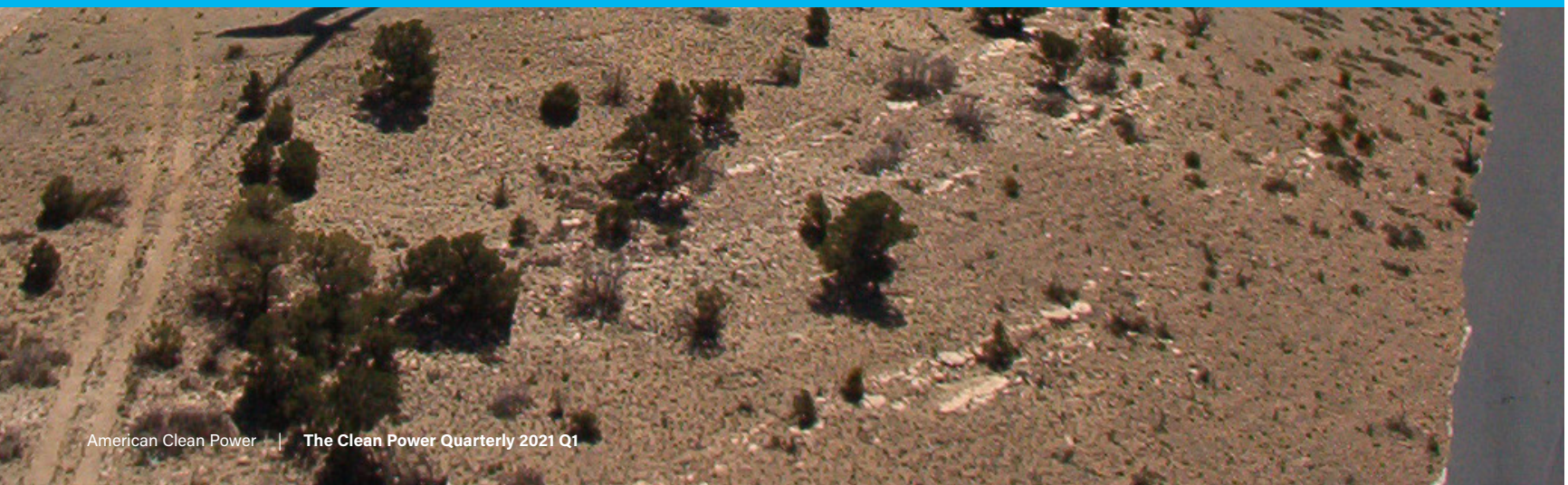
Clean Power Quarterly

2021 Q1

AMERICAN CLEAN POWER®

2021 Q1 Highlights



2021 Q1 Highlights

Clean Power Project Installations

- The U.S. clean energy industry installed a record breaking 3,859 MW of clean power capacity in the first quarter of 2021. In fact, the first quarter saw a 10% increase over the first quarter of 2020, supplanting it as the highest quarter on record.
- Project owners commissioned 38 new projects across 17 states in the first quarter. Texas once again led with 791 MW installed, followed by Oklahoma (555 MW), California (519), South Dakota (462 MW), and North Dakota (299 MW).

Clean Power Capacity Under Construction and in Advanced Development

- At the end of the first quarter there were 949 projects totaling 85,450 MW of capacity in the near-term development pipeline, including 37,719 MW under construction and 47,731 MW in advanced development.
- Clean power projects totaling 10,384 MW started construction and 14,568 MW entered advanced development in the first quarter.
- Solar represents the largest share of capacity in the clean power pipeline, accounting for 53%.
- Texas now represents 18% of the total development pipeline, followed by offshore wind projects in Federal Waters (11%), California (10%), Wyoming (4.3%), and New Mexico (4.2%).

Clean Power Procurement Activity

- Power purchasers and project developers reported 2,603 MW of new Power Purchase Agreements (PPAs) in the first quarter.
- Corporate customers announced 1,686 MW of clean power PPAs in the first quarter.

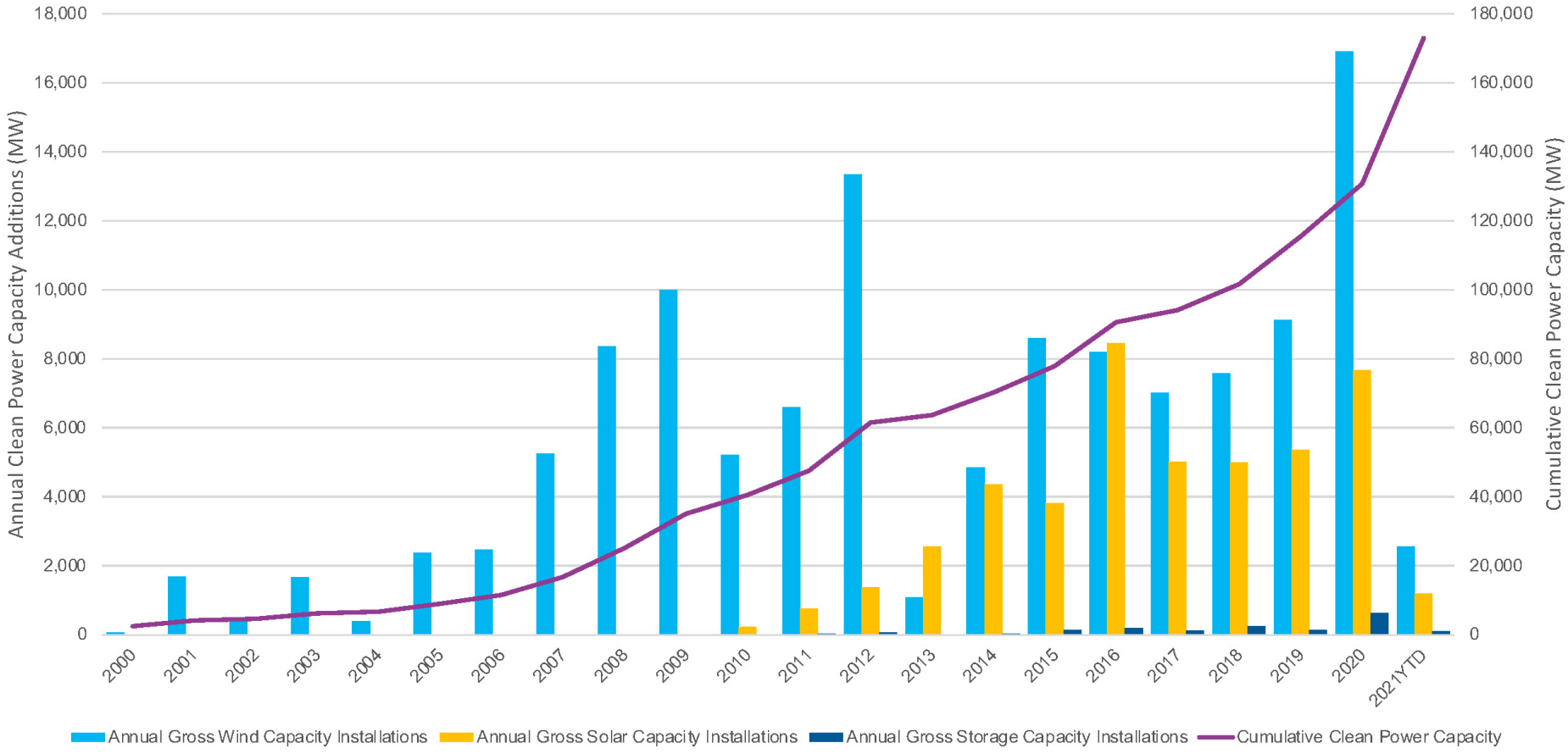
Clean Power Capacity Growth

Industry continues to deliver after record year

First quarter installations

- The industry commissioned 3,859 MW of new clean power capacity in the first quarter of 2021, breaking the record for first quarter capacity additions.
- Clean power additions were up 10% in the first quarter compared to the first quarter of 2020, when 3,519 MW was installed.

