

# Community Wind Workshop

**MAY 25, 2021**

**Session 2 - Economic  
Development**



# Dorothy Barnett

The Climate + Energy  
Project

[barnett@climateandenergy.org](mailto:barnett@climateandenergy.org)



As the Executive Director of the Climate + Energy Project, Dorothy Barnett is leading the effort to address the Heartland's energy future. Grounded in an approach based common ground solutions, Barnett has been successful in convening diverse voices in a conservative region of the country. Barnett has coordinated winning campaigns to protect the Kansas Renewable Portfolio Standard from special interest groups attacks during four legislative sessions, allowing the wind industry to grow to 40% of the state's power generation in just a decade.

Prior to her position as Executive Director, Barnett served for 4 years as CEP's Director of Energy and Transmission. This work put Dorothy on the ground in energy policy work at the local, state and regional level. Under Barnett's leadership, CEP continues to innovate and reach new audiences with projects like WEALTH: Water, Energy, Air, Land, Transportation and HEALTH, Climate + Energy Voters Take Action, the Kansas Environmental Leadership project and the Clean Energy Business Council, a multi sector business group focused on the advanced energy economy.



**COMMUNITY WIND WORKSHOP 2021**



# Community Agreements

- **Platinum Rule** - *treat others the way you want to be treated.*
- **Notice the Room** - *build awareness together.*
- **Be Curious, Open, and Respectful** - *call in, not out. Throw sunshine, not shade.*
- **Be Conscious of Your Intent vs. Impact** - *Your intentions may be good, but the impact on another may be hurtful. You are responsible for the impact of your words.*





## Mission

The Climate + Energy Project (CEP) builds resilience in Kansas through equitable clean energy solutions and climate action.

## Purpose

The Climate & Energy Project:

- connects people, organizations, and ideas;
- presents science-based facts;
- facilitates critical thinking and community engagement; and
- co-creates equitable and productive solutions.





**Randi  
Tveitaraas Jack**  
KS Dept. of Commerce  
Randi.TveitaraasJack@ks.gov



**Randi Tveitaraas Jack** (Ron'-dee Te-vī-tair'-us) manages the state's international investment program and supports the division's export promotion activities. In her 30+ years with the state, she has worked with companies in Europe, Asia, Canada, and across Kansas in key industry sectors including aviation, bioscience, and renewable energy. Ms. Tveitaraas Jack serves as the agency lead for renewable energy and has been involved with the wind energy sector for over 15 years. She is on the core team for the annual Kansas Renewable Energy Conference, worked on the Kansas wind supply chain initiative and previously served on the Wind & Transmission Committee for the Governor's Energy Policy Subcabinet. Prior to joining the agency, Ms. Tveitaraas Jack worked in international marketing at Storage Technology Corporation (now Oracle), a computer peripherals manufacturer. She holds a bachelor's degree in Business Administration from Colorado State University and an international MBA from the Thunderbird School of Global Management at Arizona State University. She is a graduate of the Economic Development Institute at the University of Oklahoma and has also studied at the University of Madrid in Spain.



