PREVIEW OF WIND LAW

The Wild West of Wind Power
Lessons from the Lone Star State

April 2, 2021

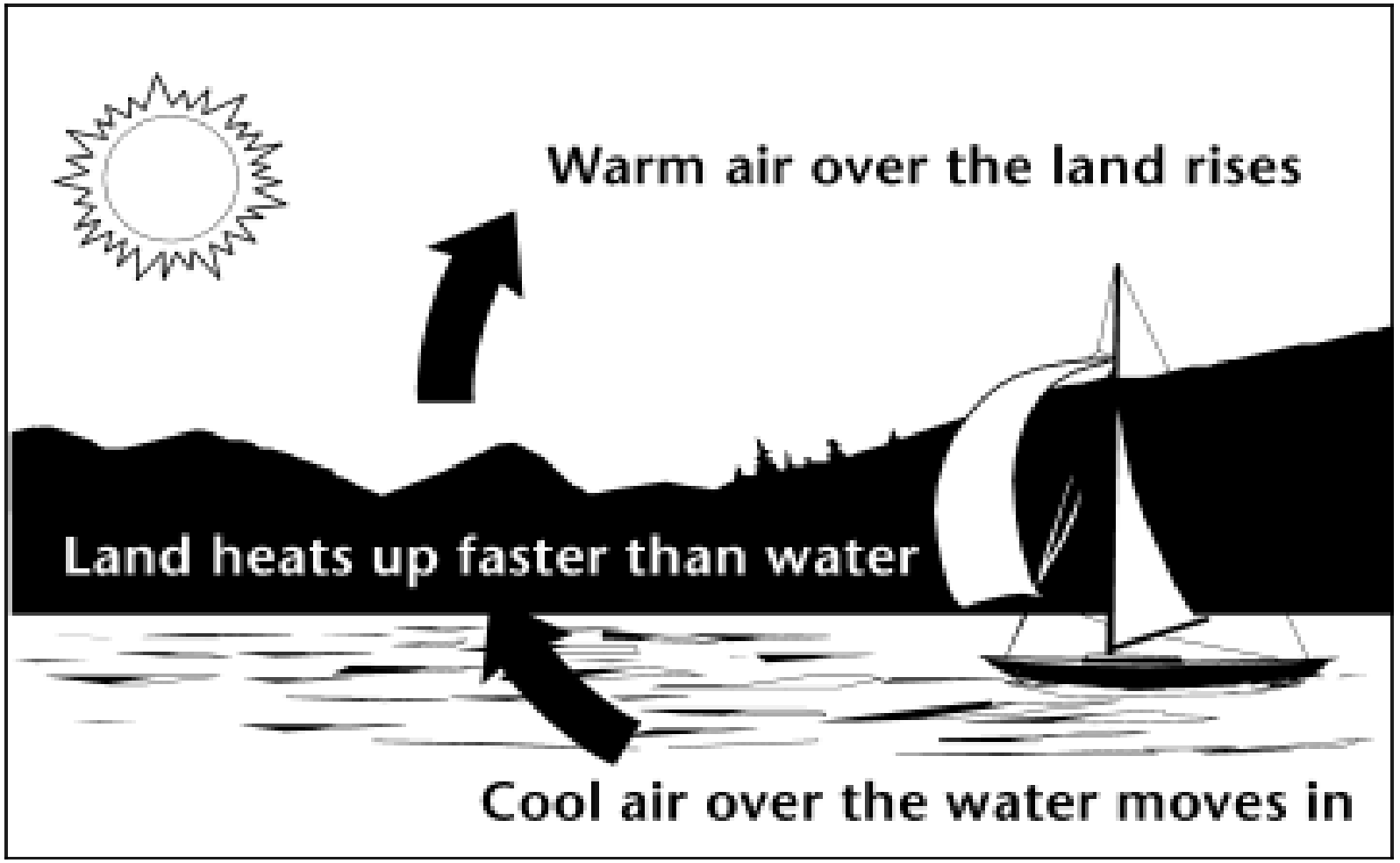
Roderick E. Wetsel

Wetsel, Carmichael, Allen, & Lederle

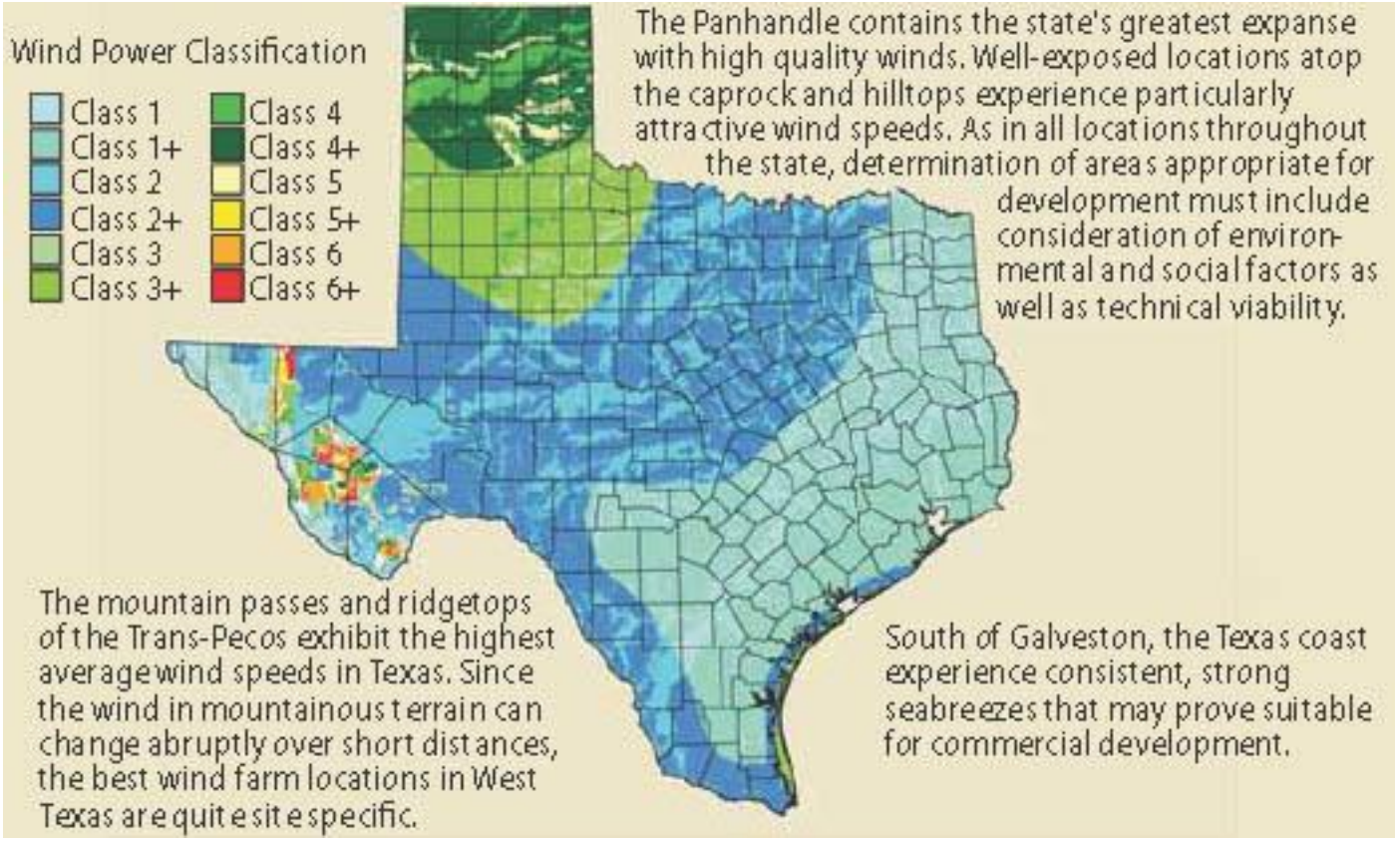
"The only tool of the lawyer is words. We have no marvelous pills to prescribe for our patients. Whether we are trying a case, writing a brief, drafting a contract, or negotiating with an adversary, words are the only things we have to work with. The great goal in writing and speaking is clarity. Persuasion is important, but we cannot persuade if we are not clear in saying what we want done and why it ought to be done."

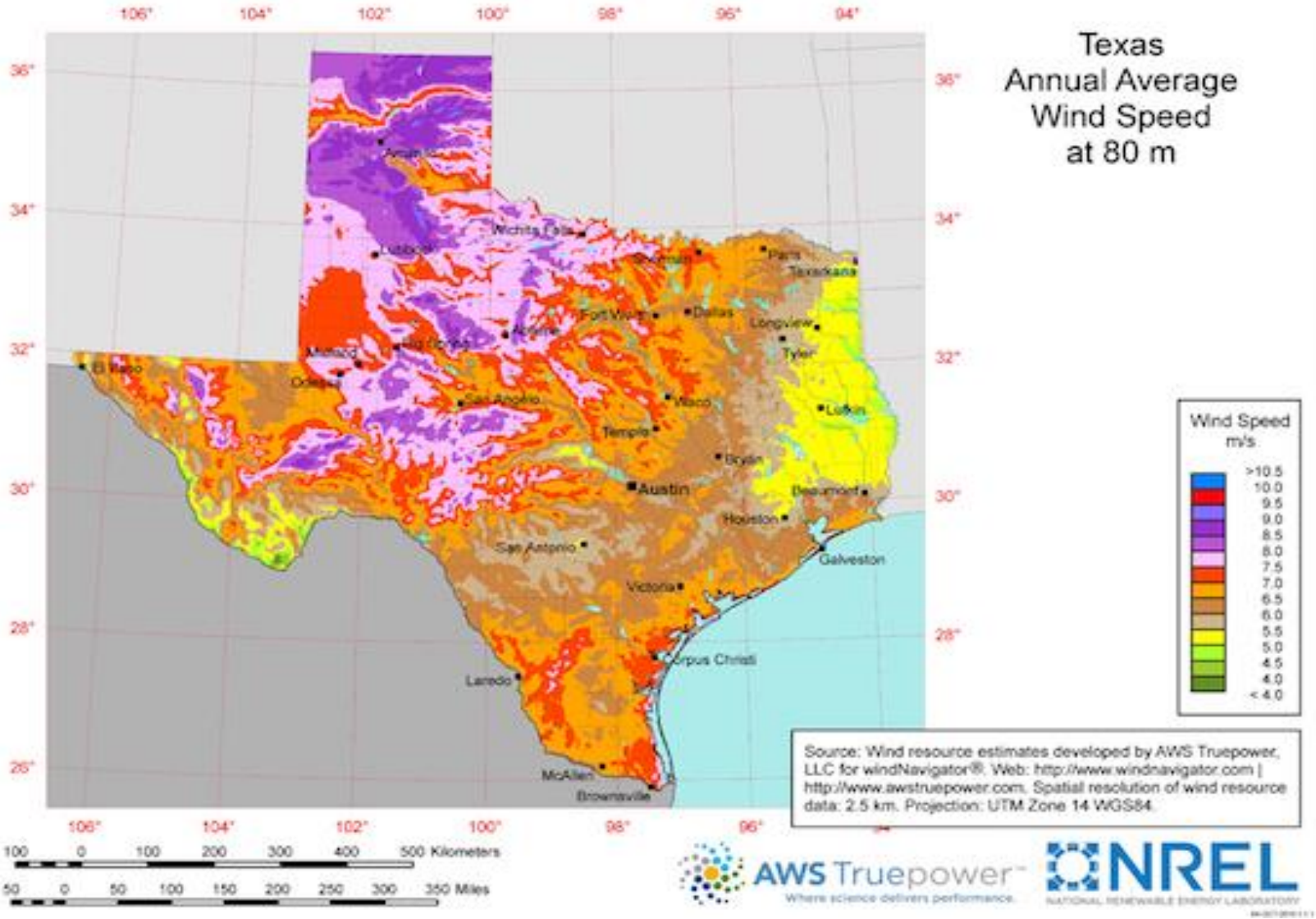
Charles Alan Wright
December 1990
Foreword to: The Elements of Legal Style, 2nd Edition, by Bryan Garner (2002)

What causes wind



Wind Resource in Texas




Texas
Annual Average
Wind Speed
at 80 m
Wind Speed
m/s
>10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
< 4.0
Source: Wind resource estimates developed by AWS Truepower, LLC for windNavigator®. Web: http://www.windnavigator.com | http://www.awstruepower.com. Spatial resolution of wind resource data: 2.5 km. Projection: UTM Zone 14 WGS84.
AWS Truepower
Where science delivers performance.
NREL
NATIONAL RENEWABLE ENERGY LABORATORY
106°
104°
102°
100°
98°
96°
94°
36°
34°
32°
30°
28°
26°
Amarillo
Wichita Falls
Lubbock
Sherman
Paris
Texarkana
Fort Worth
Dallas
Longview
Tyler
Abilene
Midland
Big Spring
El Paso
Odessa
San Angelo
Waco
Lufkin
Temple
Austin
Beaumont
Houston
San Antonio
Galveston
Victoria
Corpus Christi
Laredo
McAllen
Brownsville
100 0 100 200 300 400 500 Kilometers
50 0 50 100 150 200 250 300 350 Miles

Jobs & Economic Benefits

The U.S. wind industry is a major economic development driver. In addition to job creation and billions of dollars in project investment, the wind industry invests heavily in local communities, providing significant revenue in the form of property, state, and local taxes.

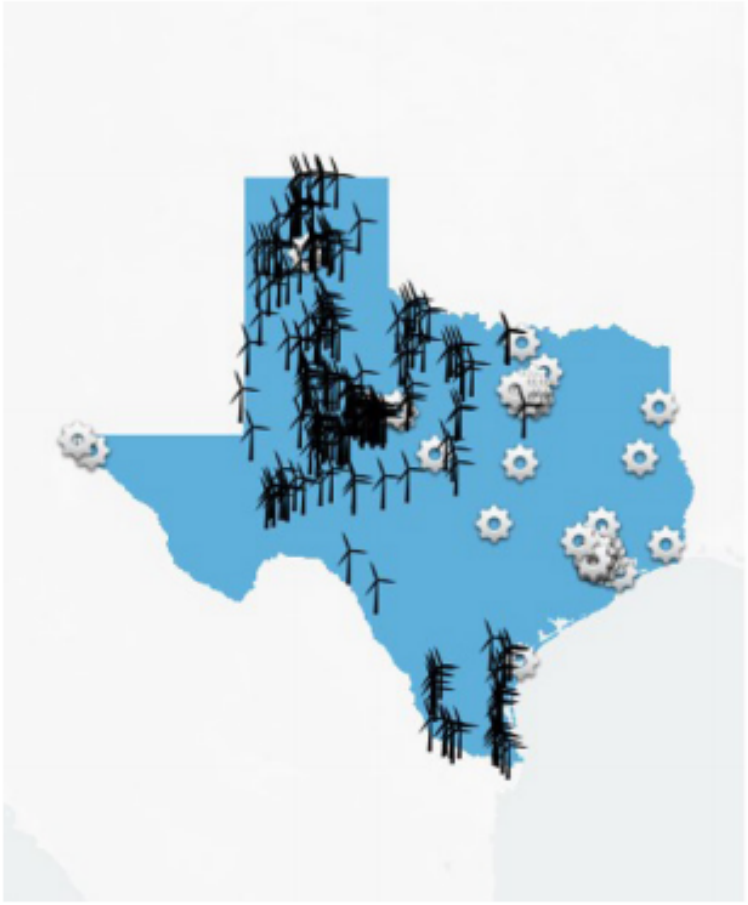
- Direct wind industry jobs in 2019: **25,001 to 26,000**
- Capital investment in wind projects through 2019*: **$53.1 billion**
- Annual state and local tax payments by wind projects: **$285 million**
- Annual land lease payments: **$192 million**

*Source: Based on state and national averages from LBNL, NREL

Wind-Related Manufacturing

Over 500 manufacturing facilities in the U.S. make products for the wind industry, from blades, towers, and turbine nacelles to raw components such as fiberglass and steel.

- Number of active manufacturing facilities in the state: **46**



Online Wind Project

Wind-related Manufacturing Facility

POWERED BY WindIQ AWEA

*Information provided by AWEA

STATE WIND FACTS

Wind Projects as of Q1 2020

- Installed wind capacity: **29,407 MW**
  - » State rank for installed wind capacity: **1st**
- Number of wind turbines: **14,929**
  - » State rank for number of wind turbines: **1st**
- Wind projects online: **157** (Projects larger than 10 MW: 148)
- Wind capacity under construction: **6,079 MW**
- Wind capacity in advanced development: **980 MW**

Wind Generation

In 2019, wind energy provided **17.50%** of all in-state electricity production.

- State rank for share of electricity: **11th**
- Equivalent number of homes powered by wind in 2019: **7,745,800**

*Information provided by AWEA

Largest operational onshore wind farms [edit]

This is a list of the onshore wind farms that are larger than 250 MW in current nameplate capacity. Many of these wind farms have been built in stages, and construction of a further stage may be continuing at some of these sites.

8

Wind farm	Current capacity (MW)	Country	State/ province	Coordinates
Gansu Wind Farm	7,965	China	Gansu	40°12′N 96°54′E
Alta Wind Energy Center	1,548	USA	California	35°1′16″N 118°19′14″W
Muppandal wind farm	1,500	India	Tamil Nadu	8°15′27.45″N 77°32′23.21″E
Jaisalmer Wind Park	1,064	India	Rajasthan	26°56′27.45″N 70°53′23.21″E
Shepherds Flat Wind Farm	845	USA	Oregon	45°42′00″N 120°3′36″W
Roscoe Wind Farm	781.5	USA	Texas	32°15′52″N 100°20′39″W
Horse Hollow Wind Energy Center	735.5	USA	Texas	32°11′24″N 100°01′48″W
Capricorn Ridge Wind Farm	662.5	USA	Texas	31°54′11″N 100°54′04″W
Fântânele-Cogealac Wind Farm	600	Romania	Fântânele & Cogealac	44°35′25″N 28°33′55″E
Fowler Ridge Wind Farm	599.8	USA	Indiana	40°36′31″N 87°19′15″W
Sweetwater Wind Farm	585.3	USA	Texas	32°20′20″N 100°26′40″W
Cedar Creek Wind Farm	551	USA	Colorado	40°52′16″N 104°5′35″W
Whitelee Wind Farm	539	UK	East Renfrewshire, Scotland	55°41′14″N 4°13′43″W
Buffalo Gap Wind Farm	523.3	USA	Texas	32°18′38″N 100°8′57″W

Largest operational onshore wind farms [edit]

This is a list of the onshore wind farms that are larger than 250 MW in current nameplate capacity. Many of these wind farms have been built in stages, and construction of a further stage may be continuing at some of these sites.

9

Wind farm	Current capacity (MW)	Country	State/ province	Coordinates	Refs
Gansu Wind Farm	7,965	China	Gansu	40°12′N 96°54′E	multiple farms [22][23][24][25]
Alta Wind Energy Center	1,548	United States	California	35°1′16″N 118°19′14″W	[2][3]
Muppandal wind farm	1,500	India	Tamil Nadu	8°15′27.45″N 77°32′23.21″E	[41]
Jaisalmer Wind Park	1,064	India	Rajasthan	26°56′27.45″N 70°53′23.21″E	multiple farms[31][32]
Los Vientos Wind Farm	912	United States	Texas	26°19′51″N 97°35′09″W	[36]
Shepherds Flat Wind Farm	845	United States	Oregon	45°42′00″N 120°3′36″W	[47]
Meadow Lake Wind Farm	801	United States	Indiana	40°36′4″N 86°51′57″W	[39]
Roscoe Wind Farm	781.5	United States	Texas	32°15′52″N 100°20′39″W	[45]
Horse Hollow Wind Energy Center	735.5	United States	Texas	32°11′24″N 100°01′48″W	[9][10]
Capricorn Ridge Wind Farm	662.5	United States	Texas	31°54′11″N 100°54′04″W	[9][10]
Limon Wind Energy Center	601	United States	Colorado	39°22′51″N 103°34′23″W	[34]
Fântânele-Cogealac Wind Farm	600	Romania	Fântânele & Cogealac	44°35′25″N 28°33′55″E	[18]

2019 Continued

10

Rush Creek Wind Project	600	United States	Colorado	39°10′20″N 103°50′43″W	[46]
Fowler Ridge Wind Farm	599.8	United States	Indiana	40°36′31″N 87°19′15″W	[20]
Sweetwater Wind Farm	585.3	United States	Texas	32°20′20″N 100°26′40″W	[9]
Flat Ridge Wind Farm	570.4	United States	Kansas	37°21′59″N 98°15′40″W	[19]
Cedar Creek Wind Farm	551	United States	Colorado	40°52′16″N 104°5′35″W	[11]
Zarafana Wind Farm	545	Egypt		29.2003°N 32.5981°E	[64]
Whitelee Wind Farm	539	UK	East Renfrewshire, Scotland	55°41′14″N 4°13′43″W	[60]
Buffalo Gap Wind Farm	523.3	United States	Texas	32°18′38″N 100°8′57″W	[9][10]
Clyde Wind Farm	522	UK	South Lanarkshire, Scotland	55°28′02″N 3°39′16″W	
Highland Wind Energy Center	501.4	United States	Iowa	43°05′N 95°34′W	[28]
Dabancheng Wind Farm	500	China	Xinjiang	43°35′37″N 87°48′32″E	[15]
Panther Creek Wind Farm	458	United States	Texas	31°58′7″N 99°54′6″W	[10]
Biglow Canyon Wind Farm	450	United States	Oregon	45°38′15″N 120°36′19″W	[7]
Fubei Wind Farm	450	China	Liaoning		[21]
Rolling Hills Wind Farm	443.9	United States	Iowa	41°18′N 94°47′W	[44]

Largest operational onshore wind farms

This is a list of the onshore wind farms that are larger than 250 MW in current nameplate capacity. Many of these wind farms have been built in stages, and construction of a further stage may be continuing at some of these sites.

11

Wind farm	Country	State/ province	Coordinates	Current capacity (MW)	Notes/Refs
Gansu Wind Farm	China	Gansu	40°12′N 96°54′E	7,965	multiple farms [22][23][24][25]
Alta Wind Energy Center	United States	California	35°1′16″N 118°19′14″W	1,548	[3][4]
Muppandal wind farm	India	Tamil Nadu	8°15′27.45″N 77°32′23.21″E	1,500	[46]
Jaisalmer Wind Park	India	Rajasthan	26°56′27.45″N 70°53′23.21″E	1,064	multiple farms[32][33]
Los Vientos Wind Farm	United States	Texas	26°19′51″N 97°35′09″W	912	[38]
Shepherds Flat Wind Farm	United States	Oregon	45°42′00″N 120°3′36″W	845	[54]
Markbygden Wind Farm	Sweden	Norrbotten	65°25′N 20°40′E	814.1	[41]
Meadow Lake Wind Farm	United States	Indiana	40°36′4″N 86°51′57″W	801	[43]
Roscoe Wind Farm	United States	Texas	32°15′52″N 100°20′39″W	781.5	[50]
Horse Hollow Wind Energy Center	United States	Texas	32°11′24″N 100°01′48″W	735.5	[2][10]
Tehachapi Pass Wind Farm	United States	California	35°06′08″N 118°16′58″W	705	multiple farms[2]
Capricorn Ridge Wind Farm	United States	Texas	31°54′11″N 100°54′04″W	662.5	[2][10]

2020 Continued

San Gorgonio Pass Wind Farm	United States	California	33°54′53.53″N 116°35′18.35″W	615	multiple farms[2]
Limon Wind Energy Center	United States	Colorado	39°22′51″N 103°34′23″W	601	[36]
Fântânele-Cogealac Wind Farm	Romania	Fântânele & Cogealac	44°35′25″N 28°33′55″E	600	[18]
Rush Creek Wind Project	United States	Colorado	39°10′20″N 103°50′43″W	600	[51]
Fowler Ridge Wind Farm	United States	Indiana	40°36′31″N 87°19′15″W	599.8	[20]
Sweetwater Wind Farm	United States	Texas	32°20′20″N 100°26′40″W	585.3	[2]
Altamont Pass Wind Farm	United States	California	37°43′57″N 121°39′9″W	576	multiple farms[2]
Flat Ridge Wind Farm	United States	Kansas	37°21′59″N 98°15′40″W	570.4	[19]
Cedar Creek Wind Farm	United States	Colorado	40°52′16″N 104°5′35″W	551	[11]
Zafarana Wind Farm	Egypt		29.2003°N 32.5981°E	545	[71]
Whitelee Wind Farm	UK	East Renfrewshire, Scotland	55°41′14″N 4°13′43″W	539	[67]
Buffalo Gap Wind Farm	United States	Texas	32°18′38″N 100°8′57″W	523.3	[2][10]
Clyde Wind Farm	UK	South Lanarkshire, Scotland	55°28′02″N 3°39′16″W	522	
Highland Wind Energy Center	United States	Iowa	43°05′N 95°34′W	501.4	[28]
Dabancheng Wind Farm	China	Xinjiang	43°35′37″N 87°48′32″E	500	[15]
Panther Creek Wind Farm	United States	Texas	31°58′7″N 99°54′6″W	458	[10]
Biglow Canyon Wind Farm	United States	Oregon	45°38′15″N 120°36′19″W	450	[8]
Fubei Wind Farm	China	Liaoning		450	[21]

2020 Continued – Page 2

Rolling Hills Wind Farm	United States	Iowa	41°18′N 94°47′W	443.9	[49]
Peetz Wind Farm	United States	Colorado	40°57′3″N 103°9′19″W	430	[2]
Blue Canyon Wind Farm	United States	Oklahoma	34°51′37″N 98°34′57″W	423.4	[9]
Macarthur Wind Farm	Australia	Victoria	38°2′24″S 142°11′30″E	420	[40]
Crystal Lake Wind Farm	United States	Iowa	43°13′45″N 93°50′28″W	416	[14]
Peñascal Wind Power Project	United States	Texas	27°00′N 97°36′W	404	[48]
Xiangyang Wind Farm	China	Jilin		400.5	[21][70]
Cimarron Bend Wind Farm	United States	Kansas	37°21′18″N 99°59′28″W	400	[13]
Grande Prairie Wind Farm	United States	Nebraska	42°36′29″N 98°25′42″W	400	[26]
Lone Star Wind Farm	United States	Texas	32°16′22.12″N 99°27′22″W	400	[10]
Windy Point/Windy Flats	United States	Washington	45°44′31″N 120°43′32″W	400	[69]
Klondike Wind Farm	United States	Oregon	45°34′48″N 120°36′36″W	399	[8]
Twin Groves Wind Farm	United States	Illinois	40°28′54″N 88°42′26″W	396	[66]
Hopkins Ridge Wind Farm	United States	Washington	46°24′07″N 117°48′44″W	385	[29][30]
Papalote Creek Wind Farm	United States	Texas	27°58′48″N 97°23′28″W	380	[47]
Snowtown Wind Farm	Australia	South Australia	33° 41′ 36″ S, 138° 7′ 51″ E	370	[59]
Hallett Wind Farm	Australia	South Australia	33°22′04″S 138°43′43″E	351	[27]
Siping Wind Wind Farm	China	Siping		348	[16]
Lower Snake River Wind Project	United States	Washington		343	[39]

2020 Continued – Page 3

Maple Ridge Wind Farm	United States	New York	43°45′N 75°33′W	321.8	[42]
Hornsdale Wind Farm	Australia	South Australia	33.058°S 138.544°E	315	[31]
Milford Wind Corridor Project	United States	Utah		306	[44]
Tarfaya Wind Farm	Morocco	Akhfenir		301	[63]
Pioneer Prairie Wind Farm	United States	Iowa	43°28′35″N 92°35′08″W	300.3	[14]
Bayannur Wulanyiligeng Wind Farm	China	Inner Mongolia	42°00′00″N 108°23′00″E	300	[5]
Liaoning Fuxin Wind Farm	China	Liaoning		300	[35]
Longyuan Huitengliang Wind Farm	China	Inner Mongolia	43°27′01″N 116°09′59″E	300	[37]
Sherbino Wind Farm	United States	Texas	30°48′26″N 102°21′20″W	300	[55]
Shiloh Wind Farm	United States	California	38°7′N 121°50.5′W	300	[56][57]
Stateline Wind Farm	United States	Oregon & Washington	46°02′13.98″N 118°48′23.74″W	300	[60]
Story County Wind Farm	United States	Iowa	41°53′28″N 92°58′42″W	300	[61]
Streator Cayuga Ridge South Wind Farm	United States	Illinois	40°57′20″N 88°28′54″W	300	[62]
Tongliao Beiqinghe Wind Farm	China	Inner Mongolia	43°56′30″N 121°09′00″E	300	[64][65]
Tongyu Wind Farm	China	Jilin	44°48′46.8″N 123°5′18.3″E	300	[21]
Zhangdong Wind Farm	China			300	[21]
Wulanchabu Hongji Wind Farm	China	Inner Mongolia		296.5	[68]
Daqing Heping Aobao Wind Wind Farm	China	Daqing		288	[16]
Gulf Wind Farm	United States	Texas	27°05′16.02″N 97°35′22.02″W	283.2	[10]
King Mountain Wind Farm	United States	Texas	31°14′16″N 102°14′16″W	281.2	[10]
Lake Bonney Wind Farm	Australia	South Australia	37°45′36″S 140°24′0″E	279	[34]

WIND POWERS AMERICA
FIRST QUARTER 2020 REPORT

AWEA AMERICAN WIND ENERGY ASSOCIATION

WindIQ

First Quarter 2020 Highlights

2020 Wind Project Installations

- The U.S. wind industry installed 1,821 MW of new wind power capacity in the first quarter of 2020, a 117% increase over the first quarter of 2019.
- Project owners commissioned 11 new projects in 6 states in the first three months of the year. Texas led with 540 MW installed, followed by Iowa (461 MW), Illinois (308 MW), South Dakota (217 MW), Michigan (169 MW), and Ohio (126 MW).
- Project owners also partially repowered six projects in the first quarter, increasing the projects' total capacity from 364 MW to 390 MW.
- There are now 107,443 MW of operating wind power capacity in the United States, with over 59,900 wind turbines operating across 41 states and two U.S. territories.