U.S. Annual and Cumulative Renewable Power Capacity Growth

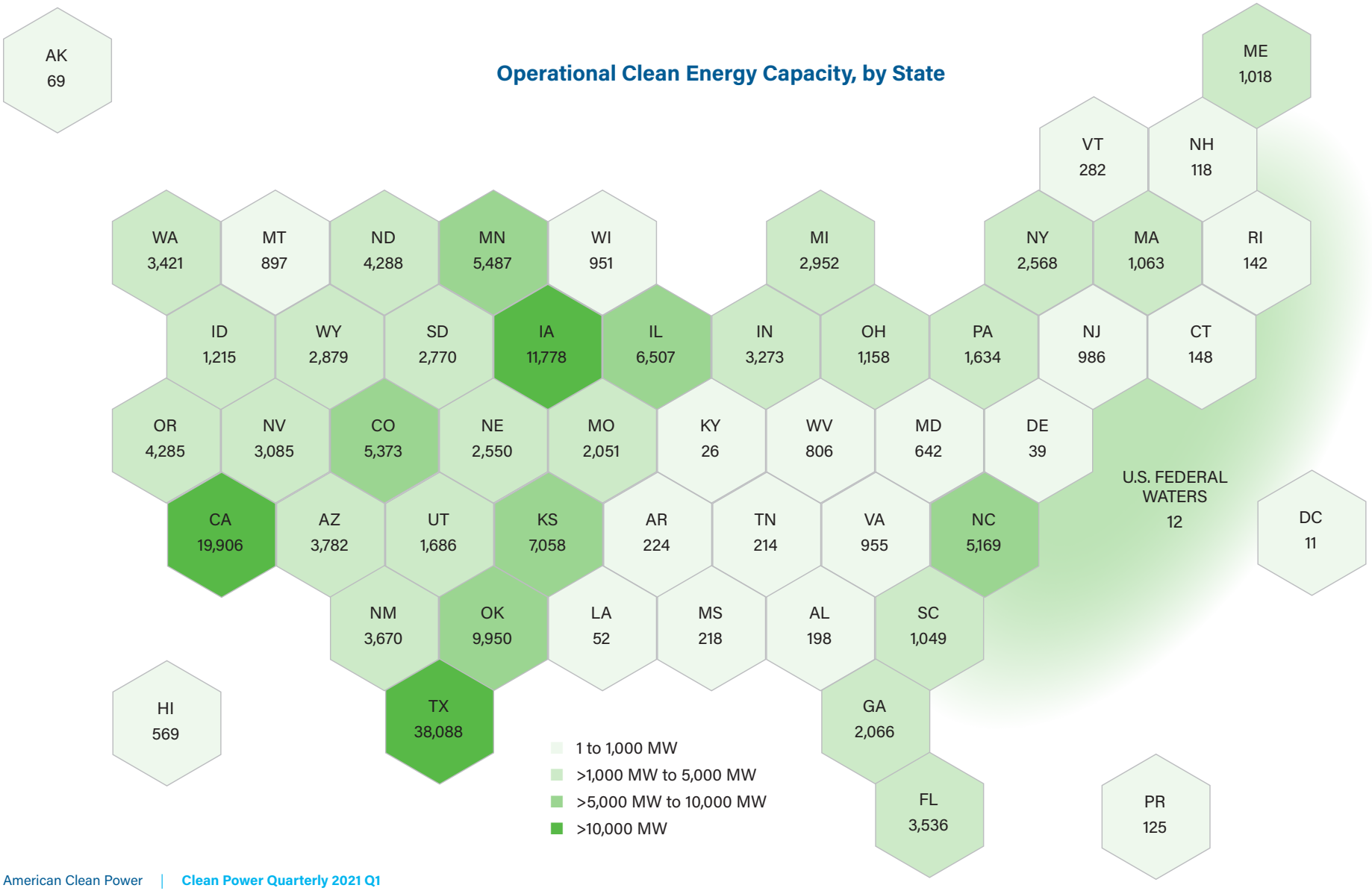


Industry continues to deliver after record year (CONT'D)

Clean Power eclipses 170 GW

- There is now over 173,032 MW of operating clean power capacity in the U.S.
- Cumulative wind capacity increased by 2.4% over the fourth quarter of 2020 to 125,422 MW and represents the largest share of clean power capacity. Solar capacity makes up the second largest share of cumulative capacity with 45,873 MW, followed by battery storage with 1,736 MW.

