CLEAN POWER QUARTERLY

AMERICAN CLEAN POWER

2026 Q1

# Market Report

Photo Credit: rPlus Energies

# Definitions

**Advanced development:** Projects not under construction, but with a PPA, firm equipment order, or moving forward with plans to be placed under utility ownership as of the end of the most recent quarter. For offshore wind, advanced development consists of projects that have secured offtake or have had successful bids in response to a state solicitation even if final offtake negotiations have not concluded.

**Capacity:** Project nameplate capacity. Unless otherwise stated, ACP reports capacity in MW-ac.

**Clean power:** For the purposes of this report, clean power includes land-based wind, offshore wind, utility-scale solar, and battery storage technology.

**Decommissioned:** Project is offline and is no longer delivering power to the grid on a permanent basis. Physical removal of equipment is not a requirement.

**Duration:** The amount of time, in hours, a battery can discharge its power capacity before depleting its energy capacity. For example, a 2 MW battery that has 4 MWh of energy capacity has a duration of 2 hours.

**Full repowering:** Full decommissioning of a utility-scale project. The original equipment is physically removed from the project site and replaced with new utility-scale equipment.

**Inverter Loading Ratio (ILR):** The ratio of installed DC capacity to the inverter's AC power rating. Also known as the AC-to-DC ratio.

**Online:** Project has reached commercial operation and is delivering electricity to the ultimate point of delivery.

**Partial repowering, nacelle replacement:** Complete replacement of a utility-scale wind turbine's nacelle, rotor, and blades. The tower and foundation are retained.

**Partial repowering, major retrofit:** Complete replacement of a utility-scale wind turbine's rotor and blades, along with the replacement of at least one major component within the nacelle, typically the gearbox or the generator.

**Pipeline:** Projects either under construction or in advanced development.

**Repowered:** Full or partial equipment replacement. Currently only wind repowering activity is tracked, but ACP will expand repowering activity tracked as the market progresses.

**Under construction:** Construction team has begun work on the ground at the project site. For offshore wind, under construction is defined as in-ocean construction.

## Acronyms

| | |
|---|---|
| **AC** | Alternating Current |
| **C&I** | Commercial & Industrial |
| **CAISO** | California ISO |
| **DC** | Direct Current |
| **ERCOT** | Electric Reliability Council of Texas |
| **GW** | Gigawatts |
| **GWh** | Gigawatt hours |
| **ILR** | Inverter Loading Ratio |
| **IOU** | Investor-Owned Utility |
| **ISO** | Independent System Operator |
| **MISO** | Midcontinent Independent System Operator |
| **MW** | Megawatts |
| **MWh** | Megawatt hours |
| **NE-ISO** | New England ISO |
| **NYISO** | New York ISO |
| **OEM** | Original Equipment Manufacturer |
| **PJM** | Pennsylvania-New Jersey-Maryland Interconnection |
| **PPA** | Power Purchase Agreement |
| **RTO** | Regional Transmission Organizations |
| **SPP** | Southwest Power Pool |

KEY TAKEAWAYS

# 2026 Q1 Highlights

### U.S. developers deployed 6.4 GW of new clean power capacity in Q1 2026

- Q1 2026 installations totaled 6.4 GW, 17% lower than the same quarter in 2025.
- Cumulative clean power capacity hit 370 GW, enough to power nearly 80 million homes.

### Q1 battery storage additions surpass previous record by 48%

- Developers commissioned 2.4 GW of battery storage capacity in Q1, up 48% from the previous record set in Q1 2025. This is the fourth year in a row that Q1 storage deployments set a record.

### Texas ranks #1 in land-based wind, solar, and storage

- With 1.6 GW of new clean power capacity added in Q1, Texas not only ranked #1 for quarterly installs, but also surpassed California for operational battery storage. Texas now boasts the top operational portfolio for land-based wind, solar, and storage, as well as the top pipeline portfolio for each technology.

### Utility-scale solar overtook land-based wind for operational capacity

- More than 3.6 GW of utility-scale solar capacity began operations in the first quarter, pushing cumulative operating capacity to 161.1 GW, while land-based wind had a slow start to the year, ending Q1 with 160.8 GW in operation.
- Land-based wind deployment numbers are expected to pick up later in the year, with a number of large projects, including the 3.5 GW SunZia Wind project in New Mexico, slated to hit COD.

### Clean power pipeline sits at 195 GW, supported by battery storage surge

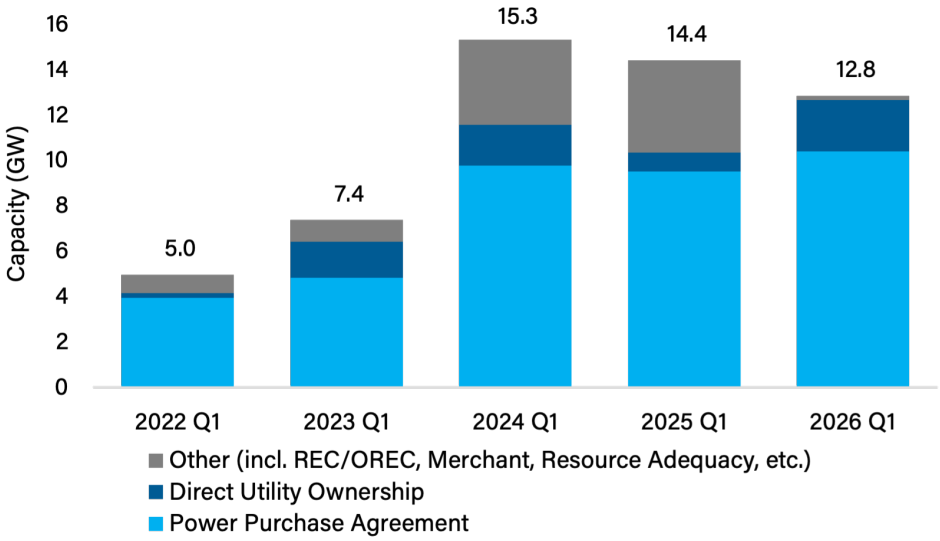
- The clean power pipeline rose nearly 8 GW quarter-over-quarter to reach 195 GW, driven primarily by a 17% increase in the battery storage pipeline to a record 53.8 GW.
- The land-based wind and offshore wind pipelines both shrank quarter-over-quarter, while the utility-scale solar pipeline saw just 2% growth from the previous quarter.

### Offtake announcements total 12.8 GW in Q1 2026

- Clean power procurement announcements tallied to 12.8 GW during the first quarter, down from the 14.4 GW observed in Q1 2025 and the 15.3 GW seen in Q1 2024.
- Power purchase agreement (PPA) announcements totaled 10.4 GW, supported by large announcements from Google and Xcel Energy.

## Cumulative Clean Power Online


## Q1 Offtake Announcements, by Offtake Mechanism

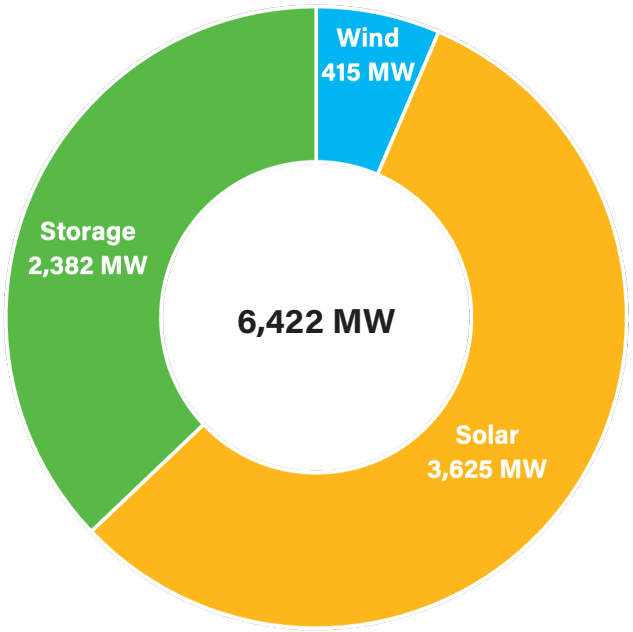


CLEAN POWER CAPACITY GROWTH

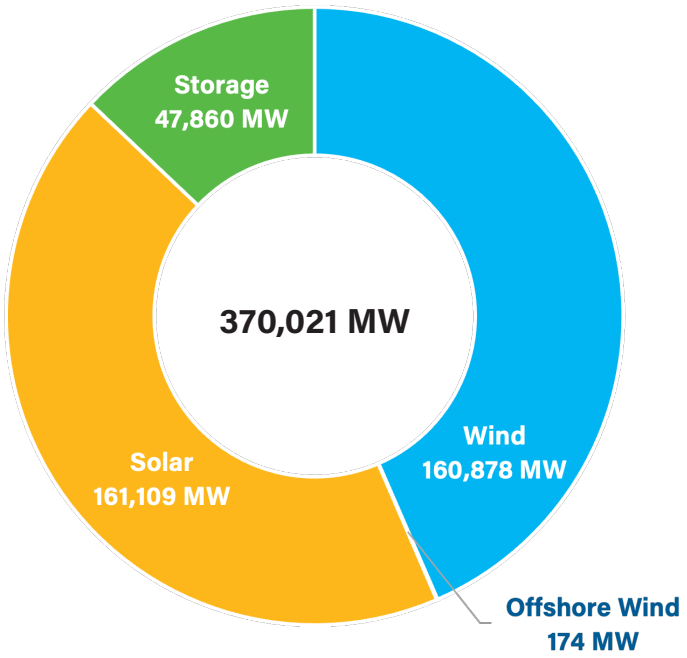
# Q1 2026 Clean Power Capacity Additions

- Project developers placed in service 108 utility-scale solar, battery storage, and land-based wind projects during the first quarter of the year, adding 6,422 MW of clean power capacity to the grid.
- Year-over-year, quarterly capacity installations were down by 17%, compared to the 7,695 MW of capacity energized in Q1 2025. Q1 installations also fell by 66% compared to the previous quarter, as first quarters are typically much slower than fourth quarters.
- More than 3.6 GW of utility-scale solar capacity was commissioned during the quarter, representing 56% of capacity additions. At almost 2.4 GW, battery storage made up 37% of quarterly additions, followed by land-based wind (6%). With 0.4 GW of new capacity installed, land-based wind power experienced its slowest Q1 since 2018.
- At the end of Q1 2026, the fleet of operational clean power projects in the U.S. reached 370,021 MW, enough to power 79.8 million American homes.