Wind Capacity Under Construction or in Advanced Development

- Construction activity reached a new record of 24,690 MW at the end of March 2020, with an additional 19,751 MW in advanced development. The combined 44,441 MW represents a 14% year-over-year increase.
- Projects totaling 4,142 MW started construction and 2,343 MW entered advanced development in the first three months of the year, for a combined 6,558 MW of new activity.
- Offshore wind now represents 19% of combined project activity as 804 MW entered advanced development in the first quarter.
- There are currently 14 states with over 1,000 MW under construction or advanced development. Federal waters now host 19% of the total development pipeline, followed by Texas (16%), Wyoming (10%), Oklahoma (8%), and New Mexico (5%).
- Half of the wind project pipeline has a PPA in place, while 26% of capacity underway is owned by utilities.

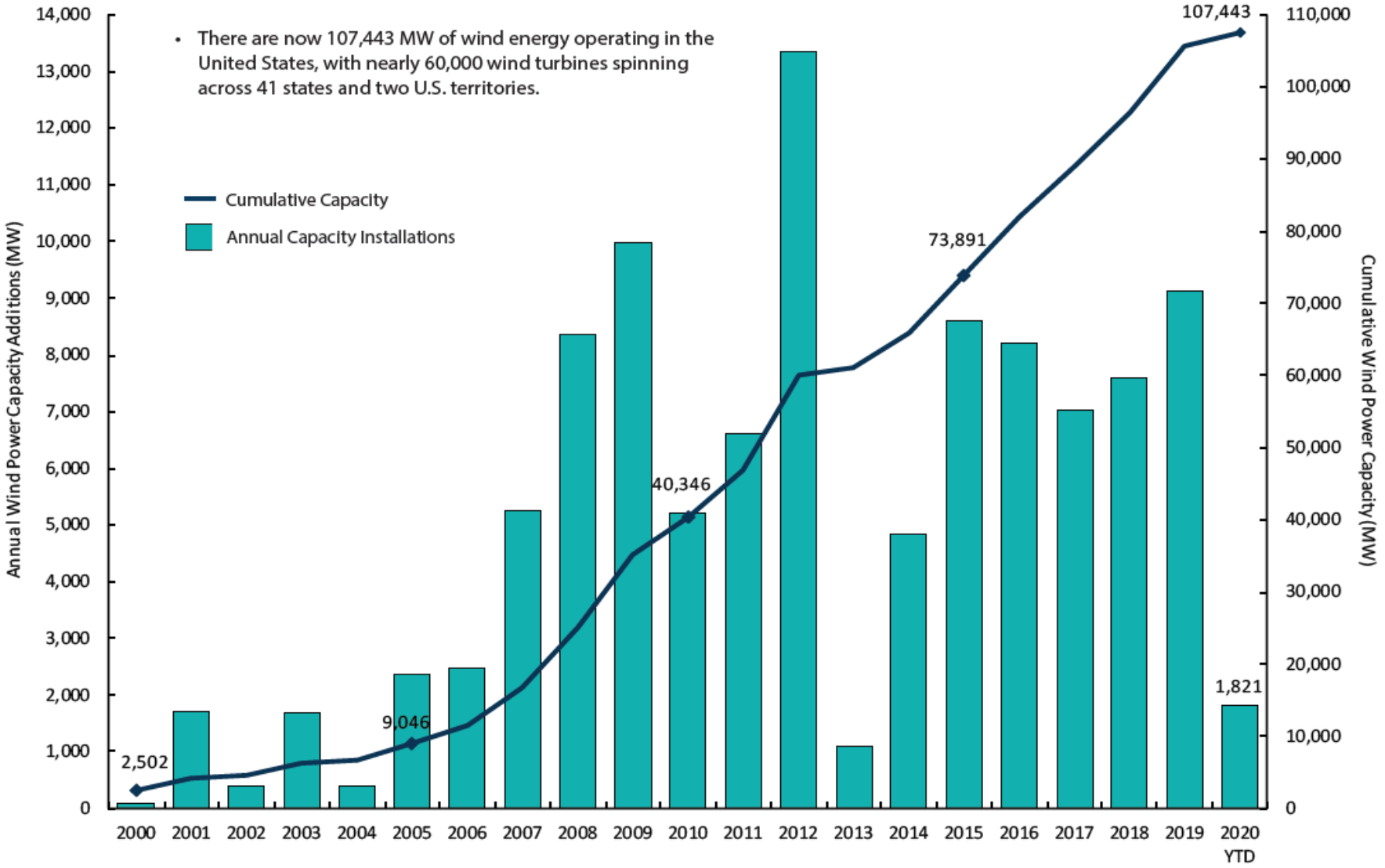
Wind Power Procurement Activity

- Power purchasers and developers reported 2,859 MW of new PPAs in the first quarter of 2020, the highest volume on record for a single quarter.
- Utilities accounted for 60% (1,719 MW) of first quarter PPA capacity, led by Evergy and AEP Energy. Eversource Energy, National Grid, and Unitil also signed PPAs for the 804 MW Mayflower Wind offshore project.
- Corporate customers announced 430 MW of wind PPAs in the first quarter. Two companies – Saint Gobain North America and Toyota Motor North America – purchased wind energy for the first time.

Turbine Technology Trends

- GE Renewable Energy led turbine installations in the first quarter, capturing 70% of the market. Vestas ranked second with 22%, followed by Nordex USA with 8%.
- Average turbine capacities continue to increase, with 41% of turbines installed in the first quarter rated over 3 MW. The first quarter saw the first 4 MW machines to start operations in the U.S.
- The majority of land-based projects in the pipeline that have reported turbine models are using turbines with a nameplate capacity between 2 MW and 2.9 MW, while 33% have selected turbines rated 3 MW or higher.

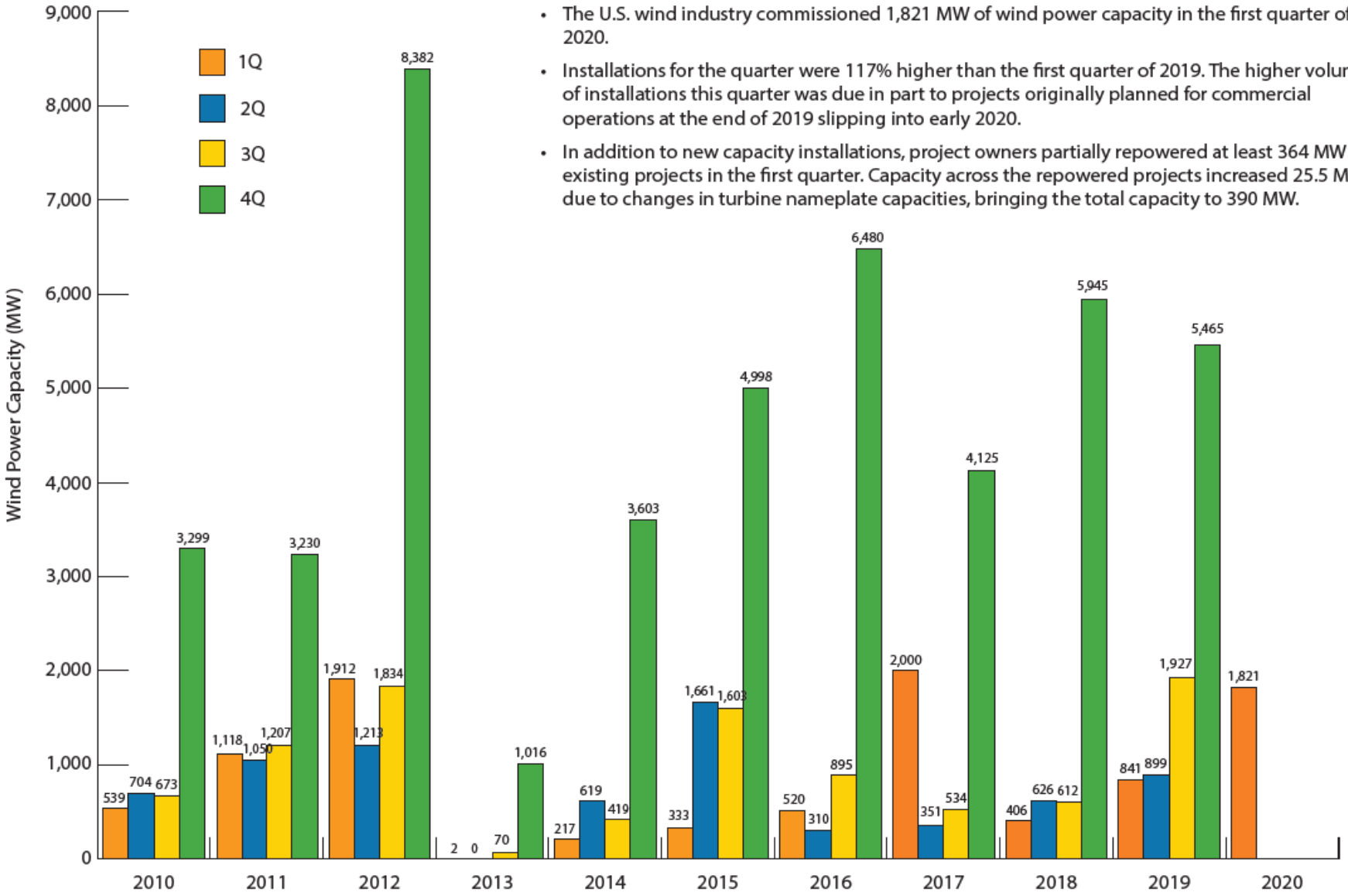
U.S. Annual and Cumulative Wind Power Capacity Growth



Note: Utility-scale wind capacity includes installations of wind turbines larger than 100-kW for the purpose of the AWEA U.S. Wind Industry Quarterly Market Reports. Annual capacity additions and cumulative capacity may not always add up due to decommissioned and repowered wind capacity. Wind capacity data for each year is continuously updated as information changes.

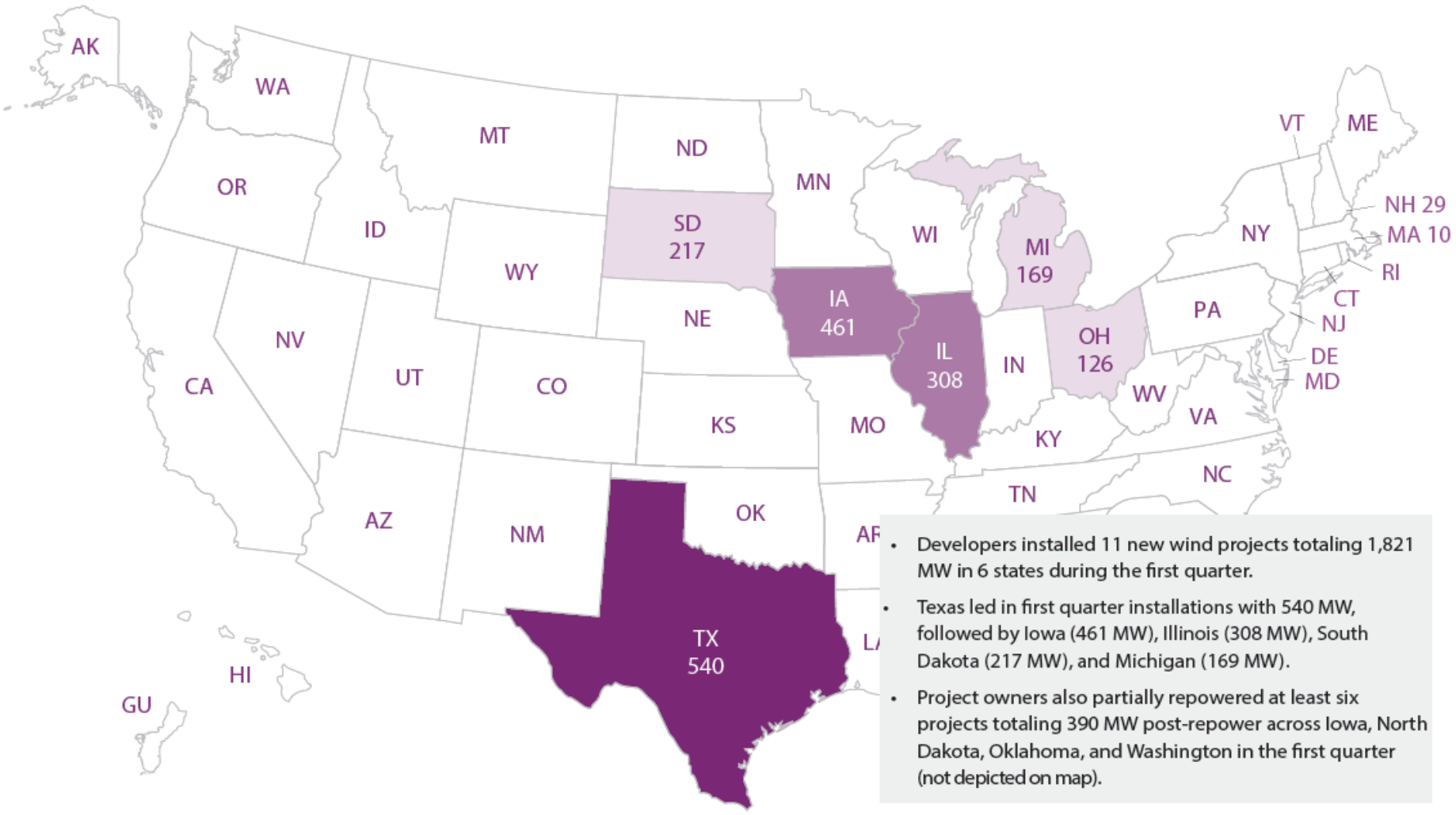
Quarterly U.S. Wind Power Capacity Installations

- The U.S. wind industry commissioned 1,821 MW of wind power capacity in the first quarter of 2020.
- Installations for the quarter were 117% higher than the first quarter of 2019. The higher volume of installations this quarter was due in part to projects originally planned for commercial operations at the end of 2019 slipping into early 2020.
- In addition to new capacity installations, project owners partially repowered at least 364 MW of existing projects in the first quarter. Capacity across the repowered projects increased 25.5 MW due to changes in turbine nameplate capacities, bringing the total capacity to 390 MW.



Note: Chart represents new capacity installations only and does not include partial repowering capacity.

Wind Power Capacity Installations in 1Q 2020, by State



- Developers installed 11 new wind projects totaling 1,821 MW in 6 states during the first quarter.
- Texas led in first quarter installations with 540 MW, followed by Iowa (461 MW), Illinois (308 MW), South Dakota (217 MW), and Michigan (169 MW).
- Project owners also partially repowered at least six projects totaling 390 MW post-repower across Iowa, North Dakota, Oklahoma, and Washington in the first quarter (not depicted on map).

0 to 100 MW | >100 MW to 250 MW | >250 MW to 500 MW | >500 MW to 1,000 MW | >1,000 MW

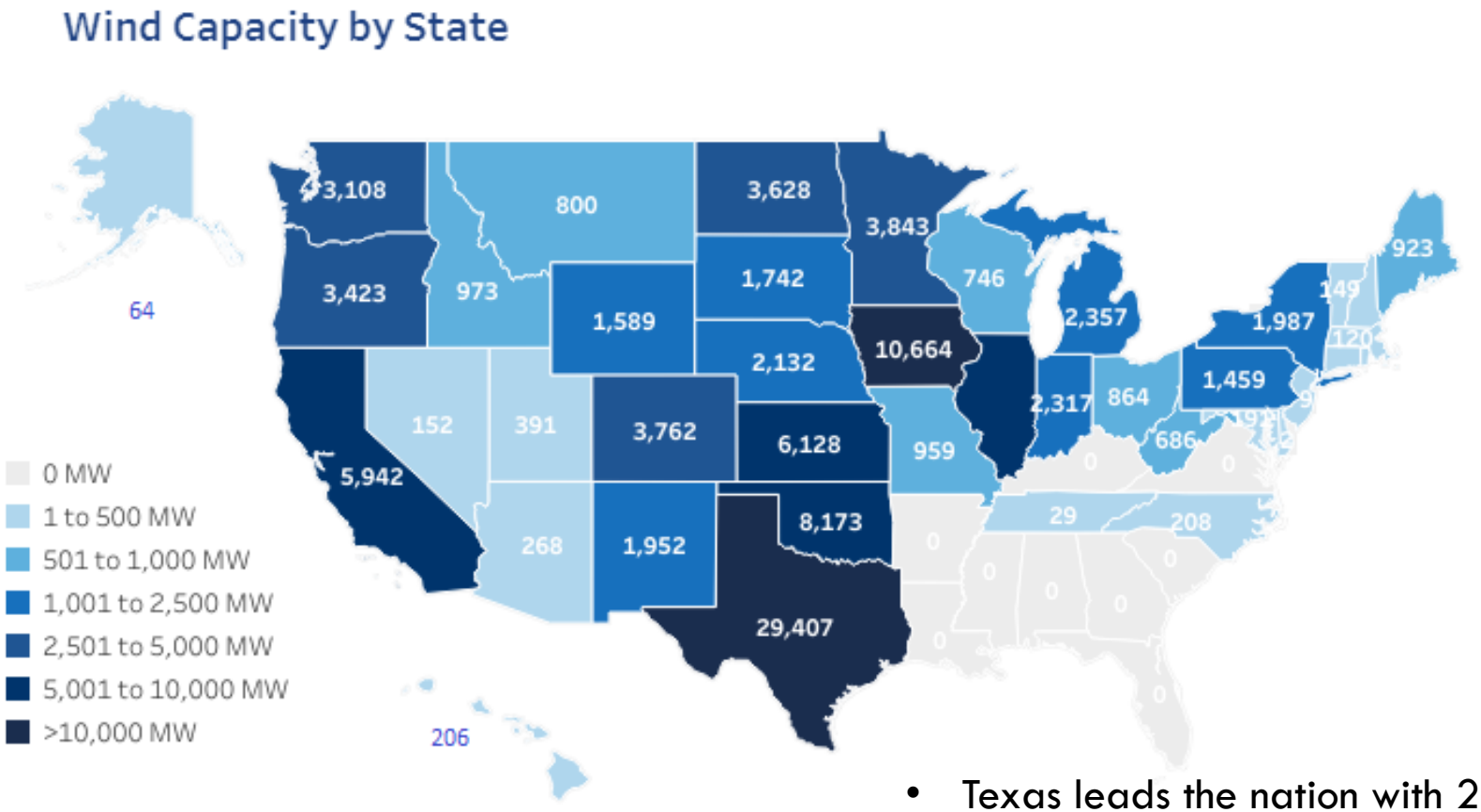
Wind Energy in the United States

The U.S. wind industry added **9,132 MW** of new wind capacity in 2019, the **third strongest year ever** for installation.

Another **1,821 MW** were added in the first quarter of 2020. There are now nearly 60,000 wind turbines with a combined capacity of **107,443 MW** operating across 41 states, Guam, and Puerto Rico.

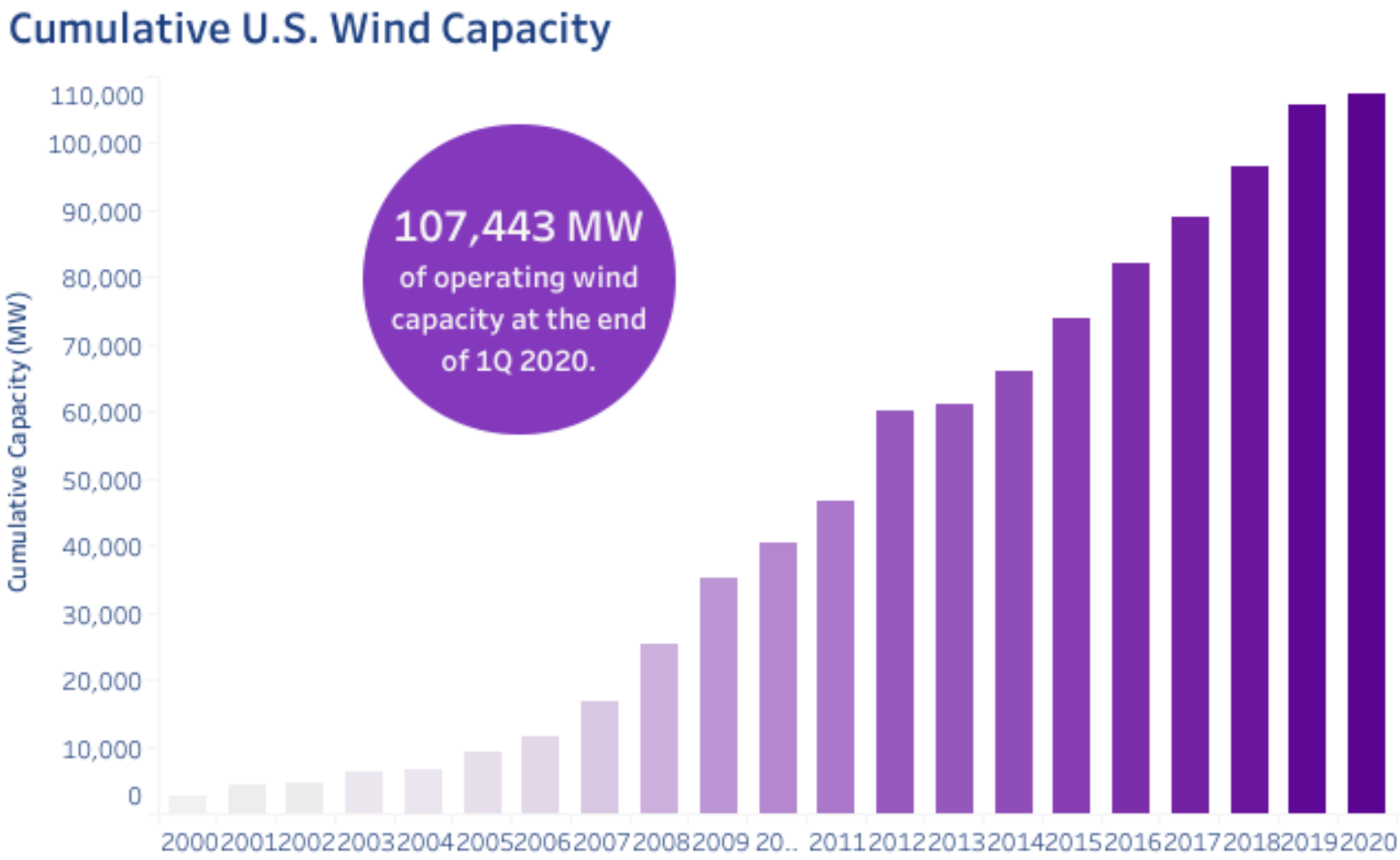
U.S. wind power has **more than tripled** over the past decade, and today is the largest source of renewable energy in the country.

U.S. Wind Power Cumulative Installed Capacity, by State

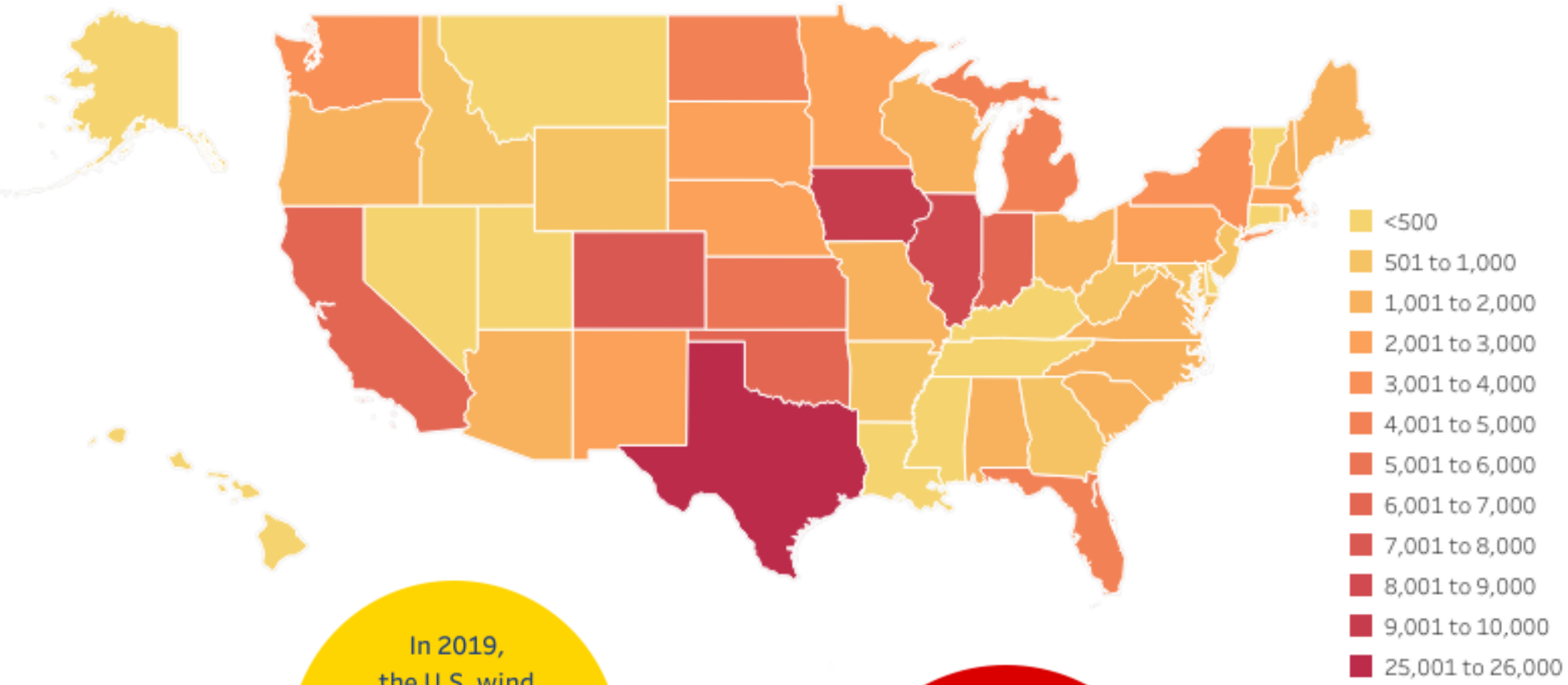


- Texas leads the nation with 29,407 MW of cumulative installed capacity.
- Iowa solidified its second place position and grew to nearly 10,664 MW of wind capacity, while Oklahoma remains in third with 8,173 MW.