Operational Clean Energy Capacity, by State



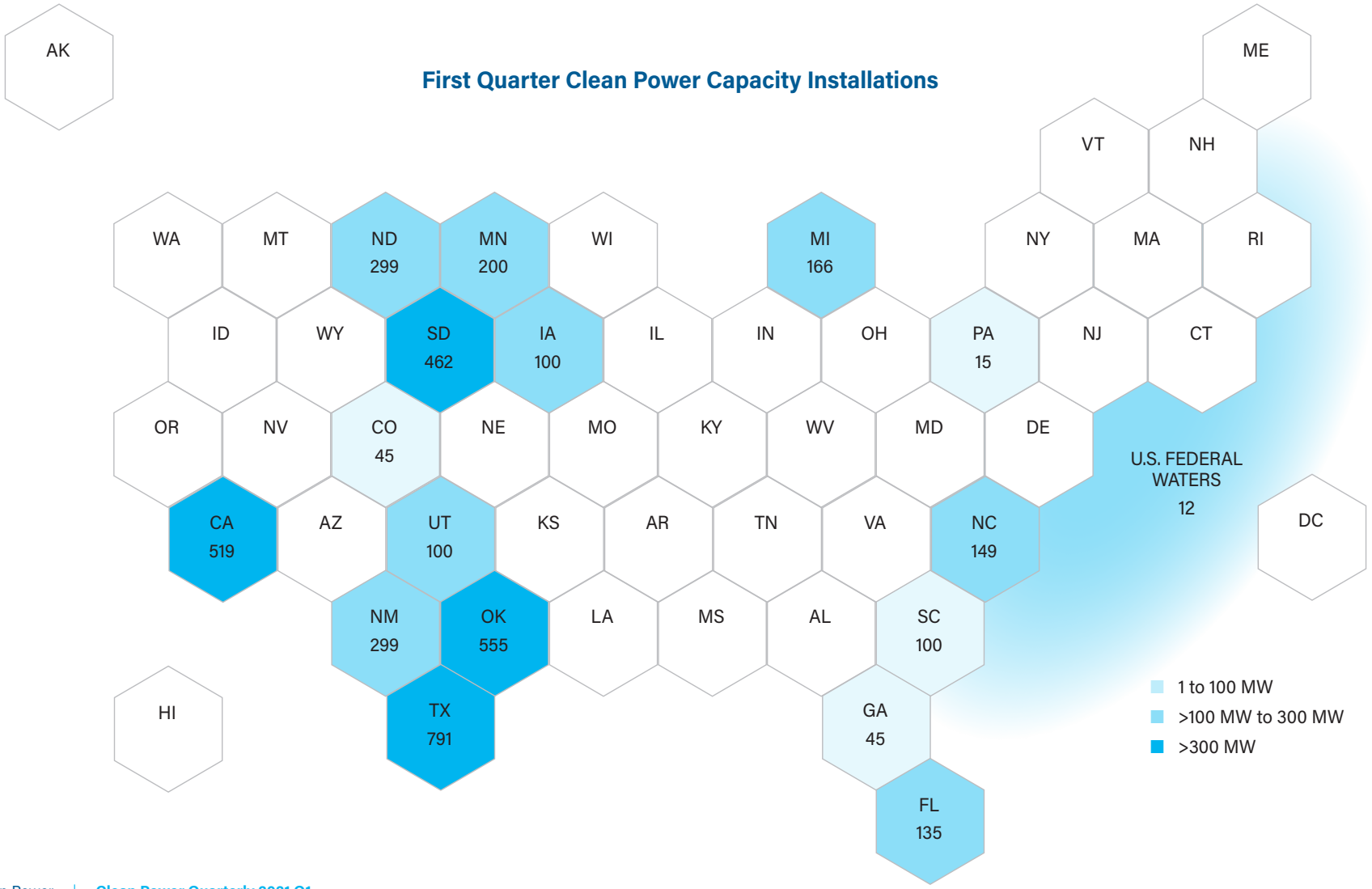
CLEAN POWER CAPACITY GROWTH

Installations surge across states

- Developers commissioned 38 new projects, totaling 3,859 MW across 17 states in the first quarter.
- Texas once again led quarter installations with 791 MW installed, folled by Oklahoma (555 MW), California (519 MW), South Dakota (462 MW), and North Dakota (229 MW).

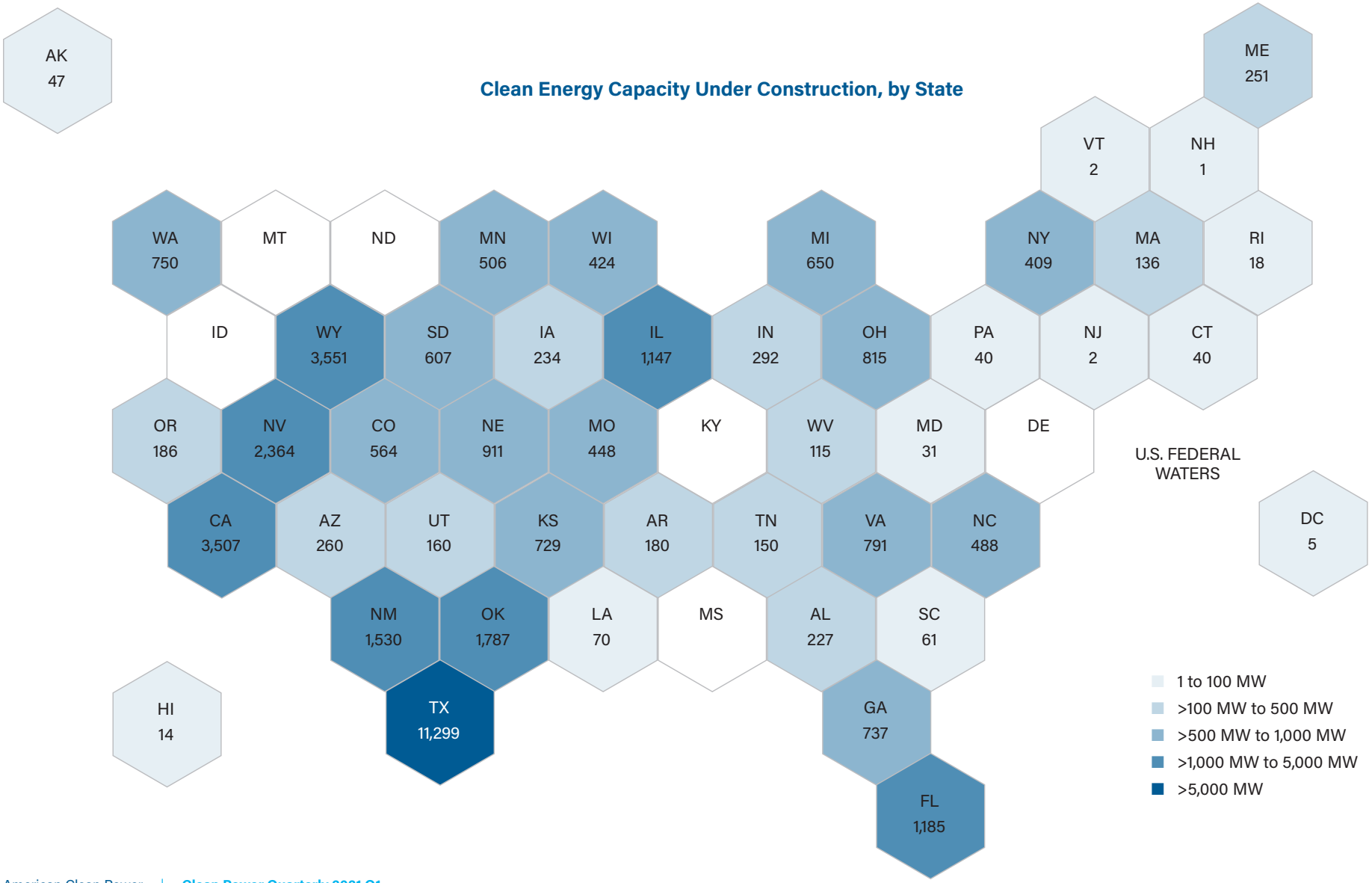
Top owners of 1Q Installations

- In the first quarter, four companies added more than 1,300 MW to their portfolios--Duke Energy, EDF Renewables, Avangrid Renewables, and Southern Power. Duke leads the group with 499 MW, thanks in part to starting operations at Frontier II, which was the largest project to start commercial operations in the first quarter.
- EDF delivered three projects, which a combined capacity of 456 MW. Avangrid brought two projects online, the Tatanka Ridge and La Joya Wind projects, for a combined capacity of 377 MW.
- In addition, Southern Power brought online the 301 MW Deuel Harvest North Wind project, the second largest project to reach commercial operations in the quarter.