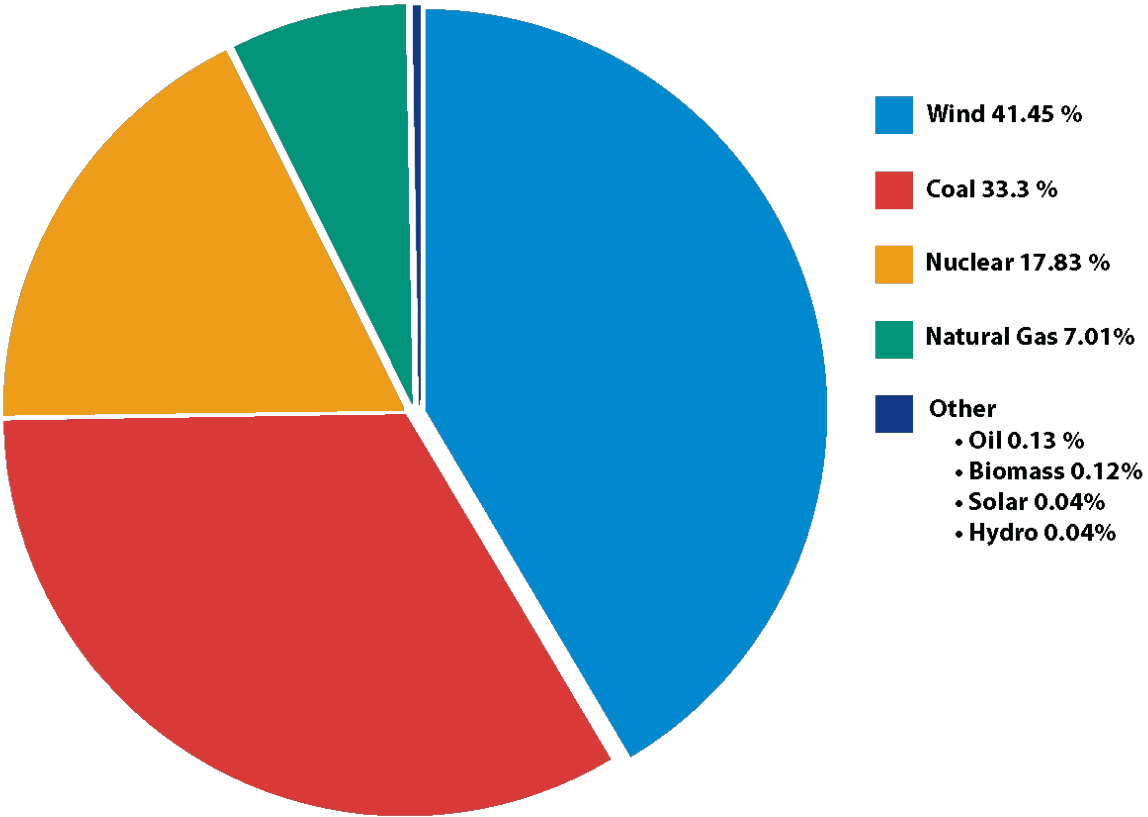
# KANSAS WIND ENERGY



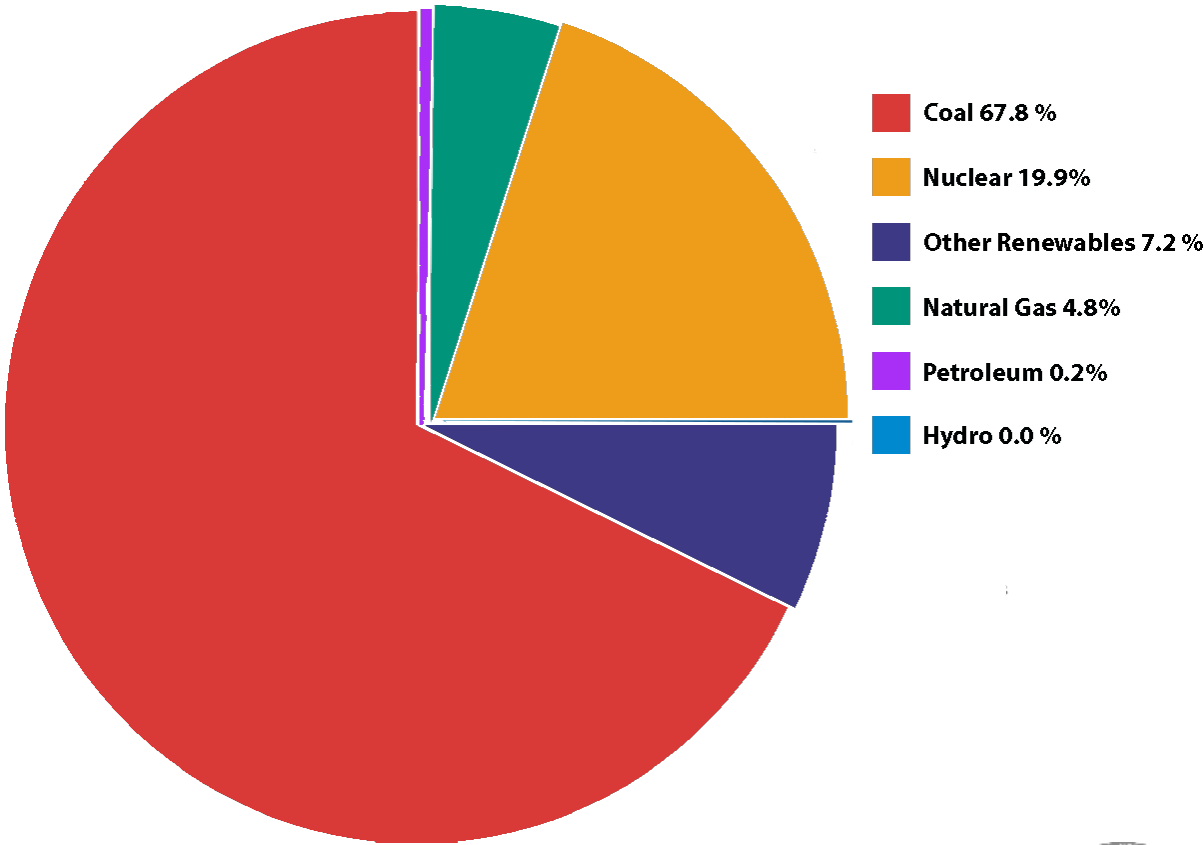