U.S. Wind Power Cumulative Installed Capacity, by State



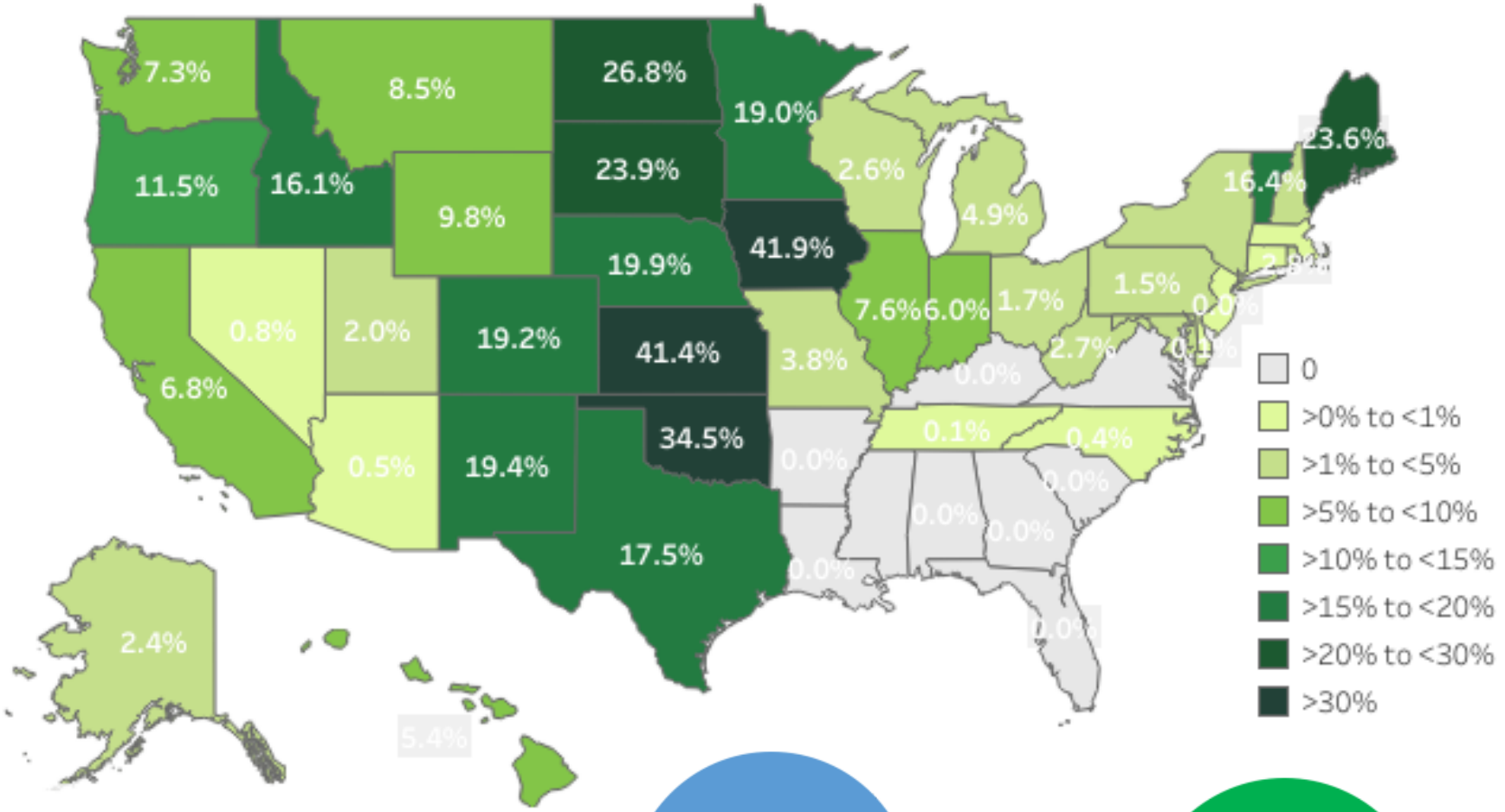
Wind Energy Jobs



In 2019, the U.S. wind industry supported **120,000 jobs** across all 50 states, plus Puerto Rico.

Texas leads the nation with over **25,000 people** employed in the wind industry. How many wind workers are in your state?

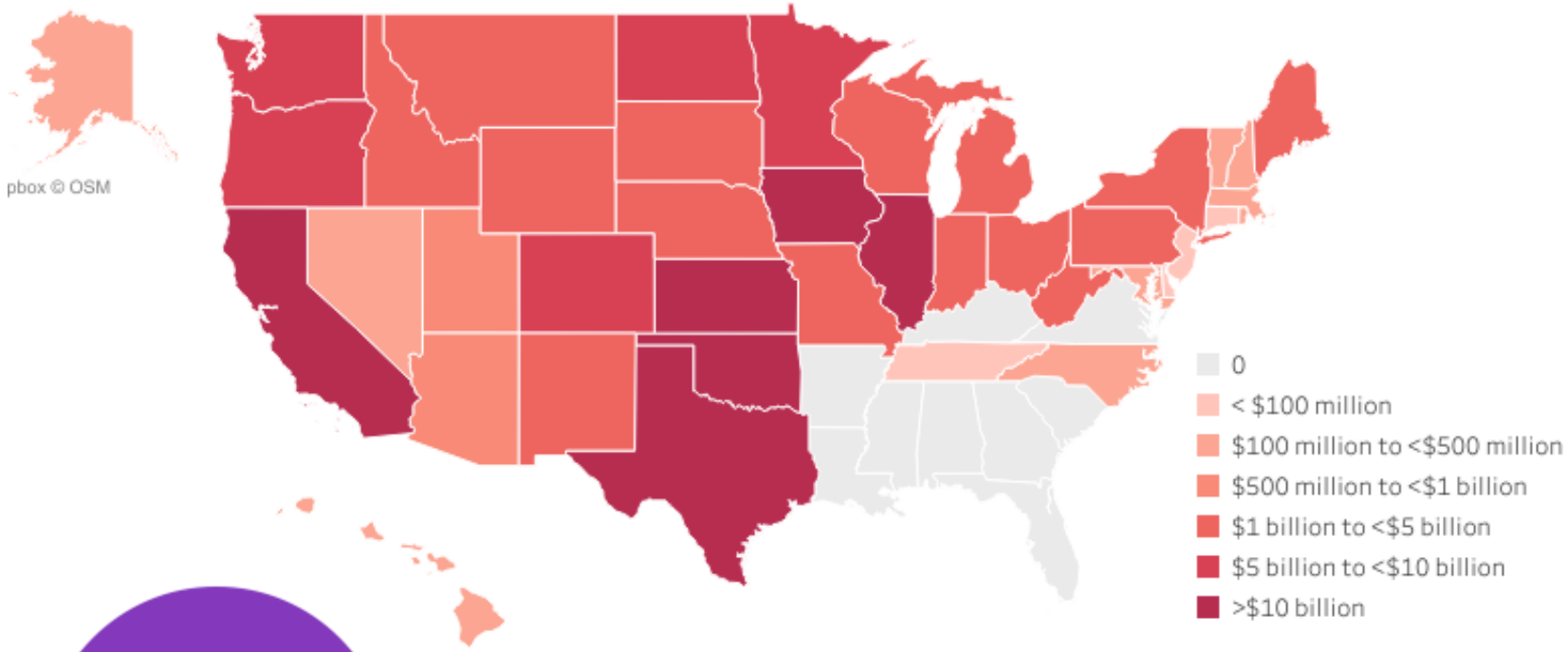
Wind Energy's Share of State Electricity Generation



Wind energy generated **7.2%** of the nation's electricity in 2019, enough to power **27.5 million** .

Wind energy provides **over 20%** of the electricity produced in **6 states**

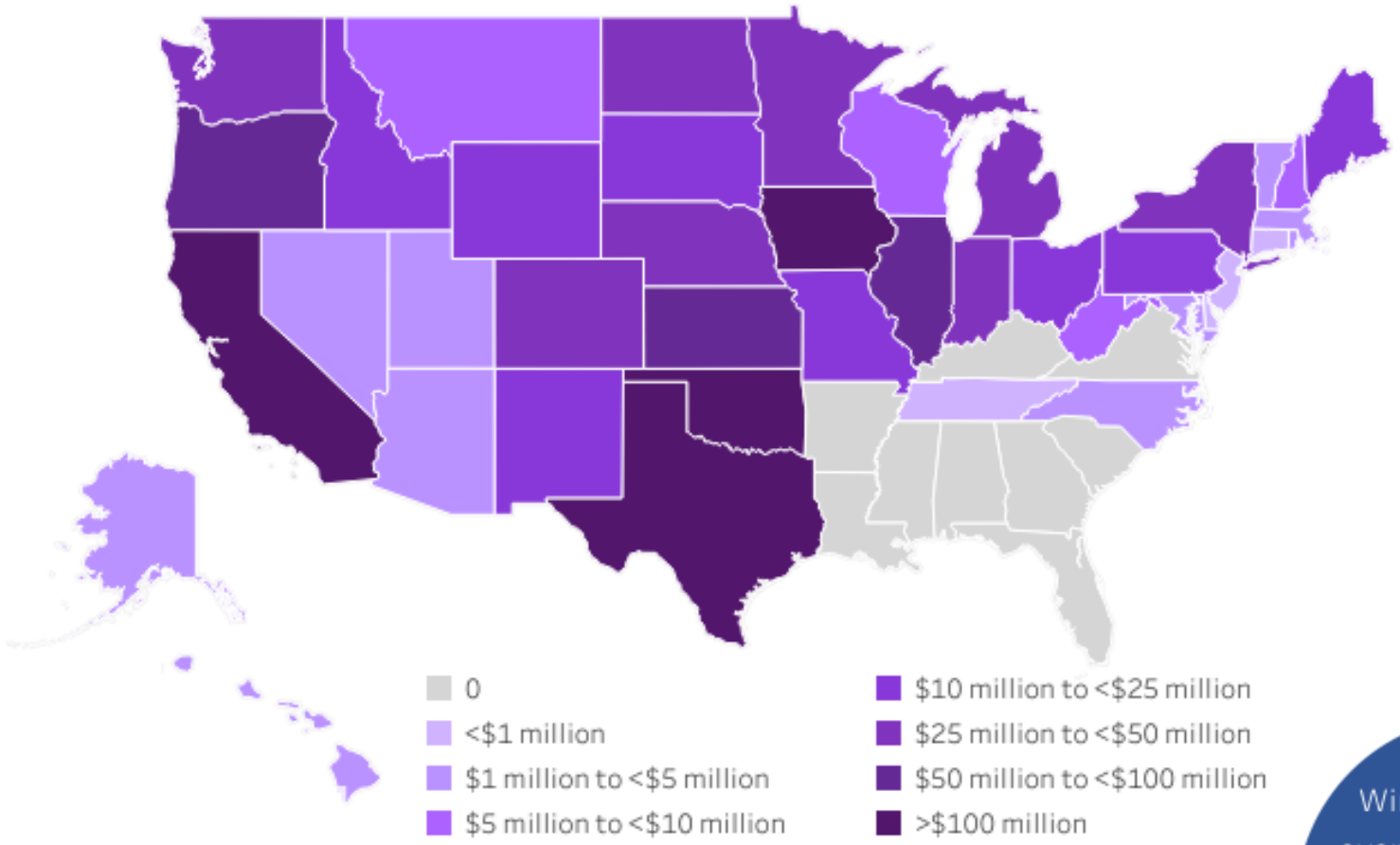
Cumulative Investment in Operating Wind Projects



Wind projects built in 2019 represent **$14 billion** of private investment

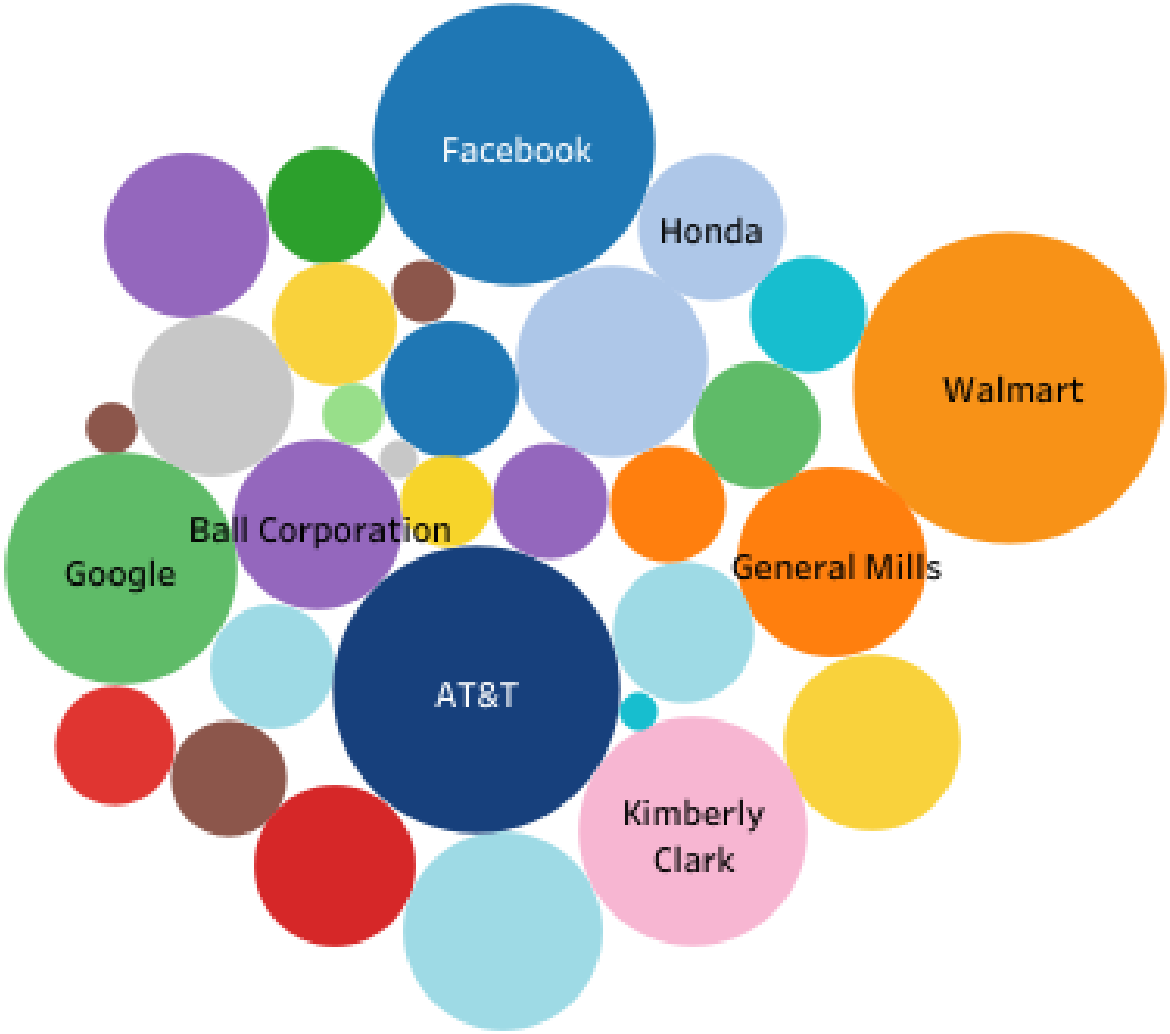
The U.S. wind industry has invested over **$208 billion** in wind projects across the country

Annual Payments to Local Communities



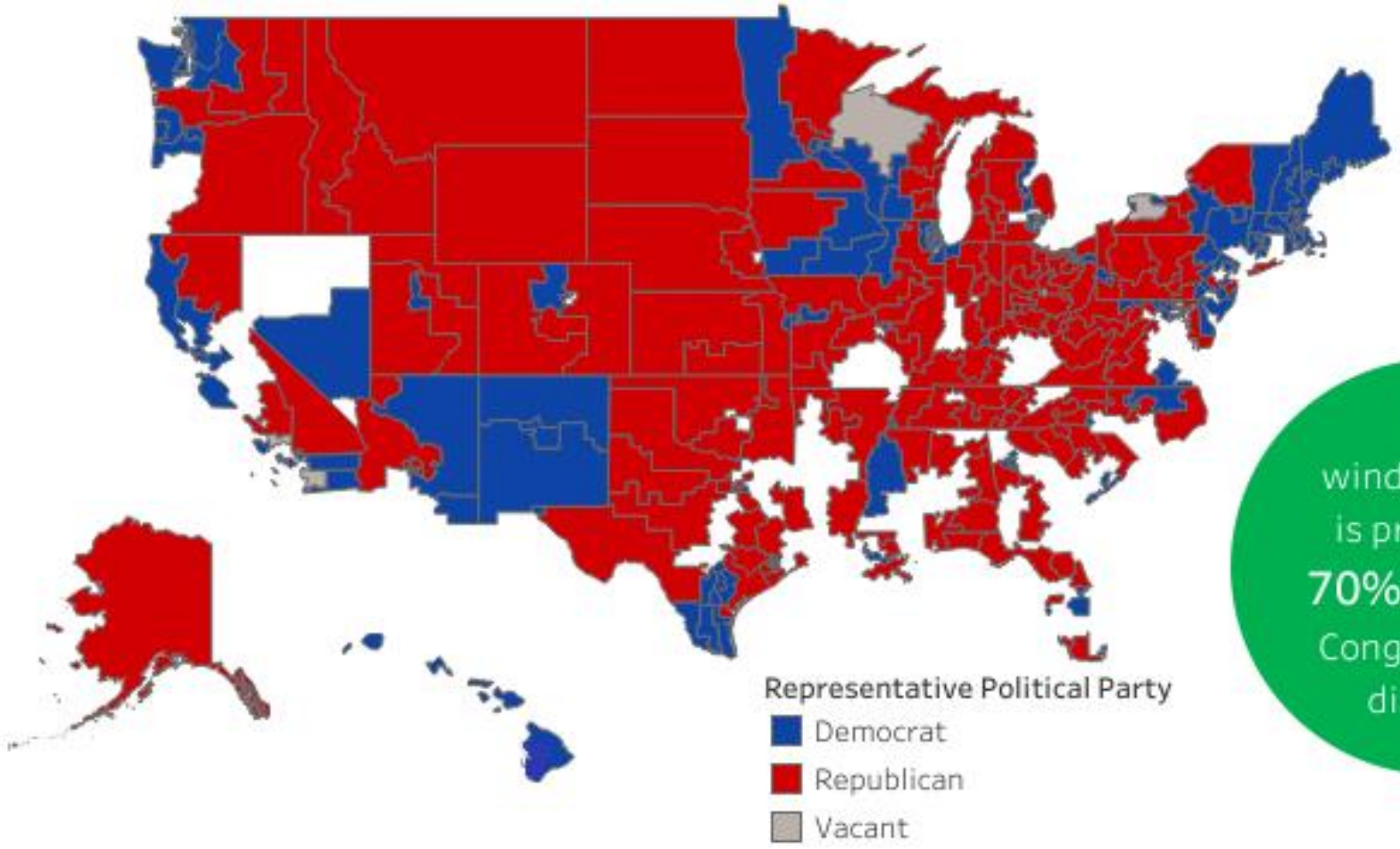
Wind projects pay over **$1.6 billion** to state and local governments and private landowners every year

Corporate Purchasers Buying Wind Energy



Non-utility purchasers announced a **record** 4,981 MW of wind contracts in 2019

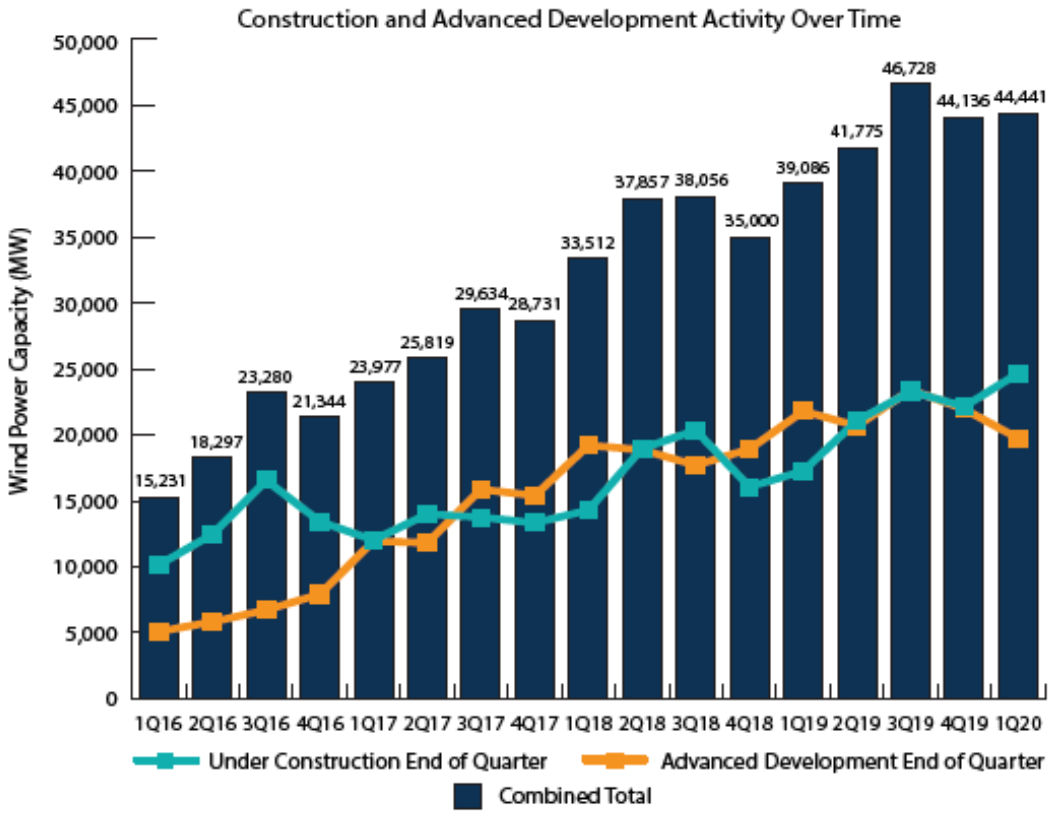
Wind Industry Presence across Congressional Districts



The wind industry is present in **70%** of all U.S. Congressional districts

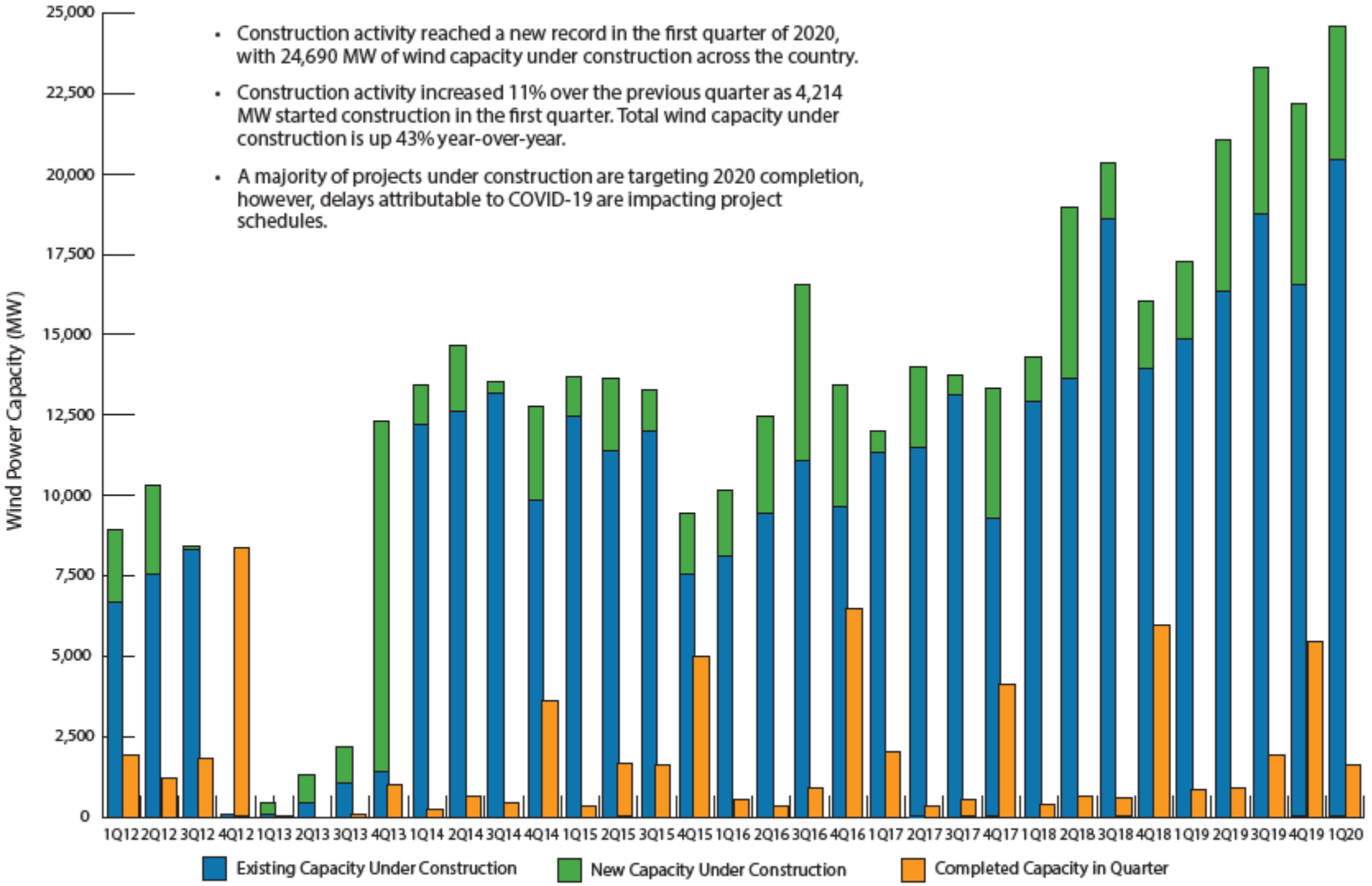
Wind Power Capacity Under Construction or in Advanced Development

- At the end of March 2020 there were 44,441 MW of wind power capacity in the near-term pipeline, including 24,690 MW under construction and 19,751 MW in advanced development. The total pipeline increased slightly over the end of 2019 and is up 14% year-over-year thanks to strong demand from utilities and corporate purchasers, as well as an increase in offshore wind project announcements. Offshore wind now accounts for 19% (8,308 MW) of the pipeline.
- Project developers announced 6,558 MW in combined new development activity in the first quarter of 2020, with projects totaling 4,214 MW starting construction and an additional 2,343 MW entering advanced development.
- Developers are moving quickly to bring their projects online. Currently 72% of the capacity underway started construction or entered advanced development in 2019 or 2020.



Wind Power Capacity Under Construction

- Construction activity reached a new record in the first quarter of 2020, with 24,690 MW of wind capacity under construction across the country.
- Construction activity increased 11% over the previous quarter as 4,214 MW started construction in the first quarter. Total wind capacity under construction is up 43% year-over-year.
- A majority of projects under construction are targeting 2020 completion, however, delays attributable to COVID-19 are impacting project schedules.



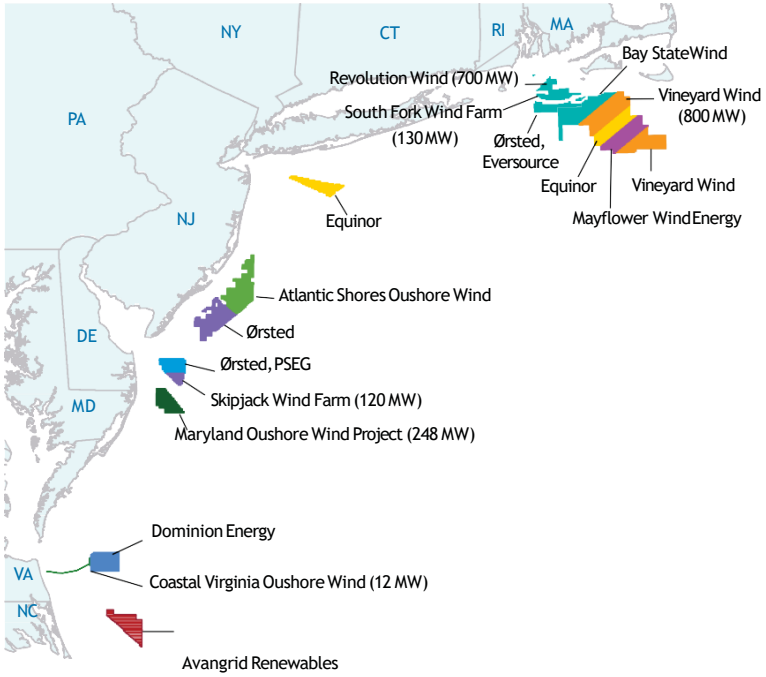
Note: Project developers self-report projects as under construction. The AWEA under construction definition is at the discretion of the project developer and may be different from the start construction definition under IRS Notices 2016-31 and 2017-04; projects are presumed to have taken steps to qualify for the PTC through safe harbor or physical construction.

U.S. Offshore Wind Energy Activity??????