## Q1 2026 Clean Power Installs by Technology

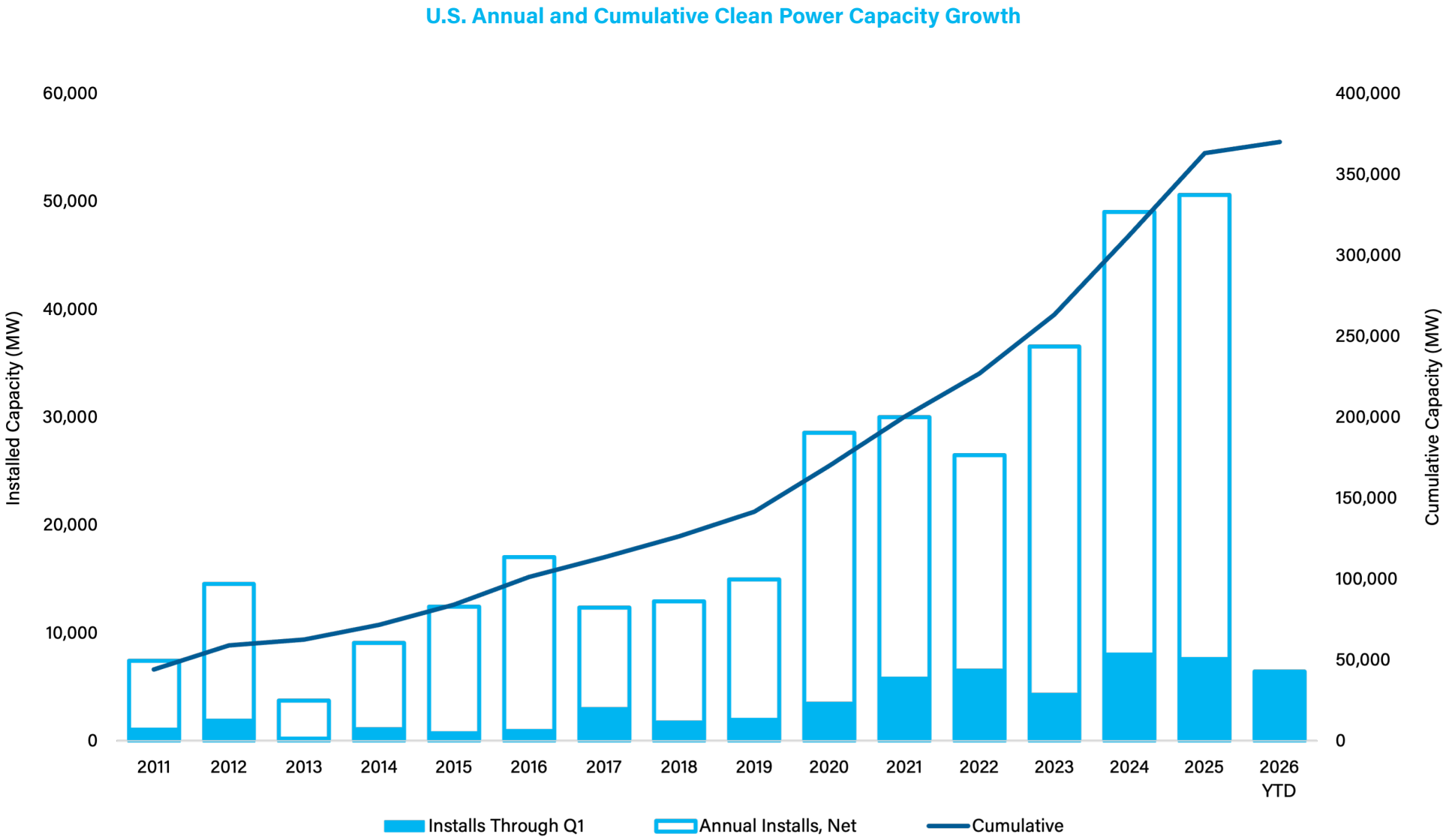



## Total Operating Clean Power Capacity by Technology

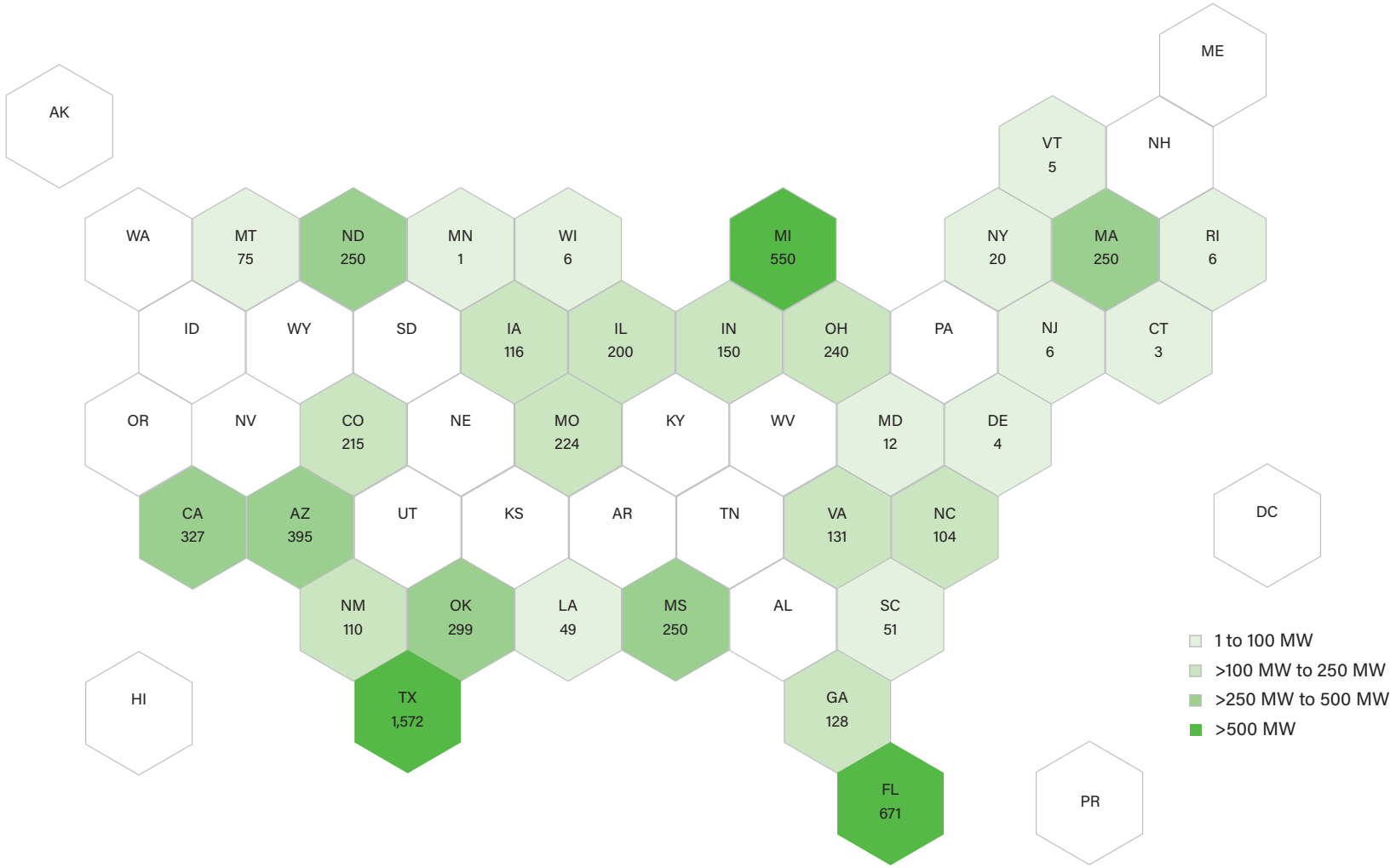


CLEAN POWER CAPACITY GROWTH

# U.S. Clean Power Deployments Reach 370 GW



# Q1 2026 Clean Power Capacity Additions by State

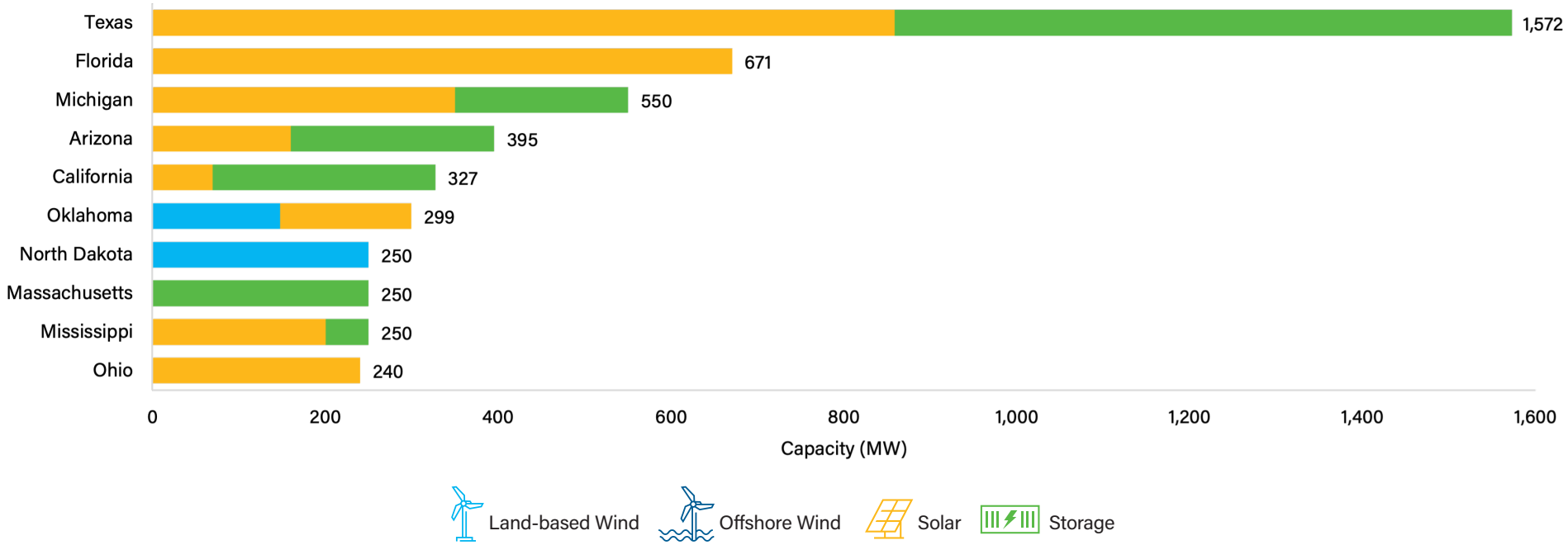


CLEAN POWER CAPACITY GROWTH

# Top States for Q1 Clean Power Capacity Additions

- Thirty-one states installed new clean power projects during Q1, with 19 states bringing online more than 100 MW of capacity.
- With 1,572 MW of new projects starting commercial operations, Texas was once again the national leader for clean power capacity additions. Texas was singlehandedly responsible for 24% of capacity brought online during the quarter. Additionally, with Texas' 714 MW of battery storage additions in Q1, the Lone Star State overtook California as the top battery storage state.
- In addition to Texas, Florida and Michigan also energized over 500 MW of new clean power projects. Florida added 671 MW of new utility-scale solar, while Michigan added a mix of new solar and battery storage capacity.
- Eight of the top ten states for Q1 clean power additions voted for the Republican Party in the 2024 presidential election.

## Top Ten States for Q1 2026 Clean Power Installations

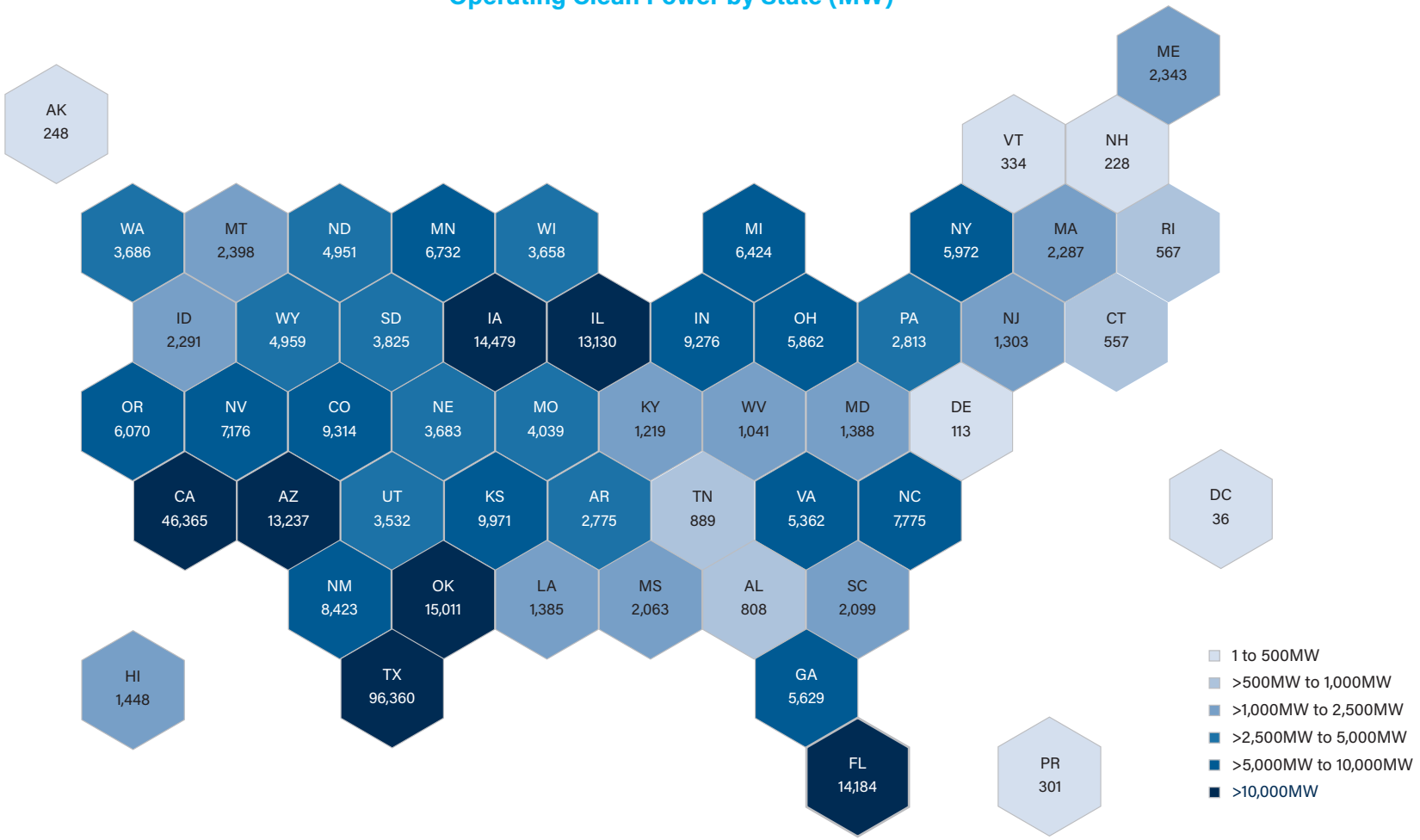


CLEAN POWER CAPACITY GROWTH

# Operational Clean Power Capacity

- Operational utility-scale solar, wind, and battery storage capacity is present in all U.S. states as well as D.C. and Puerto Rico, powering American homes and businesses.
- As the end of the quarter, the U.S. clean power fleet has grown to reach 370,021 MW, enough to power nearly 80 million American homes.
- Seven states have more than 10 GW of clean power in operation, 20 states have more than 5 GW installed, and 42 states have more than 1 GW online.
- With over 96.4 GW of clean power projects in operations, Texas is on the verge of becoming the first state to cross the 100 GW threshold. The Lone Star State is home to 26% of online capacity in the U.S. and has more operational capacity than the next four states combined.