Project Construction Pipeline

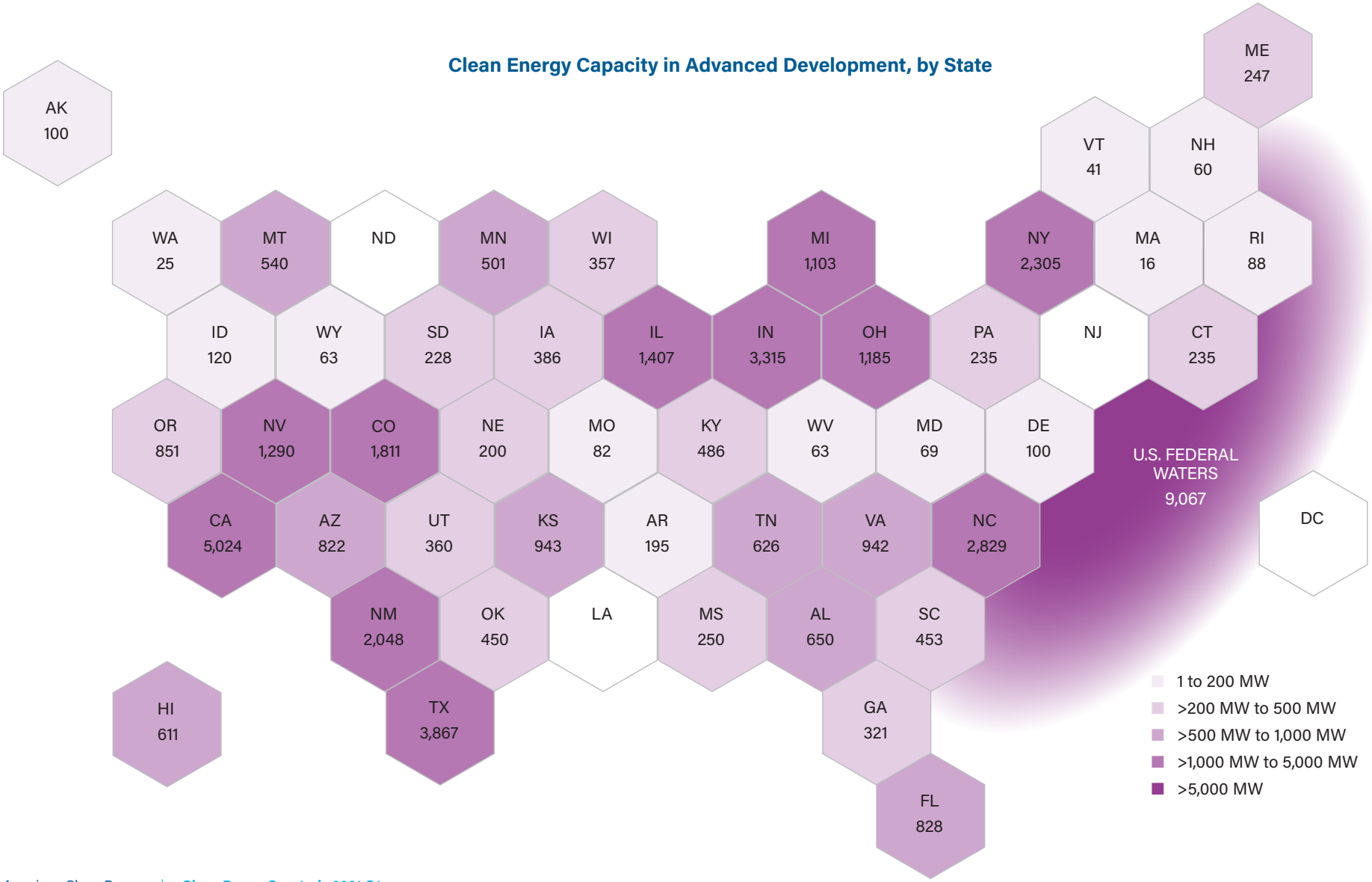
- At the end of March there was 37,719 MW of clean power capacity under construction.
- Total construction activity spans 463 project phases in 44 states and D.C.
- In the first quarter, project developers started construction on 10,384 MW across 229 projects in 27 states and D.C.
- Texas saw the largest uptick in projects entering the construction phase in the first quarter, with projects totaling 2,499 MW. California had 2,019 MW start construction, followed by Nevada with 1,311 MW, New Mexico (1,050 MW), and Florida (1,036 MW).



Advanced Development Activity

- Project developers reported 47,731 MW of clean power capacity in advanced development at the end of March.
- The industry announced that 14,568 MW worth of clean power projects entered the advanced development phase in the first quarter.
- Total advanced development activity spans 151 project phases across 46 states and 14 offshore wind projects in federal waters.
- Indiana (2,134 MW) led new announcements for the quarter, thanks to the 435 MW Dunn's Bridge Solar II and 265 MW Dunn's Bridge Solar I, followed by California with 1,560 MW entering advanced development, and Texas with 1,267 MW.

Clean Energy Capacity in Advanced Development, by State



Clean Power Project Pipeline

Wind

- The Wind industry currently has 33,834 MW of total development activity, representing 40% of the pipeline.
- Total offshore wind capacity in development in federal waters is unchanged since the previous quarter, and accounts for 25% of the total wind project pipeline.
- Texas has the most land-based wind in the near-term pipeline, representing 17% of the project pipeline, followed by Wyoming (10%), and Oklahoma (5%).
- Texas saw a 17% increase in project activity in the first quarter compared to the fourth quarter of 2020. The state hosts the country's largest wind plus storage site, the Azure Sky Wind (350 MW).
- The Azure Sky Wind project is the first large-scale hybrid project to integrate wind and energy storage at a single site. Once operational, it will be one of the world's largest battery storage facilities.
- New Mexico saw a 175% increase in under construction activity from the fourth quarter of 2020. In the first quarter, Pattern Energy Group started construction on the 1,050 MW Western Spirt wind project, which is one of the largest wind projects currently in development.

Solar

- Solar accounts for the largest share of development activity with 44,442 MW, representing 53% of the total pipeline.
- There are 651 solar projects in advanced development in 45 states and D.C.
- Texas once again hosts more activity than any other state with 19% of the total solar pipeline, followed by California with 13%, North Carolina with 8%, and Indiana with 7%.
- The largest solar project to enter the development pipeline in the first quarter was the 700 MW Dunn's Bridge solar-plus-storage project in Indiana. Once operational, the project will be the largest solar facility in the state.

Storage

- There is currently 7,174 MW of combined battery storage capacity in the project pipeline, including 3,533 MW in advanced development and 3,641 MW under construction, representing 8% of total development activity.
- Pipeline activity is spread across 137 project phases in 15 states.
- California leads with more battery storage activity than any other state, representing 39% of combined storage pipeline activity. Texas comes in second with 15%, followed by Nevada with 14%, and Florida with 6%.
- In the first quarter, construction started on the 409 MW Manatee Solar Energy Center in Florida, which is the world's largest solar powered energy storage project. Once operational, the storage project will be able to power Walt Disney World for an estimated seven hours.

Offshore Wind Activity

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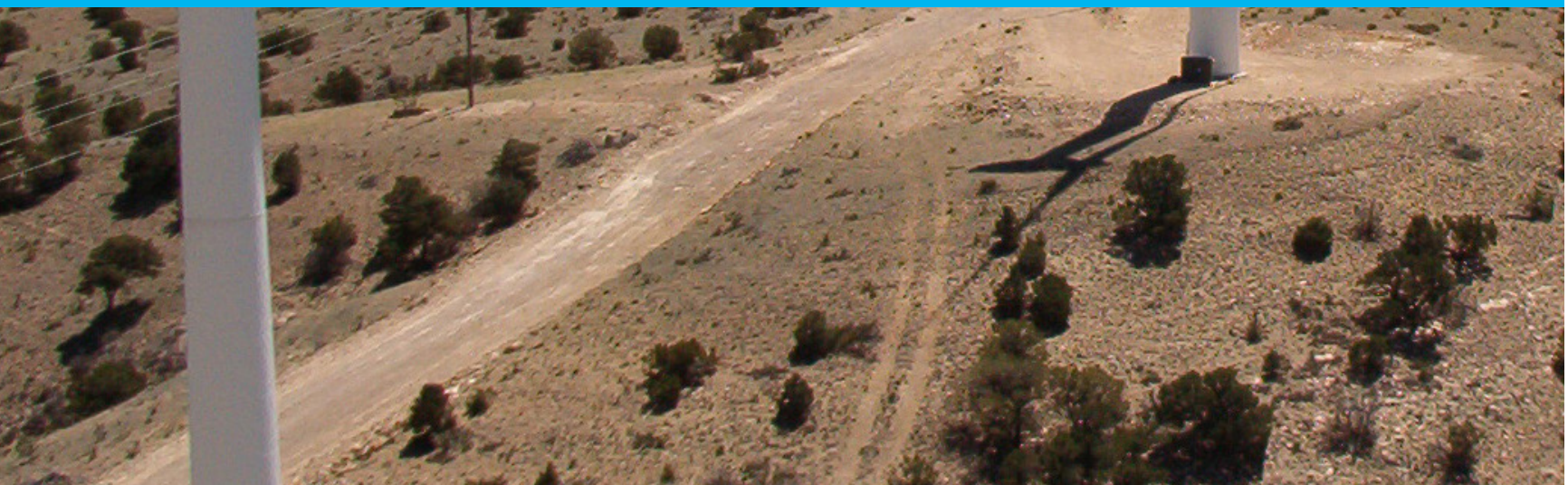
OFFSHORE WIND ACTIVITY