State RFP Project Winners

RFP State	Project Name	Project Capacity (MW)	Project Owners	Project Location	Power Purchaser
Massachusetts	Vineyard Wind	800	Avangrid Renewables; Copenhagen Infrastructure Partners	Offshore Massachusetts	Eversource Energy, National Grid, Unitil
Rhode Island	Revolution Wind	400	Ørsted US Offshore Wind; Eversource Energy	Area of Mutual Interest between RI &MA	National Grid
Connecticut	Revolution Wind	300	Ørsted US Offshore Wind; Eversource Energy	Area of Mutual Interest between RI &MA	Eversource Energy and United Illuminating Co
Maryland	Maryland Offshore Wind Project	248	U.S. Wind Inc	Offshore Maryland	Maryland PSC (ORECs)
Maryland	Skipjack Wind Farm	120	Ørsted US Offshore Wind	Offshore Delaware	Maryland PSC (ORECs)

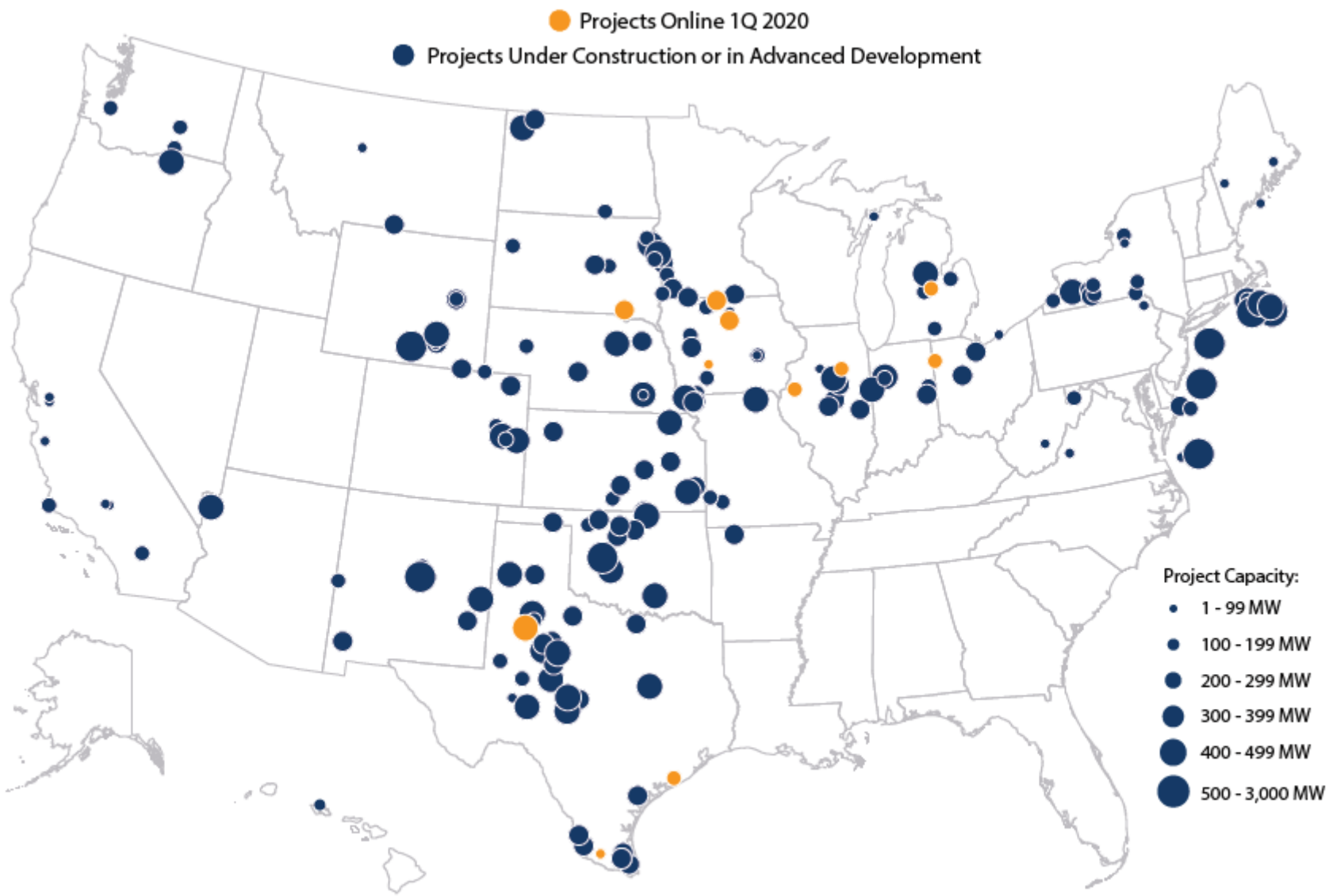
East Coast Offshore Wind Projects and Lease Areas



- In January 2019, New York Governor Cuomo called for the state to increase its offshore wind development goal to 9,000 MW by 2035 in his State of the State address, more than triple the previous target of 2,400 MW by 2030.
- In February 2019, National Grid filed for regulatory approval of a 20-year contract for 400 MW of the Revolution Wind project, which was selected by Rhode Island through a competitive procurement process in 2018. National Grid will pay a fixed price of $98/MWh for the energy and environmental attributes, or $74/ MWh in 2017 dollars.
- In the same month, Ørsted and Eversource Energy announced they were expanding their offshore wind partnership. Eversource Energy acquired a 50% stake in South Fork Wind Farm and Revolution Wind and a 50% stake in Ørsted's lease areas off of Massachusetts and Rhode Island for $225 million.
- Also in February, New York received bids from four companies in response to its first solicitation for at least 800 MW of offshore wind. Project bids included Vineyard Wind's Liberty Wind project, Equinor's Empire Wind, Sunrise Wind by Ørsted & Eversource, and Atlantic Shores Offshore Wind Project by EDF Renewables & Shell New Energies. The awards will be announced this spring.
- In addition, New Jersey opened an application for offshore supply chain tax credits for capital investments made in an eligible wind facility.

Note: Labels reflect the project name for projects that have secured offtake, otherwise the lease owner is listed.

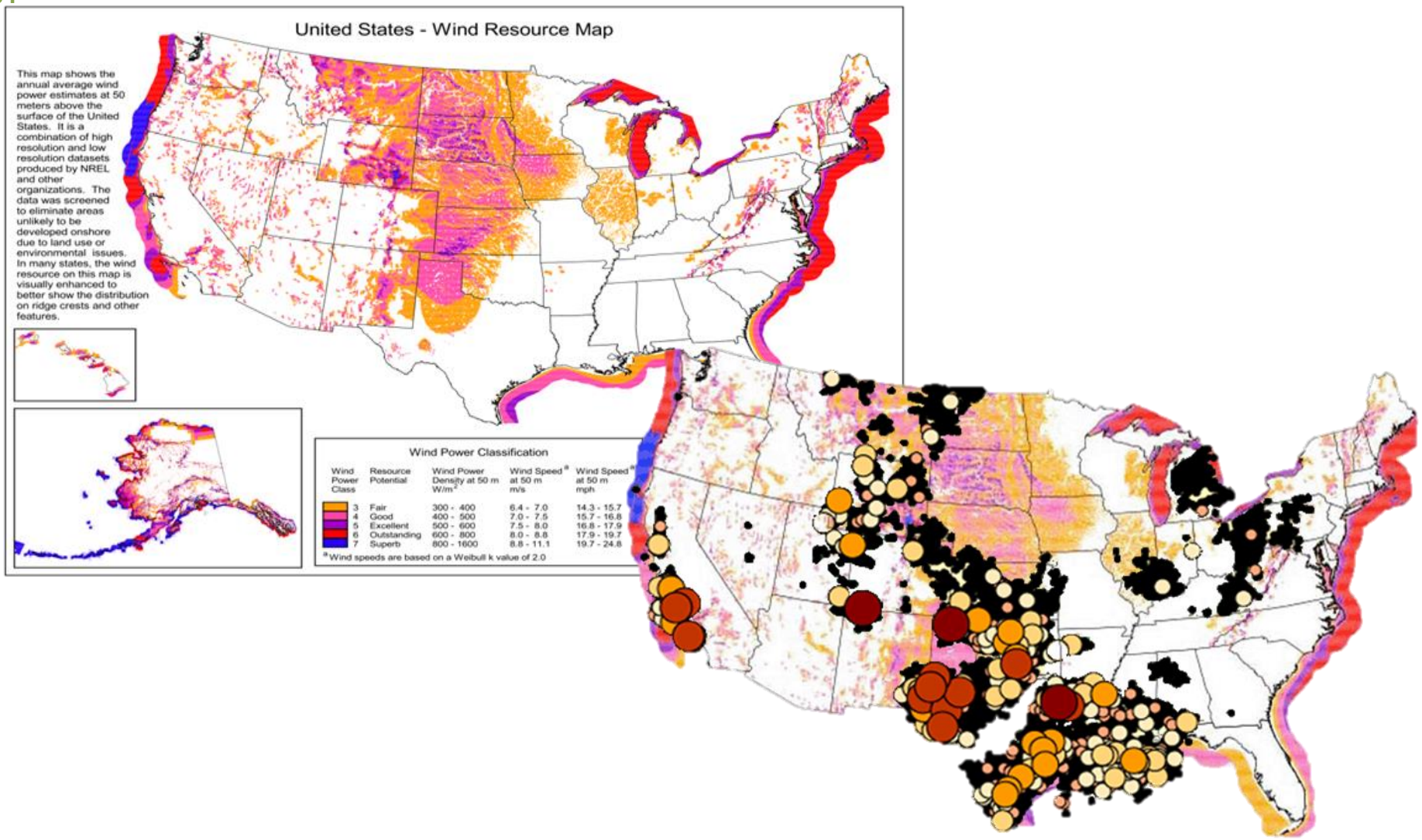
Map of Projects Online in 2020, Under Construction, or in Advanced Development



Utility-Scale Wind Projects Completed in 2020

State	Project Phase Name	Project Capacity (MW)	Turbine OEM	Turbine Model	Project Developer(s)	Project Owner(s)	Power Purchaser(s)
First Quarter 2020							
IA	Arbor Hill 2019 (Wind XI)	60.40	Vestas	V110-2.0; V150-4.2	MidAmerican Energy	MidAmerican Energy	MidAmerican Energy Co
IA	Golden Plains	199.82	GE Renewable Energy	GE 2.3-116; GE 2.5-127	EDF Renewables; Interstate Power & Light Co	Interstate Power & Light Co	Interstate Power & Light Co
IA	Whispering Willow North	201.26	GE Renewable Energy	GE 2.3-116; GE 2.5-127	Interstate Power & Light Co	Interstate Power & Light Co	Interstate Power & Light Co
IL	Cardinal Point	150.00	GE Renewable Energy	GE 2.5-127	Capital Power	Capital Power	Hedge Contract-MISO (127.5 MW; Merchant (22.5 MW)
IL	Otter Creek	158.20	Vestas	V136-3.8; V126-3.45	Avangrid Renewables	Avangrid Renewables	T-Mobile
MI	Polaris	168.60	GE Renewable Energy	GE 2.3-116; GE 2.5-127	Invenergy	DTE Energy	The DTE Electric Company
OH	Timber Road IV	126.00	Vestas	V136-3.6; V150-4.2	EDP Renewables North America	EDP Renewables North America	Microsoft
SD	Prevailing Wind	216.60	GE Renewable Energy	GE 3.8-137	sPower	sPower	Basin Electric Power Cooperative
TX	Hidalgo II	50.40	Vestas	V136-3.6	EDP Renewables North America	EDP Renewables North America	Undisclosed
TX	Peyton Creek	151.20	Nordex USA	AW125/3150	RWE Renewables	RWE Renewables	Hedge Contract (ERCOT)
TX	Sage Draw	338.40	GE Renewable Energy	GE 2.82-127	Orsted Wind Power North America	Orsted Wind Power North America	Exxon Mobil (250 MW)

Overlapping Resources



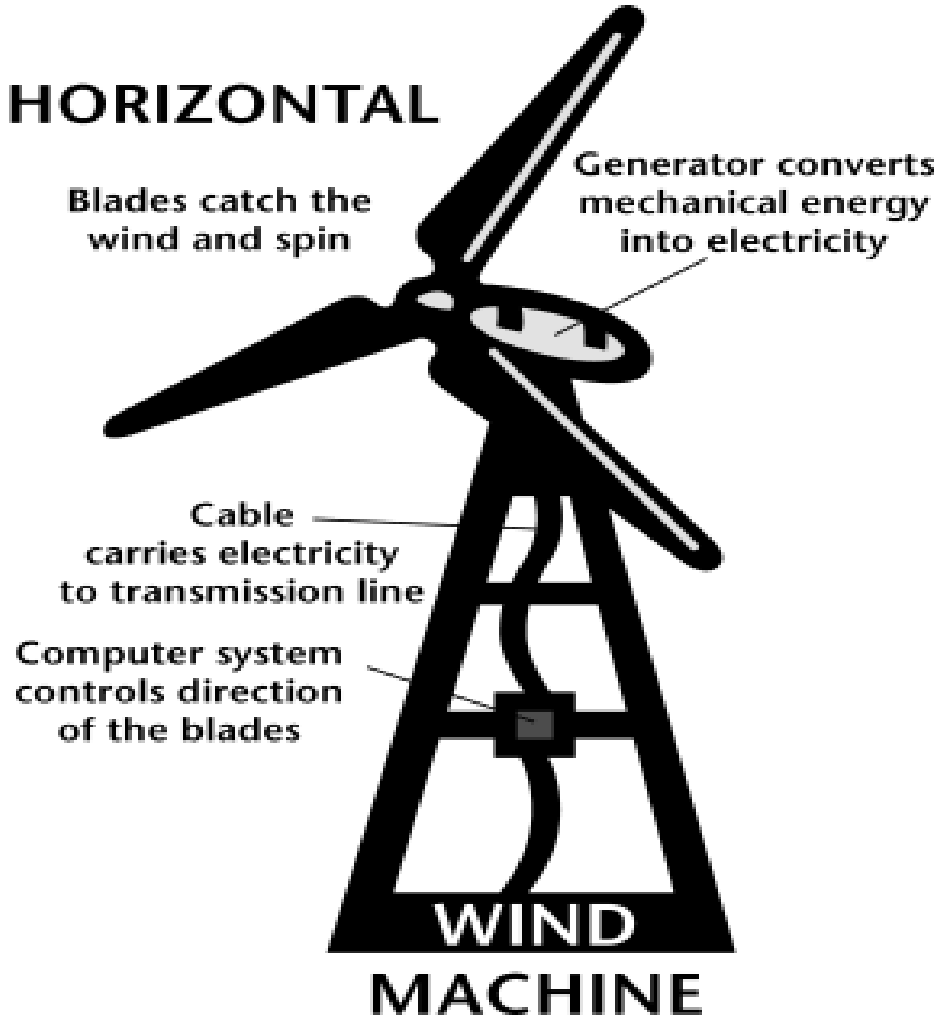
Wind vs. Oil and Gas

Wind during the 2020 Oil Bust and COVID.

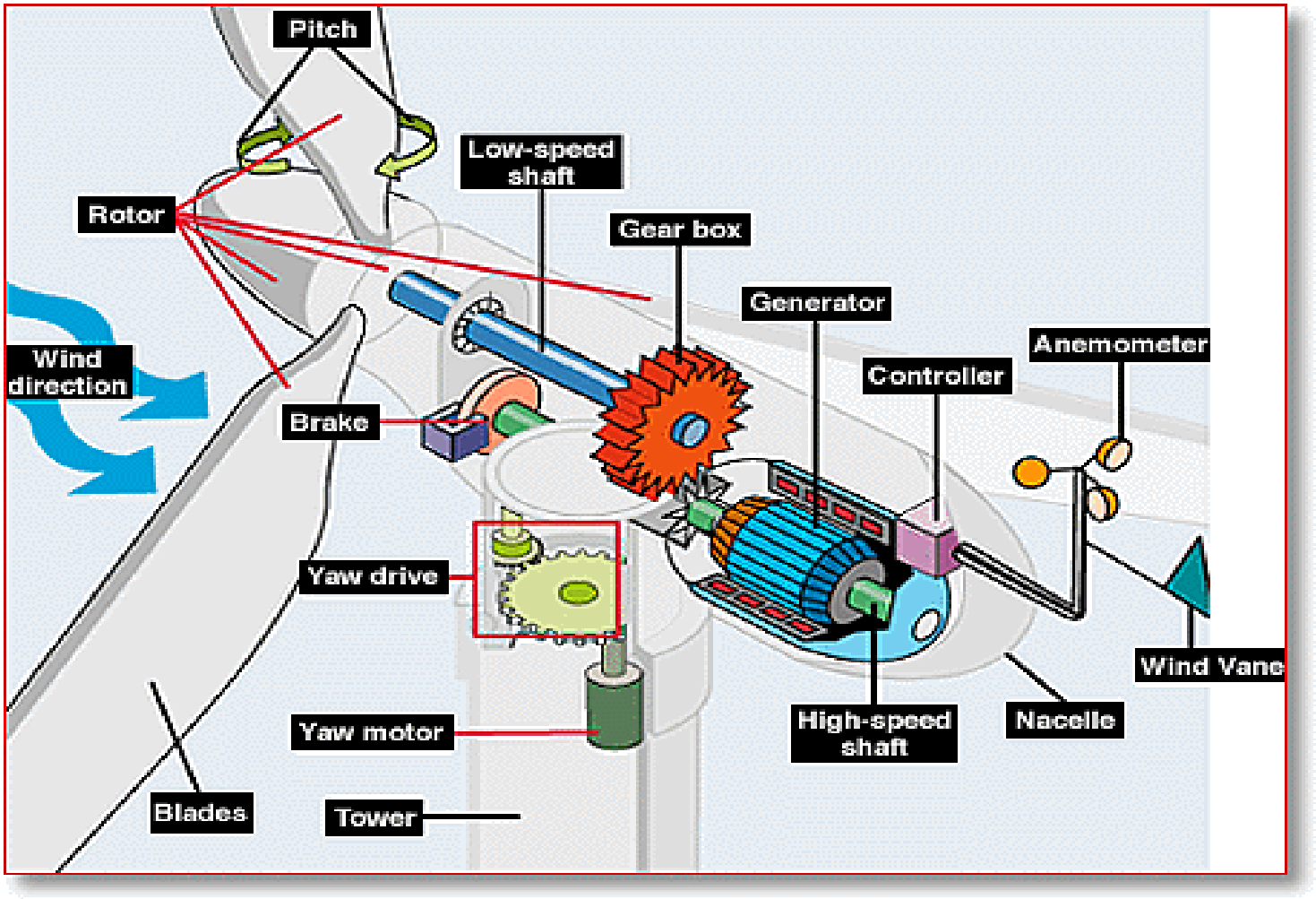
Oil dropped below $0 per barrel for the first time in history.

What a Turbine Looks Like

How the turbine works



Converting wind to electrical power



How many homes can a turbine power?

- Convert MW to kwh by multiplying the size of the turbine by 1000

  1.5 MW x 1000 = 1500 kwh
  This is the turbine production per hour

- Find out the annual production by multiplying by number of hour in a year and capacity factor

  1500 x 8760 hours x .38 capacity factor = 4,993,200 kwh

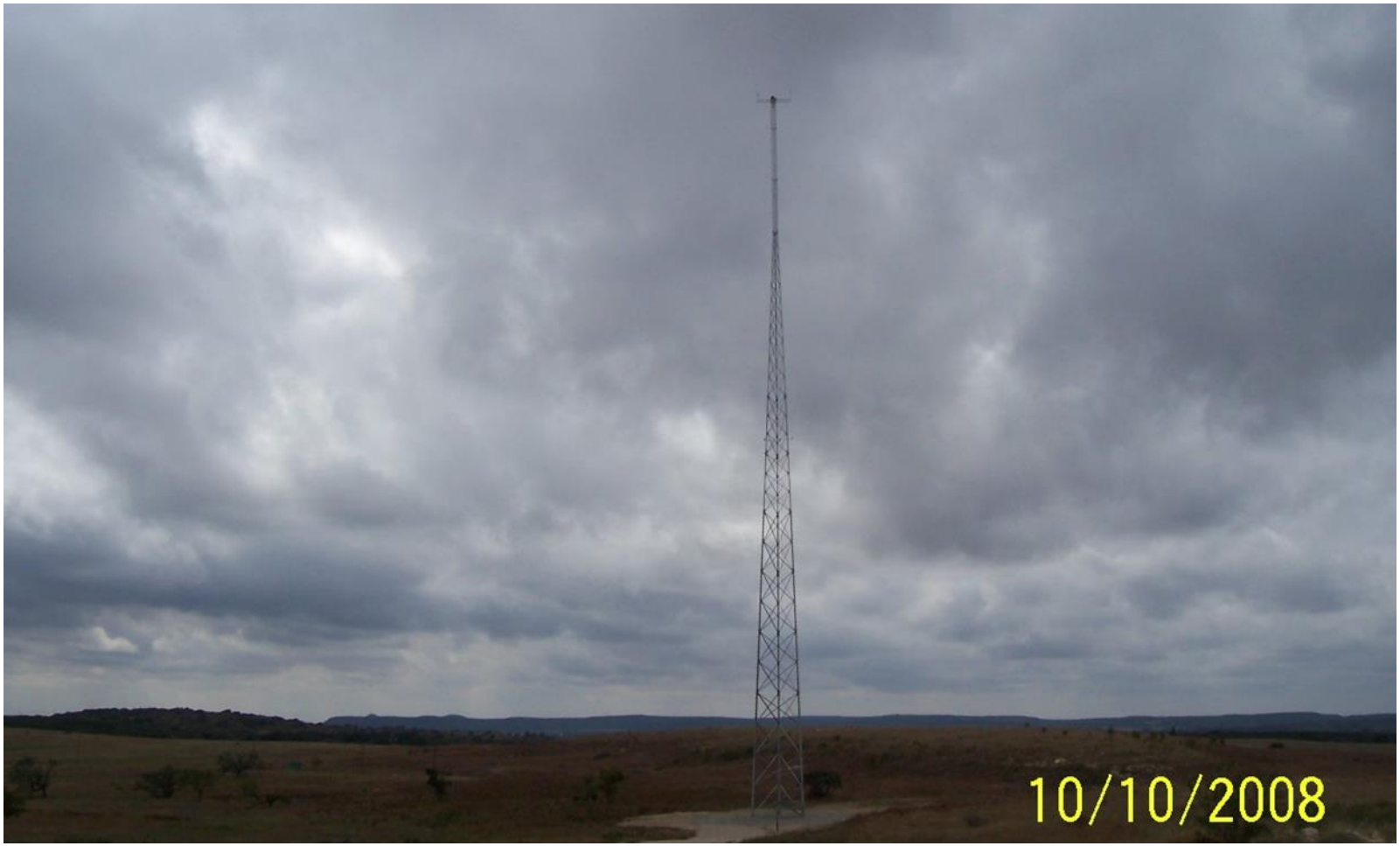
- Divide this number by average kwh hours used per house

  4,993,200 ÷ 14,500 kwh = 344 homes per year

What about a wind farm?

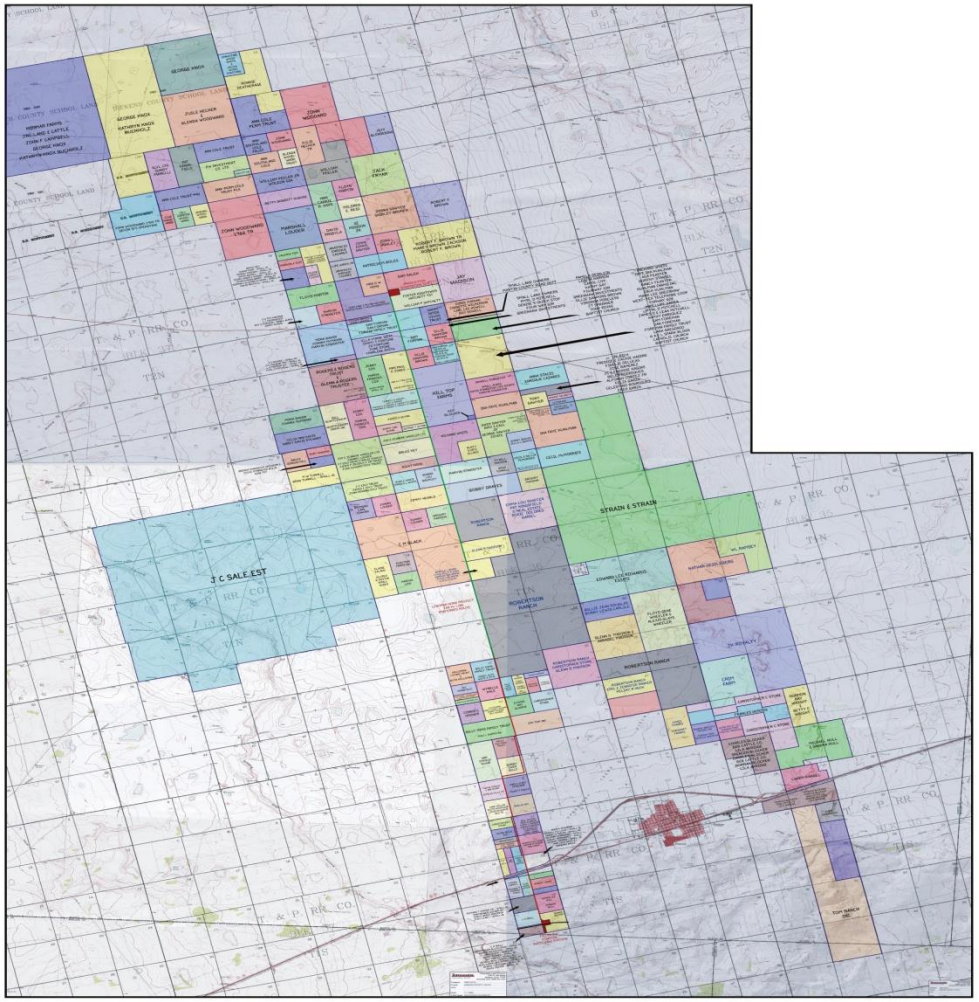
- To calculate the number of homes a *wind farm* can supply you multiply the homes served by one turbine (344) by the number of turbines (94 turbines for a 141 MW project)
- 344 x 94 = 32,336 HOMES SERVED!

Camp Springs, Snyder, Texas


10/10/2008

How are Wind Leases Obtained?

Landowner leases



The Town Hall Meeting Concept

- Large landowner group meets with wind developer to discuss proposed wind project and negotiate lease terms

* Efficient

- allows developer to deal with a single voice for large tracts of land

- faster negotiating period allowing testing and studies to commence more quickly

- information is disseminated to all landowners at once allowing each landowner to benefit from the insight and questions of his/her neighbors

- increased bargaining power for landowners with small tracts

- lower costs – attorneys fees are reduced for both sides; developer often reimburses fees to landowners

- transparency – diminishes strife as each landowner knows he/she is getting "the best deal"

- Perfected in early years by Wind-Tex Energy in its Snyder, Camp Springs, Turkey Tract, Stephens and Bor-Lynn Projects as well as by other developers such as E.On Roscoe Project and NextEra Horse Hollow
- Envisioned by Boone Pickens as launching pad for a national wind plan

Multi-Party Wind Leases

- Each individual landowner signs a separate lease
  - Same compensation
  - Different surface use provisions
    - E.g. – grazing land will contain different protection provisions than irrigated farm land.
- Wind leases are executed generally at group "signing party" or done individually through the mail

The Signing Party

- *Wade v. XTO Energy, Inc.* 2013 Tex. App. LEXIS 676 (Tex. App. – Fort Worth Jan. 24, 2013).
  - The court refused to look to the bonus check stub, previous offer letters, or other extrinsic documents not referenced in the lease to supply the necessary legal description.
  - Formalities are often an afterthought.
  - Plaintiffs "signed a lease which they did not accept and allegedly accepted a lease, without a property description, that they did not sign." (*Wade* at *11).