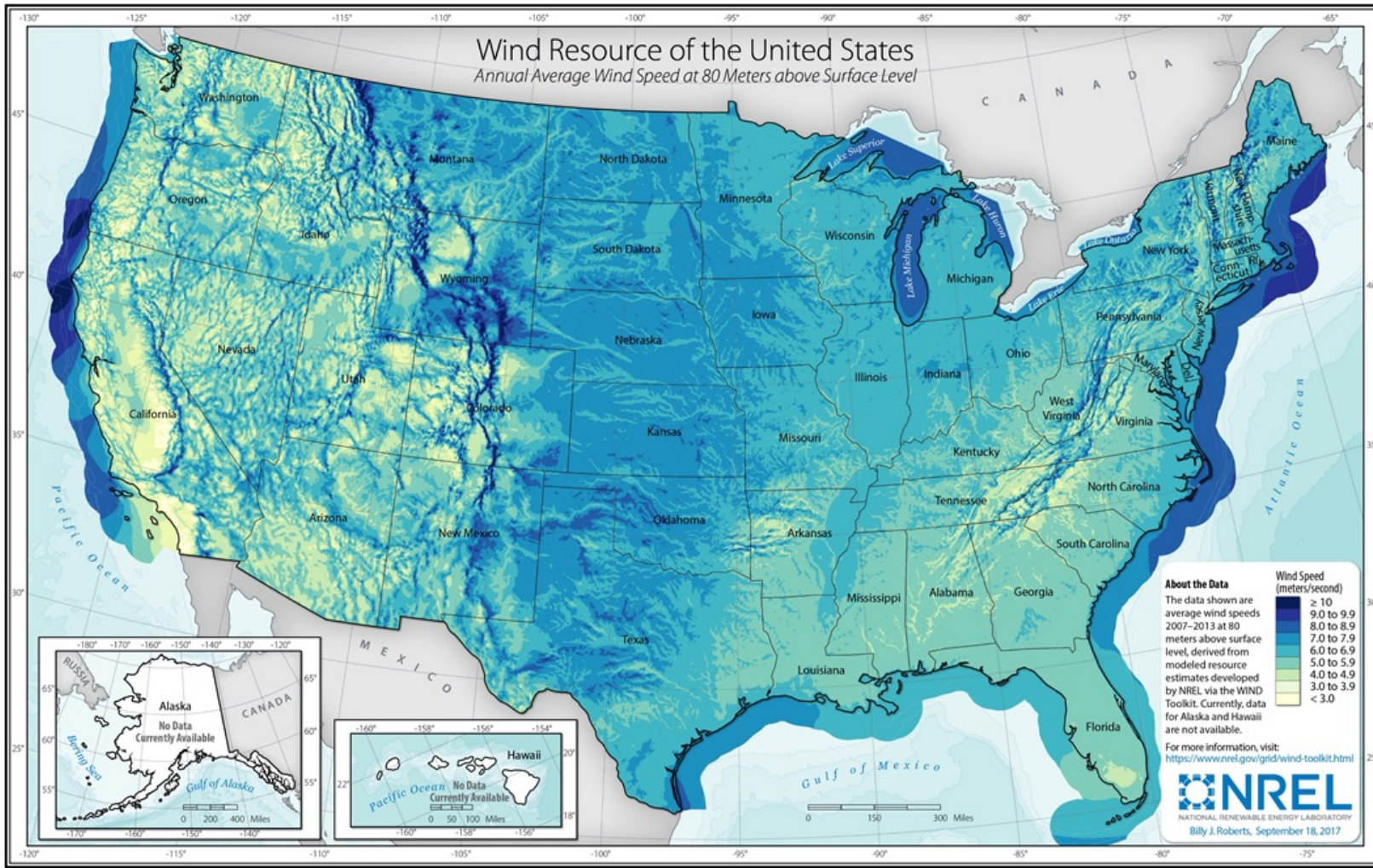
# Kansas Electricity Generation by Source