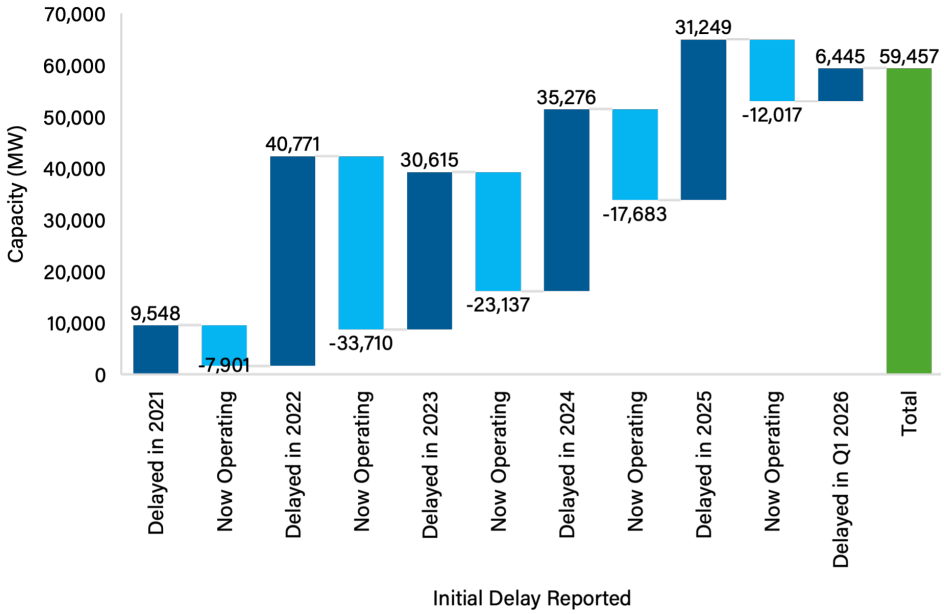
## Operating Clean Power by State (MW)



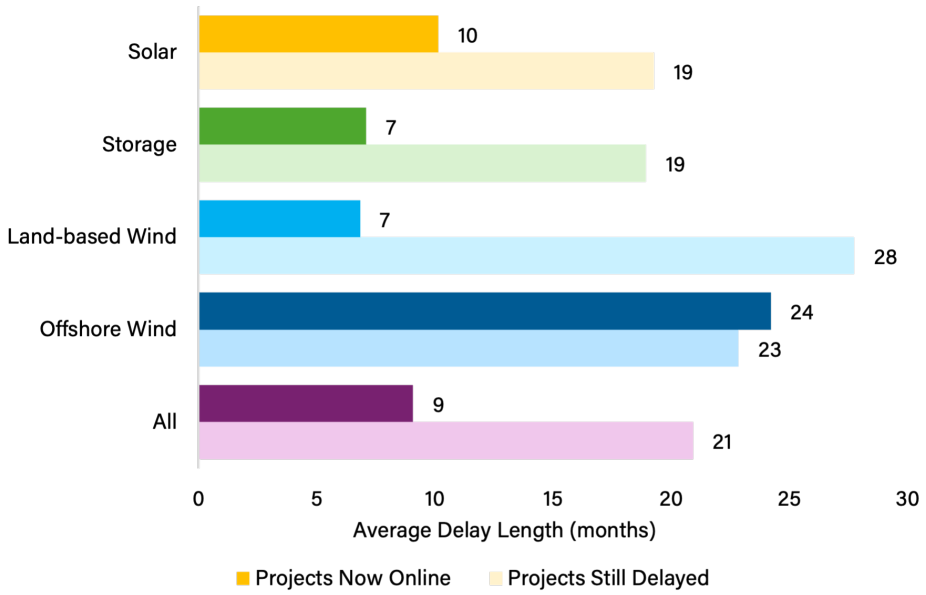
# Clean Power Project Delays

- Over 6.4 GW of clean power capacity initially expected to become operational during Q1 were delayed, adding to the 53 GW backlog of delayed projects.
- Cumulatively, the 59.5 GW delayed capacity includes projects that were initially expected to begin service in 2021 through 2026. Of the backlogged projects, 41% of capacity is expected to reach COD by the end of 2026, while 38% have CODs between 2027 and 2029.
- Out of the 545 projects currently delayed, 288 projects representing 44% of capacity have been delayed multiple times. On average, projects currently delayed have been stalled for 21 months. For delayed projects that have since been installed, the average time it took to complete the project was 9 months.
- Project developers often attribute project delays to lengthy permitting schemes, back-logged interconnection queues, and fluctuating prices for key project equipment.

## Clean Power Project Capacity Delayed




## Weighted Average Delay Length, Projects Currently Online vs Currently Delayed



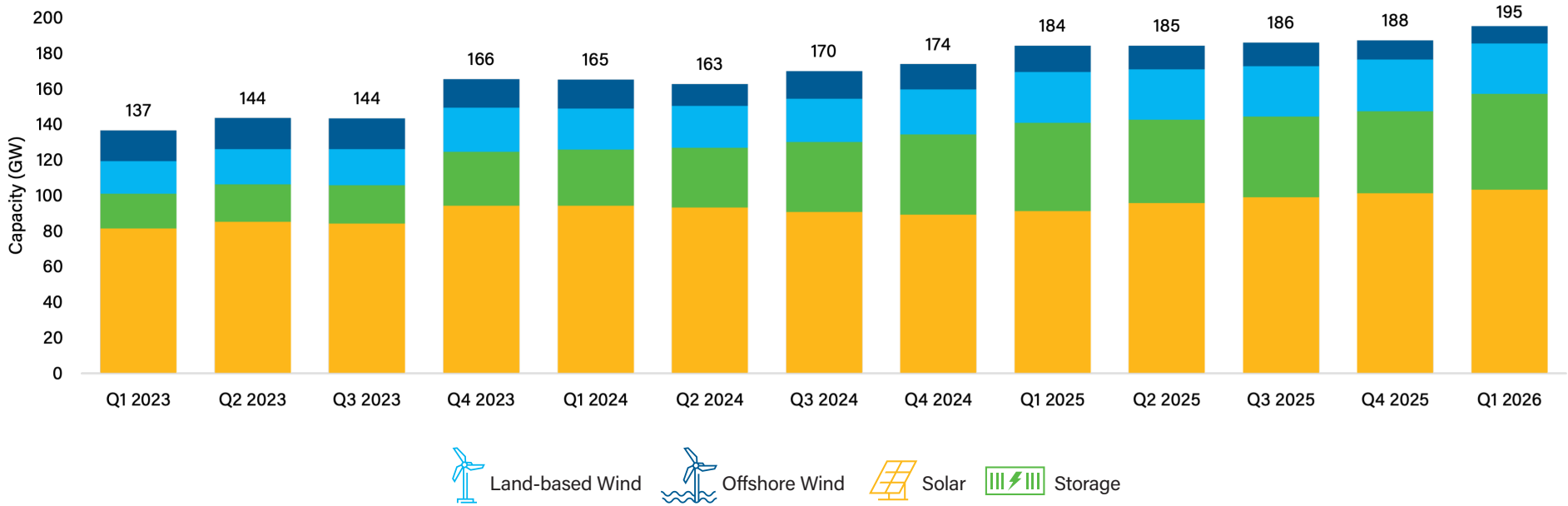

ACP has updated its delay analysis to account for projects experiencing more than two delays.

CLEAN POWER CAPACITY GROWTH

# Clean Power Pipeline Over Time

- The pipeline for clean power projects reached 195,344 MW by the end of Q1 2026, rising sharply by 4% q-o-q and 6% y-o-y. On average, the clean power pipeline experienced a quarterly growth rate of 2% over the past two years.
- Battery storage was the primary driver of growth in the pipeline, as it averaged a 7% quarterly growth rate during the last two years. Land-based wind and solar also grew at 3% and 2% on average.
- At 103.4 GW, utility-scale solar continued to be the dominant technology, making up close to 53% of pipeline capacity. Solar projects were in development in all 50 states and Puerto Rico. The solar pipeline has exceeded 1 GW in twenty-five states, and Texas alone was home to 19 GW of utility-scale solar projects in development.
- Since it overtook land-based wind at the close of 2023, battery storage has continued its upward trajectory, growing its share of the pipeline to 28%. The volume of battery storage projects in the pipeline reached 53.8 GW, up 17% since the previous quarter.
- The pipeline for land-based wind contracted slightly to 28.5 GW, a 2% decrease from the previous quarter. Early-and-mid-stage land-based wind projects have experienced difficulty securing approvals from federal regulators, stalling the pipeline. During the quarter, only one new project (300 MW) entered into advanced development.
- The pipeline for offshore wind projects fell below 10 GW for the first time in years, after TotalEnergies relinquished the lease area for its Attentive Energy Two project. The 1,342 MW project was awarded an OREC contract by the New Jersey Board of Public Utilities in 2024.

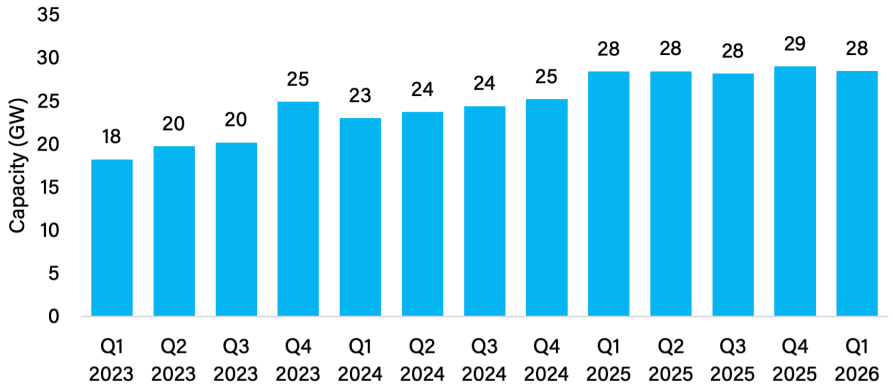
## Clean Power in Development, Q1 2023 – Q1 2026



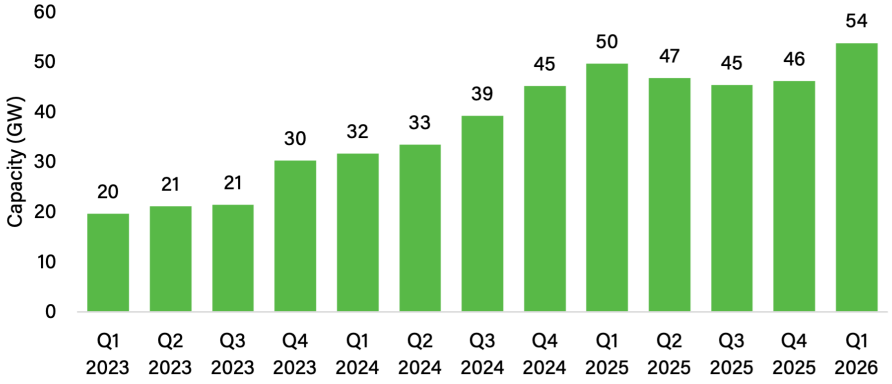
CLEAN POWER CAPACITY GROWTH

# Clean Power Pipeline Over Time

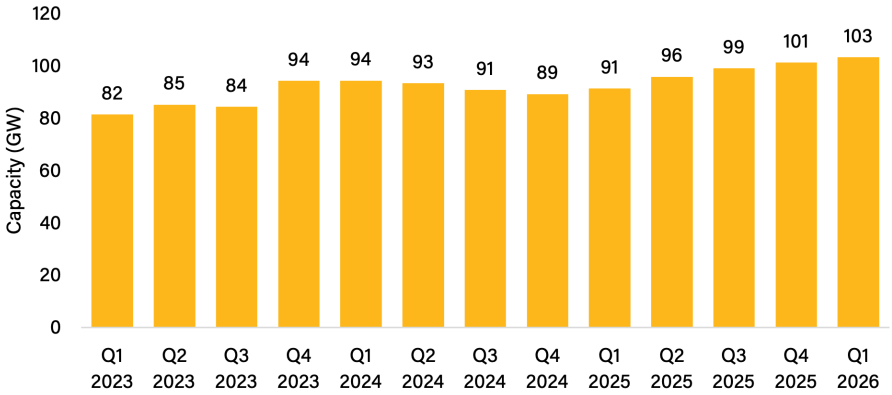
## Land-Based Wind Pipeline, Q1 2023 – Q1 2026