Major Elements of the Wind Lease

1. Orientation = "Golden Rule"
2. Length
3. Option to Renew/Cost
4. Royalty – Increases
5. Installation Fees
6. Roads, Lines, and Substations
7. Gross Revenues
8. Minimum Royalty
9. Premises Use / Quiet Enjoyment /Materially Interfere

Lease (continued)

10. Representations and Warranties
    a. Titles
    b. Environmental / Archaeological
    c. Other agreements interfering with wind farm operation
11. Hunting Rights / Cattle / Cotton
12. Venue / Dispute Resolution
13. Assignment
14. Removal Bond
15. Indemnification

Oil and Gas Exploration and Production

- The Oil Boom
- Concurrent Surface Use
- Potential for Disputes
- Accommodation Agreements

What Every Texan Wants

Force Majeure

- Broad force majeure clause

- The widespread wildfires in Texas during 2011 are illustrative of the type of event the clause anticipates

Nolan County Fire, June 2018

Lightning Strike

When the Bough Breaks

Easements

Easements (continued)

1. Option
2. In perpetuity or long term lease
3. Joint use of Easement
4. Location on Land
5. Size of Easement
6. Price Mechanism
7. Removal of Facilities

Wind as a Property Right: Is wind property?

- Property can include concepts and methods not just objects that can be physically possessed.
    - E.g.: Patent Law, procedures and methods can be property rights

- A thing is classified as property once the marketplace assigns value to it and the law endorses the classification. See Chavarria, The Severance of Wind Rights in Texas, 2008, p.1.

- Advent of utility scale wind turbines + need for renewable energy sources + windy land = expectation

Back into the Unknown: "The Twilight Zone"

- Does wind cease to be a property right once it is "severed" from the surface estate?
  - Although "severance" suggests a separation of the two interests, many argue that a wind rights holder does not own the wind rights separate from the surface; rather he or she acquires a specific right to use the surface and the wind that flows across it.

Fifty Years Before

United States v. Causby, 328 U.S. 256 (1946)

- Justice William O. Douglas: "The landowner owns at least as much of the space above the ground as he can occupy or use in connection with the land…The fact that he does not occupy it in a physical sense – by the erection of buildings and the like – is not material" (at 264).

- Justice Hugo Black (dissenting): "It is inconceivable to me that the Constitution guarantees that the airspace of this Nation needed for air navigation is owned by the particular persons who happen to own the land beneath to the same degree as they own the surface below. No rigid Constitutional rule, in my judgment, commands that the air must be considered as marked off into separate compartments by imaginary metes and bounds in order to synchronize air ownership with land ownership" (at 271).

Justice William O. Douglas

Justice Hugo Black

Opposition to Wind Farms

Major Types of Litigation

1. Common Law Nuisance/Trespass
    a) Neighboring Landowners
    b) Incompatible uses of land for commercial purposes (Oil & Gas v. Wind
    c) Opposition to CREZ
2. Federal Issues
3. Environmental and Wildlife

Common Law Nuisance & Trespass

Rankin v. FPL Energy LLC, 266 S.W. 3d 506 (Tex. App. -- Eastland 2008, pet. denied).

- Rural area, suit brought by neighboring landowners against FPL and its Lessors regarding Horse Hollow Wind Farm in Taylor County, Texas. Sought injunction in 2005 on grounds of public and private common law nuisance.
  - Claimed that ruined view and loss of property value were both part of the "package" of problems caused by turbines in Horse Hollow, among others:
    - Red blinking lights on top of turbines
    - Potential shadow and flicker effect
    - Noise
  - Trial Court granted partial summary judgment in favor of FPL on aesthetic nuisance claims
  - Went to jury mainly on noise trespass. Jury found for defendants.
  - Upheld by Eastland Court of Appeals (2008)
  - Held: Neighbors emotional response due to loss of view is insufficient to establish a cause of action for nuisance (i.e. – there is no sight based nuisance in Texas).

What Goes Around Comes Around

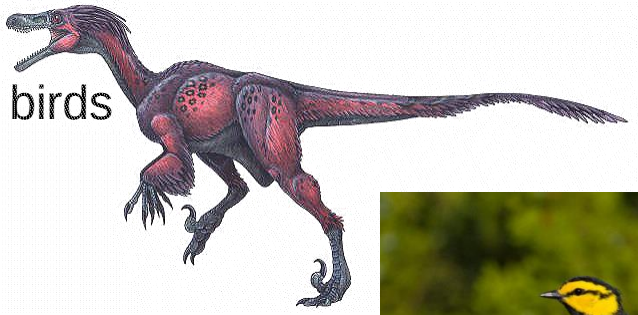
Frac Sand Tanks
Sweetwater, Texas

Adverse Impact on Wildlife

Short list of animals affected by wind farms:

Birds

- Hawks, eagles, and raptors
- Black capped vireo
- Golden Cheeked warbler
- Sage Grouse
- Prairie Chicken
- Ducks, geese and other migratory birds
- Sandhill cranes
- Pelicans



Bats

- Indiana bat
- Hoary bats

- Whitetail deer, mule deer, elks and exotics
- Horned toad
- Ocean life

Adverse Impact on Wildlife

Western Watersheds Project v. Bureau of Land Management, 774 F. Supp. 2d 1089 (D. Nev. 2011), aff'd 443 Fed. Appx. 278 (9th Cir. Nev. 2011)

- BLM approved construction of 150 MW wind farm on 430 acres of public land near Great Basin National Park in Nevada.
- Environmental groups filed suit in Federal District Court and sought a preliminary injunction. Alleged BLM did not adequately consider impact on Greater Sage Grouse and Brazilian Free-Tailed bats.
- Federal District Court denied motion for preliminary injunction in December 2011.
- Held: Plaintiffs failed to show they were likely to succeed on merits.

Wind Facility Sites and National Security

Ralls Corp. v. Committee on Foreign Investment in the United States, 926 F. Supp. 2nd 71 (D.C. Cir. 2013)

- Ralls Corp is a wind farm developer owned by Chinese nationals.
- March 2012, Ralls acquired interests from Terna Energy in four companies involved in the development of a wind farm project in Oregon.
- Ralls did not file a voluntary notice with the Committee on Foreign Investment in the United States (CFIUS) before completing the transaction.
- The U.S. Navy, as operator of a military base near the project, expressed concerns about Ralls foreign ownership.
- CFIUS issued an order requiring mitigation of Ralls foreign ownership. Two months later, President Obama superseded the order and required Ralls to divest itself of the newly acquired companies.
- Ralls filed suit in federal court alleging the President had exceeded his authority and that it had been deprived of property without due process and denied equal protection.
- Held: Statutory provision in the Defense Production Act stipulated that presidential actions and findings are not subject to judicial review (Judge Amy Jackson, "statute is not the least bit ambiguous" about role of the Courts), which barred consideration of Ralls' ultra vires and equal protection claims. It did allow the due process claim to go forward regarding the process followed in implementing the statute.

Wind Facility Sites and National Security

Ralls Corp. v. Committee on Foreign Investment in the United States, 987 F. Supp. 2d 18 (D.C. Cir. 2013)

- Subsequent litigation involving the due process claim brought by Ralls against CFIUS.
- Held: Ralls failed to show both that the government deprived it of a protected interest and did not afford it constitutionally sufficient procedure. Ralls acquired its property rights subject to the known risk of a presidential veto. It waived the opportunity provided by the statute to obtain a determination from CFIUS and the President before it entered into the transaction. Ralls had an opportunity to present to CFIUS all of the reasons why it believed its involvement in the Oregon wind farm project did not pose a threat to national security. All of "the process that was due" was given to Ralls under "the nature of the case."
- Appealed to the United States Court of Appeals for the District of Columbia Circuit

Wind Facility Sites and National Security

Ralls Corp. v. Comm. on Foreign Inv., 758 F.3d 296 (2014)

- On appeal, the Court of Appeals for the D.C. Circuit, *held*, Ralls Corp. was deprived of constitutionally protected property interests and denied due process since it was never advised of the evidence against it nor provided an opportunity to rebut it. We remand to the district court with instructions that Ralls be provided due process including access to the unclassified evidence on which the President relied and an opportunity to respond thereto
- On remand, the district court ordered that the Presidential Order shall remain in place until the government provides Ralls with access to all unclassified material contained in the record.
- The Court's limiting to unclassified information may make future parties' ability to delve deeply into the CFIUS process largely meaningless, because of the substantial reliance on classified information and executive privilege in national security matters.
- Potential foreign acquirers of U.S. entities must be aware that national security issues can be raised for the following: (1) because of the nationality of the foreign entity; (2) the facilities being acquired; and (3) because of the location of the properties being acquired.
- While Ralls achieved a favorable result, it might have achieved the same result more quickly and less expensively had it voluntarily submitted a notice to CFIUS before it closed its transaction—resolving the potential issues through agreement on mitigation.
- Engagement with CFIUS is crucial to achieving a favorable result.
- Litigation is a potential option for companies dealing with CFIUS albeit a limited, last-resort option.

2019 Extension of Renewable Energy Incentives

https://www.natlawreview.com/article/2019-extension-renewable-energy-incentives

On December 20, 2019, President Donald Trump signed into law the Further Consolidated Appropriations Act, 2020 (H.R. 1865), which included welcomed extensions for a number of energy tax incentives.

The legislation includes a one-year extension of the production tax credit (PTC) under section 45 for wind and other technologies. It also includes limited extension of other energy tax incentives that were set to expire and a retroactive extension for some credits that had already expired in 2018. Most of the credits will now expire at the end of 2021, setting up the prospect of a broader tax extenders deal during lame duck session after the 2020 election. The bill also included a one-year extension through 2021 of the new markets tax credit under Section 45D at $5 billion.

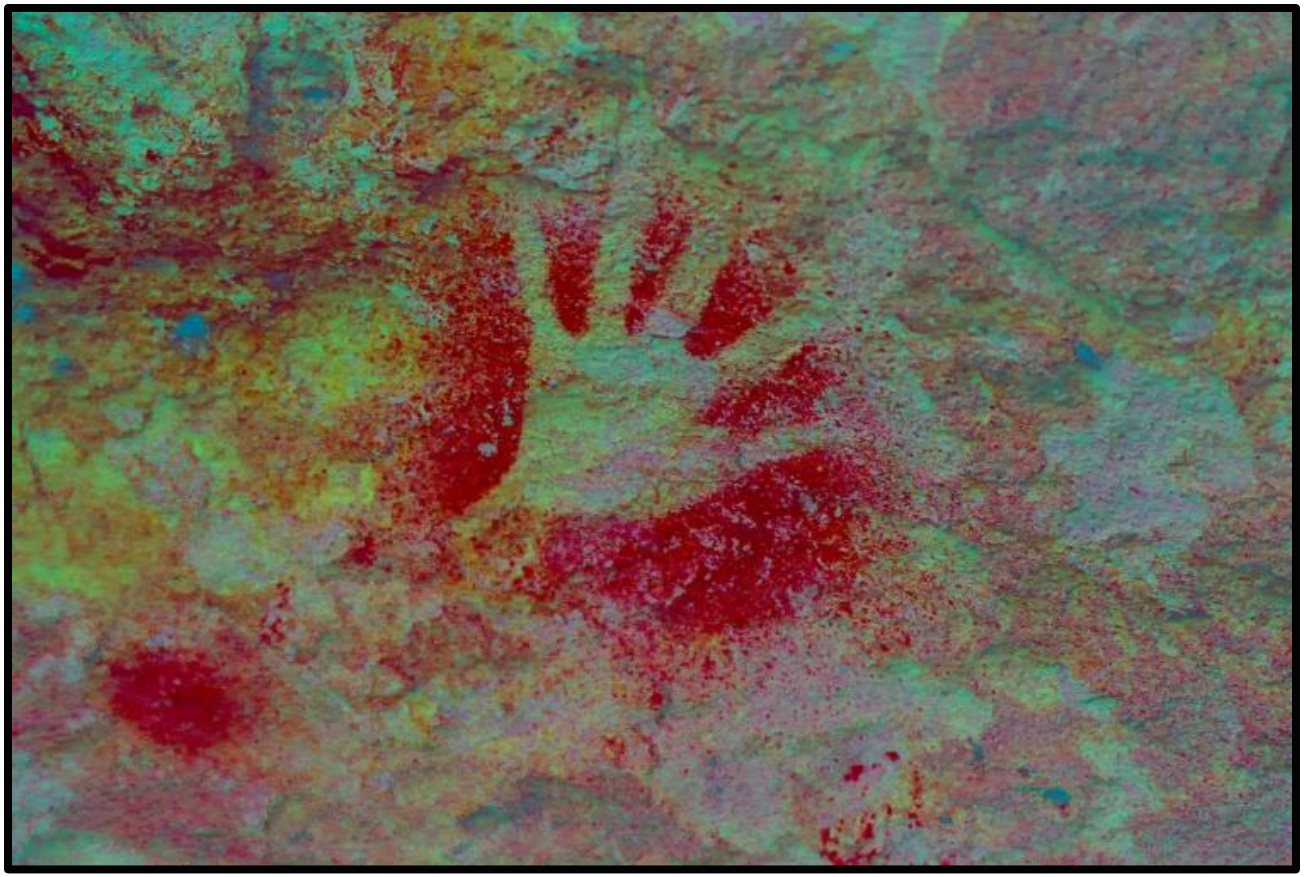
Environmental and Permitting Issues

Avian Studies

FAA Reviews

1. Radar
2. No Hazard

Cultural Assessment

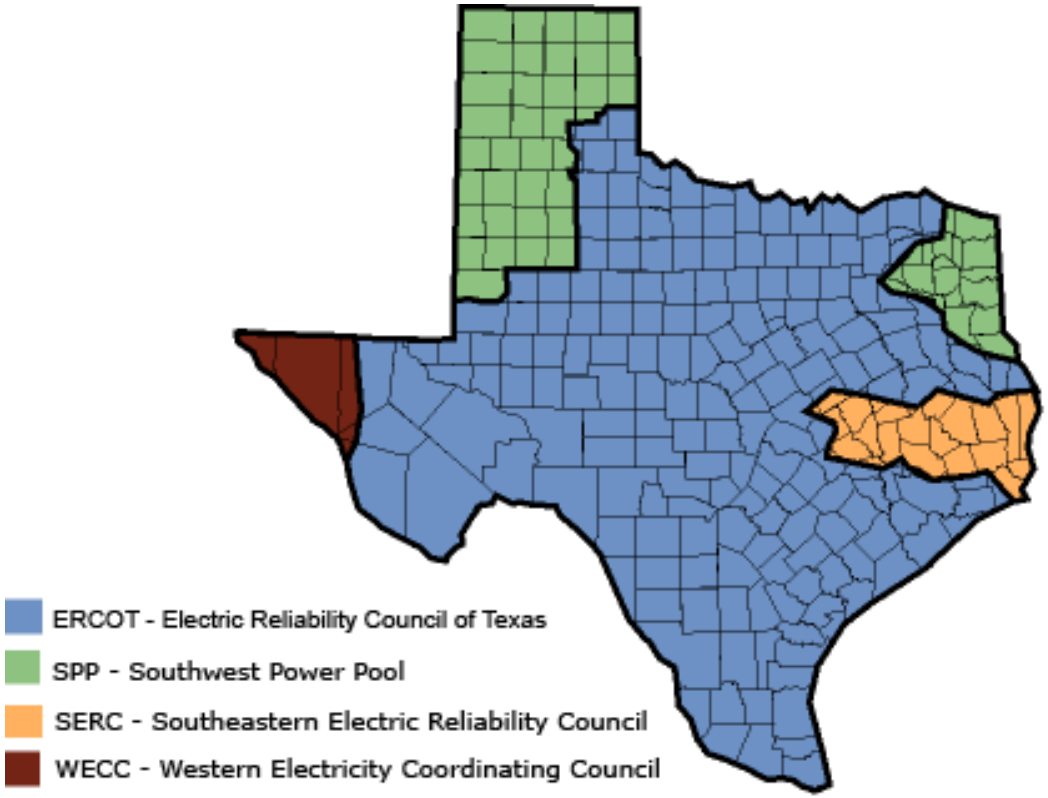


Corps of Engineers – Wetlands Issue

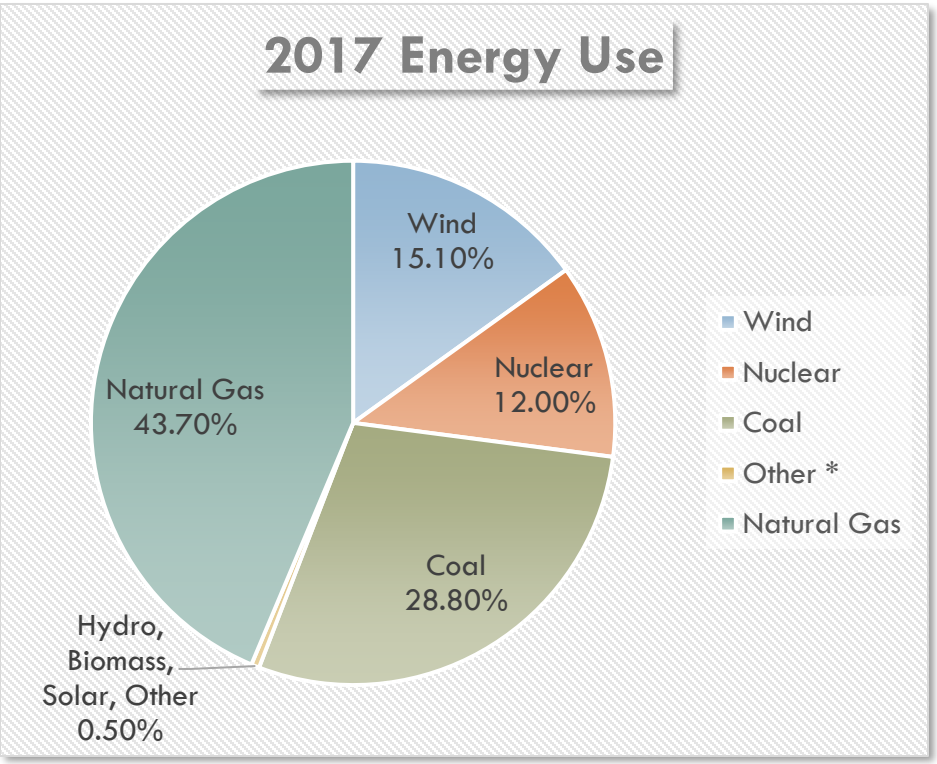
Inland Marsh Todd Votteler

Transmission

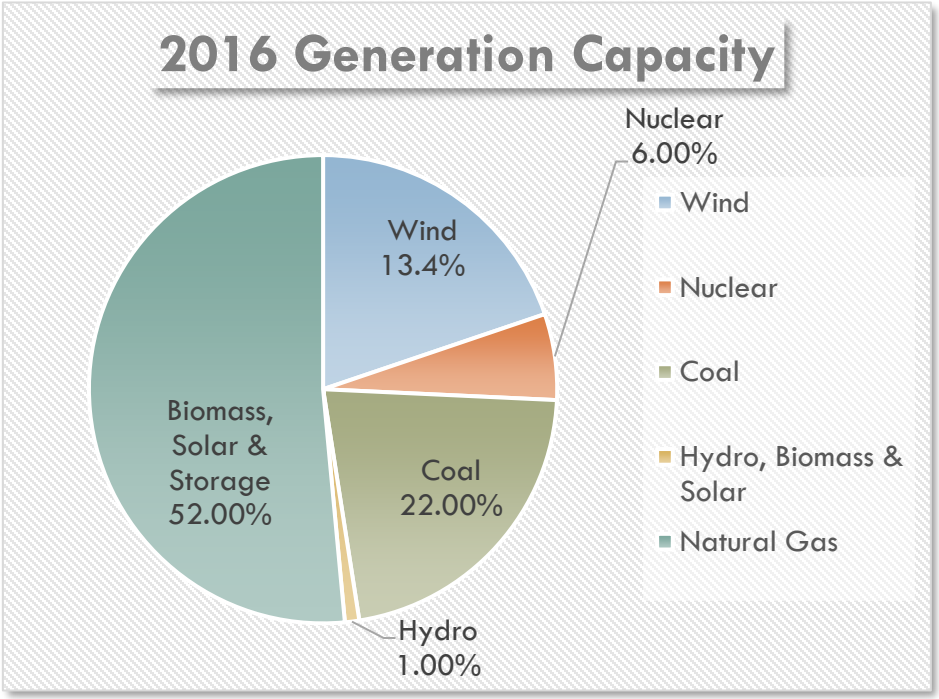
Texas Reliability Councils



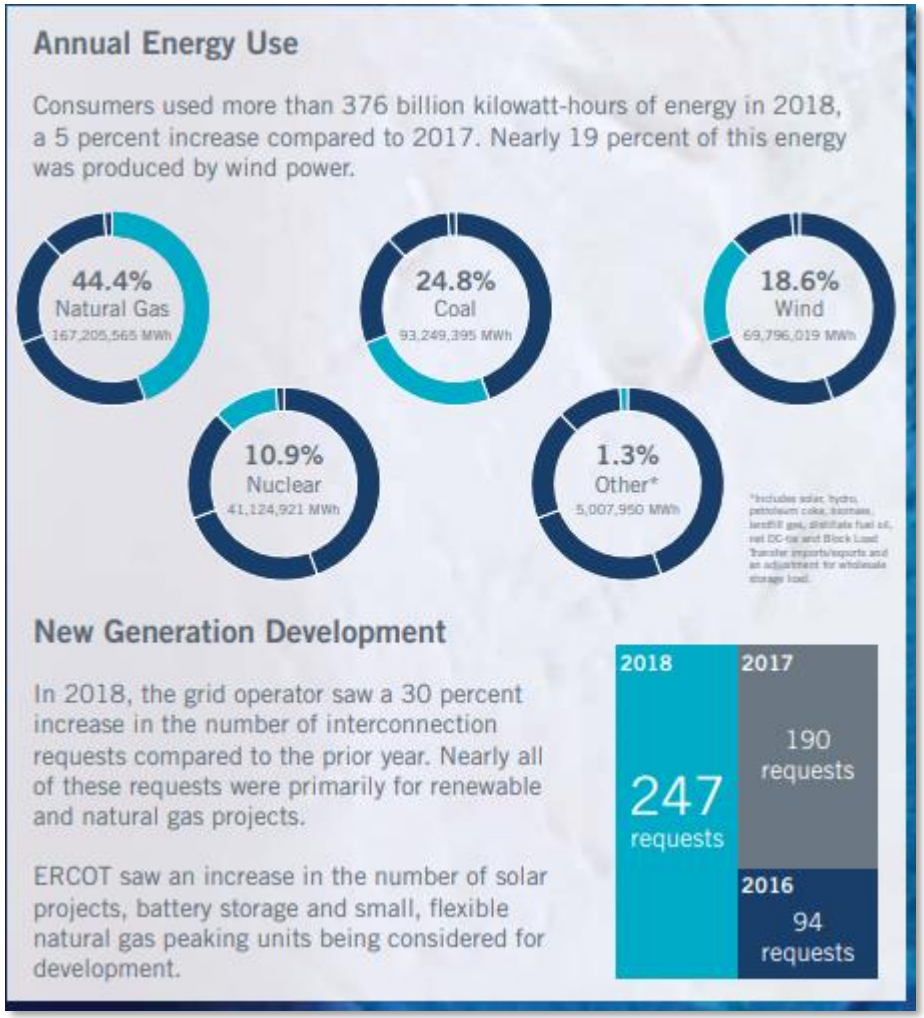
Generation Mix in ERCOT 2016 & 2017

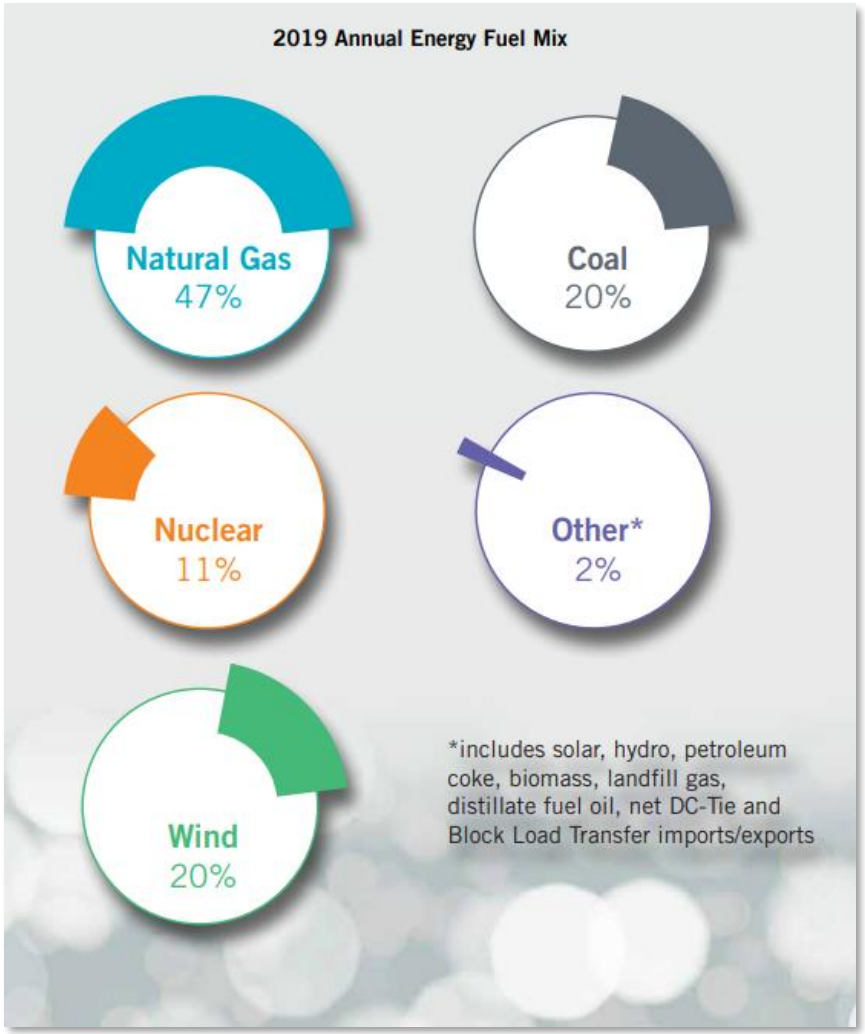


* includes Solar, Hydro, Petroleum Coke, Biomass, Landfill Gas & DC Ties

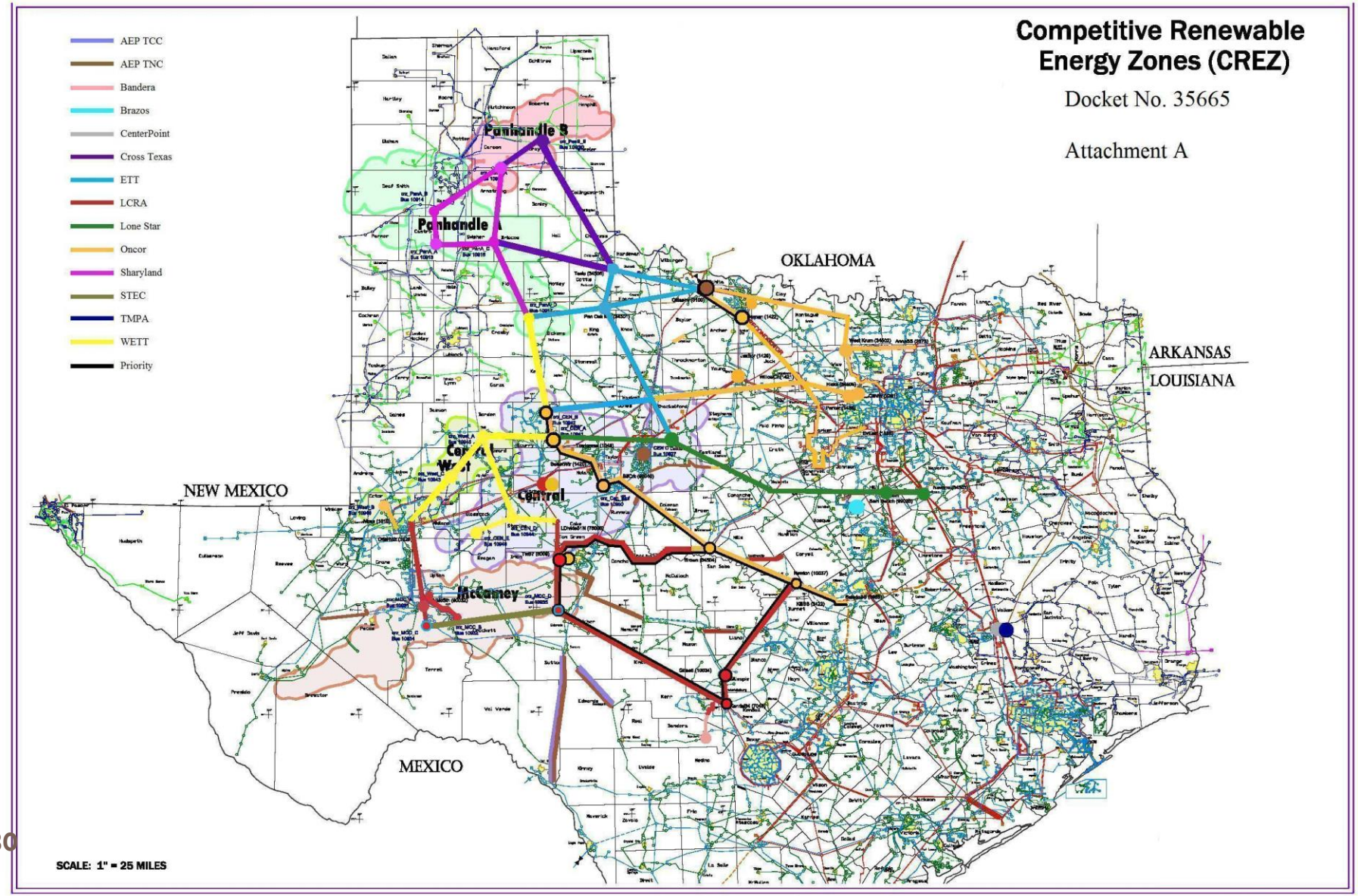


Generation Mix in ERCOT 2018 & 2019





CREZ Map


Competitive Renewable Energy Zones (CREZ)
Docket No. 35665
Attachment A
AEP TCC
AEP TNC
Bandera
Brazos
CenterPoint
Cross Texas
ETT
LCRA
Lone Star
Oncor
Sharyland
STEC
TMPA
WETT
Priority
Panhandle S
Panhandle
Central
McCamey
OKLAHOMA
ARKANSAS
LOUISIANA
NEW MEXICO
MEXICO
SCALE: 1" = 25 MILES

Transmission Study Agreements

ERCOT – Preliminary Screening Study

Standard Generation Interconnection Agreement

Tax Abatements

APPLICATION FOR CREATION OF A
TAX ABATEMENT REINVESTMENT ZONE

THE STATE OF TEXAS §
§
COUNTY OF SCURRY §

This Application for establishment of a Tax Abatement Reinvestment Zone is filed by Wind Tex Energy, LLC ("WTE"), a Texas limited liability company, owner of the proposed wind farm facilities, and a party to real property options and leases ("Surface Rights") within the requested Reinvestment Zone.