2019



2010





## U.S. WIND CORRIDOR

- Central Location
- Strong wind resource

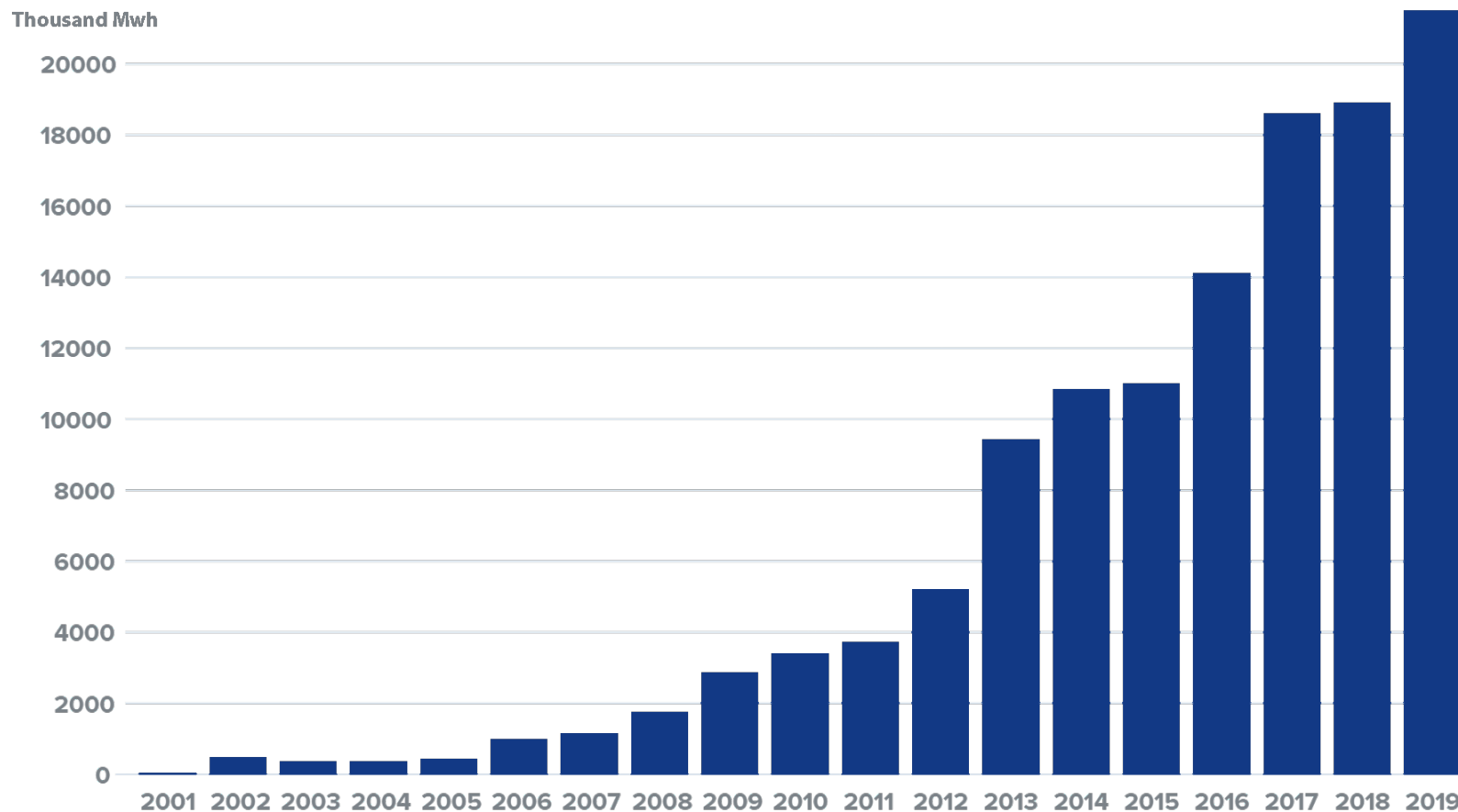
### Kansas Rankings (AWEA Market Report)