Offshore Wind Updates

- The Biden Administration announced an ambitious but achievable goal of 30 GW of offshore wind by 2030.
- Dominion Energy's 12 MW Coastal Virginia Offshore Wind project was officially commissioned. This project is expected to be a stepping stone for Dominion's larger 2.6 GW multi-phase project.
- The New York State Energy Research and Development Authority (NYSERDA) selected the partnership of Equinor and BP as the winner of the state's second offshore wind solicitation. Under the award, Equinor and incoming strategic partner BP will provide generation capacity of 1,260 MW from Empire Wind 2 and another 1,230 MW of power from Beacon Wind 1. The execution of the award is subject to the successful negotiation of a purchase and sale agreement.
- BOEM released the Vineyard Wind Final Environmental Impact Statement (FEIS). This is a key step towards final project approval, which is expected later this year.
- The 132 MW South Fork offshore wind farm took another significant step forward with the approval by New York regulators of its 7.6-mile power export transmission cable.
- Ocean Wind, a joint venture between Ørsted and PSEG, and steel monopile foundation manufacturer EEW announced the groundbreaking of the $250 million EEW monopile manufacturing facility at the Port of Paulsboro Marine Terminal in Gloucester County, NJ. The facility will manufacture monopiles to supply the 1,100 MW Ocean Wind farm off the coast of southern New Jersey, and other Northeast projects.

Land-based Wind Activity

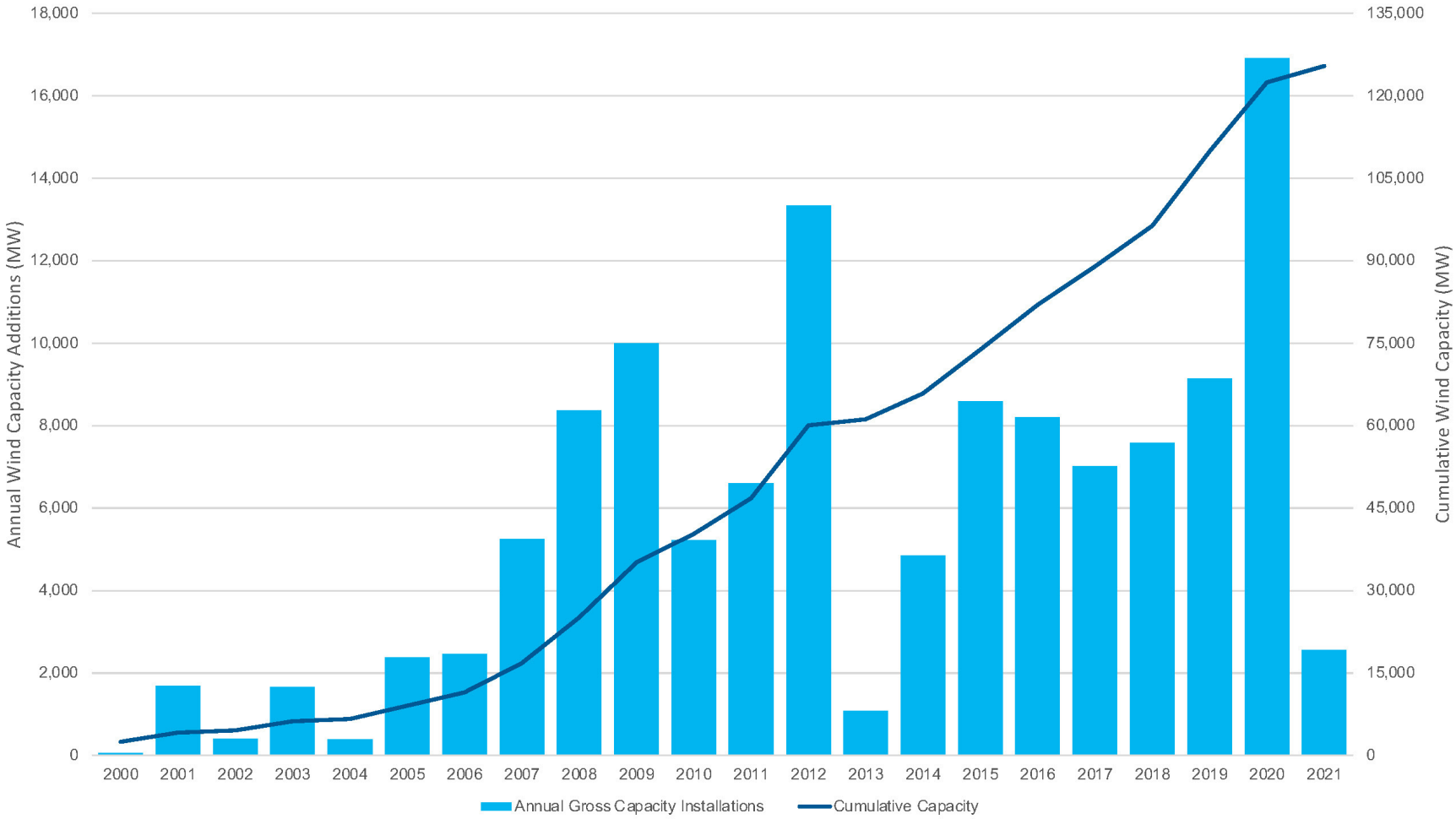


LAND-BASED WIND ACTIVITY

Large tranche of wind projects online in Q1

- The wind industry installed 2,561 MW of new capacity, the highest first quarter on record. In fact, 40% more wind was installed in the first quarter of 2021 compared to the same period last year, which broke records then for being the highest first quarter.
- The higher volume of installations this quarter was in part due to projects originally planned for commercial operations in the fourth quarter of 2020 being pushed to the first quarter of 2021.
- The largest project to come online in the first quarter was Duke Energy's 's 355 MW Frontier II located in Oklahoma.
- The average size of wind projects installed in the first quarter was 197 MW.

