

A large, white, sans-serif title "State of the U.S. Wind Power Industry" is positioned in the lower-left quadrant of the image. The text is set against a background of solar panels in the foreground and wind turbines in the distance. The overall scene is a landscape of renewable energy infrastructure under a clear sky at sunset or sunrise.

State of the U.S. Wind Power Industry

American Clean Power Association



Powering America's Future

The American Clean Power Association (ACP) is the voice of companies from across the clean power sector that are providing cost-effective solutions to the climate crisis while creating jobs, spurring massive investment in the American economy and driving high tech innovation across the United States.

Our Mission: ACP works to transform the U.S. power grid to a low-cost, reliable and renewable power system. By uniting the power of wind, solar, transmission and storage companies, along with manufacturers and construction companies, developers and owners/operators, utilities, financial firms and corporate purchasers, we are championing policies that enable the continued and aggressive growth in renewable energy in the United States.

Our Reasoning: A multi-tech trade group creates a wide variety of benefits, including:

Bigger Footprint.

By diversifying our membership, we increase the pool of resources at our disposal while expanding our industry's economic footprint.

Better Results.

By investing our time and resources into one cohesive effort, we are maximizing industry gains and collective return on investment with more robust conferences and industry resources.

Broader Influence.

A unified voice makes it easier for policymakers and the broader public to understand the scale, strength and benefits of the industry, boosting support for our objectives.

Our Policy Principles:

Expand demand at a national, regional and state level.

Remove barriers of entry through regulatory, permitting and siting reforms.

Establish long-term market certainty to ensure increased investment and manufacturing of renewable energy technologies.

Invest in a **national electric grid** that is reliable, secure, clean, and designed for a renewable future.

Develop a robust, stable, and diverse renewable energy workforce.

Join us.

