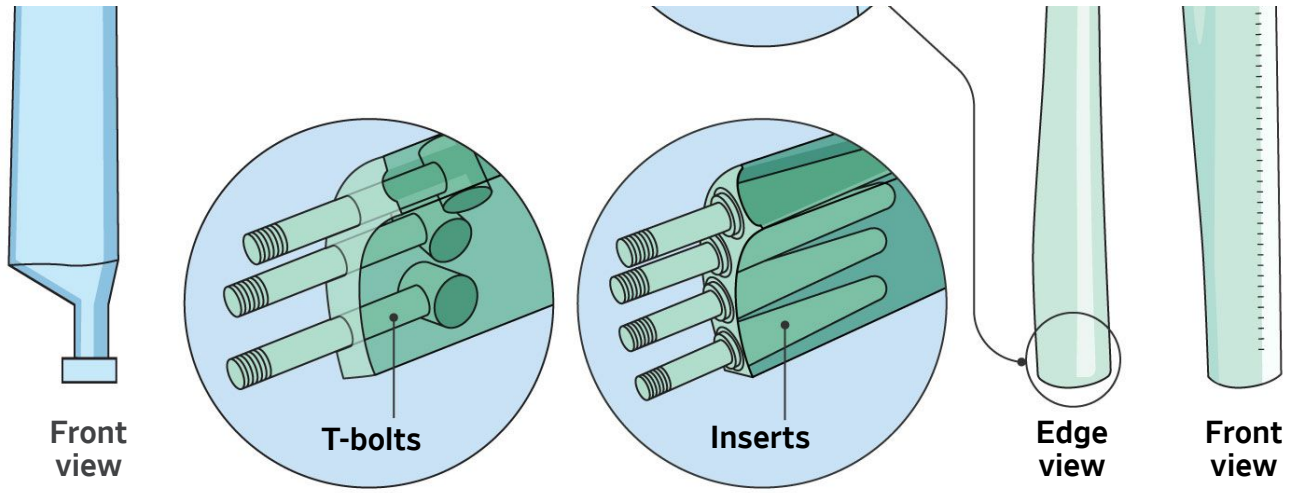
with a carbon-fiber strip the entire length of the span for strength. Sometimes the strip is made with carbon-fiber planks instead of cloth.



The shape

Innovations for the modern wind-turbine blades include higher strength that can withstand more stress, bend-twist coupling to reduce loads, and aerodynamic improvements to the blade tip for noise mitigation.





Sources: Paul Veers, National Renewable Energy Laboratories; Steve Nolet, TPI Composites Inc.; LM Wind Power; GE

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