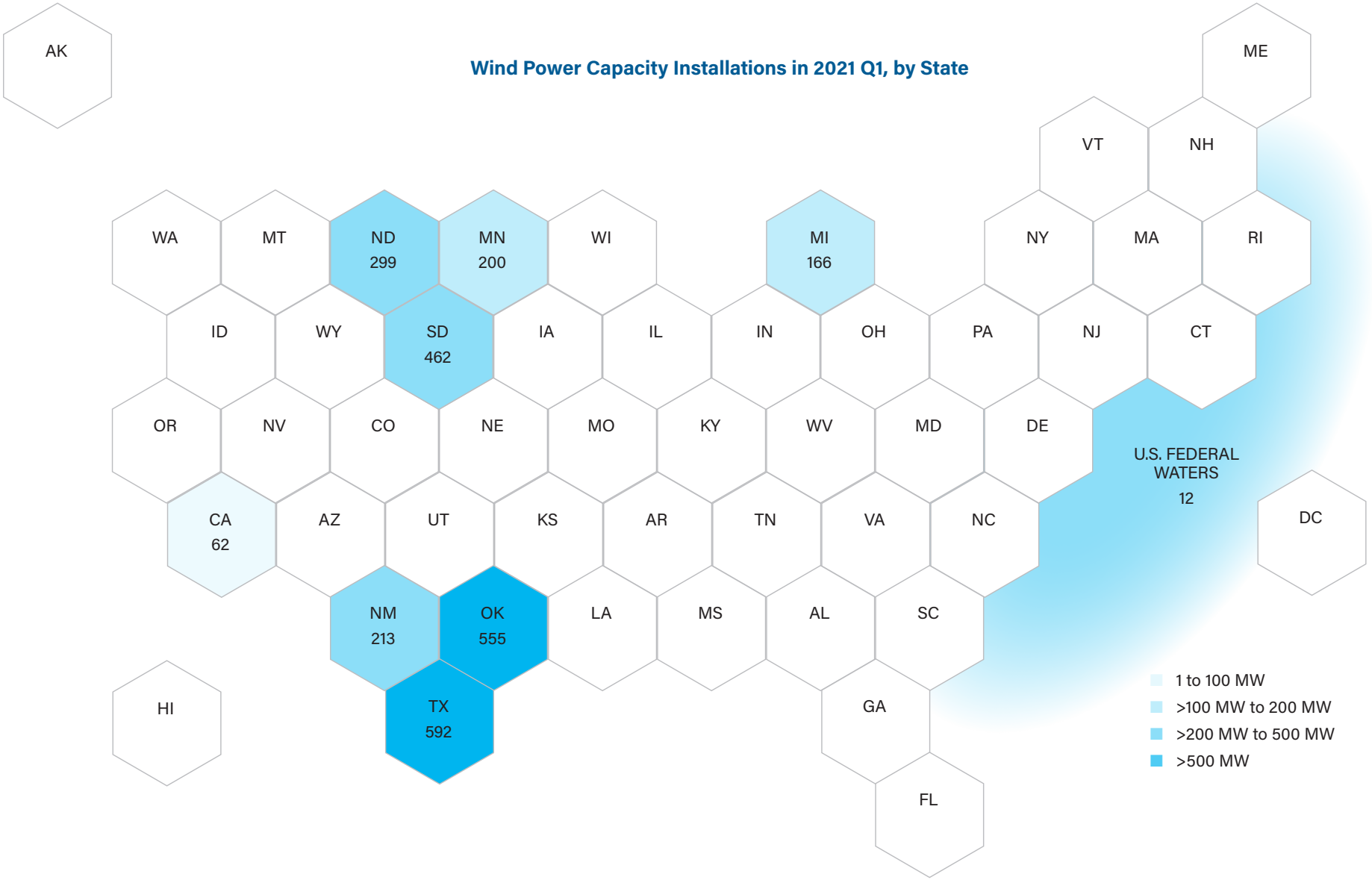
U.S. Annual and Cumulative Wind Power Capacity Growth



LAND-BASED WIND ACTIVITY

Texas leads all states...again

- Wind owners commissioned 11 new wind projects across 9 states in the first quarter.
- Texas installed the most wind capacity in the first quarter with 592 MW, followed by Oklahoma (555 MW), South Dakota (462 MW), North Dakota (299 MW), and New Mexico (213 MW).



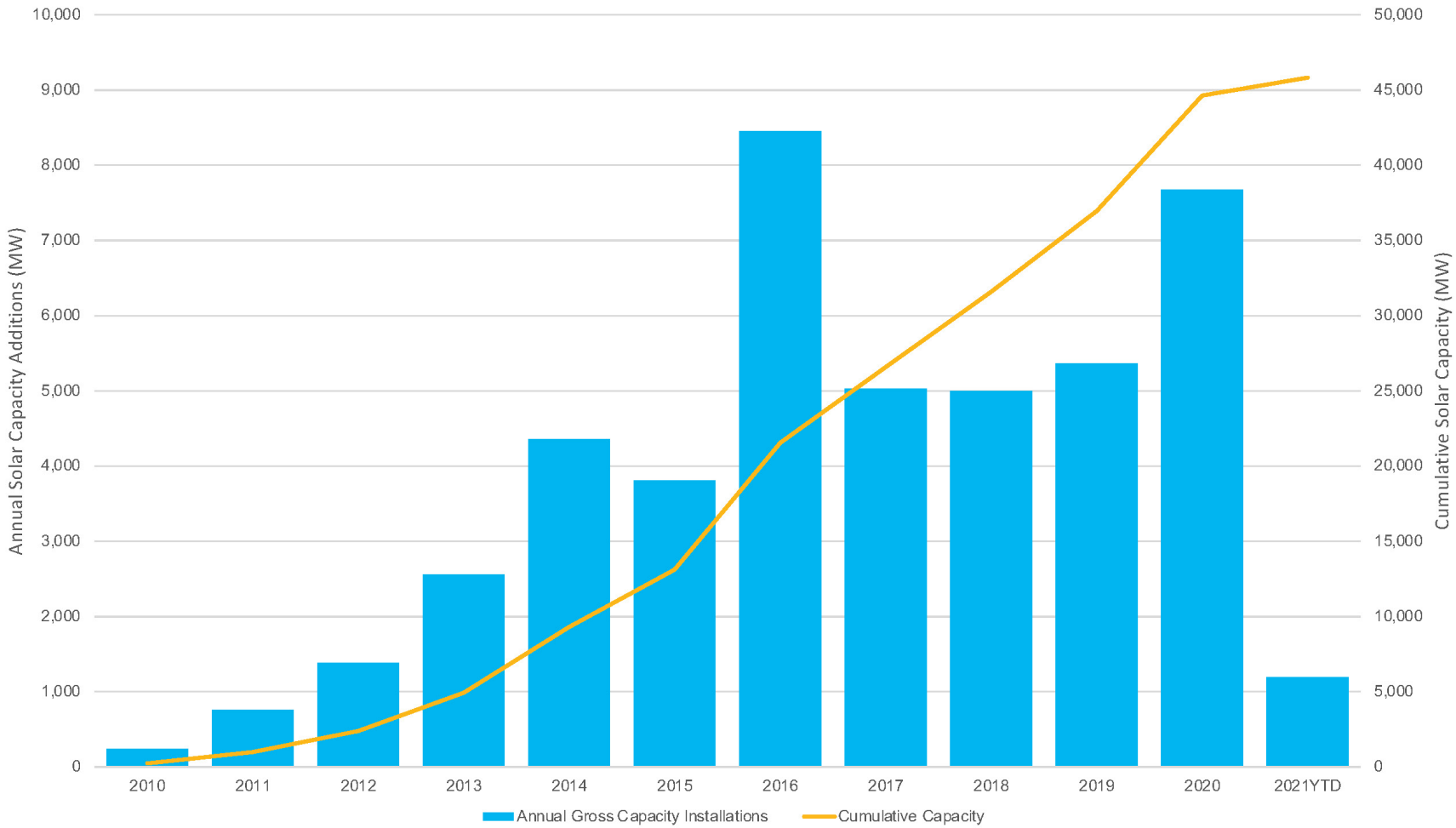
Utility-scale Solar

UTILITY-SCALE SOLAR

Record growth continues into 2021

- The clean energy industry installed 1,197 MW of new solar capacity in the first quarter, bringing total operating solar capacity in the U.S. to 45,828 MW.
- Forty-six states and D.C. have operational utility solar power capacity. California leads the solar industry with nearly 13 GW of installed capacity, more than double second placed North Carolina.
- Nearly 30% of installed utility solar power is in California, followed by North Carolina (11%), Texas (10%), Florida (8%), and Nevada (6%).