This Application is made pursuant to the Guidelines and Criteria for Granting Tax Abatements in Reinvestment Zones of Scurry County, Texas, as adopted by the Scurry County Commissioners Court.

WTE has acquired Surface Rights for use in development of a wind-powered electric power generating facility in Scurry County, Texas, and has Surface Rights on land containing at least 14,000 acres, as more particularly described on **Exhibit A-1** and shown on **Exhibit A-2** attached hereto and made a part hereof for all purposes (the "Property"). WTE intends to construct and operate a wind-powered electric generating facility (the "Project") on the Property set out in **Exhibits A-1** and **A-2**. The improvements to be constructed on the Property consist of new buildings and structures (or additions, upgrades or portions thereof) and other improvements, including fixed machinery, equipment and process units which may consist of wind turbine generators, electric transformers, one or more electrical substations, underground and overhead electrical distribution and transmission facilities, appurtenant electric equipment, roads, communication cable, data collection facilities, maintenance yards, maintenance

County

1. Application for Tax Abatement

Reinvestment Zone

Tax Abatement Agreement

1. Value of Project
2. Amount and length of tax abatement
3. Payments in lieu / % Abatement
4. Start Date
5. Local Spending Plan

Other Entities

1. Colleges
2. Hospital Districts
3. Water Districts

Local Schools – Value Use Limitation Agreement

1. Process
2. Agreement Term
3. As of September 1, 2017 cannot be granted within 25 nautical miles (28.7 miles) of a military aviation facility. (SB 277).

Project Construction Agreements

Power Purchase Agreements

1. What Purchase
    a. RECS
    b. Power
    c. Price
    d. Output guaranties
    e. Length of Agreement
    f. Security for Performance
        i. Guaranty
        ii. LOC
        iii. Timing
        iv. Investment Grade
        v. Amounts
    g. Qualified Scheduling Entity Function
    h. Risk of Loss
    i. Naming Rights
    j. Curtailment
2. QSE Agreements

Airborne Wind Turbine

Bladeless Turbines

Solar Farm

Combination Wind & Solar Lease

Future Uses of Accommodation Agreements in Wind and Solar Projects

Construction of a Wind Farm

These things are HUGE

You have to bring in a crane to put them up.

Office Complex & Laydown Yard

Rebar Installation

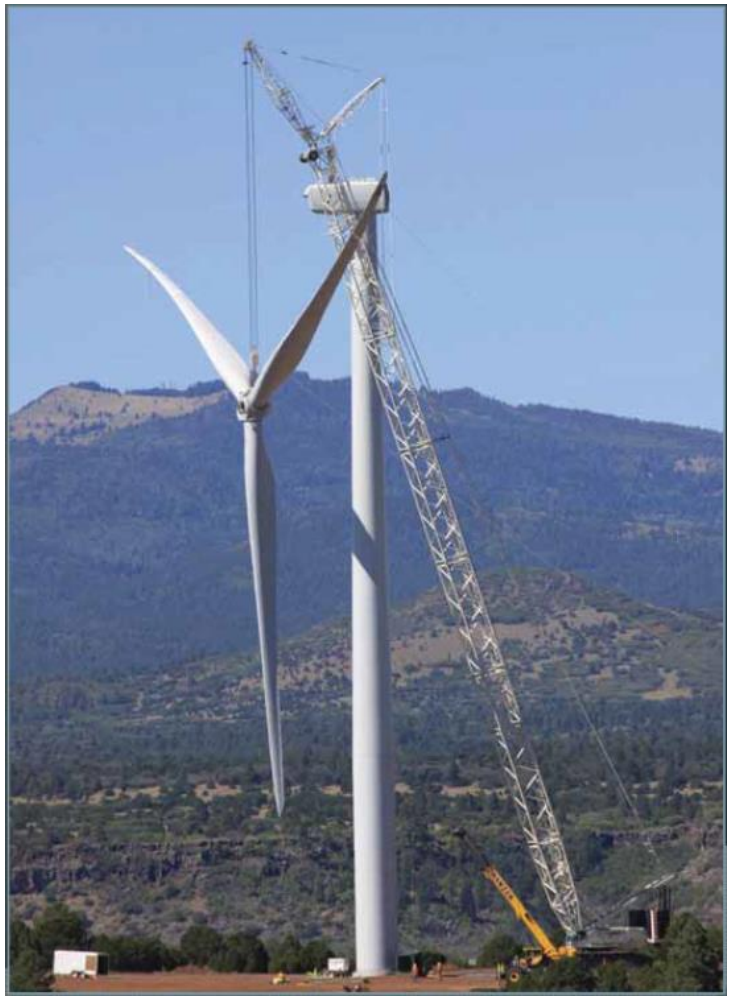
Tower Delivery

Blade Delivery

Setting the Mid Section

Rotor Assembly

Setting the Rotor



Receiving the Rotor:
Not a Job for the Timid Person

Construction

• Views of the Mozart Wind Farm in Stonewall County, Texas, constructed in 2012 by Windkraft Nord, USA including 12 Nordex N100/2500, 2.5MW wind turbines on 80-m towers

2015-2019 Construction & Planned Projects in Texas

Construction (2015-2019)

- Cirrus Wind 1 – Lynn County
- Stephens Wind Farm – Borden & Lynn Counties
- Miami – Roberts, Hemphill & Gray Counties
- Goldthwaite – Mills County
- Mesquite Creek – Borden & Dawson Counties
- Sendero – Jim Hogg County
- Grandview – Carson County
- Los Vientos – Starr County
- Javelina – Webb County
- Electra – Wilbarger County
- Horse Creek – Haskell County
- Staked Plains I – Garza & Lynn Counties
- Dermott – Scurry County
- Mesquite Star I – Fisher County
- Cactus Flats – Concho County
- Billings Project – Webb County
- Wildcat – Cochran County
- Lockett – Wilbarger County

Planned Projects (2019 - 2020)

- Red Raider – Hockley County
- Flat Top – Mills County
- Santa Rita - Reagan County
- Payne Mountain- Mills County
- Vacquero – Zapata County
- Hubbard – Limestone & Hill Counties
- Zapata Ridge – Zapata County
- Mesquite Star II – Fisher County
- Staked Plains II & III – Garza & Lynn Counties
- Roadrunner – Eastland & Callahan Counties
- Azure Sky – Throckmorton County
- Peyton Creek – Matagorda County
- South Coast – Chambers County
- Amadeus – Fisher, Stonewall, & Kent Counties
- White Mesa – Crockett County
- Helena – Bee County
- Lundell's – Webb County
- Maryneal Wind – Nolan County

2015-2018 Completed Projects

Goldthwaite

Cirrus Wind 1

Federal Production Tax Credit:

- 2015: Building of "qualified" projects (e.g. Lincoln Clean Energy's Electra Project in Wilbarger County; Sendero Project in Jim Hogg County); August 2015 President Obama proposal for 32% cut in nationwide carbon dioxide emissions for all states by 2022; December 18, 2015, Congress extended the FPTC for 5 years giving industry "new life". Remains at current level (2.3¢ per KW hour) through 2016; decreases 20% per year until expires in 2020.
- 2016: "Second Wind Boom" begins. Rush to "qualify" projects for full FPTC before year end. Developers have option to either "scrape dirt" or invest 5% of the capital cost of a project on or before December 31, 2016.
- 2017: Wind boom continues with a decrease in the PTC to 80% of the original 30% credit. Areas to watch are south Texas along the Rio Grande and the Staked Plains project in Garza and Lynn counties south of Lubbock (already qualified in 2016 for three phases totaling approximately 750 MW with two additional phases planned).
- 2018: Thanks to Senators and Iowa and South Dakota on December 15, 2017 the FPTC reduction is deleted at the last minute from U.S. Congress Tax Bill and wind begins to boom even more with new projects like Mesquite Star I in Fisher County (400 MW; 3.45 MW turbines).
- 2019-2021: Wind boom at full throttle to get last minute projects leased and built before the December 31, 2021 expiration of the FPTC. Results in additional phases of very large projects such as Staked Plains II & III and Mesquite Star II.


WELCOME TO
SWEETWATER
Sweetwater
Life is sweet in Texas

Class of 2014:
Climbing Turbines in Sweetwater

May 2014 Climb

May 2014 Climb

May 2014 Climb

May 2014 Wind Farm Tour

November 2014 Climb

November 2014 Climb

January 2016 Tour

March 2016 Tour

Sweetwater Reporter
DEDICATED TO PROUDLY DELIVERING LOCAL NEWS SINCE 1881

Thursday, March 31, 2016 www.sweetwaterreporter.com Vol. 118, Issue 84 ■ 50 cents

UT wind law students visit local wind farms

Pictured here are the Wind Law students from the University of Texas that visited the Sweetwater Wind Farm on March 25: (from left) Anita Ikwuegbu (Nigeria), Maria Bianchi (Argentina), Paulina Odun Ayanbadejo, (Nigeria), Zhanna Makash (Russia), Allison Lowry (Houston), Mingtian Li (China), Carlos Estrada (Mexico), Andrés Ramon Rodriguez-Gomez (Columbia), Michael Sivore (Missouri), Ricardo Menendez (Argentina), Professor Rod Wetsel (Sweetwater) and Piero Scarafone (Peru).

Photos by Jordan Solis

BY JORDAN SOLIS
Staff Writer

On Good Friday, 11 students travelled from Austin to Sweetwater to take a tour of the Sweetwater Wind Farm. Ken Becker, Executive Director of Sweetwater Enterprise for Economic Development, Inc. (SEED), met with the students and their professor to assist them with the tour.

The attending students were all Masters of Law (LL.M.) students at the Kay Bailey Hutchinson Center for Energy, Law, and Business, an interdisciplinary academic center created by the School of Law and the McCombs School of Business at the University of Texas at Austin. The mission of the KBH Energy Center is to provide the finest educational opportunities in the United States to students who wish to pursue careers in energy. Each of the 11 students obtained a law degree prior to enrolling in the Wind Law program at UT.

Some of the students travelled from as far as China and Africa to study Wind Law in Texas because Texas is the model for wind energy that is most often used by other states and countries. There are only two schools in the United States that offer courses on Wind Law, and both of them are in Texas: Texas Tech University and the University of Texas. Because Texas is the model for wind energy, the students can take what they learn here and apply it to wind energy businesses in their home countries.

Rod Wetsel, a native of Sweetwater, is the professor for the Wind Law Seminar Course at UT that these students are currently enrolled in. He has been a practicing lawyer in Sweetwater since 1978. When the commercial wind industry came to Sweetwater nearly 20 years ago, Wetsel represented landowners on wind leases and wrote some initial articles on preparation of those leases. In 2011, he co-authored a book entitled Texas Wind Law (now titled Wind Law) published by LexisNexis publishing company for use in law school instruction. In 2012, Wetsel became an adjunct professor at UT Law School and has taught there every year since on a part-time basis. He makes the lengthy commute to Austin one day a week to teach a writing seminar in wind energy. In the fall, he co-teaches a wind energy class with Ernest Smith, a foremost authority on energy law and who has been teaching at the law school for 32 years. Both of the classes cover all aspects of wind

Library Tag Day set for April 6

Pictured (from left) is Erica Caballero, Gayle Greer, Karan Bergstrom, Jimmie Bender, Dr. Jason Browning, Lita McEachern and Arthur Ramirez representing Big Boy's Bar-B-Que. The Woman's Forum has kicked off this year's Library Tag Day with donations from Dr. Browning and Big Boy's. Library Tag Day is scheduled for this coming Wednesday, April 6.

Submitted photo

Policy update approved by school board

BY BELINDA SERRANO
Staff Writer

Several policies were discussed at the Sweetwater ISD (Independent School District) Board of Trustees' meeting held on Monday evening.

Policy Update 104 was approved, which affected several local policies. Among the issues changed were instructional arrangements for homebound instruction; equal educational opportunity; admissions; attendance, notably attendance accounting; and student welfare in regard to freedom from discrimination, harassment and

• See SISD page 3

Registration for summer and fall semesters begins Monday at TSTC

REPORTED BY TATIANA TORRES
Managing Editor

The idea of registering for college can seem daunting for some students and their parents. Texas State Technical College has developed a registration checklist to make it easy.

Now students can register beginning Monday, April 4. Registration Checklist:

• Submit college admissions application online (www.

• See TSTC page 3

October 2016 Tour

University students get a first-hand look at wind turbine farms

Local people talk about benefits of the industry

BY SCOTT FITZGERALD
Reporter Editor

When the first wind turbines of the Trent Mesa Wind Project went up in the late 1990s between Abilene and Sweetwater, there was no cause for immediate elation.

"It was almost like a boutique deal. Not many saw it as an early precursor of what was to come," Executive Director Ken Becker of Sweetwater Economic Development told a group of University of Texas law and business students on Friday during a tour of the Leeward Renewable Energy wind farms southwest of Sweetwater.

That initial development soon paved way to a multibillion industry that changed the economic makeup of Sweetwater, Nolan County and West Texas as a whole, said Becker who was joined by Rod Wetsel, a Sweetwater attorney who now teaches Wind Law at the University of Texas in addition to his writing extensively on the subject of wind energy and the law.

Wind farms that have become a staple of the landscape here in a short period of less than 20 years have changed the futures for multi-generational family land owners in addition to providing jobs, education and economic opportunity that has soared into the billion-dollar tier, both men told the students.

"This has changed the lives of many and literally came out of no where," Wetsel said as many of his students began arriving at the Leeward wind farm station for a first-hand look at how wind farms operate and what their immediate favorable affect has been.

Wetsel wrote a paper "Anatomy of a Wind Lease," for the State Bar of Texas in 2003, earning his way as a venerable expert on wind energy issues.

"There are all kinds of interesting legal issues as to how wind energy affects the environment," Wetsel said as he talked about wind energy differing from oil and gas mineral rights in relation to land surface.

Students also got a first-hand look at how wind farms operate on a daily basis as Site Leader Mark Morgan of Leeward took them through maintenance routine protocols and how turbines are technologically designed to change according to the dictates of nature.

Morgan later guided students through an on-line inspection at one of the Leeward turbines.

Students ate lunch at the Dickson Ranch near Maryneal and heard from longtime landowners who said that the opportunities to lease to wind energy companies had salvaged their land and lifestyles.

"It's been a godsend to my family," said landowner Lewis Brooks who told students that previous ways of living off the land by way of raising cattle had become a nearly impossible task.

Becker said other student groups from University of North Texas and Texas A&M tour wind farms through the year.

Site Leader Mark Morgan of Leeward Renewable Energy shows Malcolm Boger of Dickens and his father Allen Boger of Austin the daily maintenance checks on wind turbines.

Photos by Scott Fitzgerald

Sweetwater attorney and University of Texas professor Rod Wetsel, second from left, talks to his students near a Leeward Renewable Energy wind turbine.

Applicants ... enforc...

REPORTED
BELINDA SERRA...
Staff Writer

The West Central ... Council of Governme... accepting letters of in... for a Basic Peace ... Course in Sweetwate...

This 700-hour ... would begin January ... and continue for ap... mately 32 weeks. ... for this course are ... from 6 p.m. – 10 ... Monday through F... and 8 a.m. – 5 p.m. ... most Saturdays.

"We're looking f... least 20 people to mak... happen in Nolan Co... said Irene Lau... Criminal Justice P... of the West Texas ... Council of Govern...

"The new training ... at the Sweetwater ... Department would ... great site."

Tuition for this ... is $2400. This ... course also qualifies ... the G.I. Bill.

Minimum entry re... ments for this ... include, but are not ... ited to, the following:

- *Sponsored by a ... enforcement age...*
- *Attained 20th bi... day before the ...*

nerships, event sales, retail, travel and tourism and food

an engaging energy for

Ambassador, she served

capabilities.

try in astounding ways and

121

Local Attorney brings five UT Law students to Sweetwater for Windmill Seminar

By MELINA DURAN
Editor

Rod Wetsel, a local attorney in Sweetwater and also a Wind Energy Professor at the University of Texas brought five of his students to experience the wind mills first hand on Friday, April 7.

The students traveled from Austin to the LeeWard Renewable Energy, LLC site located just several miles out of Sweetwater.

The students were Joanne Hatton- 3rd year law students, Jeesoo Kang- 1st year law student, Katherine Ellis- 2nd year law student, Skyler Collins- 3rd year law student, and Daniella Gruwell-2nd year law student.

The students went through a safety orientation at LeeWard before going to the Sweetwater Wind Phase 4 turbine site.

LeeWard Renewable Energy Project Manager CJ Holder and Mark Morgan gave a brief speech on the wind turbines, how they operate, information about he blades and also answered questions from the students.

The Sweetwater Enterprise of Economic Development (SEED) Executive Director Ken Becker was also in attendance and gave some insightful information as well to the students.

Wetsel got in the wind business in 1999 at the Double R Ranch. He ended up writing a paper on wind energy leases when he started representing a lot of wind owners. After that he and a couple other people got together and wrote a textbook about wind.

The textbook was published in 2011, around the time when he was invited to teach law school, at the University of Texas. Wetsel has been teaching for 5 years.

He teaches twice a year, In the fall semester with and older professor assisting him over worldwide wind, and he teaches a writing seminar class in the Spring Semester over Texas wind.

The students in his writing seminar each write a 50 page paper over wind energy topics such as the impact of turbines on wildlife, the effect of turbines on properties and more.

"I like my students to see the wind turbines first hand and get the privilege to interview people for their papers," said Wetsel.

The University of Texas is one of the only 3 law schools in the United States that offer Wind Energy Law. The other two are the University of Oklahoma and Texas Tech University.

"You can't go just study wind law anywhere, so it is a very unique industry," said Wetsel.

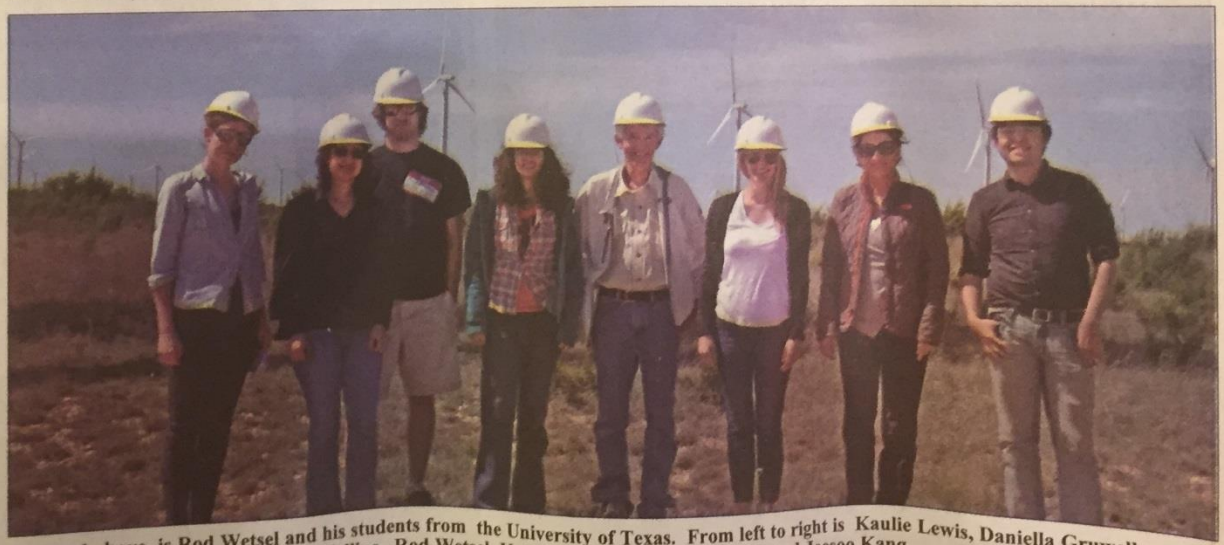
Wetsel has been bringing his students yearly on the wind tours, and a couple of times the students got the opportunity to climb the wind turbines.

The students see articles written about how the windmills are loud and ugly, but they get to witness it by first hand view rather than reading about it in a book.

"The folks here are really nice to take the time to come out here and show us around," said Wetsel.

There was also a freelance reporter from the University of Texas, named Kaulie Lewis, who attended the event. She is a journalism major.

Shown above are two students taking a look on the inside of a turbine.



Pictured above is Rod Wetsel and his students from the University of Texas. From left to right is Kaulie Lewis, Daniella Gruwell and her husband Timothy Gruwell, Skyler Collins, Rod Wetsel, Katherine Ellis, Joanne Hatton, and Jeesoo Kang.

Photos by Krys Martinez

6 97113 10522 9

SUNDAY FOCUS

Sunday Edition, April 22, 2018 ■ Page B1

Sweetwater Reporter

Wind Law students tour Sweetwater wind farms

Special to the Reporter

Rod Wetsel, Senior Partner at Wetsel, Carmichael, & Allen, LLP, Ms. Kathy Dickson, local land owner, CJ Holder, Plant Manager for Leeward Energy, and Ken Becker, Sweetwater Economic Development have done double duty this spring. In March, the group hosted students from both the J.D. And L.L.M. energy programs at University of Texas Law school for a tour of the Leeward Energy Sweetwater 1,2, and 3 wind farms and a catered lunch at Mrs. Dickson's 69 Ranch, located in the same wind project.

Two weeks later, on Friday April 13, the group hosted 15 law students from Texas Tech School of Law along with Professor Bill Keffer, who is the Director of the Energy program at the law school and a professor of Oil and Gas law for another tour. The students were able to hear from Mr. Holder as to the safety and operation side of renewable energy. They were then able to see the SCADA monitoring systems at work along with a tour of an operating wind farm.

The tour was an inaugural event for Professor Wetsel, who has recently joined the faculty at Texas T each Law School and will begin teaching there in the fall. Additionally, it was an opportunity for many of the students to meet Professor Wetsel in an informal setting and to learn firsthand what his wind law class is all about. Wetsel's Wind Law course at Texas Tech (which he previously taught at UT Law School for 10 semesters since 2012), will provide an in depth study of wind law in Texas, as well as other states. It will also include the history of wind energy, wind farm fundamentals, the major elements of the wind energy lease, conveyances and easements, severance of wind rights, government tax incentives, litigation, transmission, permitting, sale of wind, impact on wildlife, and offshore wind.

The textbook for the class is "Wind Law" which was co-authored by Wetsel and first published in 2011. In addition to wind law, in the spring of 2019, Wetsel will begin teaching Texas Mineral Titles which will prepare students for employment as title examiners and litigators both with law firms and oil and gas companies. This course will provide students with the practical aspects of examining mineral titles in Texas and the preparation of oil and gas drilling and division order opinions. The course is a first of its kind and has not previously been taught at Texas Tech Law School.

Professor Wetsel is a 1971 graduate of Sweetwater High School and has practiced law here in Sweetwater since 1978. Additionally helping with the tour were Louis Brooks, Jr., Jeff Chibitty, Jeff Allen, Rachel Newberry, Lori Kinsey, Stacie and Carroll Feagan and Frank Horak. Before heading back to Lubbock, the group gathered at Argos to discuss the tour and potential opportunities in the renewable energy industry.

Nolan County's history with renewable energy goes back to the first project in southeast Nolan County, Trent/Mesa. Trent/Mesa was a 100 turbine wind farm that could produce 100 MW. Since that project in 1999/2000, Nolan County, Roscoe, & Sweetwater have experienced a growing renewable energy industry that includes over 1300 turbines that can produce up to 2000 MW. Training opportunities grew as a TSTC Wind Technician training program was started, service and manufacturing facilities located in Nolan County, a facility to recycle wind blades was established, along with great employment opportunities and an increased tax base. Renewable energy has been a great addition to Nolan County and the communities of Sweetwater, Roscoe, and Blackwell.

TTU Law Tour April 2018

TTU UT Law Tour October 2018

Wind Tour September 28, 2019

Wind Tour September 28, 2019

Wind Tour

September 28, 2019

Filming Netflix: Our Planet November 17-22, 2018

Interview with Louis Brooks, Jr. Wind Rancher at Argos.

Netflix: Our Planet

The interview.

Last question: If you could describe wind turbines to a worldwide audience in one word, what would it be? Answer: Beautiful!

Netflix: Our Planet

Film Crew from London.

First Wind Law Treatise

Steve Kelly DeWolf
January 18, 1954 – April 25, 2018

"Waste no more time arguing what a good man should be. Be one."
- Marcus Aurelius


MUSTANGS
11
S
SWEETWATER MUSTANGS

Rod Wetsel, wind lawyer and long-distance motorcyclist,
in a cotton field that doubles as a wind farm.

Welcome to Wind Law! Argos awaits your arrival!

THE WIND LEASE [1]

The Wild West of Wind Power
Lessons from the Lone Star State

April 2, 2021

Roderick E. Wetsel

Wetsel, Carmichael, Allen, & Lederle

Wind Energy Lease in Texas

In the Beginning . . .

- 1999: First leases in Central West Texas, primarily in Nolan, Taylor and Scurry Counties: Trent Mesa, Sweetwater Wind (DKRW), and Project Snyder
- 2000-2003: First wind projects under construction: Sweetwater Wind, Horse Hollow, Buffalo Gap, Camp Springs
- 2003-2010: "Wind Boom": Wolf Ridge, Stanton; Turkey Track, Roscoe
- 2010: Recession
- 2011-2013: Increased construction; new life in South Texas
- 2014: Leasing of "FPTC qualified" projects, e.g. NextEra's Red Raider project in Hockley County and Javelina Wind Farm in Webb County; December extension of PTC to December 31, 2014.
- 2015: Building of "qualified" projects (e.g. Lincoln Clean Energy's Electra Project in Wilbarger County; Sendero Project in Jim Hogg County); August 2015 President Obama proposal for 32% cut in nationwide carbon dioxide emissions for all states by 2022; December 18, 2015, Congress extended the PTC for 5 years giving industry "new life". Remains at current level (2.3¢ per KW hour) through 2016; decreases 20% per year until expires in 2020.