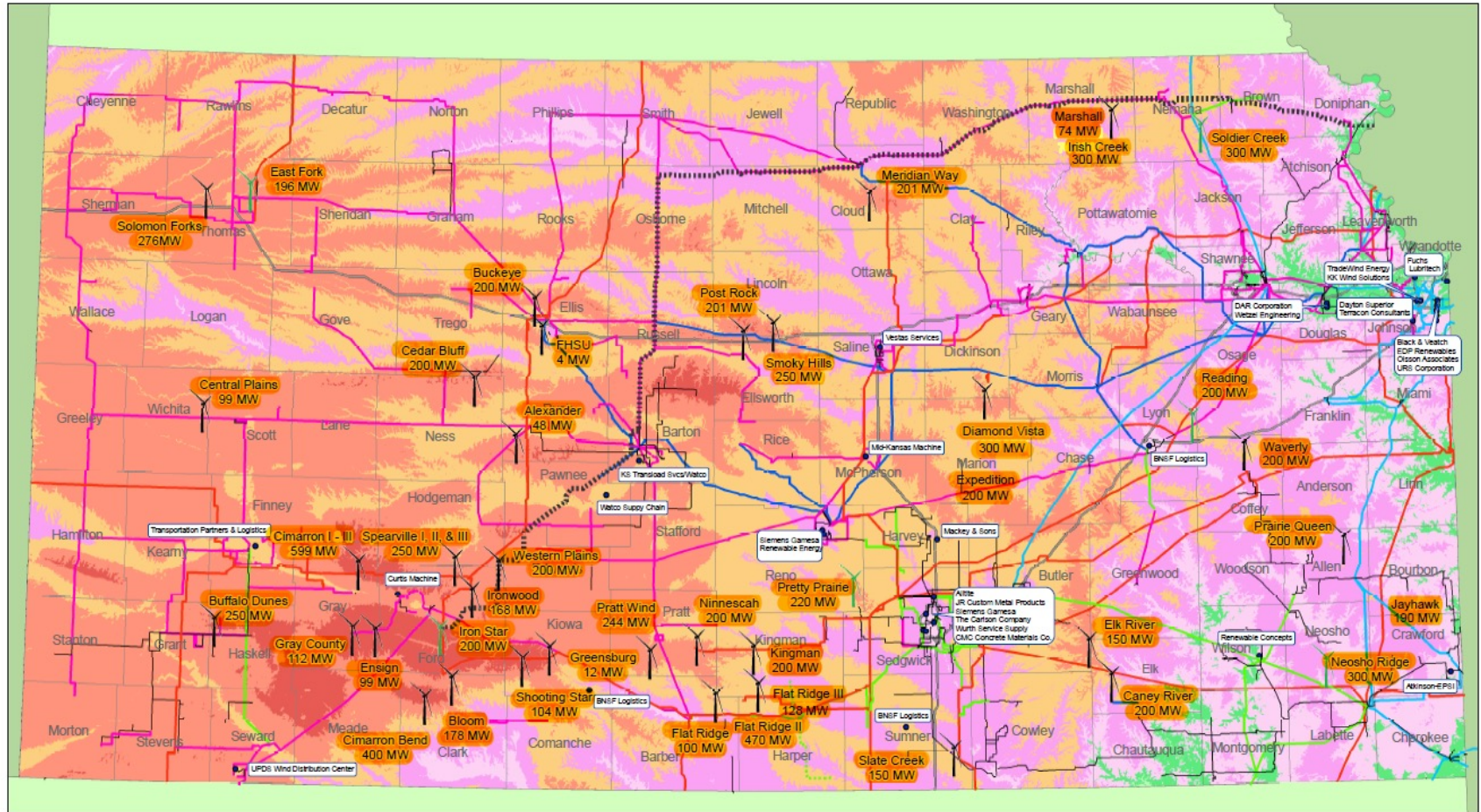
- **#2** – Wind as % of total generation
- **#3** – Corporate wind purchases
- **#4** – Wind power installed capacity
- **#4** – Wind power generation
- **#5** – Wind turbines installed
- **\$11.4+ billion** – Total investment
- **1.97 million** – Equivalent homes powered