U.S. Annual and Cumulative Utility Solar Power Capacity Growth

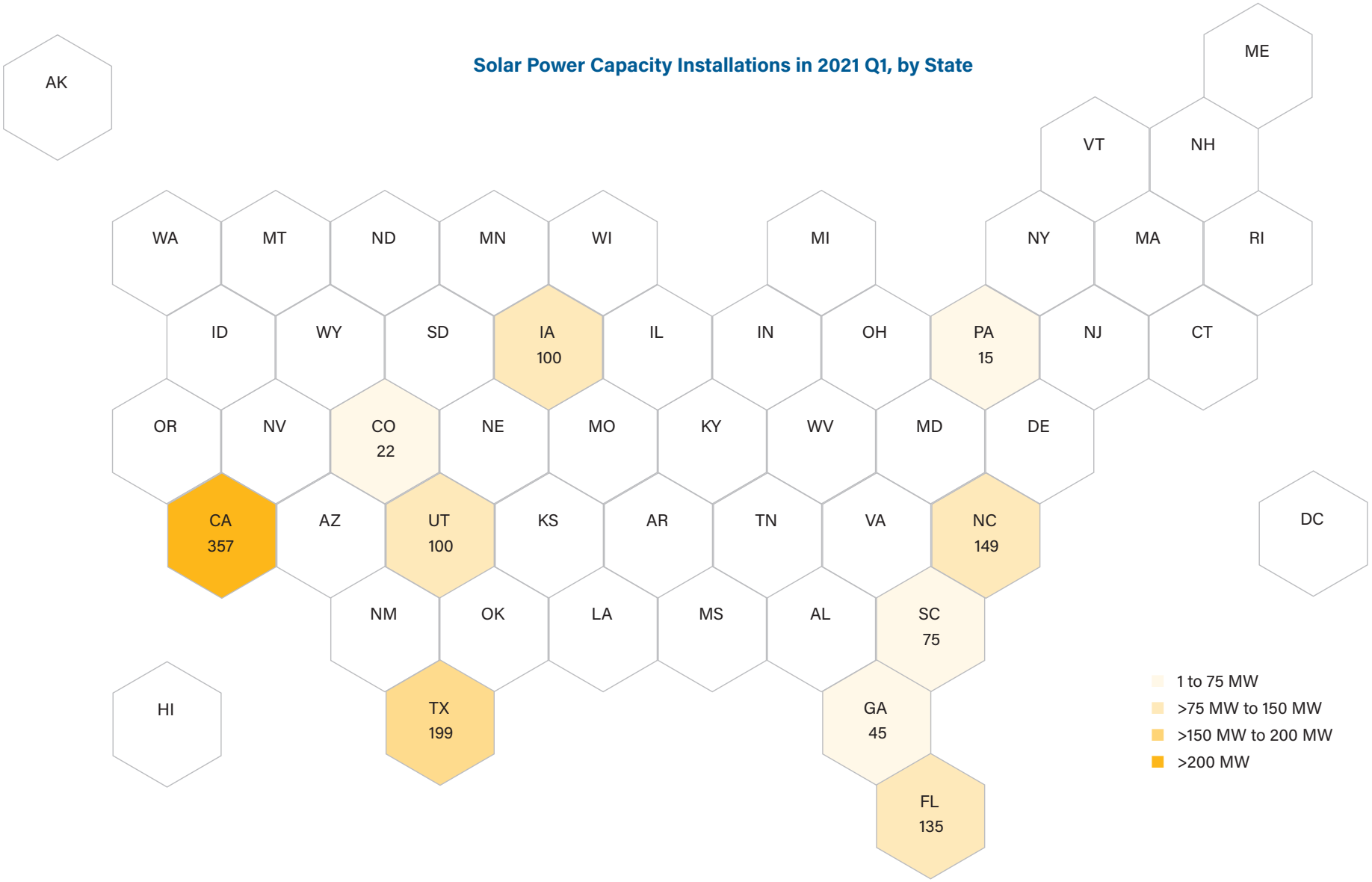


ACP reports solar capacity in MWac

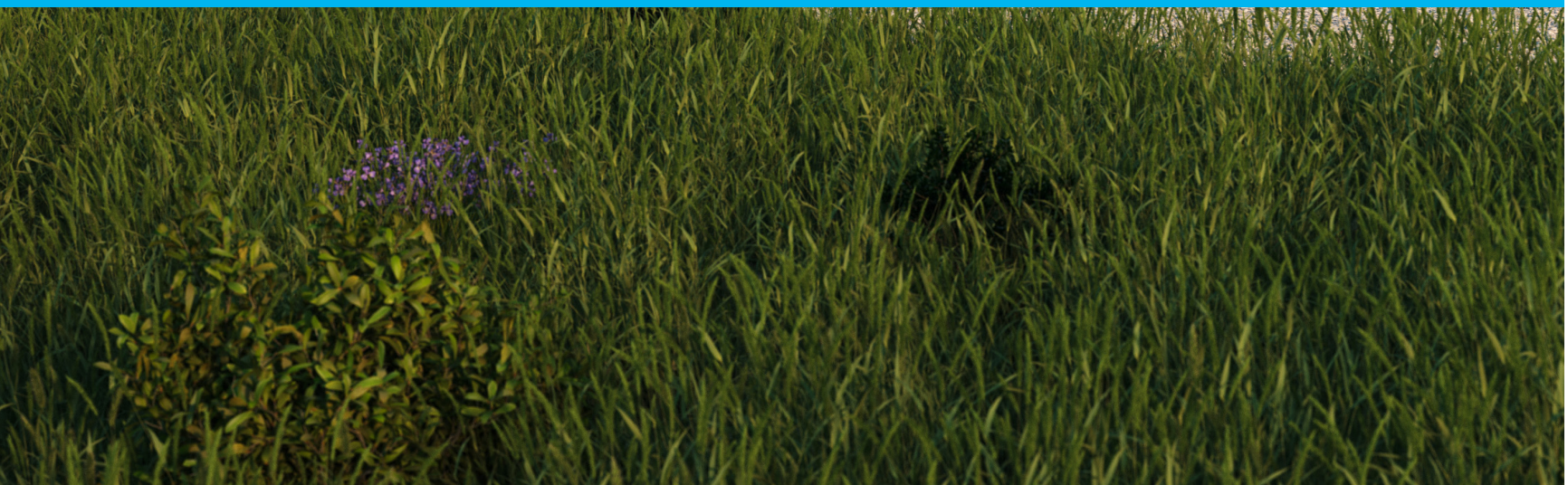
California and Texas lead first quarter installations

- Developers installed 15 projects across 10 states in the first quarter.
- California led solar capacity installations with 357 MW, representing 30% of total online activity for the quarter.
- Texas came in second with installation of 199 MW of solar capacity from the Impact Solar I project, followed by North Carolina with 149 MW.
- For solar projects where the models used are known, crystalline-silicon panels on single-axis trackers continue to dominate the industry.