For more information or to join ACP, please email: MEMBERSHIP@CLEANPOWER.ORG

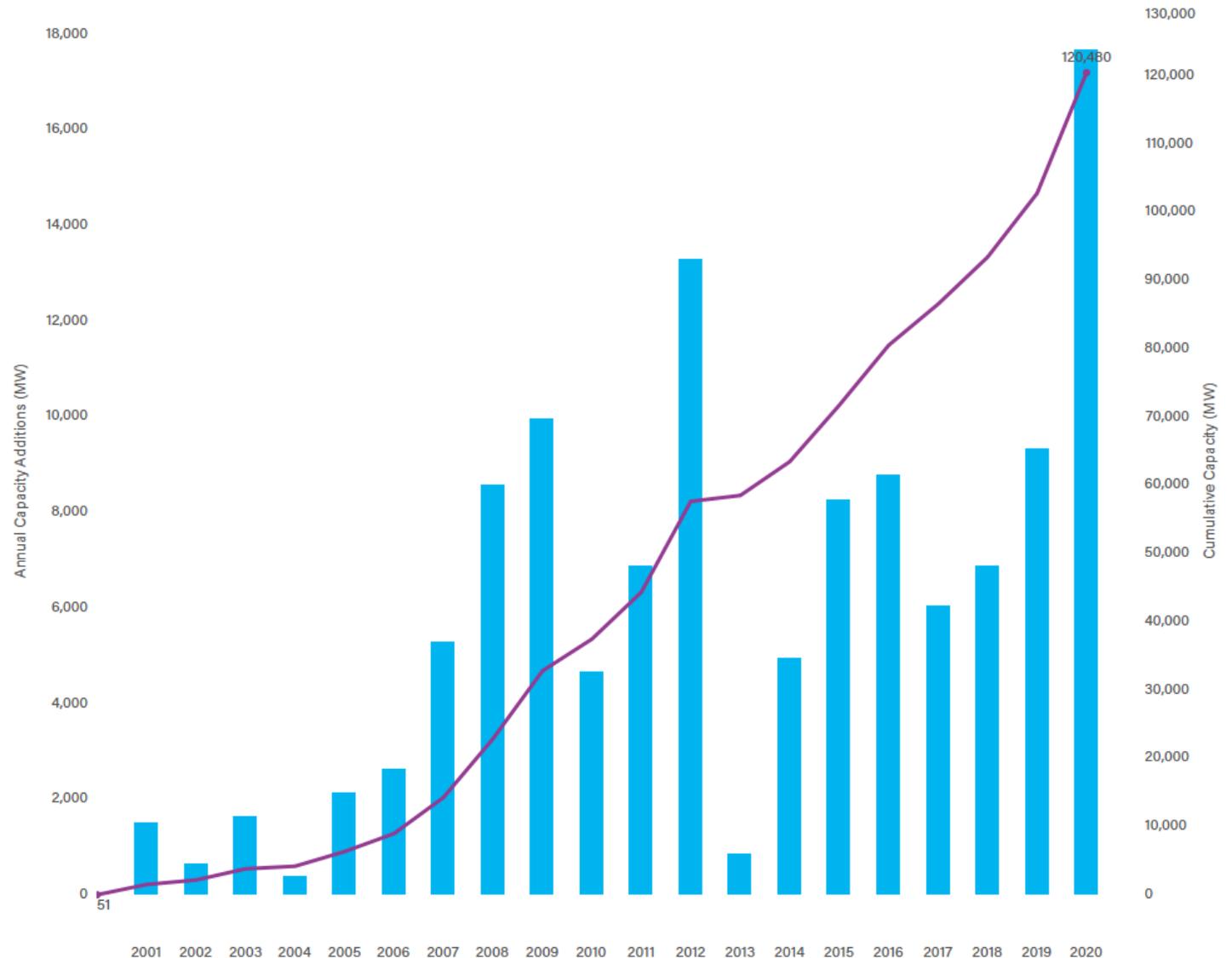


Wind Energy

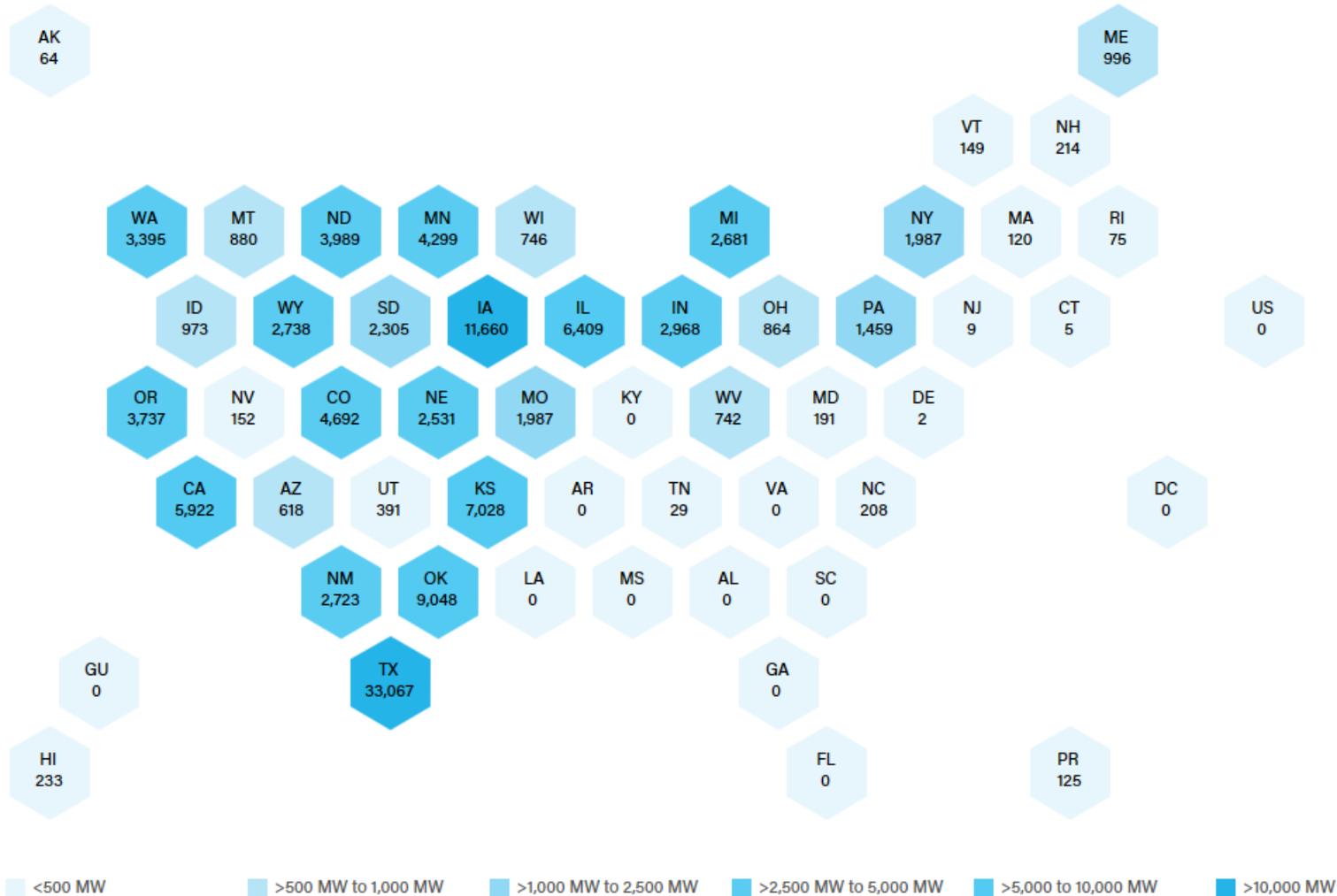
Over 120 GW now operating in U.S.

Wind energy is the
largest source of clean
power in the country

- 2020 was a record year for wind with nearly 18 GW of capacity coming online
 - Previous high was 13.3 GW in 2012
- Since 2010, installed wind capacity has more than tripled
- 10.5% CAGR over the last decade



Wind Capacity

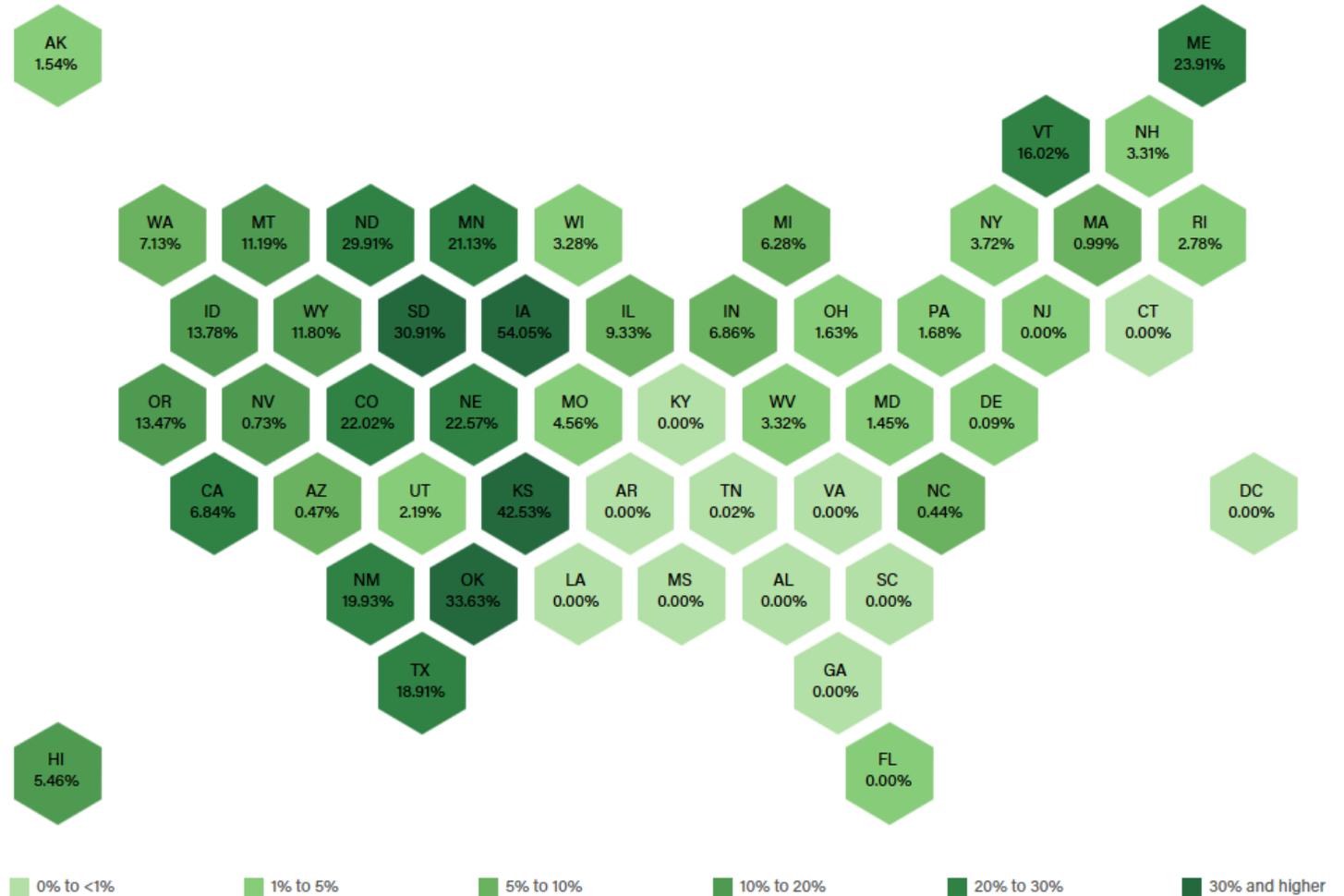


Top 10 Wind States	
Texas	33,067 MW
Iowa	11,660 MW
Oklahoma	9,048 MW
Kansas	7,028 MW
Illinois	6,409 MW
California	5,922 MW
Colorado	4,692 MW
Minnesota	4,299 MW
North Dakota	3,989 MW
Oregon	3,737 MW

