

AWEA State RPS Market Assessment 2017

Released September 26, 2017





AWEA sincerely thanks its member companies and other organizations for their contribution to this report. Review of the analysis and methodology was provided by AWEA's Regional Partners.

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Executive Summary

Across the United States, 29 states and the District of Columbia have implemented Renewable Portfolio Standards (RPS). These require utilities serving customers in a state to supply a specified percentage of their electricity from renewable resources by a certain year. This report aims to estimate near-term demand for wind and other renewables from these state RPS programs, accounting for compliance to date. The report looks out to the year 2025, when the majority of RPS requirements must be met in full, to determine the amount of additional renewable energy needed to fulfill RPS requirements. For states with RPS targets beyond 2025, the report includes state-specific estimates through the final RPS target year.

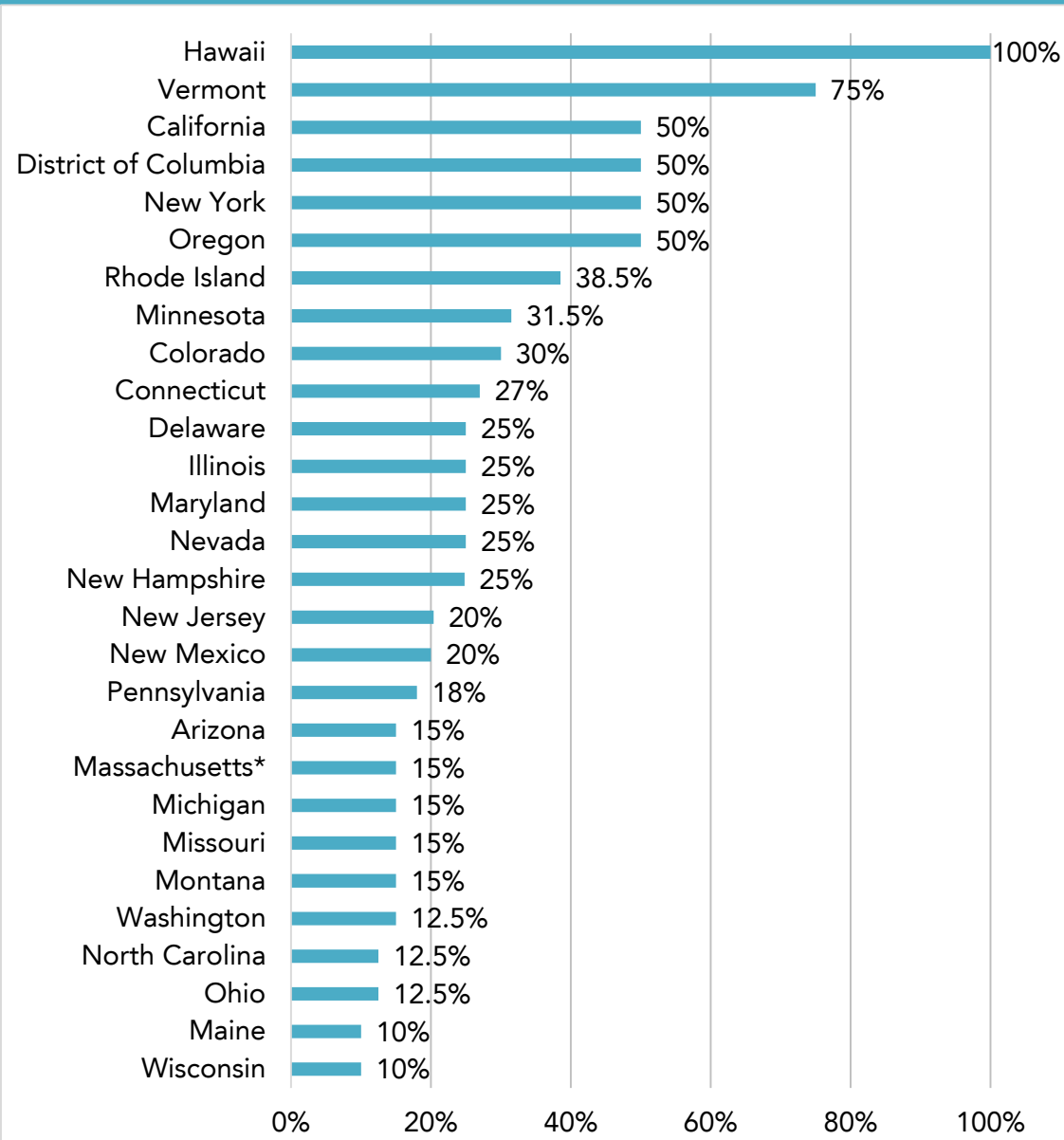
Wind energy has historically been the renewable technology of choice to meet RPS requirements, representing 61% of RPS-related capacity additions to-date, according to Lawrence Berkeley National Lab. Given the success of RPS programs in driving significant wind energy development, this report takes a detailed look at RPS requirements to assess the incremental RPS resource need or “demand” that wind is eligible to meet, as well as the RPS demand that wind is expected to capture going forward.