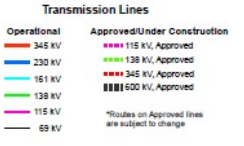
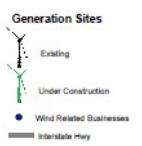
# KANSAS WIND INDUSTRY GROWTH

Annual Wind Generation  
(Thousand Megawatt-hours)





KANSAS WIND MAP WITH OPERATING AND UNDER CONSTRUCTION WIND FARMS AND RELATED BUSINESSES



**Wind Resources of Kansas**

Mean Annual Wind Speed at 100 Meters



Wind speed at 100 meters data layer was created by AWS Truewind using the MesoMap system and historical weather data. July 2008





# OPERATING PROJECTS

Project Name	County	Size (MW)	Began Operation	Project Name	County	Size (MW)	Began Operation
Gray County	Gray	112	2001	Alexander	Rush	48.3	2013
Elk River	Butler	150	2005	Buckeye	Ellis	200	2015
Spearville	Ford	100.5	2006	Cedar Bluff	Ness, Trego	200	2015
Meridian Way	Cloud	204	2008	Slate Creek	Sumner	150	2015
Smoky Hills I	Lincoln, Ellsworth	100.8	2008	Marshall	Marshall	74	2015
Smoky Hills II	Lincoln, Ellsworth	150	2008	Waverly	Coffey	199	2016
Central Plains	Wichita	99	2009	Ninnescah	Pratt	200	2016
Flat Ridge 1	Barber	100	2009	Kingman	Kingman	200	2016
Greensburg	Kiowa	12.5	2009	Cimarron Bend	Clark	200	2017
Spearville II	Ford	48	2010	Bloom	Ford, Clark	200	2017
Caney River	Elk	200	2010	Western Plains	Ford	280	2018
Cimarron I	Gray	165	2011	Pratt	Pratt	243.4	2018
Cimarron II	Gray	131	2012	Diamond Vista	Marion	300	2019
Ensign	Gray	99	2012	Solomon Forks	Thomas	276	2019
Flat Ridge 2	Barber, Kingman, Sumner, Harper	470.4	2012	Prairie Queen	Allen	200	2019
Ironwood	Ford	168	2012	East Fork	Thomas	196	2020
Post Rock	Lincoln, Ellsworth	201	2012	Reading	Lyon	200	2020
Shooting Star	Kiowa	105	2012	Cimarron III	Neosho	200	2020
Spearville III	Ford	100.8	2012	Soldier Creek	Nemaha	300	2020
Buffalo Dunes	Finney, Haskell, Grant	248.75	2012				

**7,010.55 MW by end of 2020**

\* Scheduled to be online by end of 2020





# ECONOMIC IMPACT





## Annual Economic Impacts of Kansas Wind Energy – 2020 Report



Report providing economic impact information with empirical data from the operating projects in Kansas, regulatory filings before the Kansas Corporation Commission, and nonpartisan academic sources to further examine the economic impacts of wind generation for state and local economies.



# Key findings of 2020 economic impact report on Kansas wind industry.

## LOW COSTS FOR CONSUMERS

With costs routinely under \$20 per megawatt-hour of generation, new wind generation in Kansas is now commonly less expensive than energy from traditional sources.

## DIVERSE PORTFOLIO

By including wind farms in traditional electricity portfolios, utility companies are able to better hedge against potential increases in the price of coal and natural gas over the next twenty years.

## JOB CREATION

Wind generation has created, and continues to create, a significant number of jobs for Kansas' citizens.

## ADDITIONAL REVENUE

Wind generation from currently operating wind projects will bring over \$1.51 billion in direct economic benefits to Kansas counties and landowners through contribution agreement payments and lease payments.

## CORPORATE DEMAND

With companies increasingly asking for renewable energy, Kansas must use its strategic geographic location to remain competitive in attracting industry.

## FUTURE POTENTIAL

Despite the significant growth that the wind industry in Kansas has experienced, the vast majority of the state's wind resources remain untapped.