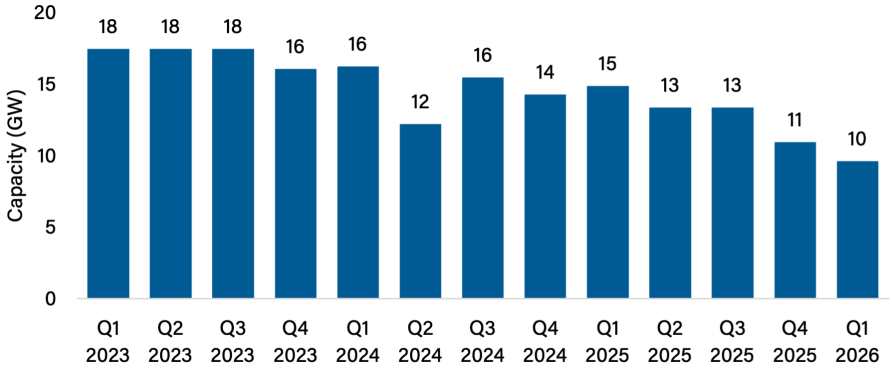

## Battery Storage Pipeline, Q1 2023 – Q1 2026




## Utility-Scale Solar Pipeline, Q1 2023 – Q1 2026



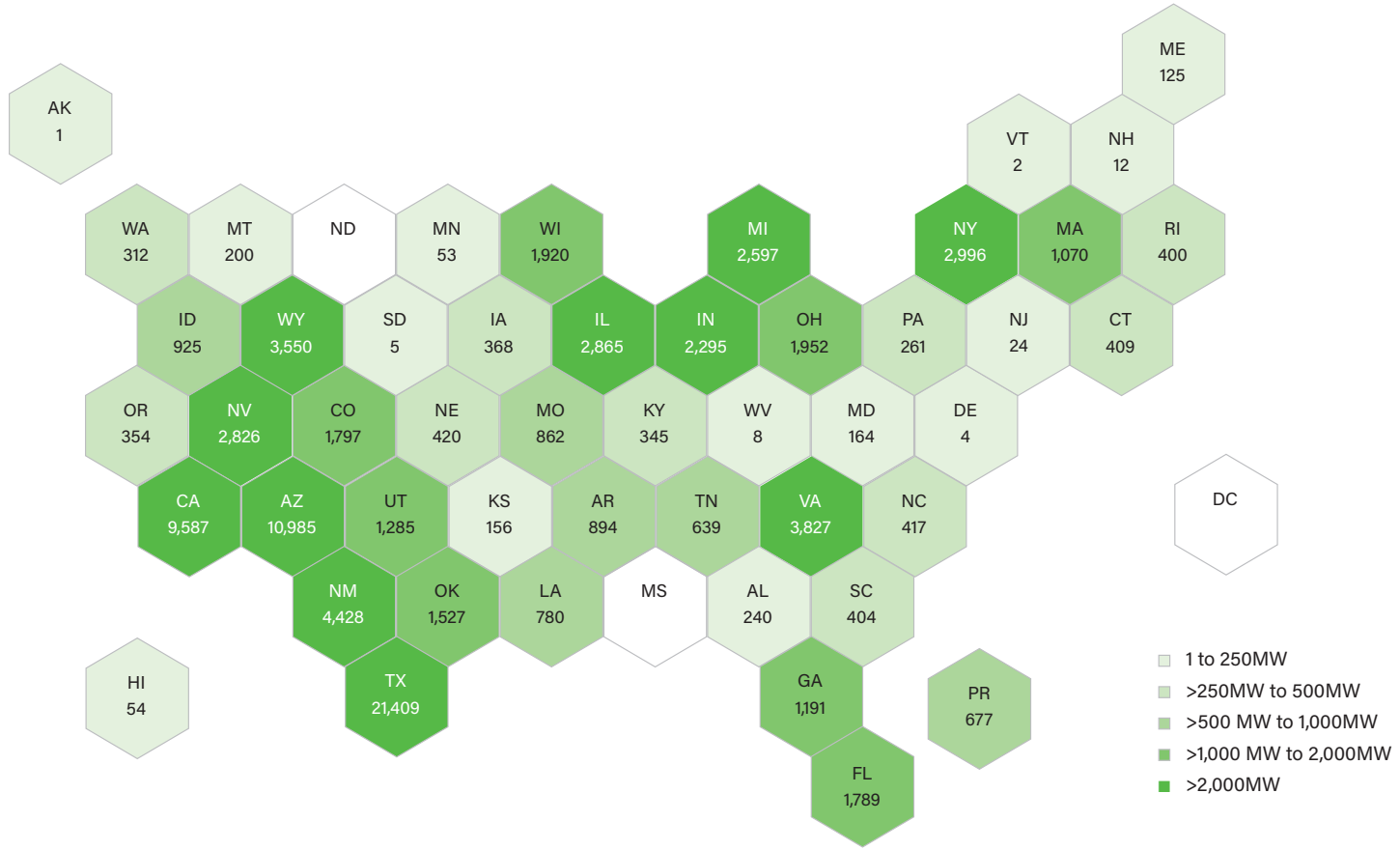

## Offshore Wind Pipeline, Q1 2023 – Q1 2026



# Clean Power Construction Activity

- At the end of the quarter, construction was underway at 89,409 MW of clean power projects. Across 48 states and Puerto Rico, 604 projects were under construction. Nineteen states had at least 1 GW of project capacity under construction.
- Texas (21.4 GW), Arizona (11.0 GW), and California (9.6 GW) maintained their positions as the top three states for capacity under construction. Combined, almost two-thirds of capacity under construction was located in these three states.
- Texas was the top state for solar (12.3 GW) and battery storage (6.8 GW) capacity under construction. Arizona ranked second for solar (5.5 GW) and third for battery storage (5.0 GW) while California ranked second for battery storage (5.1 GW) and third for solar (4.3 GW).
- The top three states for land-based wind under construction were New Mexico (3.7 GW), Wyoming, (3.6 GW), and Texas (2.3 GW). At 2.6 GW, Virginia had the most offshore wind capacity under construction.

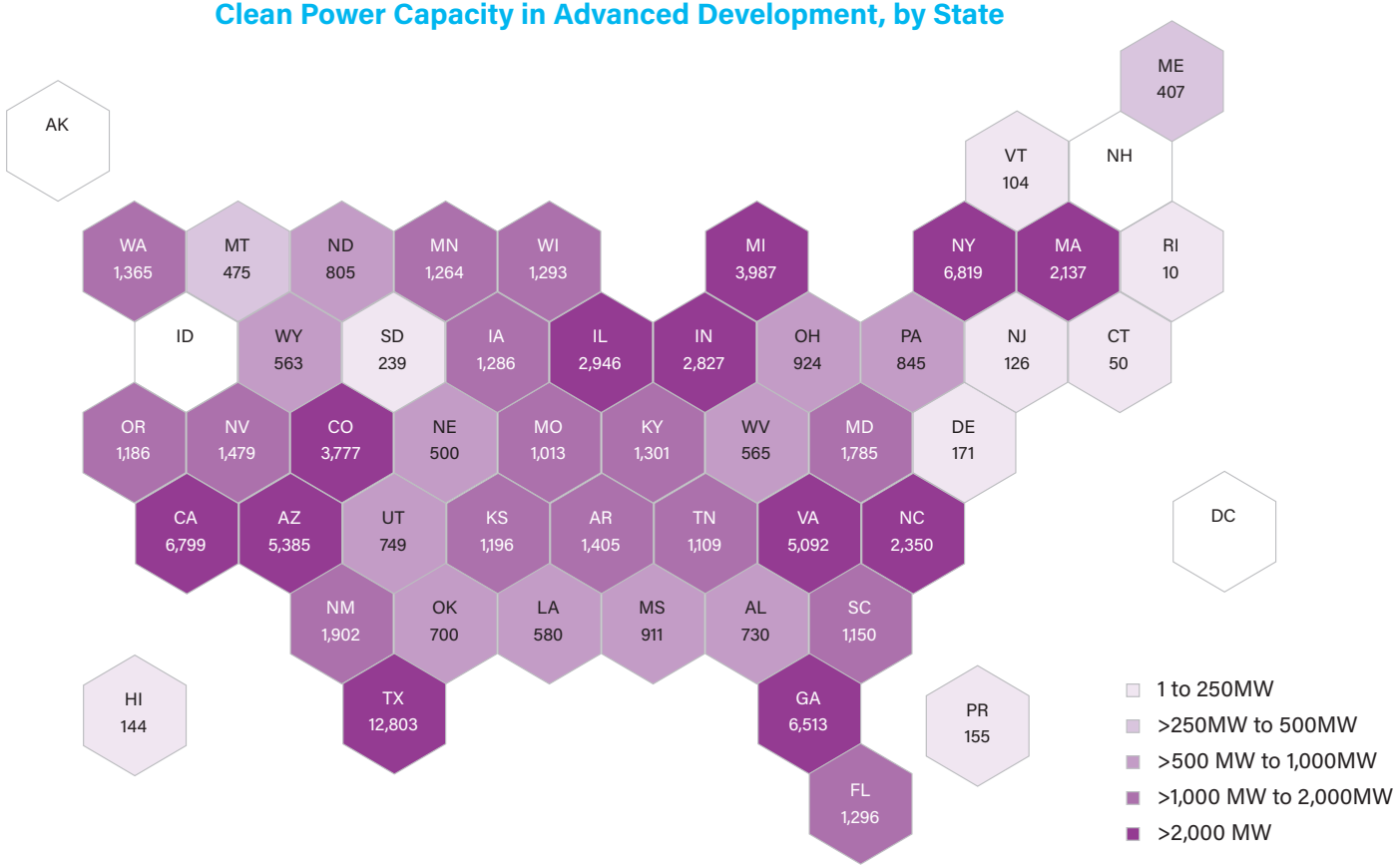
## Clean Power Capacity Under Construction, by State



# Clean Power Advanced Development Activity

- At the end of the quarter, 105,935 MW of project capacity was reported to be in advanced development, spanning 47 states and Puerto Rico. Twenty-seven states had more than 1 GW of projects in advanced development.
- At 12.8 GW, Texas was the only state to have more than 10 GW of advanced development projects. New York (6.8 GW), California (6.8 GW), Georgia (6.5 GW), Arizona (5.4 GW), and Virginia (5.1 GW) were the only other states to have over 5 GW of advanced development projects.
- By technology, Texas was the top state for solar (7.1 GW) and land-based wind (2.6 GW) capacity in advanced development. California ranked first for battery storage (4.6 GW).
- Accounting for 57%, utility-scale solar continued to make up the bulk of advanced development pipeline. Rising to 27%, battery storage continued to grow its share in the advanced development while land-based wind and offshore wind dropped to 12% and 4%, respectively.

## Clean Power Capacity in Advanced Development, by State




Offshore wind capacity is attributed to states based on the state that awarded ORECs or PPAs to the projects.