Wind Generation Shares

Wind energy is the largest source of renewable energy in the country

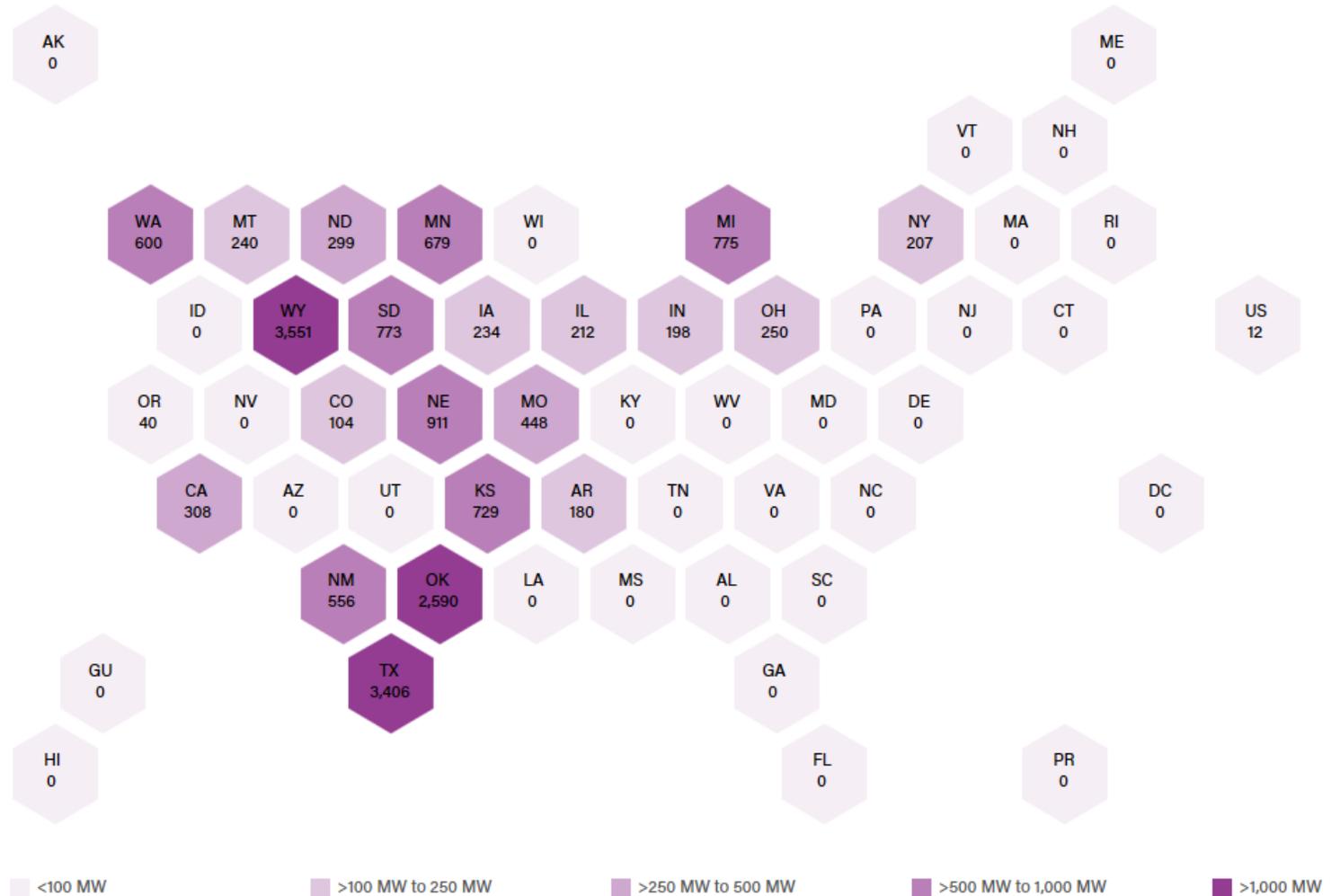
- Iowa leads the nation with over 54% of electricity generated by wind
 - All of IA and KS clean power is produced by wind energy
- A total of 9 states generate 20% or more of their electricity from wind



Wind Capacity Growth

Over 17.3 GW of wind energy is under construction across the U.S.