## ADDITIONAL REVENUE FOR THE STATE

Economic Benefits of Kansas Wind Generation	Total Impact	Per Avg. Project (200 MW)
<b>Landowner Lease Payments</b>		
Annually	\$45,767,702	\$1,325,448
Over 20-Year Project Life	\$915,354,040	\$26,508,950
<b>Donation Agreements and Property Tax</b>		
Payments	\$595,239,378	\$17,238,325

### TOTAL DIRECT PAYMENTS

*\$1.51 billion in direct economic benefits to Kansas counties and landowners*



# CREATION OF UPFRONT AND ONGOING JOBS

Jobs Created	Total Impact	Per Avg. Project (200 MW)
<b>Direct Jobs Created</b>		
Construction Phase	8,488	246
Operation Phase	544	16
<b>Additional Jobs Created</b>		
Indirect/Induced Jobs <i>(per U.S. Dept. of Energy)</i>	12,057	349

- Wind turbine service technician projected as fastest growing occupation in US between 2019 - 2029





## Wind-related Businesses in Kansas

In addition to direct jobs constructing and operating wind farms, there are many wind-related businesses across Kansas contributing to the state's economy, including:

Company	Location	Description
Alltite	Wichita	Tools/bolts for wind farm construction
Black & Veatch	Overland Park	Engineering services
BNSF Logistics	Kiowa, Emporia, Wellington	Wind component distribution services – laydown yard
EDP Renewables	Overland Park	Developer/owner/operator
Fuchs Lubritech	Kansas City, KS	Lubricants for wind turbine manufacturer
JR Custom Metal Fabrication	Wichita	Components for wind turbine manufacturing
Kiewit	Lenexa	Engineering Services
KK Wind Solutions US	Lenexa	Control systems for wind turbines
Olsson	Manhattan, Olathe, Overland Park, Pittsburg	Engineering Services
Siemens Gamesa Renewable Energy	Hutchinson	Wind turbine nacelle and hub manufacturer
Terracon Consultants	Olathe	Environmental Services
Tradewind Energy/Enel GreenPower	Lenexa	Developer/owner/operator
Transportation Partners & Logistics	Garden City, Parsons	Wind component distribution services – laydown yard
WATCO Supply Chain	Pawnee Rock	Wind component distribution services – laydown yard



## ▶ CORPORATE WIND PURCHASES

**Kansas ranks third in corporate purchases of wind as of 2019. In addition, cities, educational institutions, and other organizations are signing up for Kansas wind energy.**

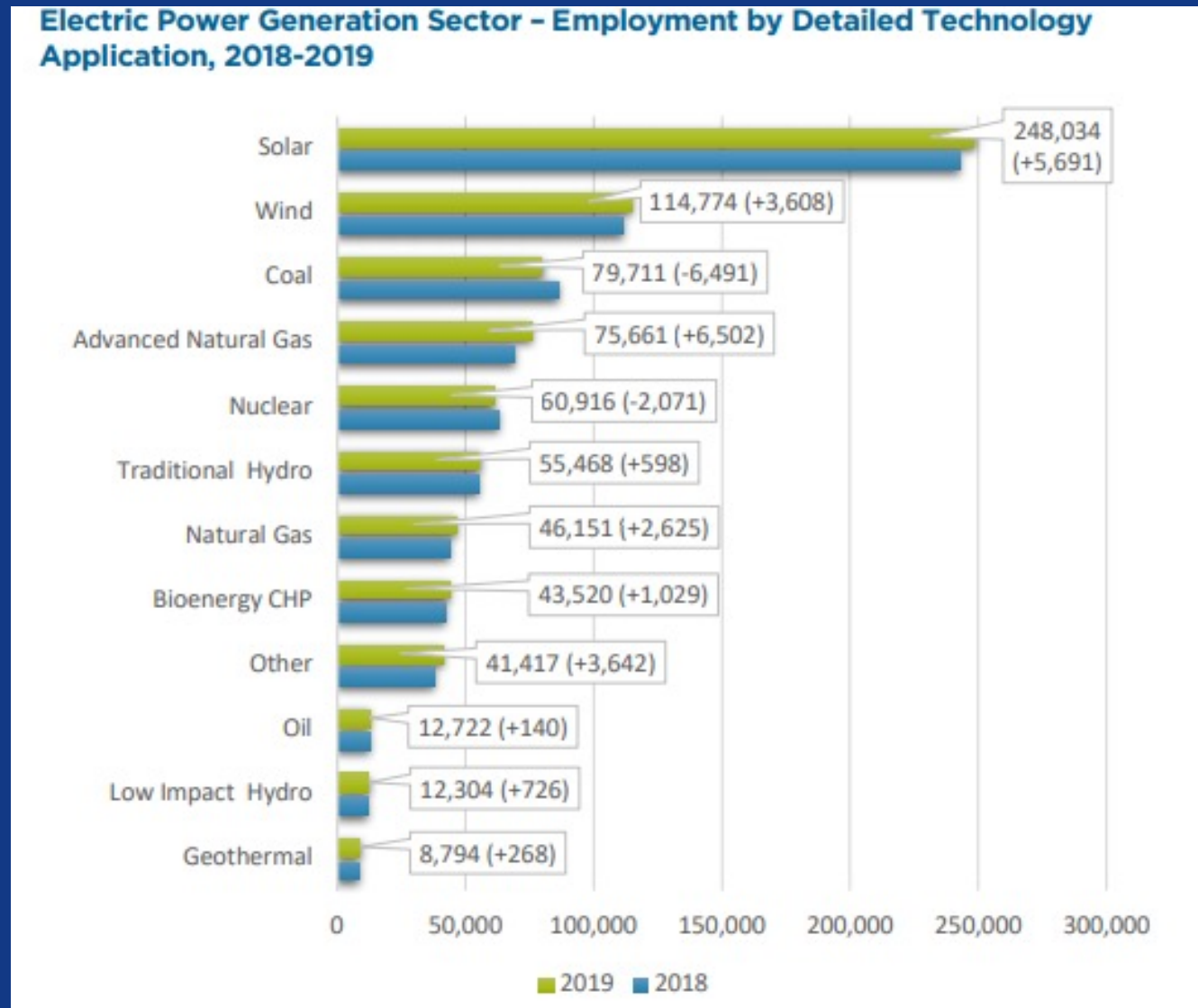
Google  
Microsoft  
Target  
T-Mobile  
Textron Aviation  
Kohler  
Brown Forman  
Ardent Mills  
Home Depot  
Brown Forman  
Royal Caribbean