In this report, readers will learn more about:

- Characteristics of RPS programs in each state
- Recent RPS policy activity
- Wind-eligible and expected wind RPS demand
- Nationwide RPS demand
- Regional RPS demand
- State by state RPS demand
- AWEA’s methodology and assumptions

Executive Summary

Current RPS Target Percentages



State RPS Targets

- State RPS targets range widely from 10% to 100% renewable energy.
- Hawaii and Vermont lead the nation with the highest targets as a percentage of electricity sales, at 100% by 2045 and 75% by 2032, respectively.
- Three states - California, Oregon, and New York - and the District of Columbia have RPS targets of 50%.
- 15 states, half of all RPS states, now have targets of 25% or greater.
- *Massachusetts' target is 15% by 2020, with an additional 1% each year thereafter.
- Iowa and Texas require specific amounts of renewable capacity rather than percentage targets.
- Five states reach their terminal RPS year in 2020, with five more states reaching their terminal RPS year in 2021 and six states in 2025. Nine states have RPS targets beyond 2025.

Executive Summary

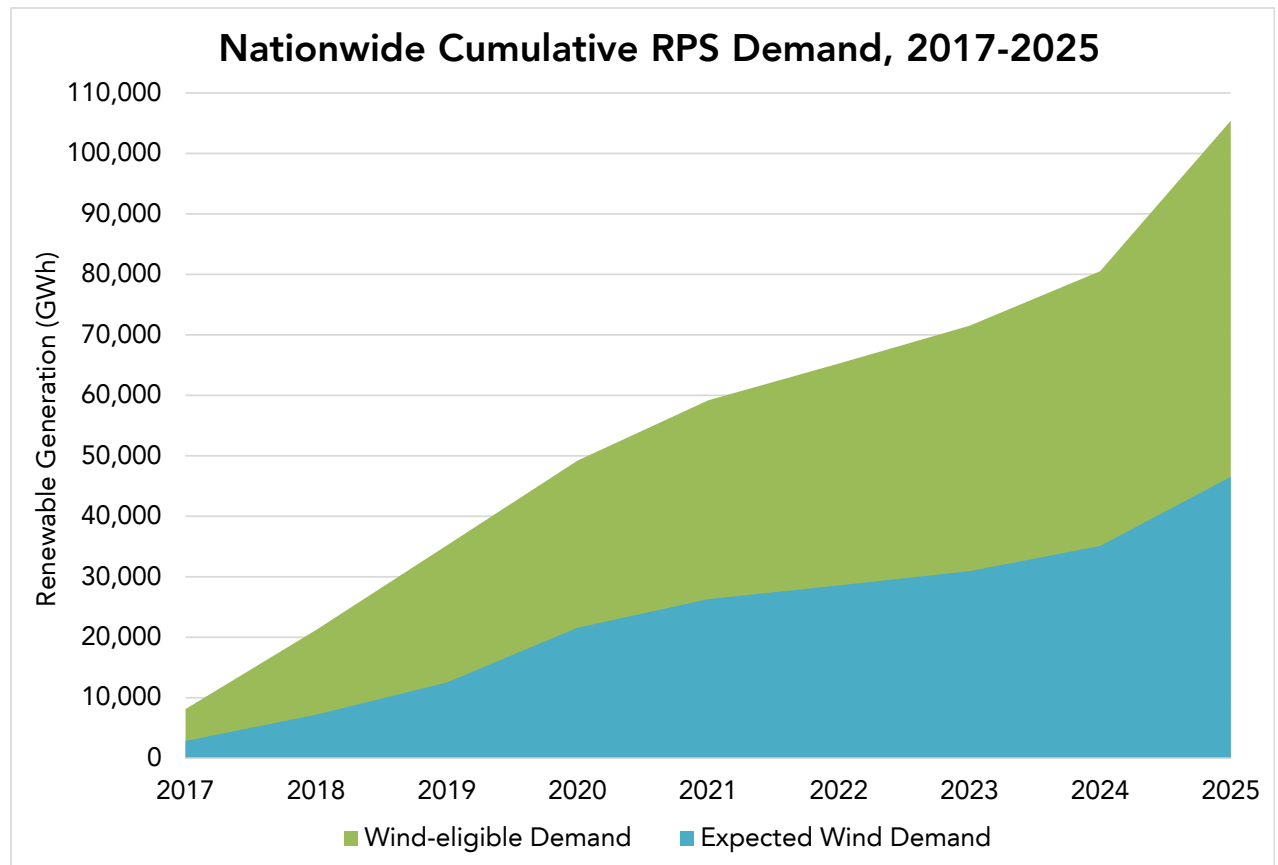
Nationwide RPS Demand

Wind-eligible Demand

- Through 2025, states need approximately 105 terawatt hours (TWh) of incremental renewable energy generation to meet wind-eligible RPS requirements. This is equivalent to 34.6 gigawatts (GW) of wind capacity.