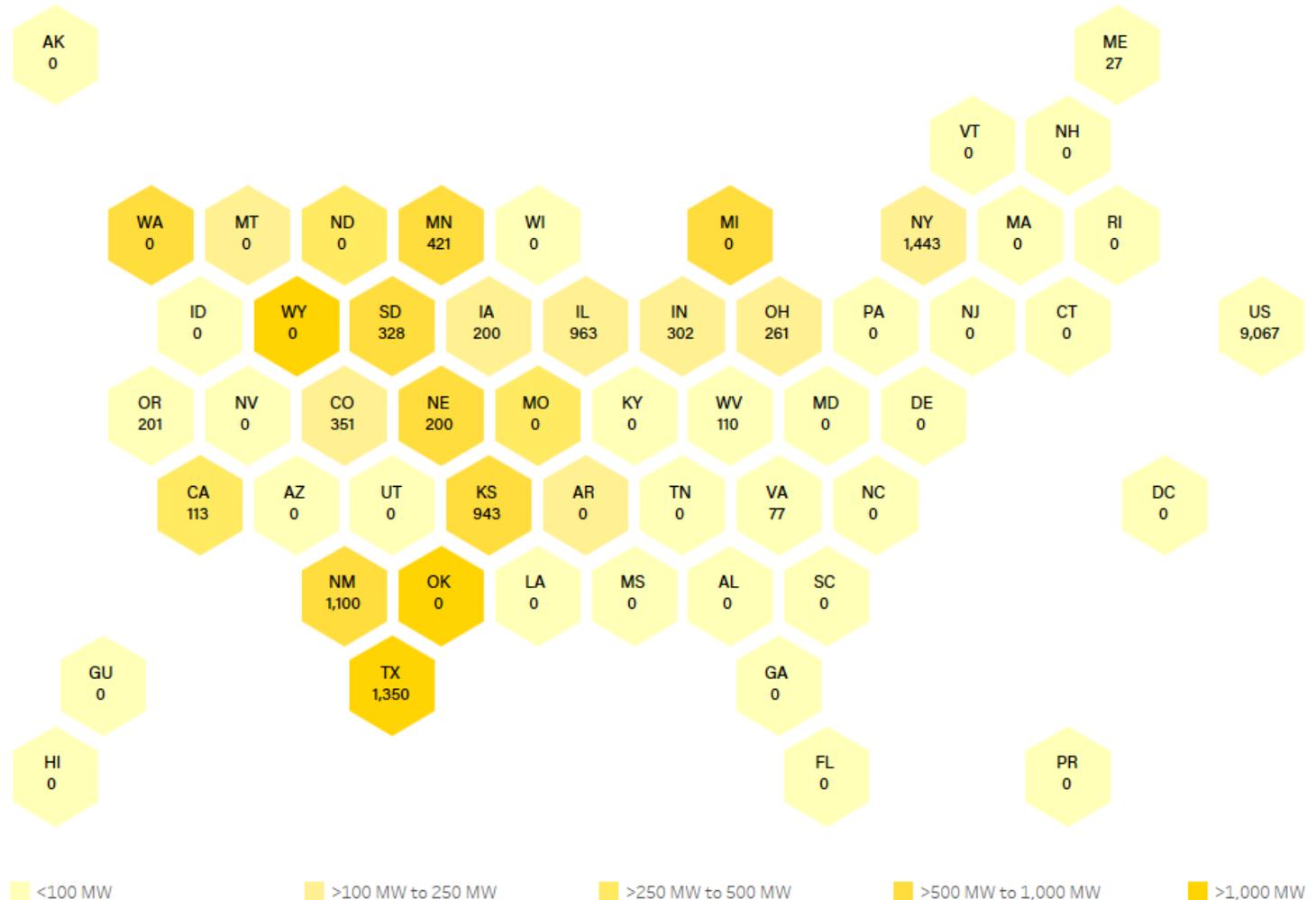
- Wyoming ranks #1 in wind energy in the construction phase, at nearly 3.6 GW
- Wind projects under construction in Texas represent a total capacity of 3.4 GW
- Eight other states have more than 500 MW of wind energy capacity in the construction phase



Wind Capacity Growth

Nearly 17.5 GW of wind energy is in the advanced development phase across the U.S.

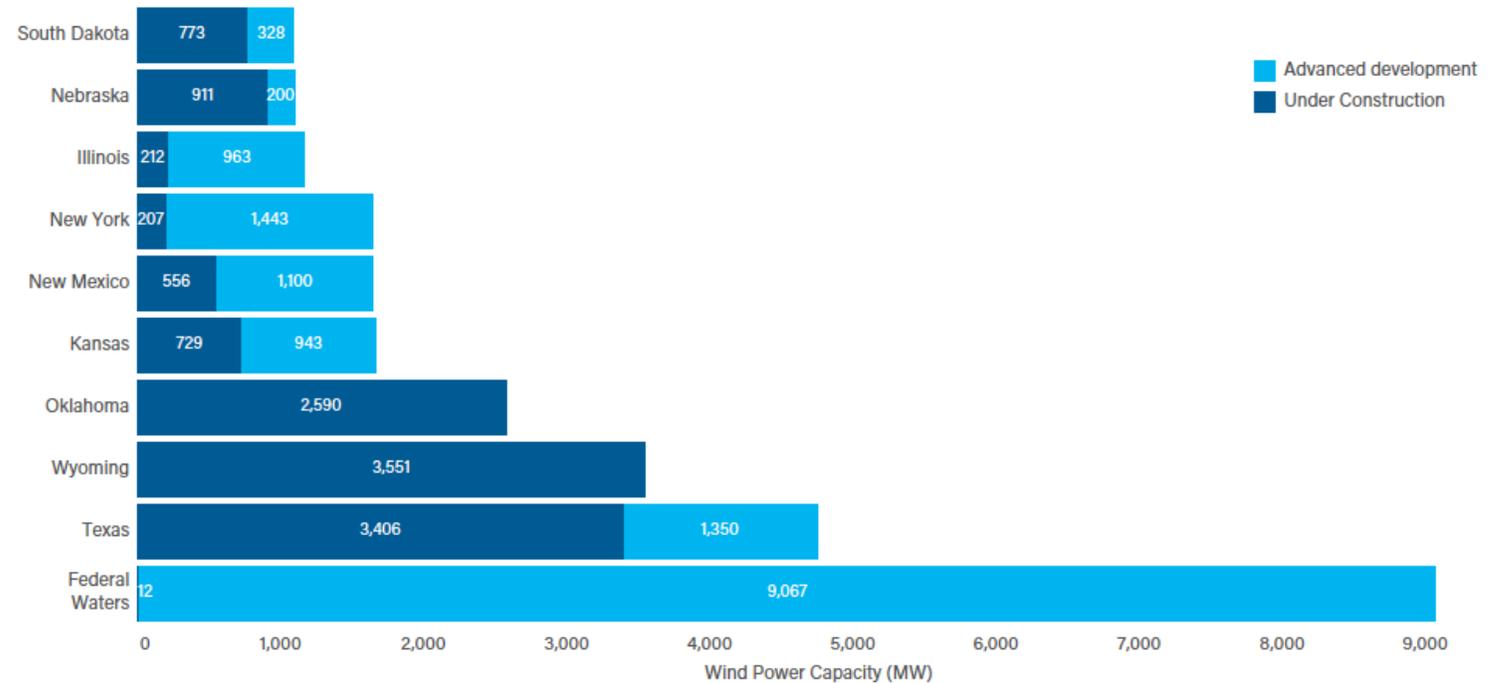
- Much of this, over 9 GW, is offshore wind located in U.S. Federal waters
- Over 1 GW of capacity is in advanced development in each of three states (NM, NY, TX)
- Four other states have more than 300 MW of wind energy capacity in the advanced development phase



Wind Pipeline

Over 9 GW of offshore wind is in advanced developed in Federal Waters on the East Coast