Spirit AeroSystems  
Bunge Milling  
Schwan's  
Landoll  
Cargill  
Evcon  
Yahoo!  
Cox Communications  
MGP Ingredients  
Facebook  
Amazon

Kansas State University  
University of Kansas  
Washburn University  
Benedictine College  
Manhattan-Ogden School District  
Topeka 501 School District  
Johnson County Community College  
Fort Hays State University

Sedgwick County Zoo  
Sisters of Charity  
Veterans Affairs Medical Centers  
Kansas City, Kansas  
Garden City  
McPherson

# ► US Energy and Employment Report





## Future Energy Workforce

Shifts in electricity generation and technology innovation will continue to impact economic growth opportunities.

Description	2020 - 2030 % Change
Crude Petroleum Extraction	(14%)
Natural Gas Extraction	(10%)
Drilling Oil and Gas Wells	(20%)
Support Activities for Oil and Gas Operations	(16%)
Fossil Fuel Electric Power Generation	11%
Nuclear Electric Power Generation	(17%)
Solar Electric Power Generation	0%
Wind Electric Power Generation	29%
Geothermal Electric Power Generation	0%
Biomass Electric Power Generation	0%
Electric Bulk Power Transmission and Control	19%
Electric Power Distribution	(11%)

Source: Emsi Q3 2020 Data Set



# Thank You

Randi Tveitaraas Jack  
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# Joann Knight

Dodge City/Ford County  
Development Corporation

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**Joann Knight** serves as the Executive Director of the Dodge City/Ford County Development Corporation and has been with the public/private partnership for 30 years.

Knight was instrumental in creating and now also oversees the Rural Education and Workforce Alliance, Main Street Dodge City, Dodge City Festivals, and the Community Housing Association of Dodge City.

Knight currently serves on several boards including the Western Kansas Rural Economic Development Alliance (wKREDA) serving as the 2020 President, the Kansas Economic Development Alliance (KEDA), Team Kansas and was the class representative on the 2018 Eisenhower Women of Excellence in Public Service Series Board of Directors. Knight was recently awarded the 2019 Rural Economic Development Leadership Award from the National Rural Economic Developers Association.





# Next Workshop Dates



**June 8th - Health and Safety  
with Amanda Miller, Pete Ferrell**

**June 22nd -Property Values with Mike Busch and Mary Fund**

**July 13th - Wildlife ft. Zac Eddy**

**To register visit**

**<https://bit.ly/2021KSWindWorkshops>**

*COMMUNITY WIND WORKSHOP 2021*