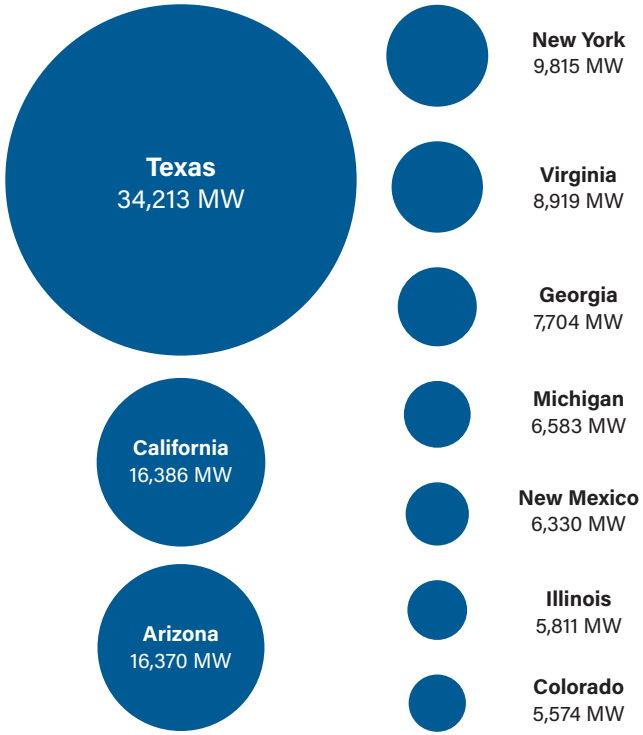
ACP defines advanced development as projects not under construction, but with a PPA, firm equipment order, or moving forward with plans to be placed under utility ownership as of the end of that quarter.

CLEAN POWER CAPACITY GROWTH

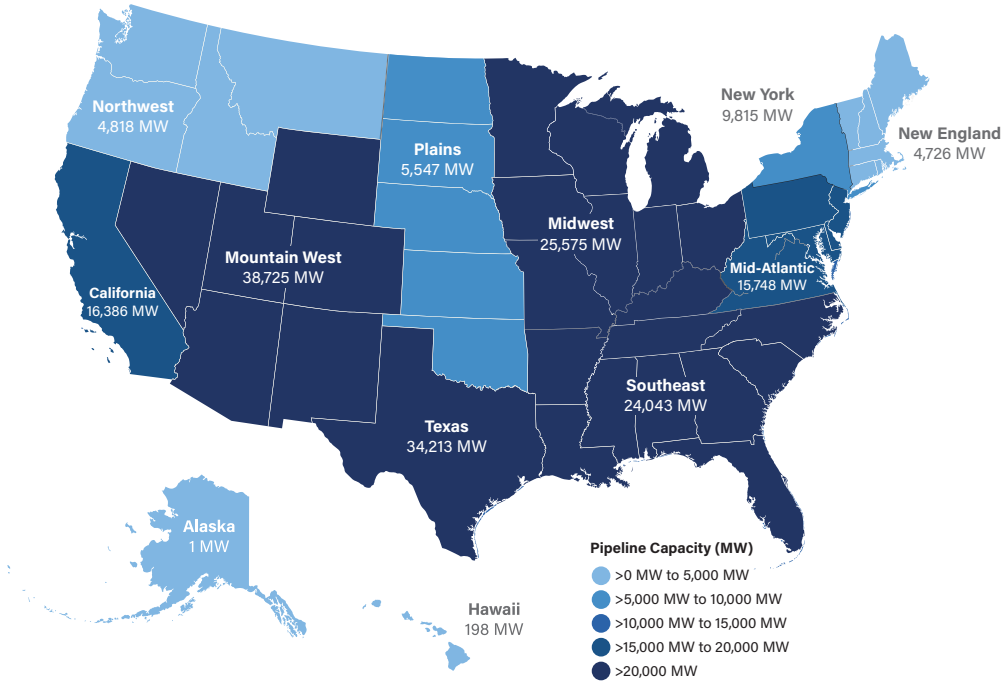
# Clean Power Pipeline by State and Region

- Across all 50 states and Puerto Rico the clean power project pipeline rose to 195,344 MW at the end of Q1.
- Texas led the nation in terms of pipeline clean power capacity, with 34.2 GW of projects in development. Texas was followed by California (16.4 GW) and Arizona (16.4 GW), the only other states to cross the 10 GW threshold.
- In total, 11 states had more than 5 GW of clean power projects in the pipeline and 33 states had over 1 GW of pipeline capacity.
- Notably, 11 states are expected to double their operational fleets based on the size of their project pipeline. This includes states like Arizona, New York, and Virginia, which already rank in the top five for pipeline clean power capacity.
- At 38.7 GW, the Mountain West is the region with the highest volume of clean power capacity in the pipeline, followed by Texas (34.2 GW) and the Midwest (25.6 GW).
- When accounting for all energy technologies in development, including coal and natural gas, the region with the highest share of clean power capacity in late-stage development was New England, which only had solar, land-based wind, offshore wind, and battery storage facilities in development. By contrast, the plains was the region with the lowest share of capacity in late-stage development from clean power sources (57%).

## Top States, Clean Power Development Capacity

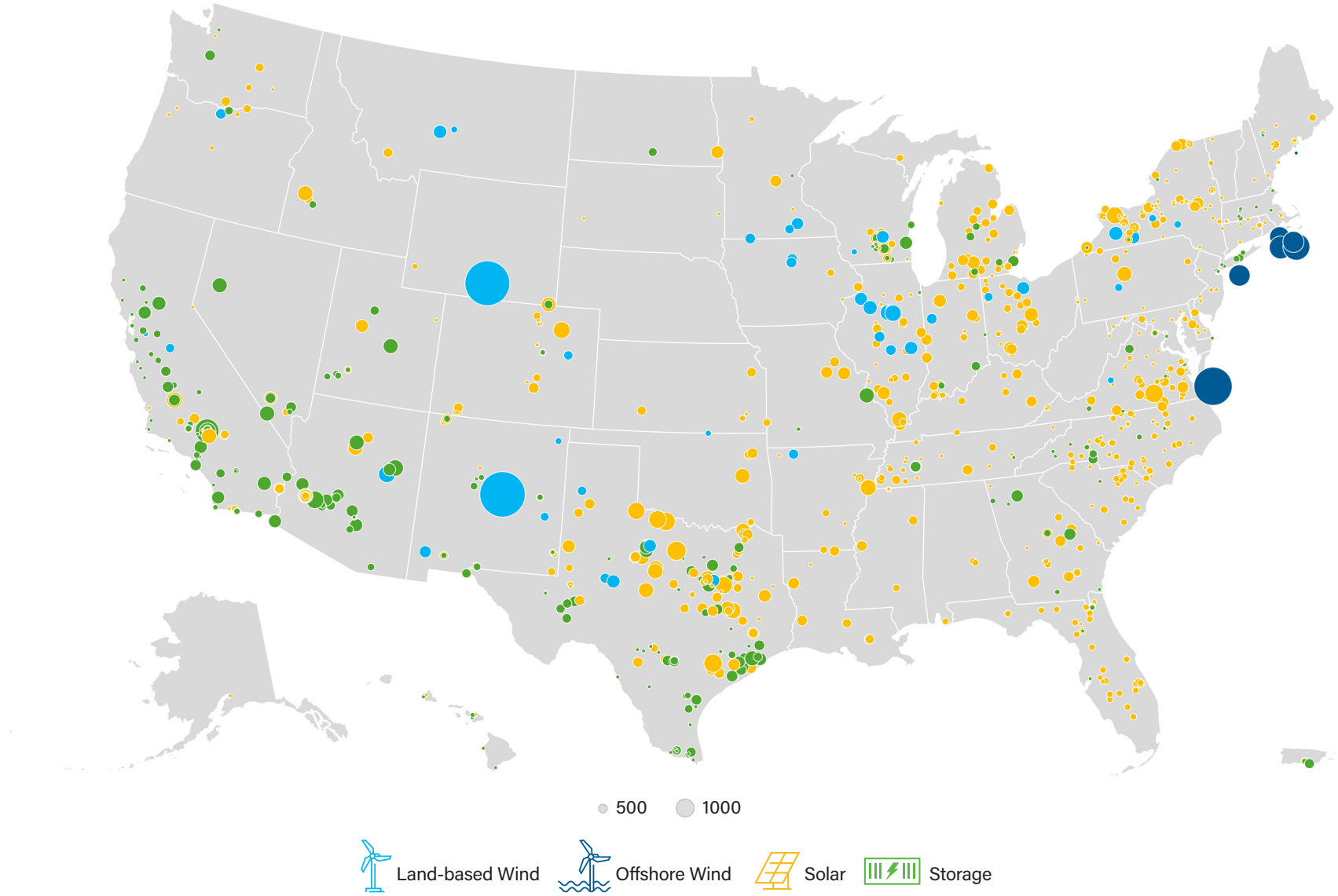



## Clean Power Development Capacity by Region



CLEAN POWER CAPACITY GROWTH

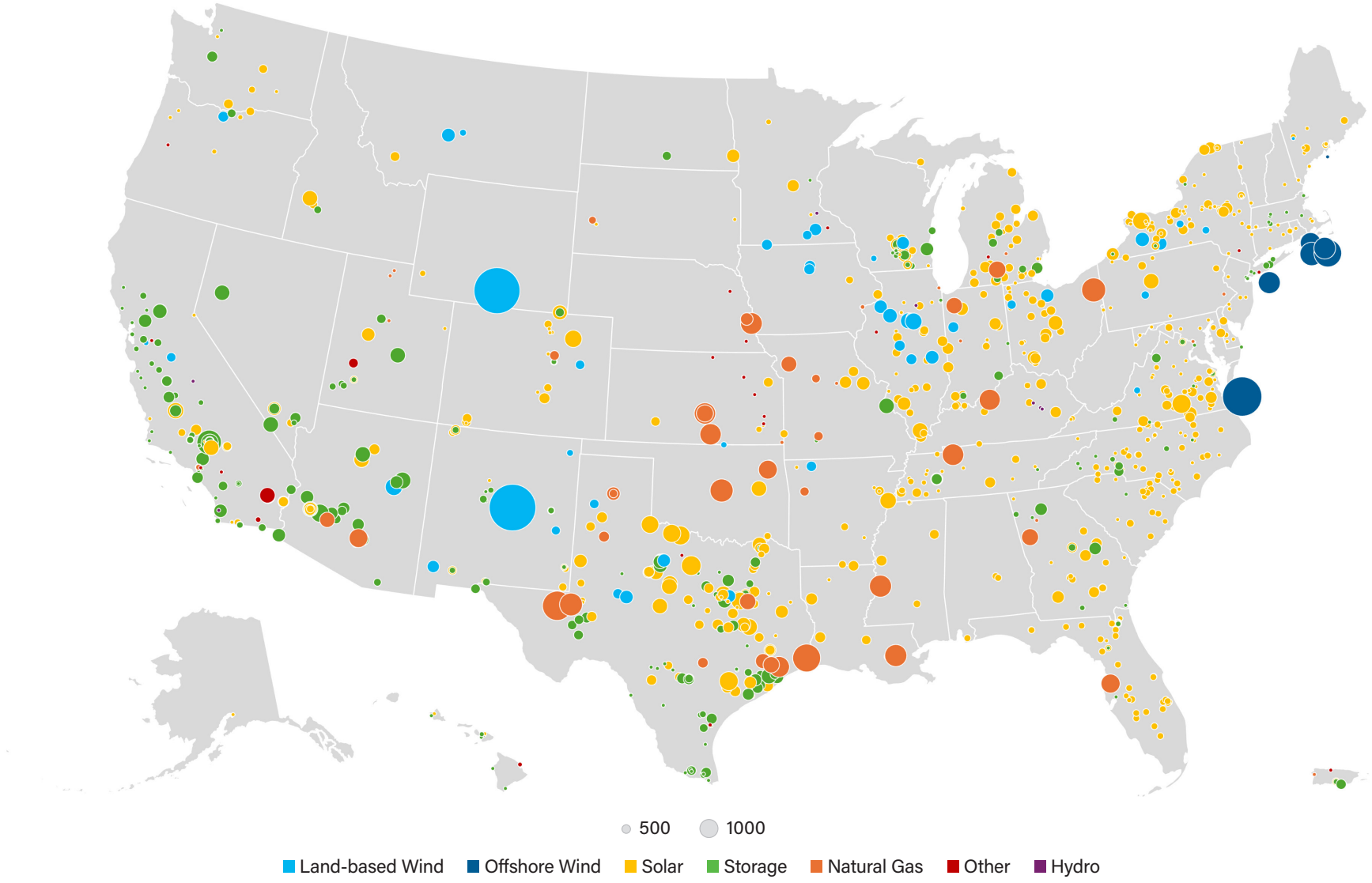
# Projects in the Pipeline




Map displays projects only where exact location information (latitude and longitude) is known.