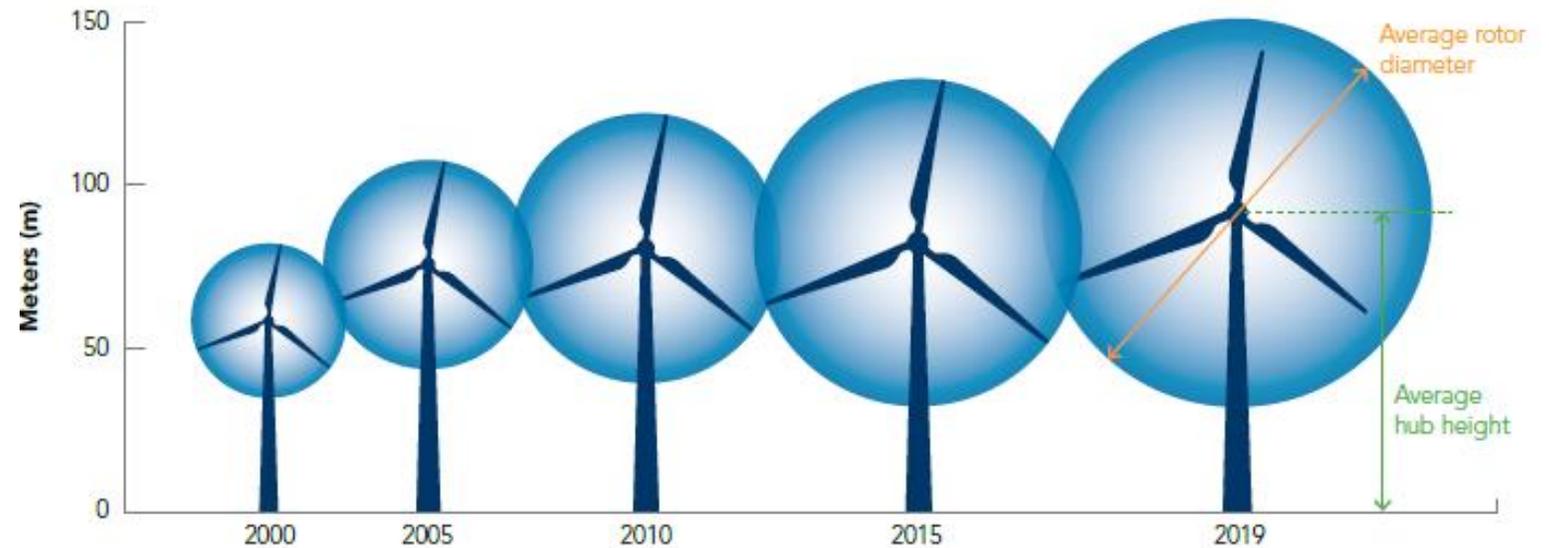
- Texas has nearly 5 GW of wind in the development pipeline
- Wyoming currently has 3.5 GW of wind generation capacity under construction
- 7 other states have more than 1 GW of wind capacity in the pipeline



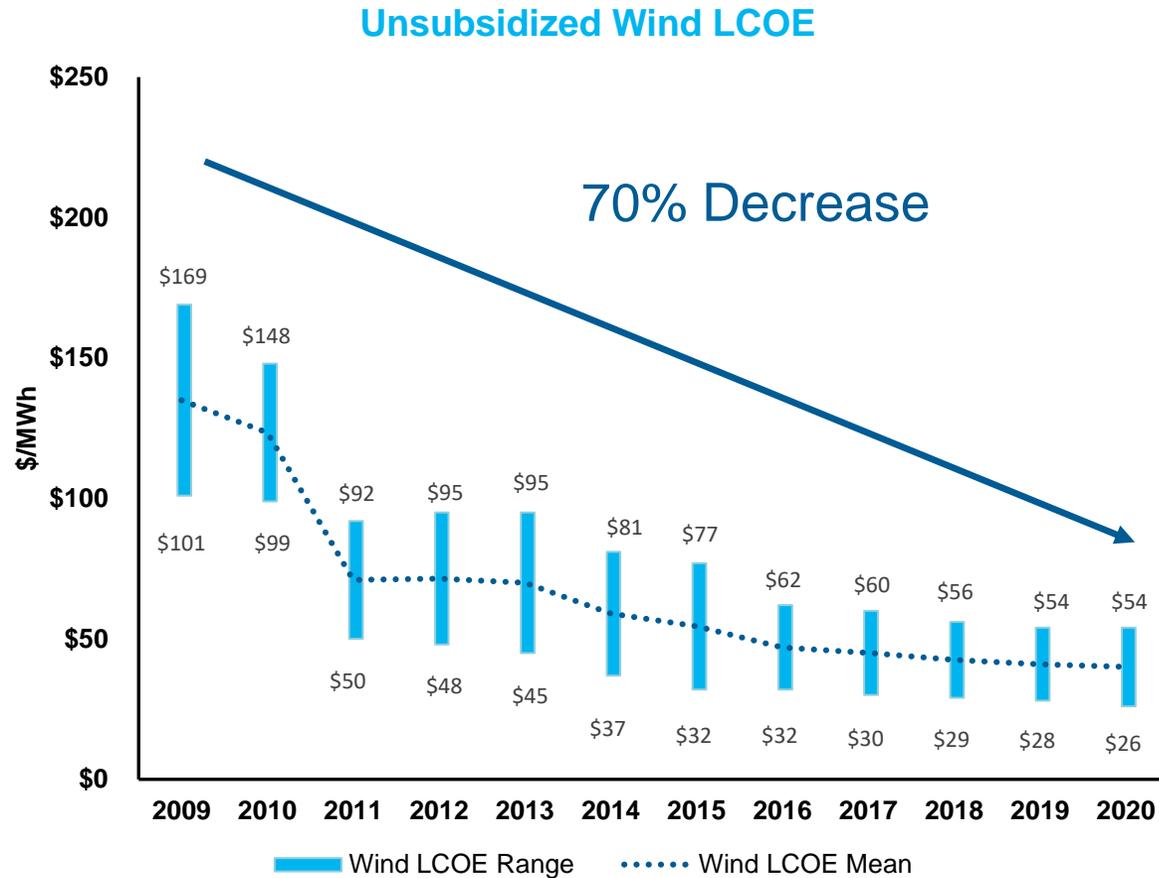
Wind Technology

Wind turbines built in 2014-2017 achieved capacity factors over 40% in 2018

- Capacity Rating: 2.55 MW
- Hub Height: 90 m
- Rotor Diameter: 121 m
- Specific Power: 220 w/m²