Wind Energy Lease in Texas

- 2016: "Second Wind Boom" begins. Rush to "qualify" projects for full FPTC before year end. Developers have option to either "scrape dirt" or invest 5% of the capital cost of a project on or before December 31, 2016.
- 2017: Wind boom continues with a decrease in the FPTC to 80% of the original 30% credit. New focus shifted to South Texas along the Rio Grande and the Staked Plains project in Garza and Lynn counties south of Lubbock (already qualified in 2016 for three phases totaling approximately 750 MW with two additional phases planned).
- 2018: Thanks to Senators and Iowa and South Dakota on December 15, 2017 the FPTC reduction is deleted at the last minute from U.S. Congress Tax Bill and wind begins to boom even more in 2018 with new projects like Mesquite Star in Fisher County (418 MW; 3.45 MW turbines).
- 2019: Wind boom at full throttle to get last minute projects leased and built before the December 31, 2020 expiration of the FPTC. Results in additional phases of very large projects such as Stakes Plains II & III and Mesquite Star II.
- 2020: Expiration of FPTC extended by President Trump to December 31, 2021.

The Town Hall Meeting Concept

- Large landowner group meets with wind developer to discuss proposed wind project and negotiate lease terms

* Efficient

- allows developer to deal with a single voice for large tracts of land

- faster negotiating period allowing testing and studies to commence more quickly

- information is disseminated to all landowners at once allowing each landowner to benefit from the insight and questions of his/her neighbors

- increased bargaining power for landowners with small tracts

- lower costs – attorneys fees are reduced for both sides; developer often reimburses fees to landowners

- transparency – diminishes strife as each landowner knows he/she is getting "the best deal"

- Perfected by Wind-Tex Energy in its Snyder, Camp Springs, Turkey Tract, Stephens and Bor-Lynn Projects as well as by other developers
- Envisioned by Boone Pickens as launching pad for a national wind plan. Despite his grandiose ideas of a 1,000 MW project in Roberts County, he never built a wind farm. Regardless, he left a legacy in group negotiation of wind leases.

Multi-Party Wind Leases

- Each individual landowner signs a separate lease
  - Same compensation
  - Different surface use provisions
    - E.g. – grazing land will contain different protection provisions than irrigated farm land.
- Wind leases are executed generally at group "signing party" or done individually through the mail

The Signing Party

- *Wade v. XTO Energy, Inc.* 2013 Tex. App. LEXIS 676 (Tex. App. – Fort Worth Jan. 24, 2013).
  - The court refused to look to the bonus check stub, previous offer letters, or other extrinsic documents not referenced in the lease to supply the necessary legal description.
  - Formalities are often an afterthought.
  - Plaintiffs "signed a lease which they did not accept and allegedly accepted a lease, without a property description, that they did not sign." (*Wade* at *11).

Ethical Considerations

- Professional Responsibility
  - Wind lease negotiations present a unique set of circumstances wherein the practitioner is often required to represent multiple parties with common yet diverging interests.
  - Relevant Rules to Consider:
    - Rule 1.02 – Scope and Objective of Representation
    - Rule 1.03 - Communication
    - Rule 1.04 – Fees
    - Rule 1.05 – Confidential Information
    - Rule 1.06 – Conflicts of Interest
    - Rule 1.15 – Declining or Terminating Representation

* Concerns about breach of fiduciary duty: *Burrow v. Arce*, 997 S.W.2d 229 (Tex. 1999)

The Engagement Letter

Rule 1.02 provides, generally, that a lawyer shall abide by a client's decisions concerning the objectives and general methods of representation but may limit the scope, objectives and general methods of the representation if the client consents after consultation.

- The Engagement Letter provides the practitioner the opportunity to disclose the nature of the multiple representation and clearly state the expectations of the parties.
- Presented to landowner group at initial meeting, allows for open discussion with the entire group

Conflict of Interest in Wind Leases

- Wind groups generally do not "pool" their land but instead individually grant a lease which has been negotiated as a group
- Important to disclose multiple representation in writing;
  - State the ethical obligations
  - State the fee arrangement – Fees in wind projects customarily reimbursed by the wind farm developer
  - Discuss the engagement letter, be open about the relationship

Contingent Fee Clause in a Wind Lease

Contingent Fee to Attorneys at Law "Dewey Cheatham & Howe"

In consideration of DC&Hs efforts in assisting Landowner, Landowner agrees to pay a contingent fee and/or success fee arrangement of ten percent (10%) of any and all amounts received by Landowner relating in any way to this Lease, including but not limited to development fees, installation fees, surface damages, minimum royalty, and royalty.

Any and all amounts owed to DC&H, Attorneys-at-Law, will be paid to DC&H by Landowner within thirty (30) days of receipt of funds by Landowner. Landowner also hereby authorizes the Developer and any assignee of Developer to pay directly to DC&H any amounts owed under the terms of this Lease.

Wind Energy Lease in Texas

Overview:

- Option Phases
- Lease Term
- Compensation
- Gross Revenues
- Conflicting Uses
- Surface Protection

Option/Development Term

- Initial Phase of wind lease during which time Developer seeks to ascertain whether or not the property subject to the lease is suitable for construction of wind farm.

  Provides easements for:
  - Limited right of ingress & egress
  - Meteorological testing equipment
  - Developer's right to conduct necessary studies

- May be structured as a "true" option or as a separate phase of the Lease Term

- Length contingent upon site location and qualification for the PTC, range from 18 months to 7 years.

Lease Term

- Period of time that the wind farm is in commercial operation (sometimes called the Operations Term); typically most development activities have occurred prior to the lease term
  - Generally between 30 and 50 years
  - May be divided into multiple phases

- Construction Phase: lease should specify whether construction is to occur during Development or Lease Term, or during a separate phase (Construction time approximately 18 months).

Compensation Terms: Installation Fees

• Purpose: to compensate landowners not only for the location damage but also for the long-term loss of the use of surface of their property.

•Installation Fees are defined in two ways:

1. Payment owing to landowner as compensation solely for wind turbine sites
   - This definition contemplates a separate payment for roads, collection lines, and transmission lines, generally referred to as “Surface Damages”
2. Payment for all of the damage caused to the surface of the property caused by the installation of the wind farm. (rarely seen today).

- Generally paid within 60 days of the commencement of construction, but often bifurcated with a payment due upon the commencement of construction and a second payment due upon completion.

Compensation Terms: Facility Payments

• Purpose: to compensate an individual landowner for the location of a facility on his or her property which will be utilized for the benefit of the entire project.

• Payment Structure – Generally one time payment, made per acre utilized, though often, in lieu of a larger up front payment, annual payments are made for Substation and O&M Facility.

- Substations – permanent power station in a system for the generation, transmission, and distribution of electricity where voltage is powered up or down by transforms. Generally 5 acres.

- O&M Facilities – small office building installed at or near a project which houses a computer bank and other electronic equipment required by employees who will oversee the day to day operation of the wind farm.

- Lay Down Yards – temporary storage area for turbine segments, building materials, and equipment during the construction of wind farm. Generally 10 to 25 acres.

Compensation Terms: Surface Damages

• Purpose: to compensate landowners for newly constructed or improved roads, buried collection & distribution lines, and overhead transmission lines.

•Payment Structure: Generally a one time payment made a commencement of construction calculated based upon the length of the road or line (typically a dollar amount per rod (16.5') or per foot)

•Roads required to access each turbine and can be as large as 60' wide during construction to accommodate cranes and other equipment

•Collection/Distribution Lines –under ground lines connecting each turbine

Compensation Terms: Minimum Royalty

• Purpose: to provide landowner an annual guaranteed income payment regardless of the production of electricity or the operation of wind turbines on the property.

• The greater each year of three separate types of minimum rent payments:

1. Amount paid per megawatt of installed nameplate capacity; or
2. Amount paid per acre of land held by the lease;
3. Actual amount of royalty paid during the year.

• Generally include an escalation provision over the life of the lease (e.g. $500 per MW, $5.00 per acre, and 1/2% royalty increase every 5 years).

Minimum Royalty Hypothetical

Facts:

- Client owns 10,000 acres (AC) of ranchland in Webb County, TX.
- 60 megawatts (MW) guaranteed to be installed on client's property

Years 1-5: Minimum Royalty is the greater each year of the following:

1. 60MW x $7,500/MW = $450,000
2. 10,000AC x $25/AC = $250,000
3. 6% of Gross Revenues

Years 6-10: Minimum Royalty is the greater each year of the following:

1. 60MW x $8,000/MW = $480,000
2. 10,000AC x $30/AC = $300,000
3. 6.5% of Gross Revenues

Compensation Terms: Royalty

- Purpose: a percentage of gross revenues paid to the landowner as “rent” (may result from a power purchase agreement, merchant plant arrangement, or combination of both).

- General Formula: [(Turbine Size * Capacity Factor * 8760)* Price of Electricity]* Royalty Percentage

- Generally includes an escalator over the life of the lease.

- Royalty percentages are considerably lower than that found in oil and gas leases (e.g. 1.5 MW turbine at 4-4.5% royalty typically generates income of $8,000-$12,000 per year per turbine whereas a 3.45 MW turbine at a 4.5 to 5% royalty should generate $18,000-$20,000 per year.).

Gross Revenues

• General Definition: income generated by the wind farm prior to the deduction of expenses.

• "Gross Revenues" are specifically defined by each wind lease for the purpose of calculating lease Royalty:

  •Should include all payments from the sale of electricity from the lease, including payments for renewable energy credits and other "green" reimbursements. Also may include payments made pursuant to claims under an insurance policy with a business interruption clause.

  •Generally does not include: payments for Federal Production Tax credits, reimbursement for wheeling costs, nor revenues received from the modification or termination of a power purchase agreement.

• Typically calculated based upon the total amount of electricity produced by each turbine or from all turbines as measured at the interconnection point between the wind farm and the electrical grid.

•Trend today by landowners to seek a "cost free" royalty.

Landowner Retained Surface Uses

- Farming
  - Protection of irrigation systems (e.g. relocation of pivot or drip irrigation systems)
  - Reimbursement for crops damaged by Developers operations
- Ranching
  - Protection of Livestock including reimbursement for injury or death to animals
  - Repair and replacement of fences, gates and cattle guards
- Hunting
  - Reimbursement for lost hunting revenues
  - Hunter's indemnities and waivers of liability
- Site Rules (address speed limits, smoking, firearms, animals, artifacts, fossils, staying on roads, no photographs, etc.)

Landowner Retained Uses - Minerals

- Overview
  - Accommodation Doctrine
  - First in time
  - Concurrent development

Wind Energy Lease Compensation

	South Texas	Elsewhere in Texas
Installation of Turbine Site Fees	$7,500/MW	$4,500 – 5,000/MW
New Roads	$25 – 50/Rod	$15 – 25/Rod
Improved Roads	$25/Rod	$12 – 20/Rod
Buried Electric Lines	$25 – 35/Rod	$15 – 20/Rod
Overhead Electric Lines	$500 – 2500/Rod	$250/Rod
Substations & O&M Buildings: first 5 acres for each additional acre up to 10 acres	$50,000 for 5AC $2,500-3,500/acre	$25,000 for 5AC $1,500 – 2,500/acre
Laydown Yard (5-15 acres for 18 months)	$50,000	$25,000 – 5,0000
Minimum Royalty: with standard 5 year increases of $500/MW or $5/acre	$7,500/MW $25/acre	$4,500 – 5,000/MW $15/acre
Royalty: increasing 1/2% every 5 years	6%	4.5 – 5%
Hunting: for **ALL acres** in lease or a flat fee of	$25/acre or $100,000 flat fee	$15/acre
MET Tower (per tower per year)	$5,000/year	$1,500 – 3,500/year
Reimbursement of Attorney's Fees	ALL	All or Capped amount
Signing Bonus (which can be substantial)	Sometimes	Rarely and not much

Minerals: Accommodation Doctrine

- Multidimensional approach to some degree balancing surface and mineral interests
- Judicial, non-statutory concept requiring the mineral owner to act with prudence and "due regard" for existing surface uses.
- Focuses only on the method of the mineral owner's operations—not a limitation on mineral owner's right whether or not to extract
- Parties are at the mercy of a judge's discretion to weigh the factors

Minerals: If Wind Rights are First in Time

- Grantor owns all of the surface and mineral estate and there is no current lease of the minerals
- Wind lessee includes provisions in the lease which restrict oil, gas and mining activities on the surface as well as future leases and conveyances of minerals
- Wind lessee may attempt to reverse the dominant estate doctrine
- Wind lessee requires future oil and gas lessees to enter into an accommodation agreement
- Future oil and gas leases must reference the wind lease
- The wind lease includes a broad “no interference” clause

Minerals: If Wind Rights are First in Time, Duties of the Executive

- *Lesley v. Veterans Land Bd.*, 2011 Tex. LEXIS 635 (Tex. 2011)
  - Held that: It may be that an executive cannot be liable to the non-executive for failing to lease minerals when never requested to do so, but an executive's refusal to lease must be examined more carefully. If the refusal is arbitrary or motivated by self-interest to the non-executive's detriment, the executive may have breached his duty.
  - Overruled *Aurora Petroleum, Inc., et al. v. Newton*, 287 S.W.3d 373 (Tex. App. – Amarillo, 2009

- *KCM Fin. LLC v. Bradshaw, 457 S.W.3d 70 (Tex. 2015)*
  - Facts: Bradshaw inherited an NPRI, reserved by her parents in the 60's, which stipulated that any royalty could not be less than 1/2 of 1/8 (i.e., 1/16 of gross production). The NPRI was in 1,700 acres (out of a 2,000 acre ranch). Through a series of transactions, KCM Financial (Steadfast) became the owner of the entire 2,000 acre ranch (surface and mineral estate). There was evidence that KCM Financial was informed of Bradshaw's interest and was advised to take a 1/4 royalty to avoid possible litigation. KCM's attorney also informed KCM that as a non-executive Bradshaw was not entitled to any bonus money. KCM later leased the ranch to Range Resources for a 1/8 royalty and a bonus of over $7,500.00 an acre (i.e., a total bonus consideration of over 13 million). KCM then immediately assigned the majority of its 1/2 interest in the 1/8 royalty to a series of people responsible for setting up the deal. Bradshaw brought suit arguing that by 2005 a 1/4 royalty had become customary and that as a result of KCM accepting a 1/8 royalty in return for an exorbitant bonus consideration it had violated its executive duty to her by diminishing the value of her NPRI.

- *KCM Fin. LLC v. Bradshaw, 457 S.W.3d 70 (Tex. 2015)*
  - Holding: "An executive owes a non-executive a duty that prohibits self-dealing but does not require the executive to subjugate its interests to those of the non-executive. Thus, in ascertaining whether the executive breached its duty to the non-executive, the controlling inquiry is whether the executive engaged in acts of self-dealing that unfairly diminished the value of the non-executive interest." Id. at 82. Thus, "the failure to obtain a market-rate royalty does not, in and of itself, constitute a breach of that duty." Id. at 89. "Rather, the subject transaction must be viewed as a whole in determining whether the terms of a mineral lease, including the negotiated royalty, reflect the executive's utmost good faith and fair dealing vis-à-vis the non-executive." Id. at 84.
  - Result: Affirmed the Court of Appeals, who had reversed the Trial Courts summary judgment in favor of KCM (i.e., that KCM had not violated its executive duty to Bradshaw).

- Texas Outfitters v. Nicholson, 2017 WL 2124494 (Tex. App. San Antonio 2017)
  - Holdings: [1]-In a suit brought by non-executive mineral interest owners against the executive owner, the trial court's findings and conclusions supported its judgment in favor of the non-executive owners for breach of the executive's duty of utmost fair dealing to the non-executive owners by failing to enter into an oil and gas lease that was offered; [2]-The executive's refusal to lease was motivated by self-interest to the non-executives detriment because its owner expressed that he did not want to lease the mineral interest because it would interfere with his surface interest on which he conducted a hunting operation; [3]-Resulted in a loss to the non-executive owners, who held 45.84 percent of the interest, of $867,654.

Minerals: If Mineral Rights are First in Time

- Severance of the mineral estate prior to wind lease and development
- Wind lessee attempts to obtain surface waivers and non-interference agreements from non-executive mineral owners
- Common law advantage of dominant estate ownership has caused some mineral owners to refuse to accommodate servient surface use by the wind lessee

Surface Protection Clauses

- Crop Dusting
  - Because of the height and placement of turbines crop dusting may be severely limited; however, the issue may be dealt with by liability assumption/waiver
- CRP
  - Clause provides that if any portion of the premises is removed from CRP due to development, the Developer will be responsible for penalties and reimbursement of payments
- Water & Caliche
  - Use limited through agreement between landowner and wind company
- Blasting
  - Provision requires setbacks from residences, barns, corrals, and other improvements including oil and water wells.

THE WIND LEASE [2]

The Wild West of Wind Power
Lessons from the Lone Star State

April 2, 2021

Roderick E. Wetsel

Wetsel, Carmichael, Allen, & Lederle

Wind Energy Lease in Texas

- Overview:
  - Location of Facilities
  - Maintenance
  - Taxes
  - Liens
  - Assignment
  - Termination
  - Restoration & Bond
  - Indemnity
- Default & Remedies
- Financial Provisions

Location of Wind Power Facilities

- Wind leases commonly contain provisions which either limit or dictate the location of wind power facilities on the property. Conflict exists between the landowner's desire to restrict the location of turbines, overhead lines, and other facilities and the developer's desire to achieve the highest economic benefit.

Common Construction Restrictions include:

1. 1000' set back from residences
2. Set backs from barns or corrals
3. Turbines restricted to corners of each section to avoid pivot irrigation
4. "Restricted Area" addendum to lease prohibiting construction in specified areas
5. "Site Plan" requiring landowner's approval

CAVEAT: Many construction restrictions are subject to the developer's reasonable commercial discretion as to location

Maintenance of Wind Power Facilities

• Wind leases in Texas have evolved to include “good housekeeping” clauses which require that the developer:

- •Maintain and repair buildings, roads, fences and gates
- •Keep the property free of debris
- •Use existing roads when possible
- •Mark all wind power facilities (particularly those which are buried).
- •Treatment, control and eradication of weeds (e.g. “Organic Farmers”).

Ad Valorem Taxes

- Largest line item for expenses incurred after construction of a wind energy project is for payment of property or ad valorem taxes.
- In Texas ad valorem taxes are assessed by counties, independent school districts, hospital districts, colleges and other governmental entities.
- Landowners are often concerned about the loss of agricultural exemptions and increased taxes based upon the wind farm's location
    - For these reasons, wind leases usually include a clause providing that the wind lessee shall be responsible for any annual increase (not attributable to the existing underlying value of the property) in the landowner's ad valorem taxes.

Insurance

• Insurance: All wind leases provide that the lessee shall, at its expense, maintain a broad-form comprehensive policy of general commercial liability insurance as well as worker's compensation, automobile, and other coverage.

• Provision often includes requirements that the developer provide certificates of insurance upon demand and include the landowner as additional insured.

Construction Liens

- Wind leases typically contain a provision which requires the developer to keep the property free and clear of all mechanic and materialmen's liens.

Assignment

- As a general rule in Texas, absent an explicit provision to the contrary, contractual obligations and rights are freely assignable
    - Developers require the ability to freely assign the lease in order to work with its lenders or investors
    - Other developers intend to assign the lease to a larger company for the purpose of construction

- It is common for landowners to request restrictions upon assignment including restrictions that the lease may only be assigned to a subsidiary or “financially responsible” entity that is at least as credit worthy as developer

Termination

- Lessee has the unilateral right to terminate at any time.

- Landowner generally has no right to terminate a wind lease absent an event of default or a specific provision which allows for termination in the event of non-construction.
    - Often if there is a Landowner termination right, it includes a provision which provides the developer with continuing easements for ingress and egress.

- Landowners often require a “Termination Fee” to be paid in the event of termination

Surface Restoration & Removal Bond

- Most wind leases require that the developer remove the wind power facilities and restore the land upon lease termination.
    - Restoration includes: removal of foundations, clearing of roads (on request), removing turbines, cleaning any chemical spills, reseeding disturbed areas.

- Removal Bond: Effective September 1, 2019 HB 2845 requires the posting of a bond (along with specific restoration requirements) for the removal of wind power facilities on or after the 10th anniversary of the earlier to occur of the termination of the lease or the "commercial operations date" of the wind power facilities located on the landowner's leased property. "COD" is defined as the date on which the wind power facilities are approved for participation in market operations by a regional transmission organization and does not include the generation of electrical energy or other operations conducted before that date for purposes of maintenance and testing. The statute provides that other than a traditional bond a lessee may also tender a letter of credit, an escrow account, or other form of financial assurance acceptable to the landowner. The amount of the bond or other financial assurance must be at least equal to the estimated amount by which the cost of removing the wind power facilities from the landowner's property and restoring the property to as near as reasonably possible the condition of the property as of the date the agreement begins exceeds the salvage values of the wind power facilities, less any portion of the value of the wind power facilities pledged to secure outstanding debt. Regardless of the statutory language, many landowners often seek a higher bond in the amount of the net removal cost only without salvage.

Indemnity and Suits Against Neighboring Landowners

- Unlike oil and gas leases in Texas, almost all wind leases currently in use contain an indemnity clause:
  - Many leases are reciprocal with both the landowner and developer having mutual obligations and protections
- Neighboring Landowners
  - Issues that often arise with regard to wind leases: include claims for nuisance, trespass, interference as well as health issues such as "Wind Turbine Syndrome"
  - See *Rankin v. FPL Energy, LLC*, 266 S.W.3d 506 (Tex. App. - Eastland 2008, pet. denied); *Ladd v. Silver Star I Power Partners, LLC*, 2013 Tex. App. LEXIS 6065 (Tex. App - Eastland 2013, aff'd); *Sowers v. Forest Hills Subdivision*, 294 P. 3d 437 (Nev. 2013)

Default and Remedies

- Events of default are generally broken into two categories:
  - "Non-Monetary" – defined as any breach of the lease that does not involve money (e.g. – failure to close gates, failing to perform weed wash)
    - Often have 60 day or longer cure periods and allow only for monetary damages
  - "Monetary" – includes default as to payment of construction damages, rent, royalty or other amounts due.
    - Often have a shorter cure period than non-monetary defaults
    - Contain the additional remedy of lease termination.

Financial Provisions: Overview

- Wind farms are capital intensive projects often involving hundreds of millions of dollars; therefore, the Lessee likely plans to finance its development and operations

Right to Mortgage

- The lessee may, upon notice to the landowner, but without the landowner's consent or approval, mortgage, collaterally assign, or otherwise encumber and grant security interests in all or any part of its interest in the lease, easement, and improvements.

Notice of Default and Opportunity to Cure

- As a precondition to exercising any rights or remedies related to any alleged default, the landowner must give written notice of the default to each mortgagee at the same time it delivers notice of default to lessee.
- Mortgagee has time, in addition to developer's time, to cure default
- If the default cannot be cured within the prescribed period using reasonable diligence, then the mortgagee has an additional or extended period of time in which to cure.

Mortgagee Liability

- Any mortgagee that does not directly hold an interest in the lease or improvements, or whose interest is held solely for security purposes, has no obligation or liability under the lease prior to the time that the mortgagee succeeds to absolute title to the lessee's interest.

Estoppel Certificates

- Landowner is required to execute estoppel certificates certifying that no default exists under the lease, as well as consents to assignment, subordination and non-disturbance agreements, and other such agreements as the lessee or mortgagee may reasonably request from time to time.

Mortgagee's Right to Enforce Mortgage and Assign Its Lien

- A mortgagee has the absolute right:
  1. To assign its mortgage
  2. To enforce its lien and acquire title to all or any portion of the lease or improvements by any lawful means
  3. To take possession of and operate all or any portion of the lease, or cause a receiver to be appointed to do so,
  4. To acquire all or any portion of the lease or improvements by foreclosure

THE WIND LEASE [3]

The Wild West of Wind Power
Lessons from the Lone Star State

April 2, 2021

Roderick E. Wetsel

Wetsel, Carmichael, Allen, & Lederle

Wind Energy Lease in Texas

- Overview:
  - Mortgagee's Right to Obtain New Lease
  - Mortgagee's Consent
  - Dispute Resolution
  - Confidentiality
  - Force Majeure
  - Subordinated Lien
  - Most Favored Nations
  - Build-Out Clause
- Audit Rights & Separate Meter Requests
- Overhang Provision
- Retained Acreage
- Wind Leases in Other States
- Top Six Worst Wind Lease Clauses in History

Mortgagee's Right to Obtain New Lease

- If a foreclosure occurs, or if the lease is rejected or disaffirmed in a bankruptcy or other proceeding, and the mortgagee has arranged for all payments to be brought current, then the landowner, upon the request of the mortgagee is required to execute and deliver to the mortgagee, or its assigns, a new lease under substantially the same terms as the original.

Mortgagee's Consent to Amendment, Termination or Surrender of the Lease

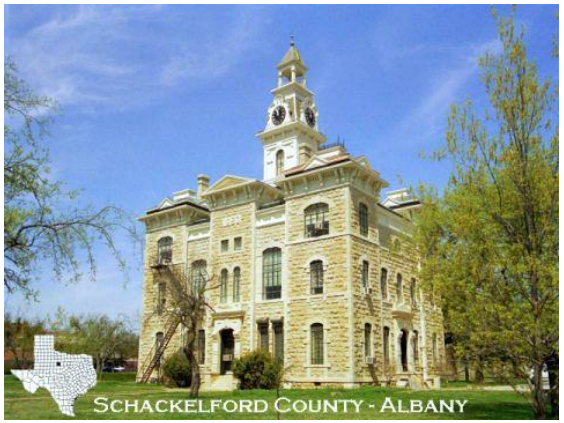
• Parties generally agree that so long as there exists an unpaid mortgagee, the lease may not be modified or amended, and the landowner may not accept a surrender, cancellation, or release of all or any part of the lease from the lessee, prior to the expiration of its term without the prior written consent of mortgagee.

Dispute Resolution

- Common Features:
  - Specify that Texas law applies

  - Venue Selection Clause – State courts in the county where land is located

  - Often seek waiver of jury trial – Texas law does not have a presumption against conspicuous waiver of jury trial



- Alternative Dispute Resolution
  - Generally broad arbitration clause
    - Often specifies location, number of arbitrators, arbitration rules to follow
  - Some leases include mediation

Confidentiality

- Most wind leases include a provision which requires the landowner to agree not to provide copies of the lease or to disclose the terms of the lease to any unauthorized person or entity.
  - Generally includes right to seek injunction and attorney's fees for violation.
  - Includes caveat for landowner to seek counsel from accountants, attorneys, family members, et cetera.
  - Wind leases recorded in the form of memorandum

Force Majeure

- As in oil leases, wind lease contains a broad force majeure clause.
  - Clause excuses performance (other than payment of monetary obligations) if party's performance of such obligation is impeded by a force majeure event
  - Generally includes: fire, earthquake, flood, strikes, war, civil strife, et cetera.

Force Majeure

- July 2020 Fire, South of Sweetwater

Subordinated Lien

- Though generally disfavored by Developers, and often removed by subsequent lease amendments, this clause grants a lien to the landowner on the improvements for the purpose securing the removal and restoration of the premises upon lease termination.
    - Landowner agrees to subordinate the lien to all other lien holders regardless of order of attachment

Most Favored Nations

- Aka: “No Worse Treatment”
- States that landowner’s lease will be modified to contain terms equal to the best terms granted by the developer in the wind farm.
    - Generally only includes economic terms
    - Best practice is to specify which terms will be modified
    - Provision generally includes restrictions as to geographic location and length of time during which the modification will be granted
    - Most common in Texas leases
    - Unresolved issue is how to enforce in light of confidentiality clause.

Build-Out Clause

- Provision included in some wind leases which requires the developer to place a specific number of turbines or megawatts on a landowner's property
  - Preferable to include a specified number of megawatts as opposed to turbines.
  - May also be presented as a "good faith" build-out with no specific number of megawatts but nearly impossible to enforce.

- Most common consequence for failure to build is requirement that the developer pay the landowner minimum rent based on the guaranteed number as a "phantom payment."

Audit Rights and Separate Meter Request

- Audit Clause provides that the lessee shall keep true, accurate and complete books, records, accounts, contracts and data sufficient to support and verify royalties and other compensation
  - Landowner, through a CPA of its choice, is allowed to investigate books to verify accurate payment
    - Generally audits are limited to once every year or less
  - Landowner, at times, may request a separate meter be placed on each turbine and have the information provided.

Overhang Provision

- Landowner grants the lessee an irrevocable, non-exclusive easement, appurtenant to the lease, or set back waiver for the right and privilege to permit the rotors of any wind turbine located on adjacent tracts of land to overhang the landowner's land. Most land owners disfavor such clauses unless there is a royalty sharing formula.