CLEAN POWER CAPACITY GROWTH

# Projects in the Pipeline, all Technologies

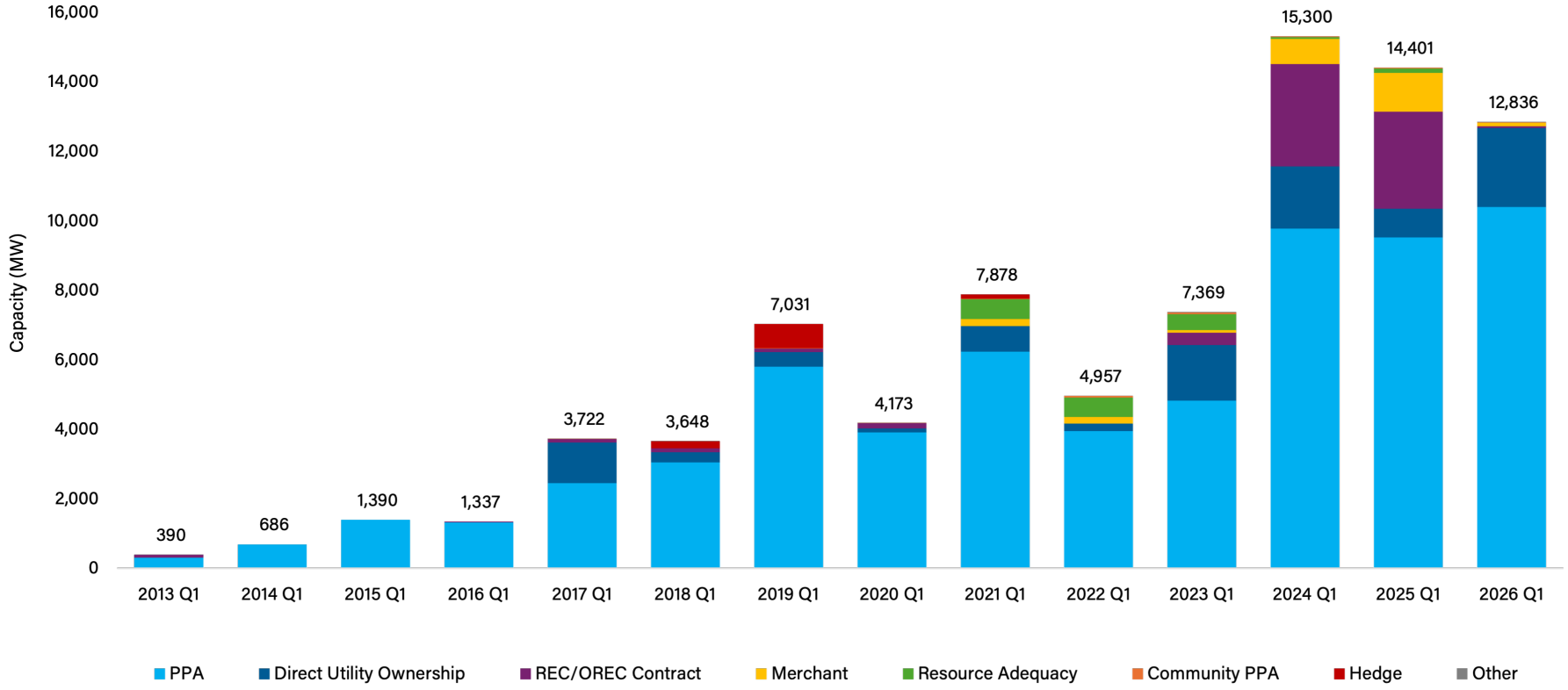



Map displays projects only where exact location information (latitude and longitude) is known.
Map only includes facilities that have received regulatory approval or are under construction
Source: EIA 860 March 2026

# Offtake Announcements Over Time

- Clean power purchasers announced 12.8 GW of offtake arrangements throughout the first quarter of 2026, roughly 1.6 GW less than Q1 2025. Year-over-year, total offtake announcements fell 11%.
- However, by individual offtake mechanism, capacity contracted via PPAs and direct-use from utility ownership rose significantly. Each offtake mechanism had a record-breaking Q1.
- PPAs are the dominant offtake mechanism for clean energy projects, making up 81% of all Q1 offtake announcements. During the first quarter, PPAs grew 9% year-over-year with 10.4 GW contracted. This marks the strongest Q1 for PPA announcements on record.
- Direct-use of utility-owned assets also recorded the strongest Q1 for offtake announcements. Developers and utilities contracted 2.3 GW of direct-use offtake agreements in Q1 2026, a sharp 174% increase year-over-year. Direct-use from utilities accounted for 18% of all offtake announced.
- Other offtake arrangements made up just over 1% of announcements for the quarter.

## Q1 Clean Power Offtake Announcements Over Time

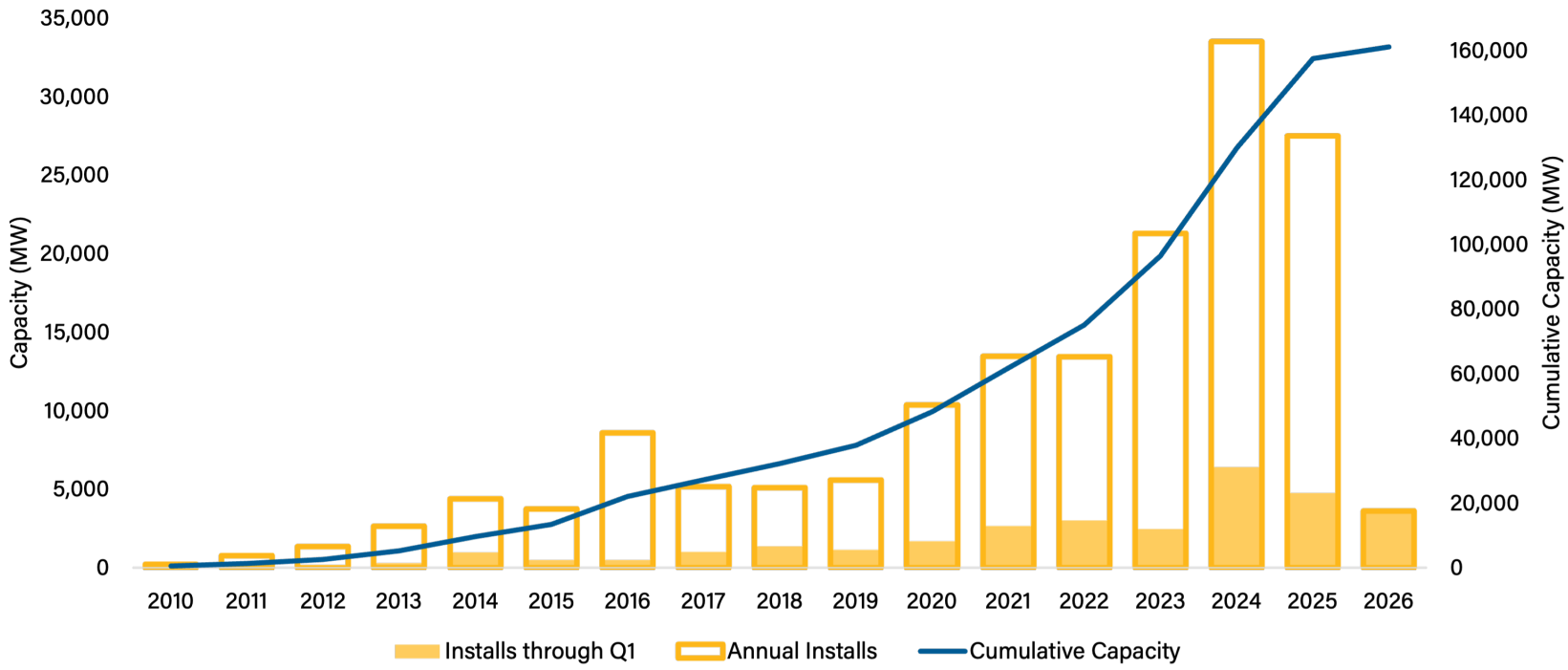


UTILITY-SCALE SOLAR

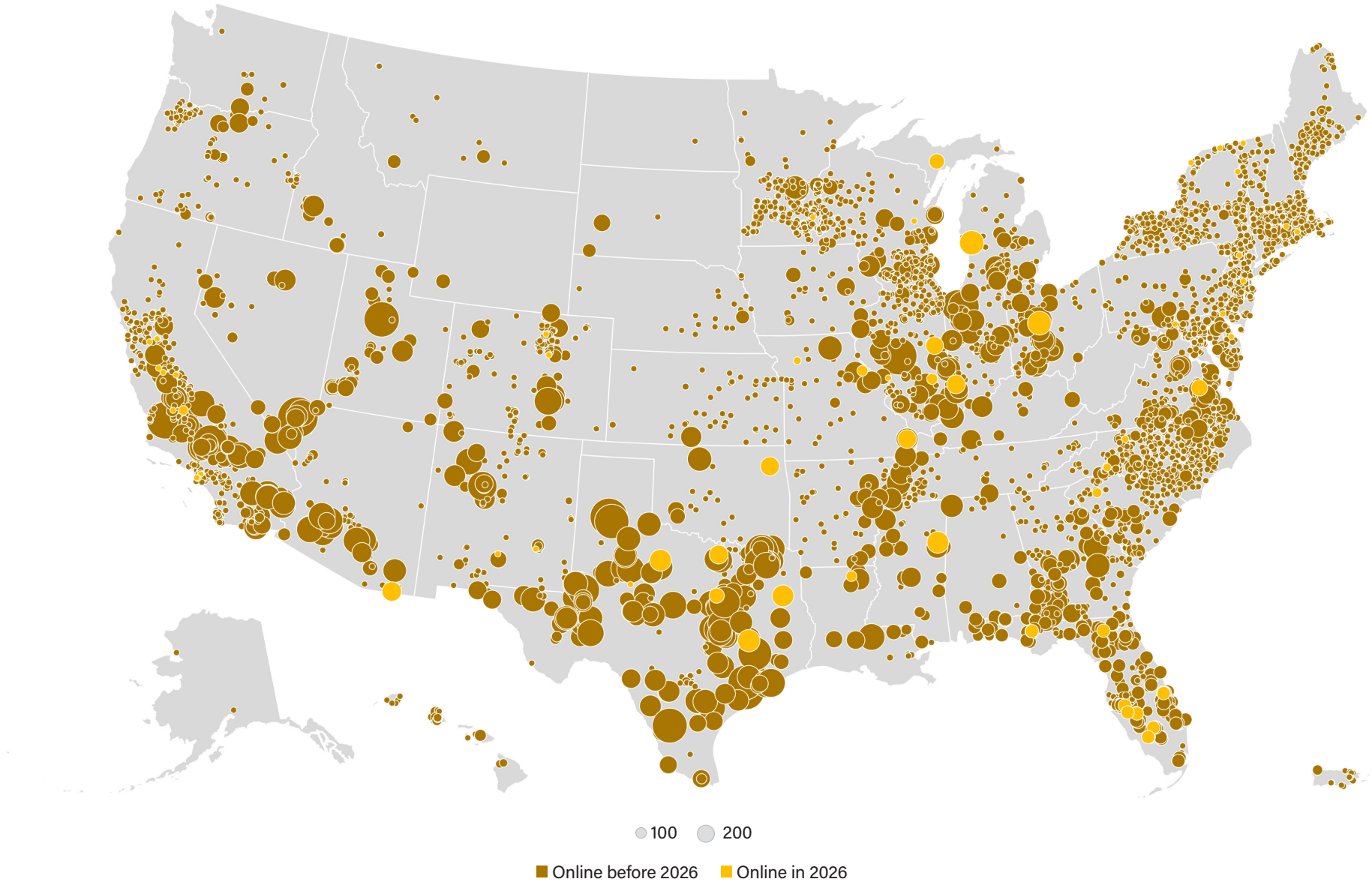
# Q1 2026 Utility-Scale Solar Deployments

- U.S. developers added 3,625 MW of utility-scale solar capacity to the grid in Q1, ranking third for most solar capacity installed in the first quarter, behind 2024 and 2025. For the past three years, fourth quarter solar installations have more than doubled the first quarter solar installations.
- At the end of Q1 2026, the cumulative operational solar capacity in the U.S. reached 161,109 MW. Utility-scale solar is operational in all 50 states, the District of Columbia, and Puerto Rico.
- The largest utility-scale solar project that was energized in Q1 2026 was the 250 MW Muskegon County Solar Project located in Michigan. This project marks the largest utility-scale solar project for Consumers Energy, the developer and owner of the project.