Cost Reductions



Land-based wind LCOE has decreased 70% since 2009

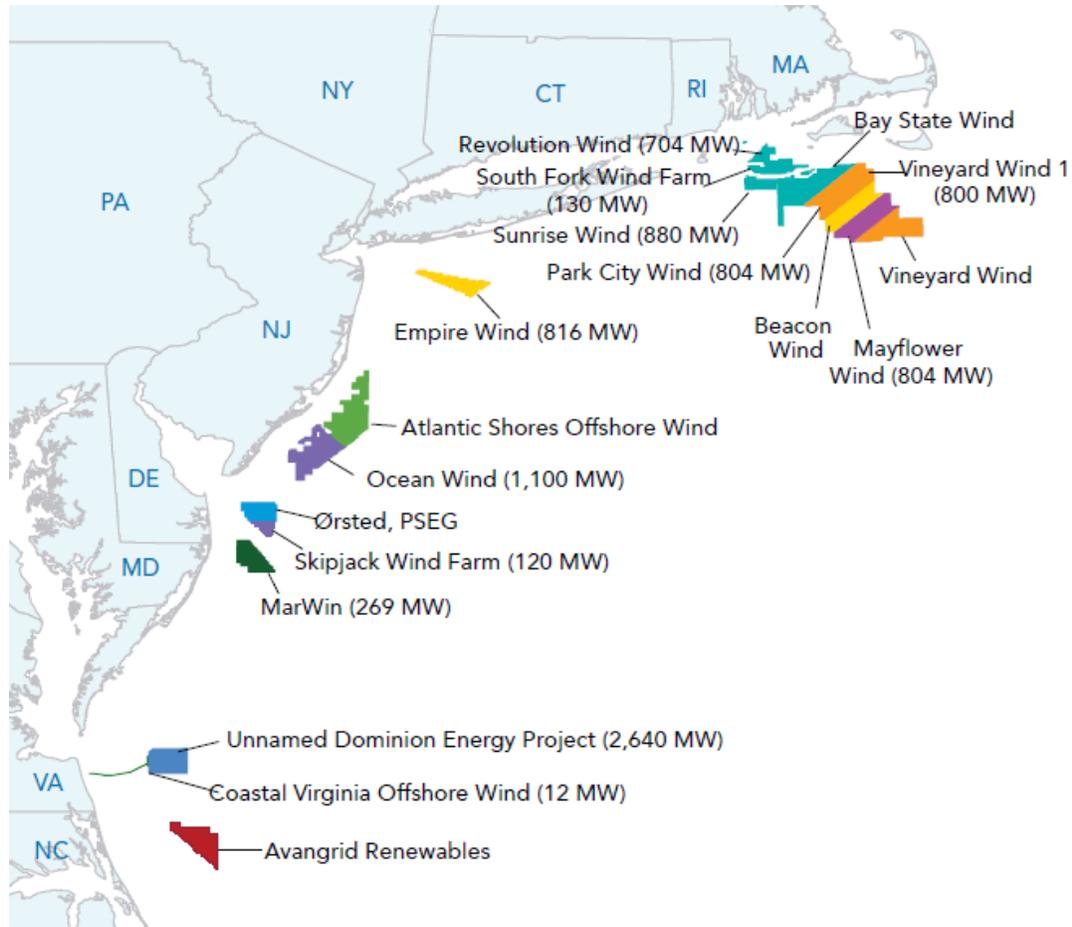
- Wind costs continue to decrease
- Average unsubsidized LCOE for land-based wind fell to \$40/MWh in 2020
- LCOE has decreased 70% since 2009



Offshore Wind

Offshore Wind

East Coast Offshore Wind Projects and Leases



High level comment on state of offshore wind development

- Potential in federal leases
- Recent procurements (such as in NY/NJ)
- Total projects that have secured a buyer
- Total size (GW) of these projects

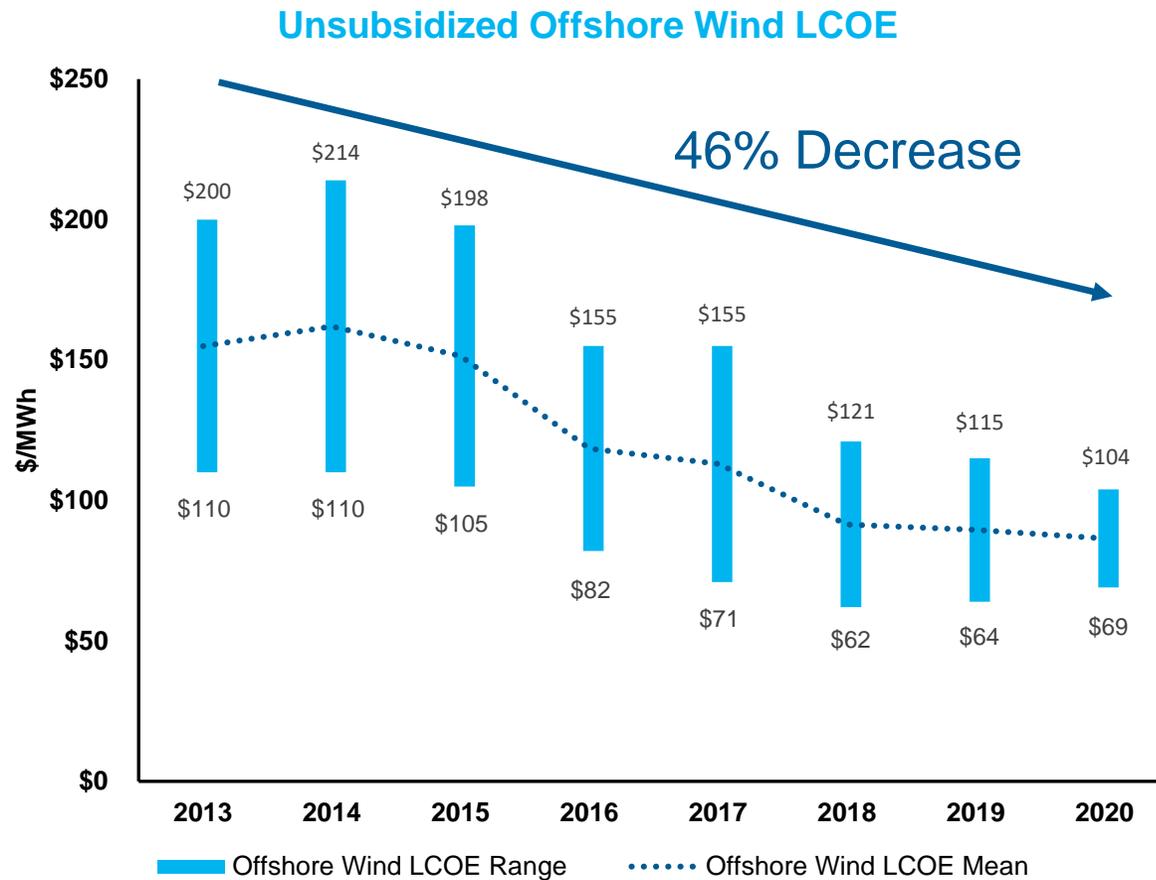
State Offshore Wind Targets Growing

States have established over 29,000 MW of offshore wind procurement targets to date