Retained Acreage

- Wind farms only utilize between three and five percent of the land initially leased
- Developer may wish to release land to diminish the minimum royalty obligation and satisfy the landowner's desires to have as little of its property encumbered as possible
- Retained acreage clause provides formula for the release of unused acreage
  - Most provisions provide that the developer must give three to six months advance notice before release
  - May also require a survey
  - Often includes continuation of necessary easements as well as "Restricted Zones" which perpetuate the developer's Non-Interference Easement

Wind Leases in Other States

- New Mexico
- Oklahoma
- Kansas
- Missouri
- Indiana
- Illinois
- Wyoming
- Colorado
- Montana
- Nebraska
- South Dakota
- Louisiana
- California
- Iowa

6 Worst Wind Lease Clauses

#1 "[I]f a title search shows that the holders of fee simple title . . . are different from the persons who signed this Agreement . . . [then] **Owner SHALL IMMEDIATELY CAUSE all of the holders of fee simple title to the Property to execute an amendment to this Agreement** pursuant to which all of such holders of fee simple title to the Property agree to and ratify this Agreement, all at no cost to Grantee."

#2 "**If Wind Company** reasonably **suspects that [Landowners] proposed activity might threaten [Wind Company's operations], then Landowner SHALL PROVIDE to Wind Company, AT NO COST OR EXPENSE TO WIND COMPANY, A WRITTEN REPORT AND OPINION FROM A LICENSED PROFESSIONAL ENGINEER** acceptable to Wind Company, **that the proposed activity will have no adverse impact on the Wind Power Facilities or other improvements.**"

#3 99-year lease (50 year Initial Lease Term, and seven 7-year extension lease periods - 49 years).

#4 "Landowner **SHALL NOT ASSIGN OR OTHERWISE TRANSFER an interest in the wind energy rights** . . . separate from fee title . . . **WITHOUT GRANTEE'S CONSENT which Grantee may withhold in its sole discretion.**"

6 Worst Wind Lease Clauses (cont.)

#5 Reversal of Dominant Estate Doctrine: "From and after the date of execution of this lease, Landowner agrees that regarding any interest he or she owns in both the surface and mineral estate of the property covered by this lease, that the surface estate shall be considered to be dominant to the mineral estate. Landowner agreed that all of Landowner's future transactions regarding the mineral estate in and under said lands shall be subject and inferior to the terms of this lease and all future uses of the surface of said lands by Lessee.

#6 "Gross revenues" shall mean all cash revenues actually received by Grantee during the applicable year of the Term for the following: (i) electricity sold…, (ii) the sale of carbon credits, renewable energy credit certificates, credits for greenhouse gas reduction or the generation of renewable or alternative energy on the Property, (iii) the proceeds of a business interruption insurance policy or payments from the manufacturer of any wind turbine on the Property under provisions of its warranty therefor, in each case if and to the extent made specifically in lieu of revenues… (iv) any proceeds from any lump sum payment or payments to cancel or modify any obligation under any energy electricity or capacity purchase contract related to the Project for wind turbines on the Property or payment of liquidated or other damages under any energy or

6 Worst Wind Lease Clauses (cont.)

#6 continued

electricity or capacity purchase contract related to the Project for wind turbines on the Property.

Production Payments. Notwithstanding the foregoing clause (1) of this Section, if and when wind turbines are installed on the Property and begin generating electricity and in the event that (A) the U.S. Production Tax Credits under Section 45 of the Internal Revenue Code available on the Commercial Operation Date for wind turbines installed on the Property are less than the full amount of the U.S. Production Tax Credits in effect on December 31, 2015 (as adjusted for inflation under said Section 45), or (B) Grantee is an electric utility or does not sell electricity generated by wind turbines installed on the Property under a power purchase agreement or similar contract, or (C) Grantee sells electricity generated by wind turbines installed on the property under a power purchase agreement or similar contract to a purchaser that is affiliated with Grantee, then instead of payments of the Applicable Percentage described in clause (1) of this Section, "gross revenues" shall be deemed to be equal to $27.00 per megawatt-hour of electricity generated by Windpower Facilities located on the Property and delivered to the point

6 Worst Wind Lease Clauses (cont.)

#6 continued

of interconnection to the utility grid, net of costs of wheeling and/or transmission service, integration, imbalance, transmission losses, compliance with grid or regulatory requirements, congestion and/or similar charges (if any) paid by Grantee to an entity that is not affiliated with Grantee, and any sales taxes and similar amounts payable by Grantee to any governmental taxing authority ("Production Payment"). Production Payments shall be made quarterly within forty-five (45) days of the end of each calendar quarter following the Commercial Operation Date, and each payment shall be accompanied by a statement that shows how the payment was calculated."

OFFSHORE WIND FARM DEVELOPMENT: THE CAPE WIND SAGA

DEVELOPMENT IN EUROPE, ASIA, AUSTRALIA, AFRICAN & BEYOND

THE FUTURE OF OFFSHORE WIND

The Wild West of Wind Power
Lessons from the Lone Star State

April 2, 2021

Roderick E. Wetsel

Wetsel, Carmichael, Allen, & Lederle

Rod E. Wetsel

wetsel@wetsel-carmichael.com

325-236-1776 (text messages)

Class Time & Location:

Monday & Tuesday

5:00 p.m. – 6:15 p.m.

Lanier Auditorium

Office Hours:

Monday 2:00 p.m. to 4:00 p.m.

Tuesday 1:00 p.m. to 4:00 p.m.

or by appointment

Office 312

Cape Wind

"Lately it occurs to me, what a long, strange trip it's been," Grateful Dead, "Truckin" album (1970)

- As a result of massive opposition from Native American tribes, the Kennedy family, and other coastal community members, Cape Wind spent $65M-$100M over 16 years on litigation and administrative hearings while attempting to obtain necessary permits to build an offshore wind farm in Nantucket Sound.

- On October 6, 2010, project developers signed the nation's first offshore wind lease for the Cape Wind Project. The 33-year lease covered 46 square miles in Nantucket Sound.

- The Cape Wind Project was slated to cover 24 square miles and cost $2.6 billion. Each of the project's 130 turbines would have been able to generate 3.6 MW of electricity, for a total generating capacity of 468 MW. If built, it would have dwarfed the later 30MW Block Island Project off Rhode Island which was built.

Cape Wind: 2013-Present

- On December 23, 2013, Cape Wind signed an offshore wind turbine supply agreement with Siemens. Critics suggested that the agreement was a ploy to incur 5% of the project's cost by the end of 2013 so that Cape Wind would qualify for the investment tax credit. The credit would have covered 30% of the project's approximately $2.6 billion construction cost.

- In 2015, two utilities (National Grid and NSTAR) opted out of the purchase contracts they had signed with Cape Wind (for 77.5% of its production), because Cape Wind missed its December 31, 2014, financing and construction deadlines.

Cape Wind: 2013-Present

- In the fall of 2015, Cape Wind's Vice President of Regulatory Affairs claimed that Cape Wind's demise was not only exaggerated but false.
- About the same time, Cape Wind's website claimed the project was in its financing phase.
- However, in June 2017, the town of Yarmouth terminated its contract with Cape Wind, signaling that the offshore wind project was effectively dead. Cape Wind had first entered into an agreement with Yarmouth representatives in 2003. https://dennis.wickedlocal.com/news/20170626/yarmouth-cuts-ties-with-cape-wind
- Cape Wind signifies the growth and power of the "Not In My Backyard (NIMBY) Movement."
- Interesting reading: "Cape Wind: Requiem for a dream." May 1, 2018. "Where did it all go wrong and what others can learn from the developer's experience?" https://www.windpowermonthly.com/article/1462962/cape-wind-requiem-dream

Cape Wind Litigation

Ten Taxpayers Citizen Group v. Cape Wind Associates, LLC, 278 F. Supp. 2d 98 (D. Mass. 2003):

- In 2002, Ten Taxpayers obtained a TRO restraining Cape Wind from constructing a scientific measurement device station (SMDS) on the seabed of Nantucket Sound. The case was then removed to federal court where Ten Taxpayers argued that the permit that Cape Wind had received was improper because it was not in compliance with Massachusetts's fisheries regulations.

- The Court determined that, as the proposed wind farm and SMDS were offshore by more than three miles and therefore under federal jurisdiction, “no license from the Commonwealth was required.” The Court dismissed the case.

- Ten Taxpayers appealed, and the case made its way to the U.S. Supreme Court where certiorari was denied in 2005.

Cape Wind Litigation

Alliance to Protect Nantucket Sound, Inc. v. U.S. Dept. of Army, 288 F. Supp. 2d 64 (D. Mass. 2003)

- In 2003, the Alliance filed suit in federal court against the Army Corps of Engineers, challenging the Corps decision to grant a permit to Cape Wind to construct a scientific measurement device station (SMDS). Cape Wind intervened in the action.

- The same judge from the *Ten Taxpayers v. Cape Wind* case heard the case and ruled similarly, holding that the Corps had the authority to issue permits such as the one it had issued to Cape Wind. The Court further held that the Corps did not have to circulate its draft Environmental Assessment ("EA") or its finding of "no significant impact." Neither was the Corps required to consider the environmental impacts of a "possible" wind energy plant.

- In 2005, the case was appealed to the U.S. Court of Appeals for the First Circuit, where it was affirmed.

Cape Wind Litigation

Cape Wind Associates, LLC v. Donelan, 2004 WL 1194739 (Mass. Super. Apr. 29, 2004)

- This 2004 defamation case centered on an employee of the Alliance to Protect Nantucket Sound, Inc., John Donelan, who had sent a false press release defaming Cape Wind to the *State House News* in Boston. Donelan used an e-mail account opened under a fictitious name to send the press release.

- Despite attempts to invoke the Fifth Amendment, Donelan was ordered to answer the questions that had been posed to him at his deposition or else the Court would refuse to allow him to oppose the claims brought against him. Such a decision would effectively establish Donelan's liability for damages.

- Donelan then admitted to sending the defamatory email and resigned from the Alliance. A settlement was reached in 2006 for $15,000.00. Cape Wind donated the settlement amount to assist local low-income families with paying their energy bills.

Cape Wind Litigation

Alliance to Protect Nantucket Sound, Inc. v. Energy Facilities Siting Bd., 448 Mass. 45 (2006)

- In 2006, the Alliance challenged the Energy Facilities Siting Board's decision to allow Cape Wind to construct and operate two 18-mile, 115 kV underground-and-underwater transmission lines. The Alliance argued that the Board had incorrectly altered its standard for determining the 'need' for transmission lines that fell outside its jurisdiction.

- Obtaining the Board's approval was necessary because the transmission lines were to traverse land in the towns of Yarmouth and Barnstable and Massachusetts waters before entering federal waters.

- The Court held that the Board had discretion to change its approach for determining the need for transmission lines, that issuing a conditional permit was an effective method to accomplish statutory obligations related to determining need, and that the Board did not improperly delegate its responsibilities.

Cape Wind Litigation

Ten Taxpayers Citizens Group v. Sec'y Office of Envt'l Affairs, 2008 WL 4739555 (Mass. Super. Sept. 10, 2008)

- In 2007, Ten Taxpayers challenged the issuance of a final environmental impact report certificate by Secretary Office of Environmental Affairs to Cape Wind.
- The Secretary stated that Cape Wind had "adequately and properly complied with the Massachusetts Environmental Policy Act ("MEPA") and its implementing regulations."
- Ten Taxpayers disagreed and argued that the Court should strike the certificate due to "various deficiencies" under MEPA. Cape Wind moved for dismissal.
- The Court found in favor of the Secretary's determination dealing with the MEPA requirements and granted Cape Wind's motion to dismiss.

Cape Wind Litigation

Town of Barnstable, Mass. V. F.A.A., 659 F.3d 28 (D.C. Cir. 2011)

- In 2010, several non-profit organizations of pilots and the Town of Barnstable challenged the FAA's "no hazard" determinations for each of Cape Wind's 130 proposed 440-foot-tall turbines, claiming that the FAA "violated its governing statute, misread its own regulations, and arbitrarily and capriciously failed to calculate the dangers posed to local aviation."

- Section 6-3-8(c)1 of the FAA regulations state that "a structure would have an adverse aeronautical effect upon VFR air navigation if its height is greater than 500 feet above the surface at its site…."

- The Court held that by relying solely on this section, the FAA had misread and misapplied its own regulations and that the height limit was simply one possible issue that would constitute an adverse effect. (Cape Wind lost).

- In 2012, after analyzing the turbines a second time, the FAA determined that the "proposed construction of 130 wind turbines, individually and as a group, had no effect on aeronautical operations." (Cape Wind won).

Cape Wind Litigation: Cape Wind wins again!

Alliance to Protect Nantucket Sound, Inc. v. Dep't of Pub. Utilities, 461 Mass. 190 (2011)

- In 2010, the Department of Public Utilities entered a final order approving a proposed power purchase agreement (PPA) between National Grid and Cape Wind.

- In 2011, Alliance sought to re-open the administrative record so that un-redacted documents from NSTAR Electric, another utility, could be entered as additional evidence. The Department of Public Utilities refused to re-open the record, concluding that the Alliance had failed to show "good cause" and that no compelling circumstance existed to reopen the record.

- The Court held the Department did not abuse its discretion in declining to re-open the record.

Cape Wind Litigation

Melone v. Dep't of Pub. Utilities, 462 Mass. 1007 (2012)

- Thomas Melone, a landowner who owned property on Martha's Vineyard argued pro se that his view would be obstructed by the Cape Wind development, that his property would diminish in value, that oil and other contaminants spilled at the turbine sites could find their way to his property, and that he had standing as a ratepayer and owner of land adjacent to the proposed wind project.

- The Court found that the regulations governing the Department allowed for wide discretion to grant, limit, or deny a person leave to intervene, but it held that there had been no abuse of discretion. The Court further held that "where the department properly did not grant Melone's petition to intervene as a party to the § 83 proceeding, it follows inexorably that he was not an aggrieved party in interest entitled to seek judicial review of the department's final order approving the power purchase agreements." Thus, Melone had no standing to complain.

Cape Wind Litigation: The final blow… Coup de Grace for Cape Wind.

Public Employees for Environmental Responsibility et al v. Hopper, 827 F 3d 1077; 2016 U.S. App. Lexis 12358 (USCA – DC Circuit). July 5, 2016

The Court held:

- (a) Bureau of Ocean Energy Management violated NEPA by relying on inadequate geophysical and geotechnical surveys without first obtaining sufficient data on sea floor and subsurface hazards. Was arbitrary and capricious.

- (b) Fish and Wildlife Service violated the Endangered Species Act in issuing its "incidental take statement" which was not based on the best available scientific data because it disregarded data submitted by plaintiffs. Was arbitrary and capricious.

Note: Rare overruling of federal agency decisions.

Offshore Wind Litigation: South Fork project off Long Island, New York

Fisheries Survival Fund v. Jewell, 236 F. Supp. 3d 332 (2017)

- Nine commercial fishing organizations and businesses requested a preliminary injunction to temporarily halt the Bureau of Ocean Energy Management's (BOEM) "plan to lease to Statoil Wind US, LLC, a large nautical area off the coast of New York for the development of a wind energy facility."

- The plaintiffs were all involved in the commercial fishing of scallops and squid in the same coastal areas as the planned wind farm.

- The Court concluded that Plaintiffs failed to establish imminent, concrete, or irreparable harm that would warrant preliminary injunctive relief. (Wind company won).

United States

- In 2016, the first offshore wind farm in the United States, the Block Island Wind Farm, came online off the coast of Rhode Island.

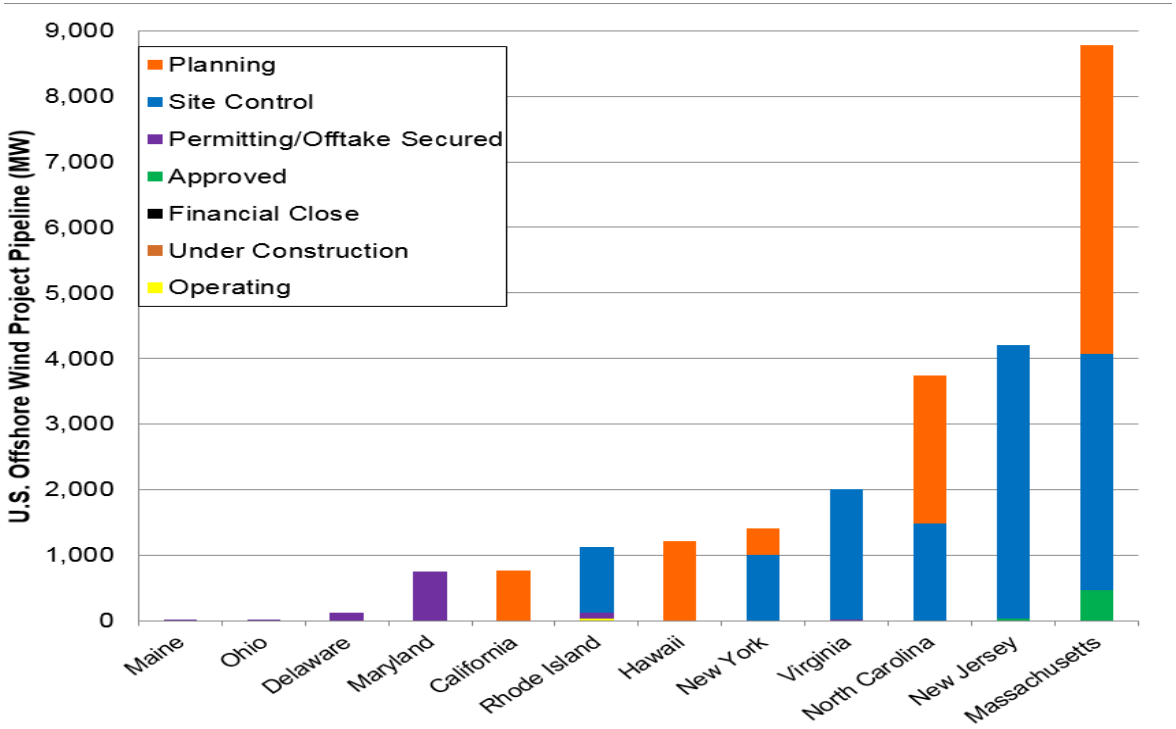
- The 30 MW wind farm has just five turbines. Its parent company, Deepwater Wind, estimates that the project will reduce electric rates on the island by approximately 40%.

- A 15-turbine, 90 MW project slated for construction thirty miles off the coast of Montauk, New York, could become the nation's first utility-scale offshore wind farm. Developers expect this project to generate enough electricity to power more than 50,000 homes. As seen above, the wind farm has already been the subject of litigation.

https://us.orsted.com/wind-projects

United States

- By 2017, twenty-eight offshore wind projects, totaling 23,735 megawatts (MW) of potential installed capacity, were in the works in the United States.
- Wind farms are increasingly likely to be built 30 miles from shore, a shift fueled by advances in floating wind turbine technology.
- By mid 2018, a total of 25,464MW of offshore wind capacity was in the project pipeline.



Europe

- Wind energy in Europe is currently a €72 billion industry, meeting 11% of the continent's electricity needs. While onshore wind is the continent's cheapest kind of new power generation, costs for offshore wind are also diminishing.
- Europe leads the world in offshore wind installations, with more than 90% of offshore wind farms.
- Analysts project that between 49 GW and 99 GW of offshore wind will be installed by 2030, according to a European association for wind energy.

https://windeurope.org/about-us/new-identity/

Europe

- The first offshore wind farm in the world was installed in 1991 off the southeastern coast of Denmark. The 11-turbine farm was in operation for more than 25 years until it was dismantled in 2017.

https://www.cnbc.com/2017/09/08/the-worlds-first-ever-offshore-wind-farm-has-been-dismantled-and-its-parts-recycled.html

- Germany has reached 7,500 MW of installed offshore capacity as of January 2020.

https://www.evwind.es/2020/01/24/germany-offshore-wind-power-capacity-reaches-7-5-gw/73223#:~:text=A%20total%20of%201%2C469%20offshore,industry%20grid%20as%20of%20now.

Europe

United Kingdom

- The United Kingdom generates more electricity from offshore wind than any other country. Offshore wind meets roughly 5% of annual electricity demand in the UK.
- The UK's first offshore wind farm came online in 2001, and the country now has 30 offshore wind farms with 5.1 GW of installed capacity. Construction is in progress on another 4.5 GW.
- Offshore wind is likely to provide the UK with up to 10% of its power needs by 2020.

https://www.thecrownestate.co.uk/energy-minerals-and-infrastructure/offshore-wind-energy/

- Costs associated with building an offshore wind farm in the UK have halved in less than three years. Lower costs are likely to create a £17.5bn investment boom in the industry.

http://www.telegraph.co.uk/business/2017/09/11/offshore-wind-power-175bn-investment-boom-costs-halve/

Europe

United Kingdom

- The UK has a high population density and is windiest in winter, when the demand for power is greatest.
- The London Array is the world's largest offshore wind farm, with 175 wind turbines and an installed capacity of 630MW (but not quite as big as the Roscoe Project at Sweetwater which has 680MW). The wind farm cost over $2.8 billion to construct (or $4.5 million per installed MW), can be seen from outer space, and reduces annual CO2 levels by 925,000 tons per year – equal to more than 300,000 passenger cars.

Europe

- The UK is also home to Hornsea Wind Farm, which is comprised of four separate project phases that are expected to eventually generate up to 6 GW of electricity. (Currently at 1.2 GW with 174 Turbines)
- At 190 meters tall, Hornsea's wind turbines are taller than London's Gherkin Building.
- Once fully constructed, the Hornsea Wind Farm will generate enough electricity to power more than 1,000,000 homes. http://hornseaprojectone.co.uk/en/About-the-project#0

- The world's first floating wind farm, Hywind Scotland, started producing electricity in October 2017. The 30 MW wind farm is 25 km off the coast of Aberdeenshire, Scotland, and can power 20,000 households. https://www.statoil.com/en/news/worlds-first-floating-wind-farm-started-production.html

Europe

- The Dogger Bank wind farm will be able to provide electricity to more than 4.5 million homes in the U.K. once up and running.
- The wind farm is a 50-50 joint venture between Norwegian energy major Equinor and SSE.

- Overall offshore capacity for European nations now stands at more than 22 GW. WindEurope said that the U.K. was responsible for almost half of the new capacity in 2019, followed by Germany, Denmark and Belgium.

Asia

Japan

- Japan has 500 GW of potential floating wind capacity. The country installed its first offshore floating wind farm off southwestern Japan in 2013. https://www.japantimes.co.jp/news/2016/08/25/business/fukushima-floating-wind-farm-japans-entry-contested-sector/#.WgUKdmhSw2w

- Installation of new wind power capacity in Japan during the 2016-2017 fiscal year roughly doubled over the previous year, as higher electricity rates in Tokyo propelled construction of offshore wind farms. The 300 MW of capacity installed in 2016-2017 is enough to power more than 100,000 Japanese homes. https://www.reuters.com/article/us-japan-renewables-wind/japan-accelerates-wind-power-development-as-govt-support-pays-off-study-idUSKBN1670VP

- The move toward offshore wind has been fueled by fallout from Japan's nuclear meltdown in March 2011. Japan is seeking to eliminate all of its nuclear facilities by 2040 and to have 20% renewable power by 2020.

Rebecca L. Gibson, "*Cast Your Fate to the Wind (Turbines): Strengthening Japanese Wind Energy Law and Policy*," Vol. 9, No. 1, TEX. J. OIL, GAS & ENERGY L. (2013-2014)

Asia

Japan

- The Fukushima Forward wind project, off the coast of Fukushima Prefecture, is the country's largest floating wind farm, with a 2 MW turbine, a 7 MW turbine, a 5 MW turbine, and a substation. https://www.japantimes.co.jp/news/2016/08/25/business/fukushima-floating-wind-farm-japans-entry-contested-sector/#.WgUKdmhSw2w

- Fukushima Shimpuu, the world's largest floating wind turbine (7 MW) was towed out to sea in July 2015. The height from the sea surface to the rotor center is 105 meters, and the height to the turbine's highest point is 188.5 meters. This model of floating wind turbine can be placed further from shore and fishing areas than any other model of turbine. http://www.offshorewind.biz/2015/08/27/worlds-largest-floating-turbine-sails-out/

Asia

Taiwan

- A 128MW wind farm called Formosa 1 is being developed off the western coast of Taiwan. Two 4MW wind turbines were installed in 2016 and began operating in April 2017. Construction on the second phase of the project, which will include 30 additional turbines, began in 2018 and be finished in early 2020.
- Taiwan has approved two more wind projects with the aim of constructing 1,000 turbines by 2030. The country plans to produce 4GW of electricity through offshore wind.
  http://www.power-technology.com/projects/formosa-1-offshore-wind-farm/

South Korea

- The country's first commercial-scale wind farm came online in 2016. The farm's ten 3MW turbines are expected to generate enough electricity to power 24,000 homes. South Korea also has plans for at least eight additional offshore wind projects, including the 2.5 GW Southwest offshore wind project.
  http://www.windpowermonthly.com/article/1410934/30mw-tamra-offshore-wind-farm-delivers-first-power

Asia

China

- By 2026, Asia will nearly tie Europe's offshore wind capacity. China has plans to install 13 GW of offshore capacity, nearly 10 times its current capacity. The country is driving much of Asia's growth in the sector. https://www.greentechmedia.com/articles/read/the-top-5-emerging-markets-for-offshore-wind#gs.4k=885E

- China has been adding offshore wind power so rapidly that in 2016 the country rose to third place in global offshore wind rankings – behind the UK and Germany, http://asian-power.com/power-utility/exclusive/flurry-offshore-wind-energy-projects-sweep-asia-off-its-feet-costs-keep-fall

- China had 1.6 GW of offshore wind capacity at the end of 2016 and planned an additional 900 MW by the end of 2017. https://www.greentechmedia.com/articles/read/the-top-5-emerging-markets-for-offshore-wind#gs.4k=885E

- Onshore and offshore, by the end of 2018, China had 188,190 MW or 34.85% of the global total.

Australia

- Onshore wind in Australia is incredibly cheap, while offshore wind has faced obstacles related to cost, location, and lack of supply chain. https://www.greentechmedia.com/articles/read/the-big-problem-facing-offshore-wind-in-australia#gs.KpB8rZk

- Australia has 76 on-shore wind farms and more than 2,000 turbines. The majority of these are located in South Australia, Victoria, and Western Australia.
- In 2015, Australia's then-prime minister, Tony Abbott, directed the country's clean energy bank in July to stop investing in wind farms. http://www.renewableenergyworld.com/articles/2015/11/australia-sees-offshore-wind-on-a-grand-scale-hunt-says.html

- Australia's current prime minister, Malcolm Turnbull, has since reversed that ban. In 2016 Turnbull helped set up a $1 billion fund to increase investment in renewable energy.

Australia

- Plans for the country's first offshore wind farm, off Victoria's southeastern coast, had been approved by the Australian government. As of March 30, 2019, the government approved a license for Offshore Energy Partners, Ltd. to proceed. The wind farm's proposed location is within the windy "roaring 40s" latitudes and its 250 turbines could supply nearly 1/5 of Victoria's energy or power for 1.2M homes. http://www.abc.net.au/news/2017-06-02/victoria-plans-to-build-australias-first-offshore-wind-farm/8582652

Africa

- Southern Africa is the new frontier for both wind and solar. Demand for electricity is extremely high, and the region has outstanding wind and solar resources. “Finding an Answer to the Electricity Shortages in Southern Africa. Arnold Z. Chikazhe (2016)
- In 2018, South Africa had almost 2 GW of wind energy capacity, though the country has yet to construct any offshore wind farms.

Africa

- The island nation of Mauritius in East Africa is exploring the construction of offshore wind to help it achieve its goal of 35% electricity production by renewable sources by 2035. http://www.offshorewind.biz/2016/10/27/mauritius-looking-into-offshore-wind-potential/

Worldwide

- More than 60 gigawatts (GW) of wind energy capacity was installed last year, a 19% increase compared to 2018, according to a recent report from the Global Wind Energy Council (GWEC).
- According to a June 2020 report by WWEA, 60.4 GW of capacity was installed in 2019, the second biggest year for additions. Some 6.1 GW of this was in the offshore wind sector, making 2019 its best year to date. Total capacity for onshore and offshore wind now stands at more than 651 GW.

COVID 19

- The GWEC said its forecast of continued growth across the next five years – more than 355 GW of additions – would "undoubtedly be impacted by the ongoing COVID-19 pandemic, due to disruptions to global supply chains and project execution in 2020."
- It was, however, "too soon to predict the extent" of the coronavirus' impact on both energy markets and the wider global economy, the GWEC added.

Future of Offshore Wind

- Concerns about cost overruns, especially during construction
- Uncertainty about untested turbine foundation technologies
- Uncertainty about the impact of storms and hurricanes
- Financing and policy