Solar Power Capacity Installations in 2021 Q1, by State



Utility-scale Storage



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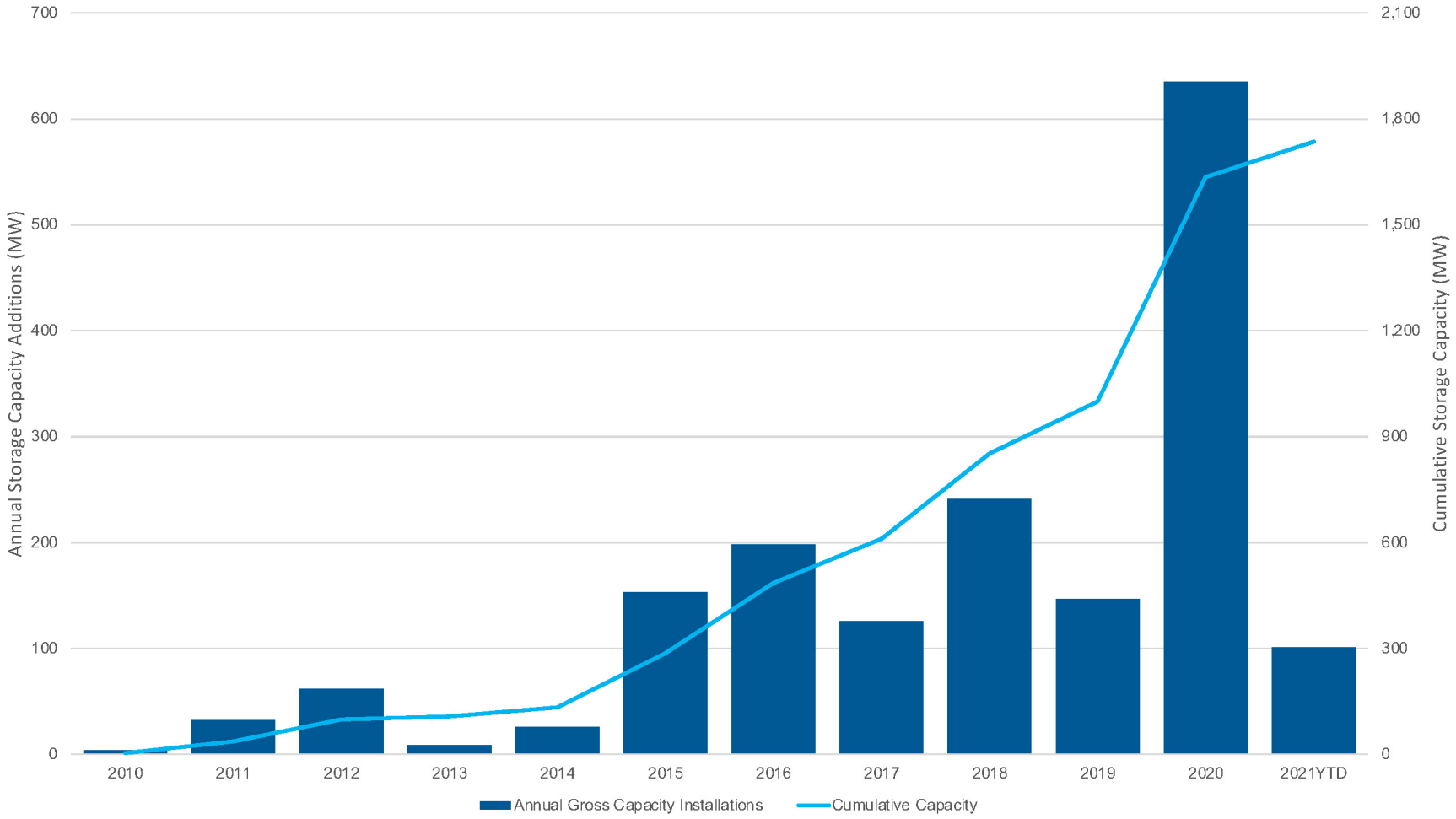
Storage installations accelerate

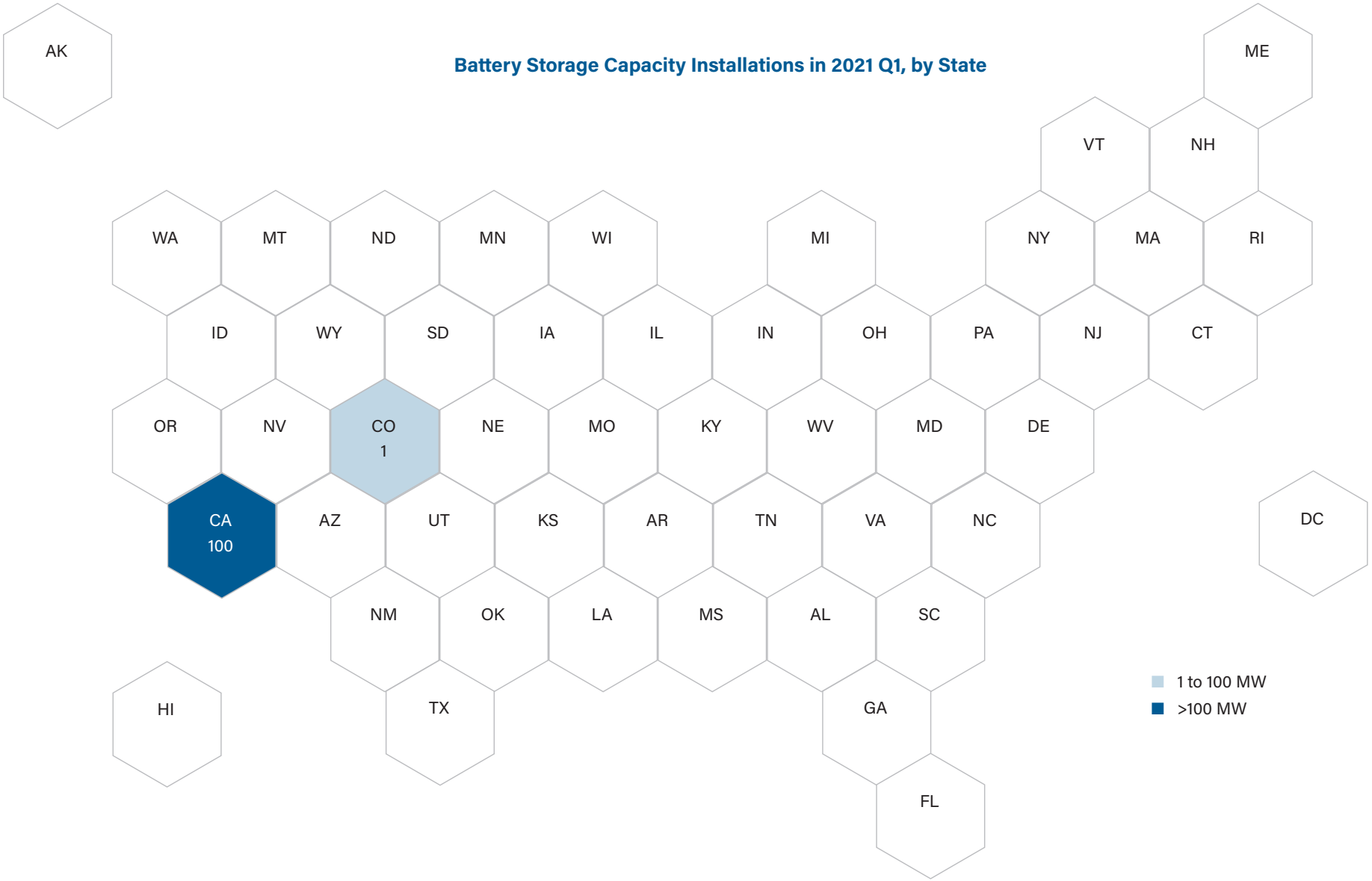
- In the first quarter, cumulative storage capacity increased 6% with the installation of 101 MW of new storage capacity, bringing total operating storage capacity to 1,736 MW.
- There are currently 176 operating storage projects across 33 states. California hosts the most battery storage with 925 MW (53%) of installed capacity, followed by Texas with 134 MW (8%), Illinois (133 MW, 8%), West Virginia (64 MW, 4%), and Hawaii (63 MW, 4%).
- Lithium-ion batteries with 2-to-4-hour durations are the most common.

U.S. Annual and Cumulative Utility Battery Storage Capacity Growth



California leads BESS installations in Q1

California led installations with 101 MW while 1 MW of storage was installed in Colorado.



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