- New York: 9,000 MW by 2035
- New Jersey: 7,500 MW by 2035
- Virginia: 5,200 MW by 2034
- Massachusetts: 1,600 MW by 2027
 - Authorized additional 1,600 MW by 2035
- Connecticut: 2,000 MW by 2030, plus 304 MW purchased in 2018
- Maryland: 1,200 MW by 2030, plus 389 MW purchased in 2017
- Rhode Island: 400 MW purchased in 2018



Cost Reductions



Offshore wind LCOE has decreased 46% since 2013

- Average LCOE for offshore wind was \$87/MWh in 2020, down from peak of \$162/MWh in 2014
- Further cost decreases are expected as technology improvements allow for larger turbines farther away from the shore

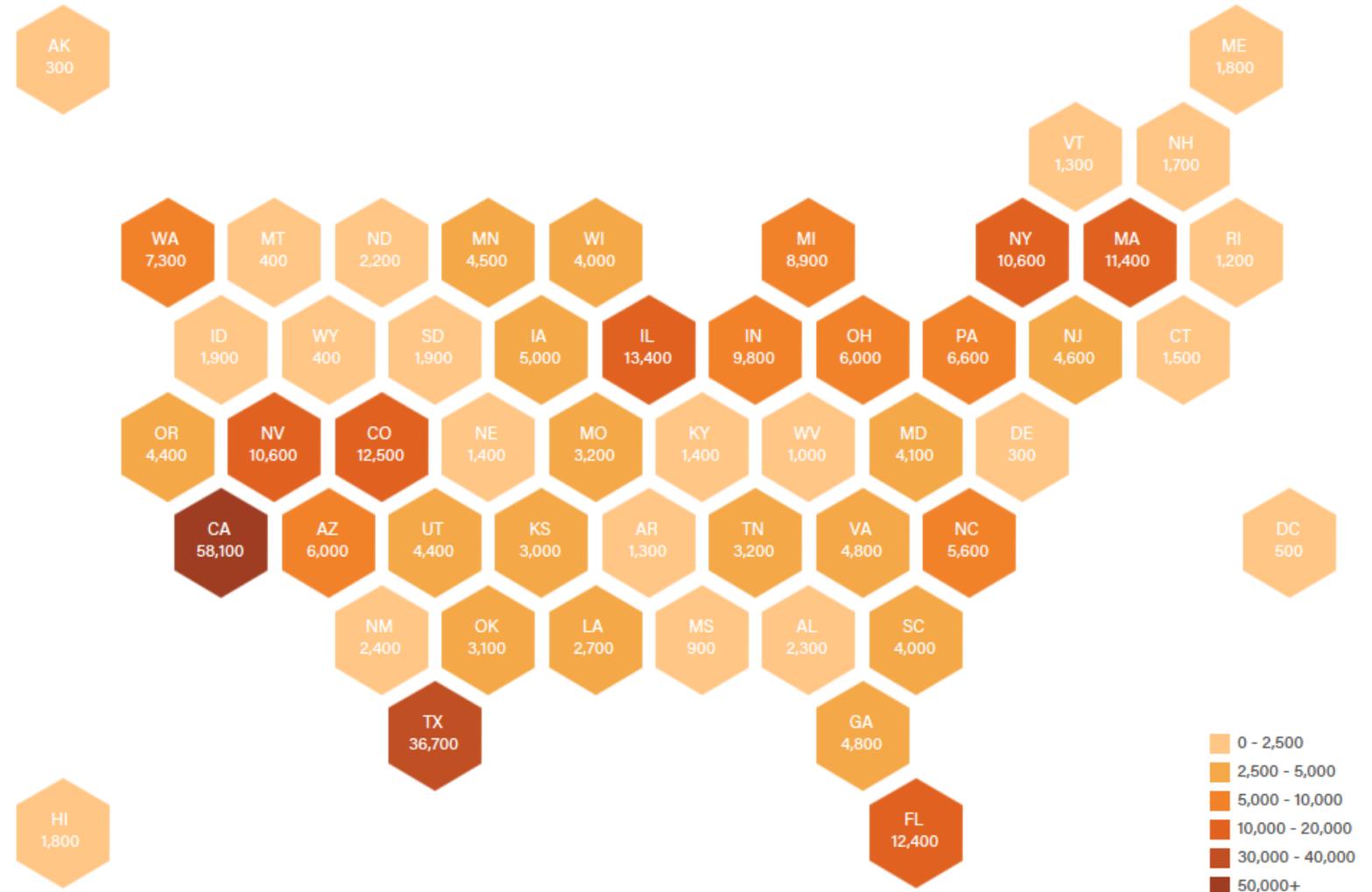


Benefits

Economic Benefits

Clean power supports over 300k jobs across the U.S.

- Over 58,000 jobs in California are related to the clean power industry
- Texas follows with 36,700 jobs
- Six other states (CO, FL, IL, MA, NV, NY) have more than 10,000 jobs in the clean power industry