## U.S. Annual and Cumulative Utility-Scale Solar Capacity Growth



# Geography of Utility-Scale Solar



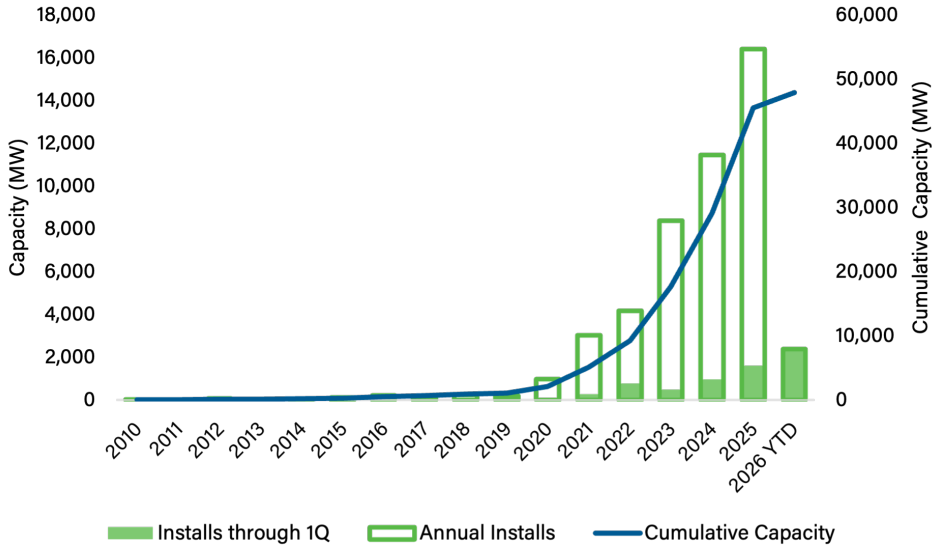

Map displays projects only where exact location information (latitude and longitude) is known.

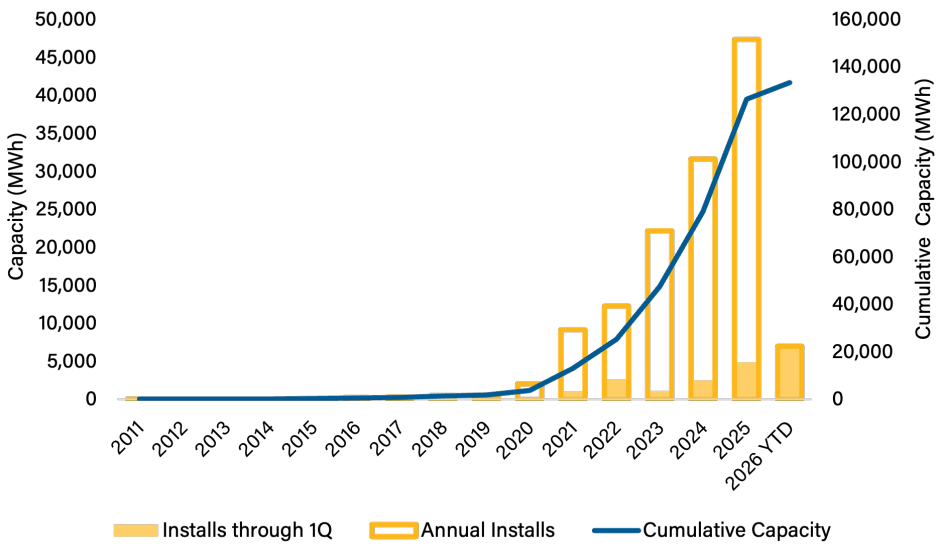
UTILITY-SCALE ENERGY STORAGE

# Q1 2026 Energy Storage Installations

- Developers commissioned 40 new utility-scale battery storage projects in the first quarter, adding 2,382 MW/6,994 MWh of new capacity to the grid, bringing the cumulative capacity to 47,860 MW/133,356 MWh.
- Q1 2026 was the strongest first quarter for battery storage additions, with over 48% more capacity added this quarter compared to Q1 2025, the previous record for installations in the first quarter.
- Battery storage accounted for over one-third (37%) of all clean power capacity additions in Q1 2026.
- At the end of Q1 2026, there was 23,245 MW of storage capacity under construction, a 13% year-over-year increase compared to Q1 2025, with 20,640 MW under construction.

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

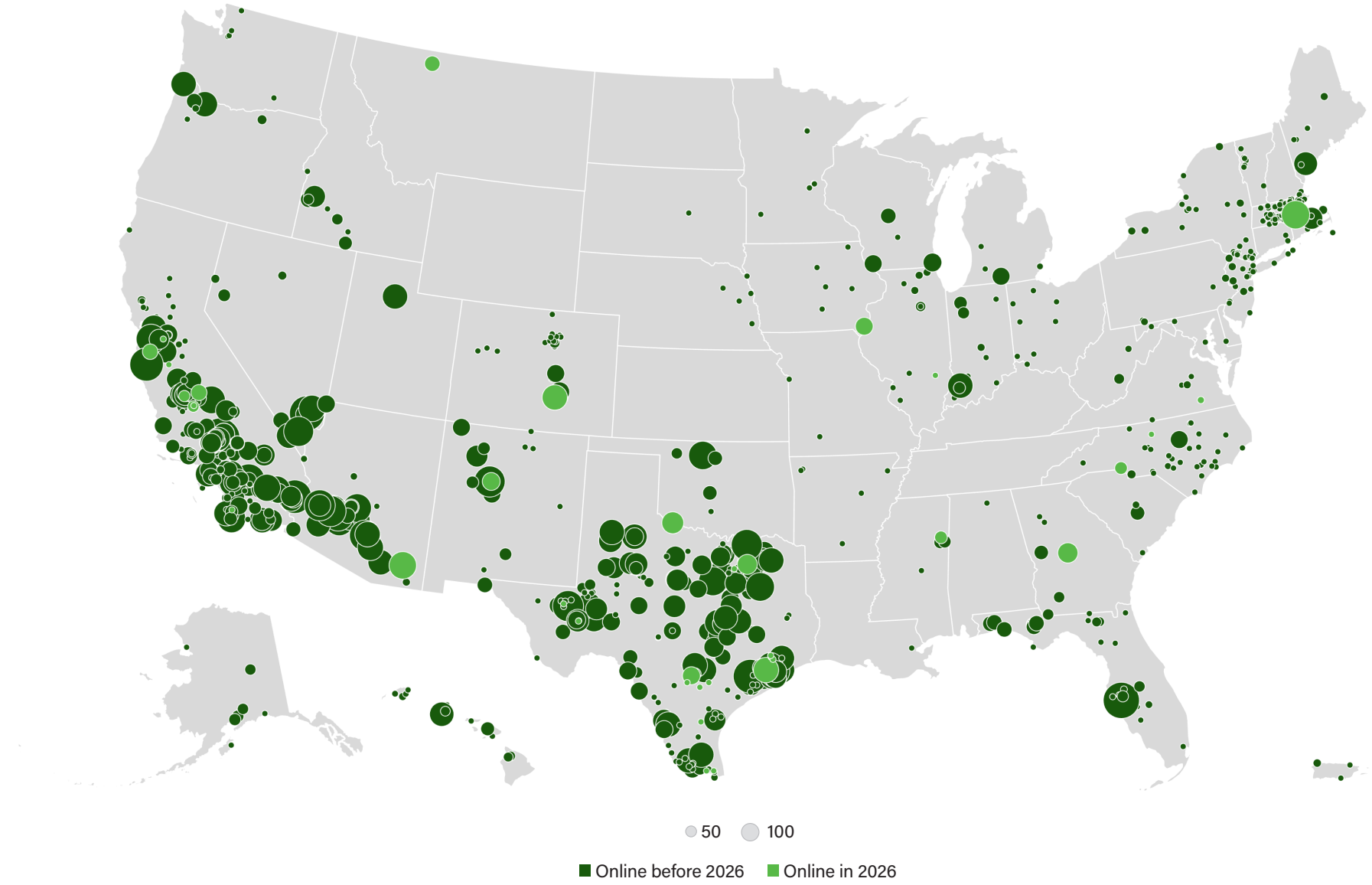



Note: Battery storage capacity is tracked in terms of rated power capacity (MW), the maximum possible instantaneous discharge, and energy capacity (MWh), the maximum amount of stored energy.

UTILITY-SCALE ENERGY STORAGE

# Geography of Energy Storage

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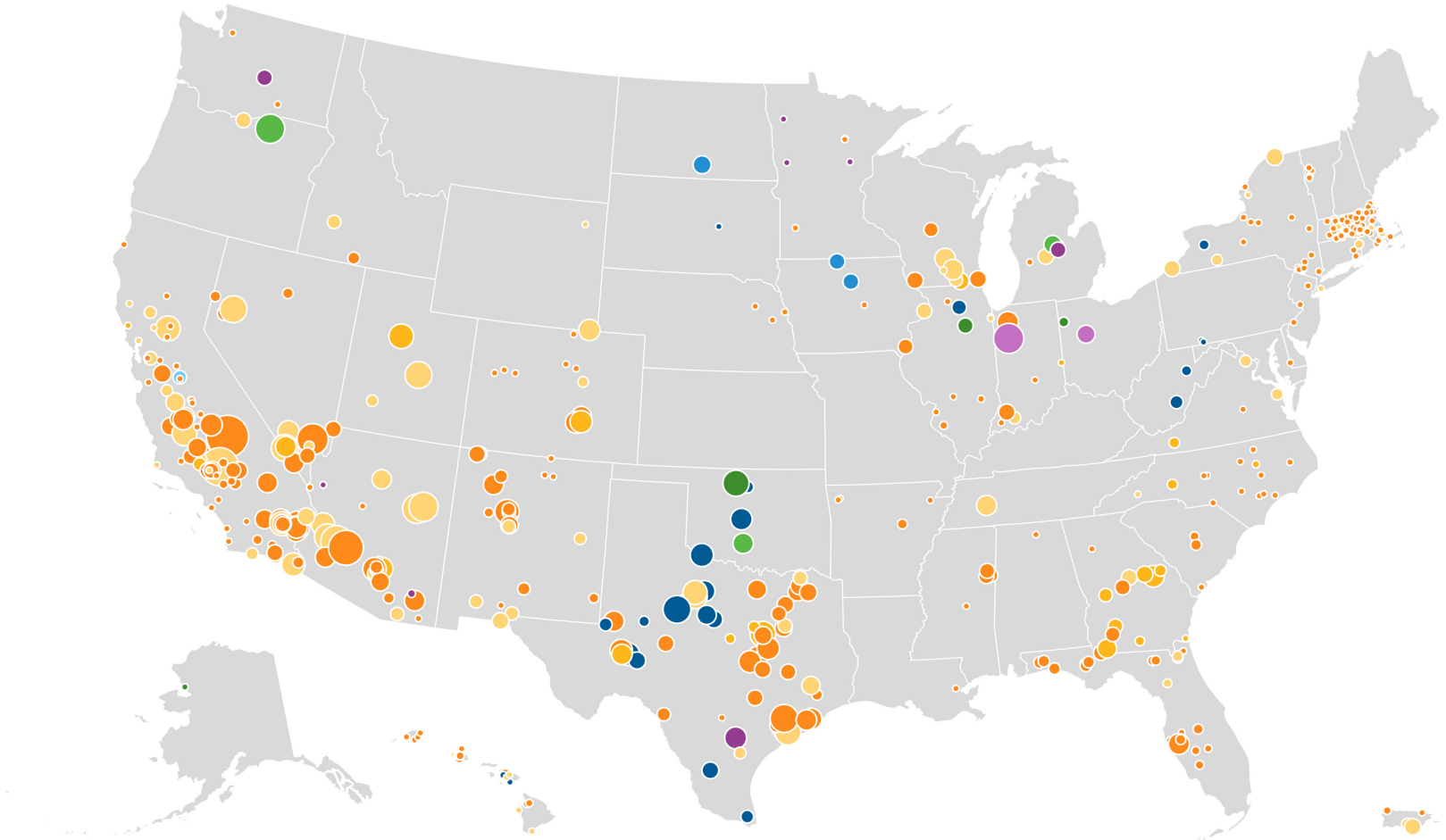
HYBRID PROJECTS