Capital Investment

Over \$323 billion invested across the U.S. in 2020

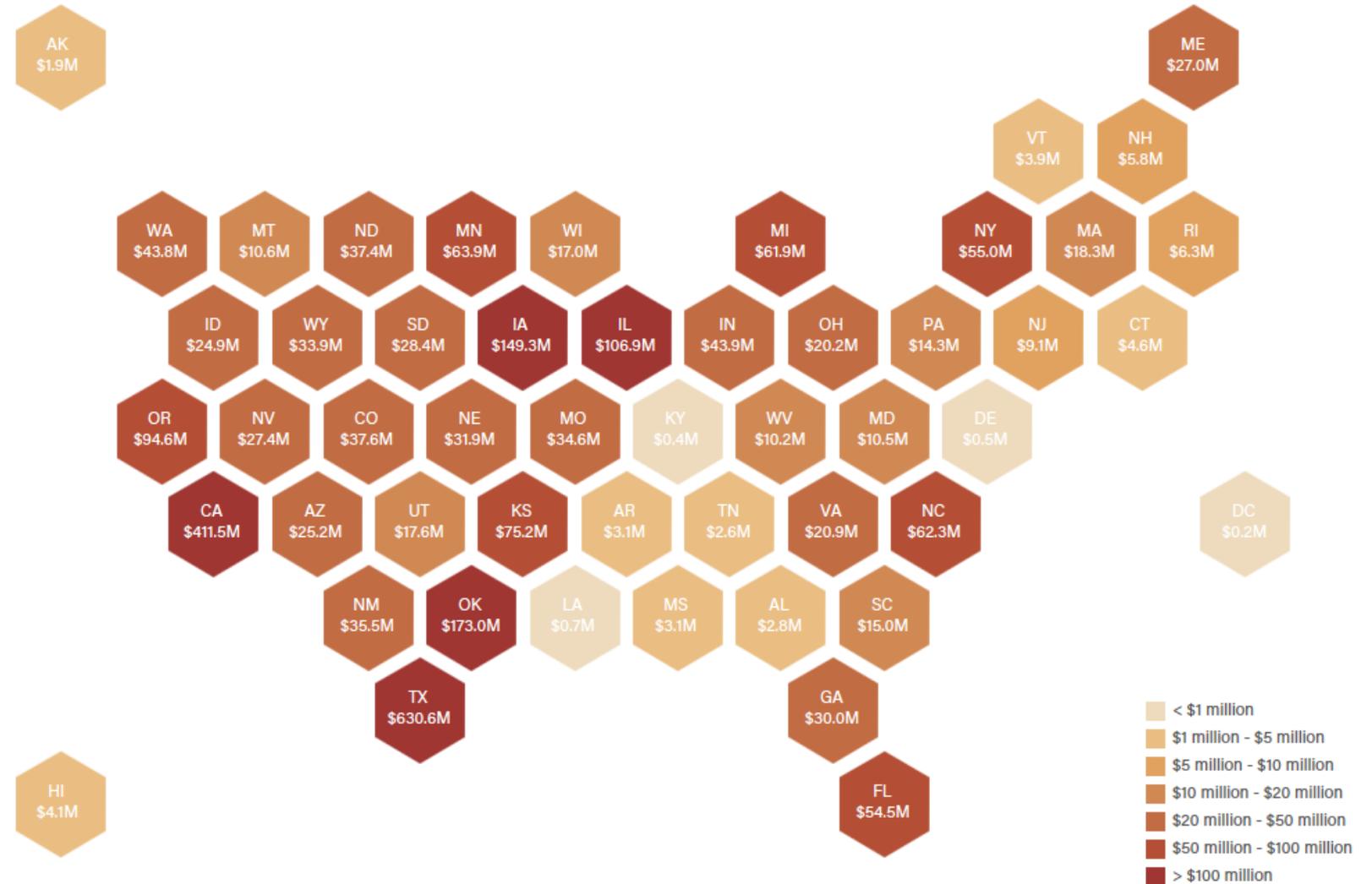
- Clean power invested \$62.5 billion in Texas alone
- Investments in CA topped \$53 billion in 2020
- Total 2020 investment exceeded \$10 billion in five other states (IA, IL, KS, NC, OK)



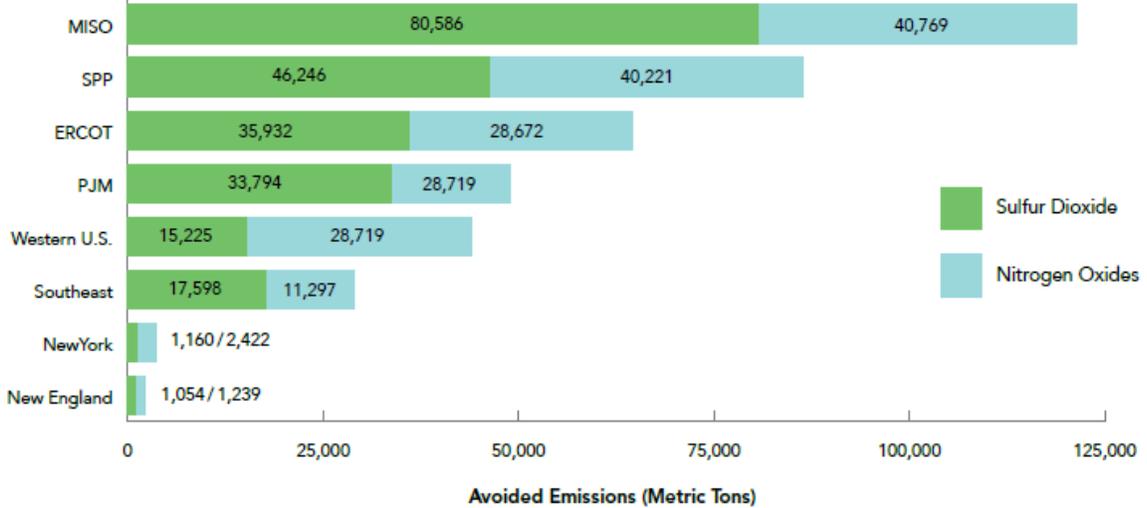
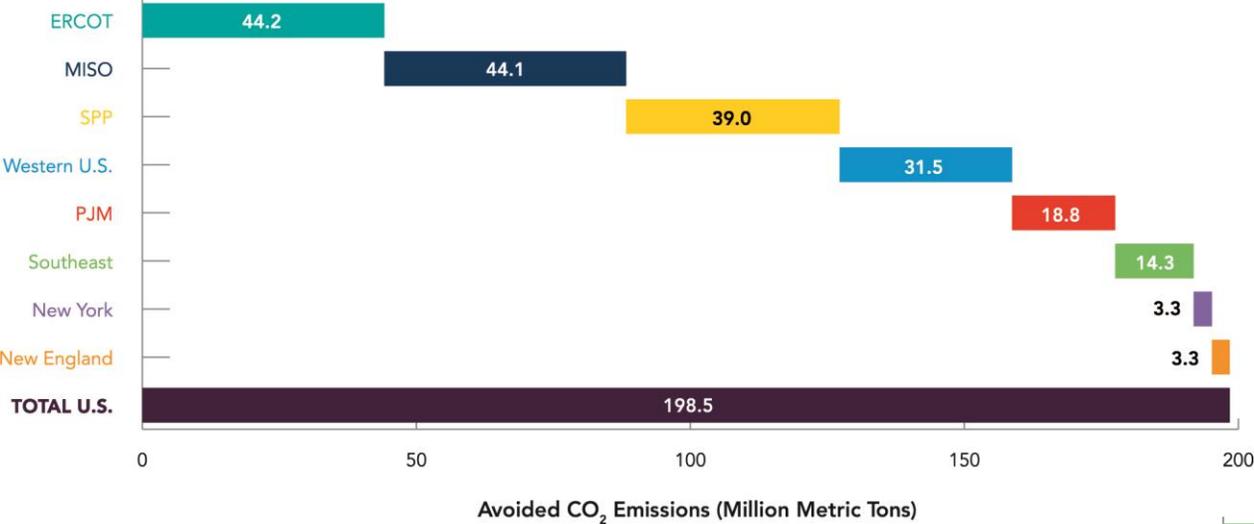
Local Economies

The industry paid over \$2.6 billion in state and local taxes and lease payments to landowners across the U.S. in 2020

- Payments to local governments and landowners topped \$630 million in Texas in 2020
- Clean power paid over \$100 million in taxes and lease payments in four other states (CA, IA, IL, OK)



Environmental Benefits





Thank you.

Questions? Contact membership@cleanpower.org