# Geography of Hybrid Projects



**Capacity**
- 50 MW
- 100 MW

**Solar + Storage**
- Online
- Partially Online
- Pipeline

**Wind + Solar**
- Online
- Partially Online
- Pipeline

**Wind + Storage**
- Online
- Partially Online
- Pipeline

**Wind + Solar + Storage**
- Online
- Partially Online
- Pipeline

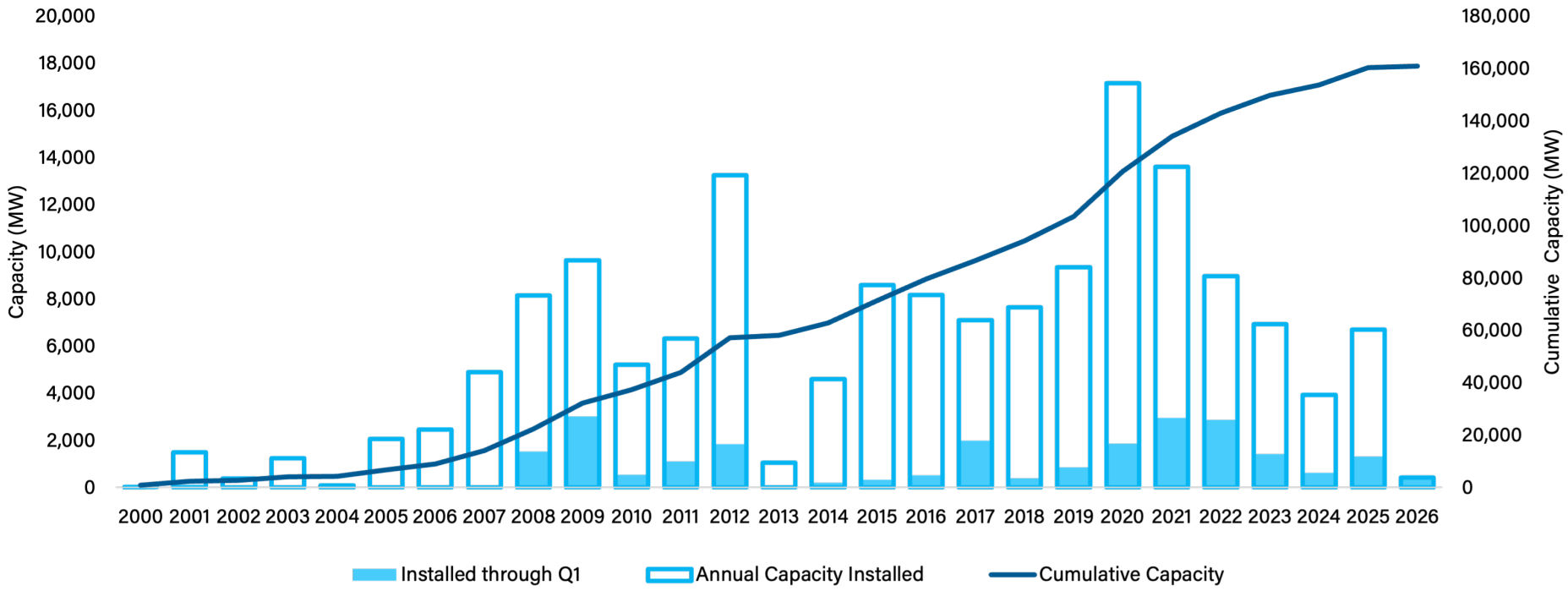
Note: The pipeline consists of projects fully in development and not yet operating phases of partially online projects. Map displays projects only where exact location information (latitude and longitude) is known.

LAND-BASED WIND ACTIVITY

# Q1 2026 Land-Based Wind Installations

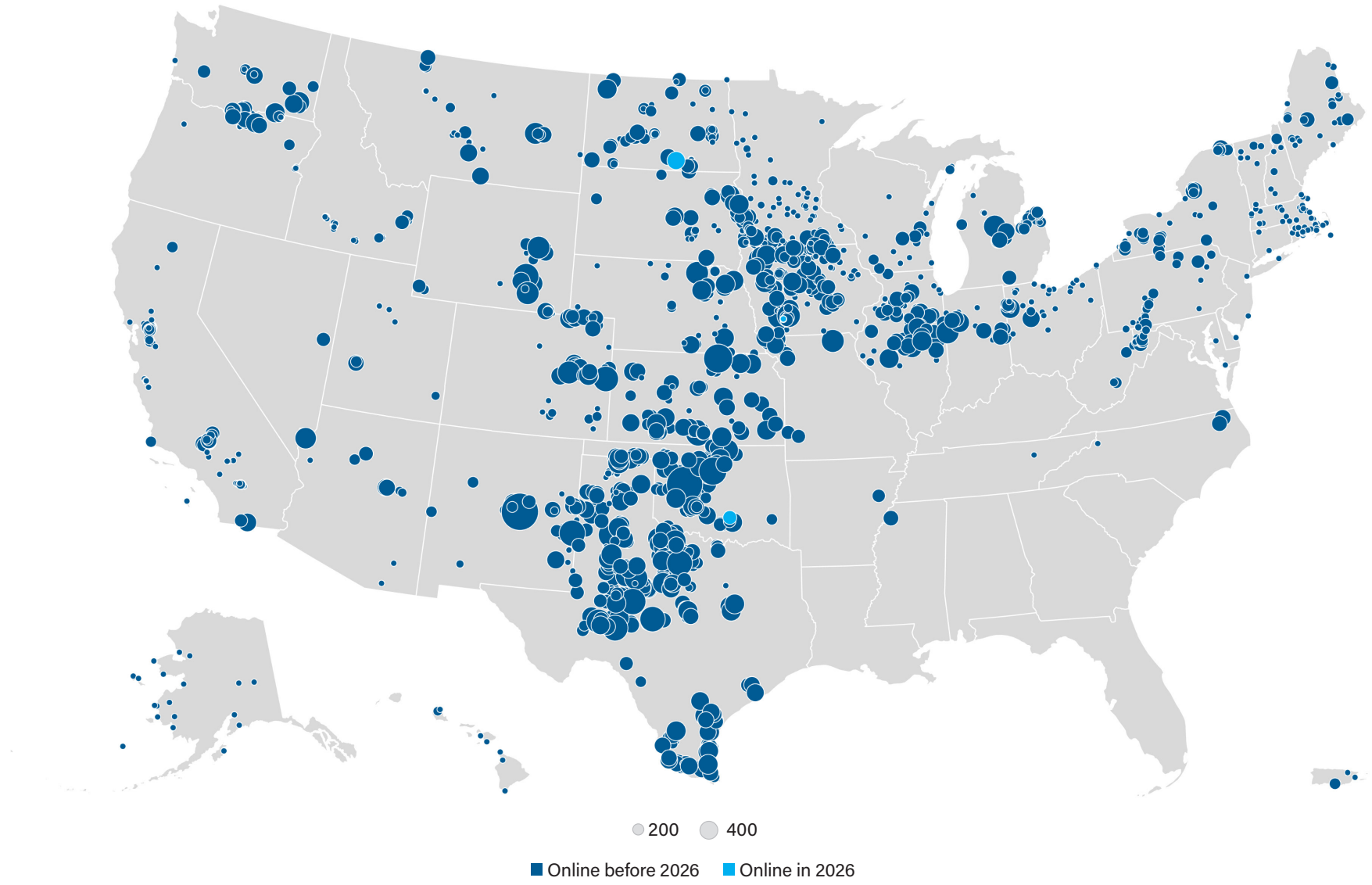
- Project developers commissioned 415 MW of land-based wind capacity in Q1 2026 from three projects, consisting of 129 turbines. An additional 18 MW of capacity was brought online through repowerings. Cumulative land-based wind power in operation rose to 160,878 MW.
- With light additions to start the year, Q1 2026 was the slowest first quarter for land-based wind installations since 2018. The industry saw some recovery in 2025 with nearly 7 GW of new capacity brought online. However, permitting delays and freezes for wind turbines have once again slowed development.
- Quarterly land-based wind installations have averaged 1.3 GW over the last two years. Low installation quarters fell near 500 MW, while the highest quarter (2025 Q4) hit 3.3 GW. Although Q1 2026 additions were low, the drift between quarters for new installations is minimal, ranging between just 1-3 GWs.
- Ørsted's 250 MW Badger Wind Project in North Dakota was the largest land-based wind project to begin commercial operations during the quarter. The project features 92 GE 2.8-127 turbines, spanning Logan and McIntosh counties. Power from the project will be purchased by Montana-Dakota Utilities.

## U.S. Annual and Cumulative Land-Based Wind Capacity Growth



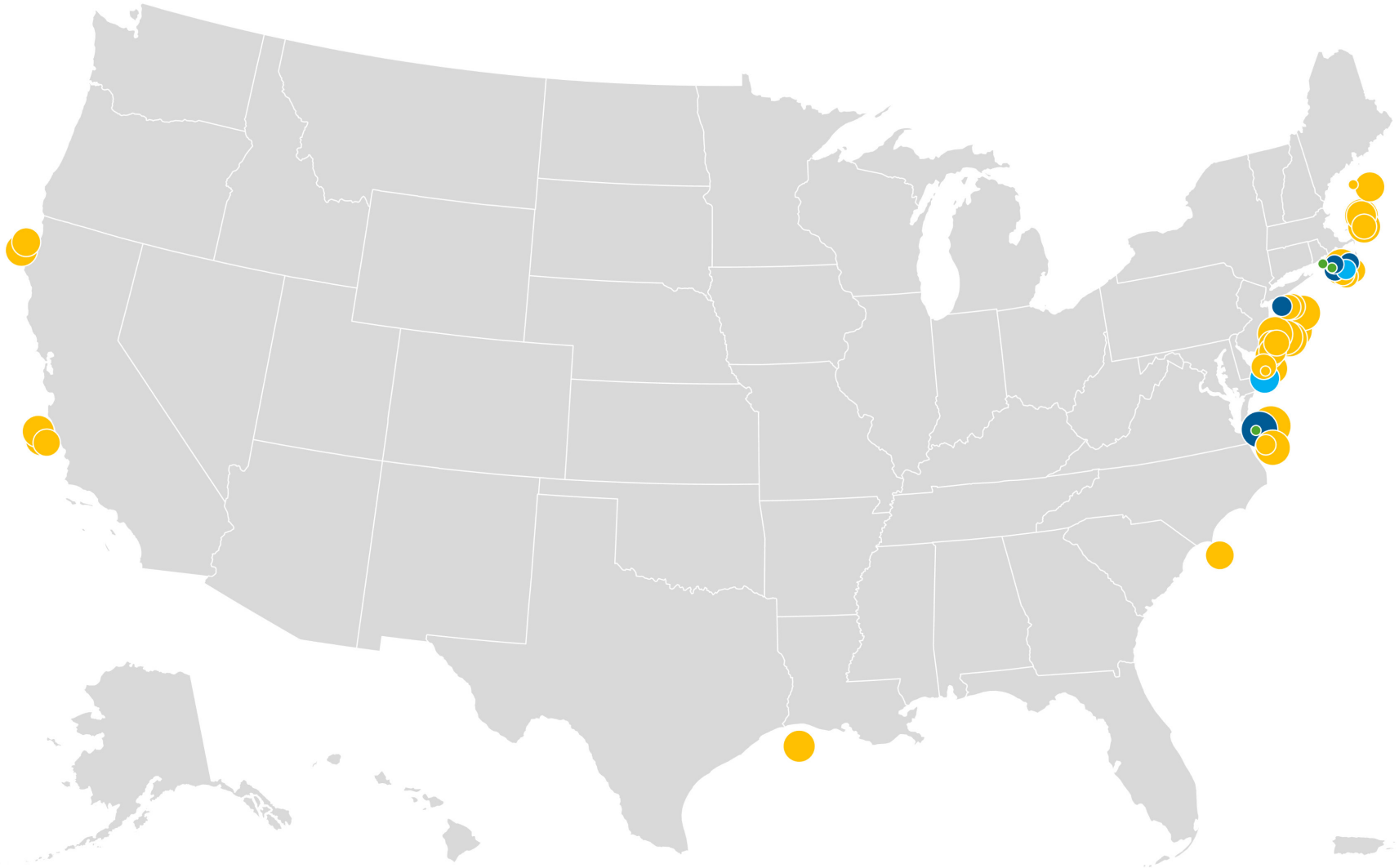
LAND-BASED WIND ACTIVITY

# Geography of Land-Based Wind



OFFSHORE WIND ACTIVITY

# Geography of Offshore Wind




Map denotes projects as of the end of Q1 2026. As such, it includes Bluepoint Wind and Golden State Wind as Early Development projects. On April 27, 2026, Ocean Winds reached an agreement with DOI to relinquish the Bluepoint and Golden State offshore lease areas.

The American Clean Power Association (ACP) is the leading voice of today's multi-tech clean energy industry, representing energy storage, wind, utility-scale solar, clean hydrogen, and transmission companies. ACP is committed to meeting America's energy and national security goals and building our economy with fast-growing, low-cost, and reliable domestic power.

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