Expected Wind Demand

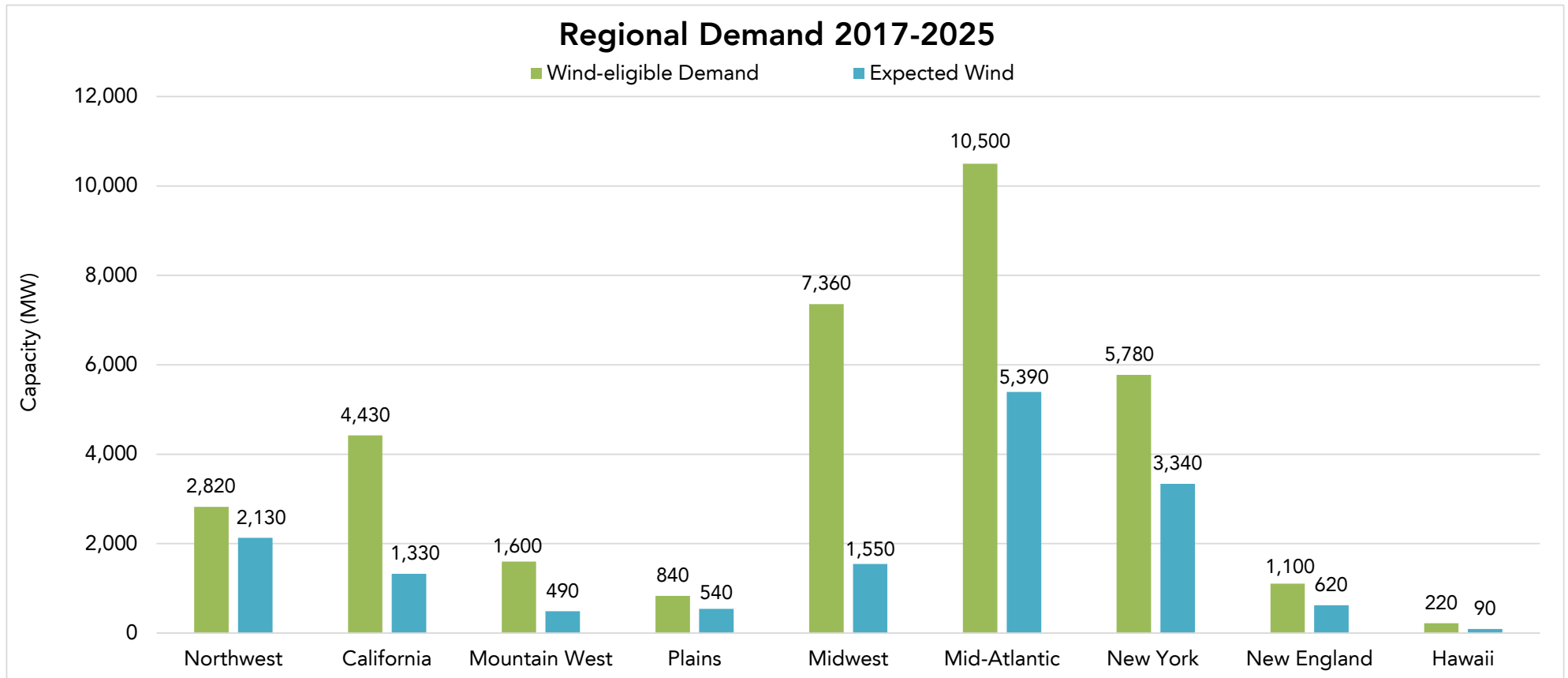
- AWEA estimates that RPS policies will drive the development of approximately 15.5 GW of new wind power capacity from 2017 through 2025.
- This amount of wind capacity would generate a total of 46.5 TWh of renewable electricity through 2025.



Executive Summary

Regional RPS Demand

- Through 2025, the Mid-Atlantic region has the greatest need for wind-eligible RPS resources, requiring an estimated 10,500 MW of renewable energy.
- The Midwest represents the second highest region for wind-eligible demand, at approximately 7,360 MW.
- New York as a single state represents the third highest region for wind-eligible demand, requiring approximately 5,780 MW.
- The Mid-Atlantic, Midwest, and New York are expected to add the most wind to comply with RPS policies, representing 70% of all expected wind RPS demand through 2025.
- The Mid-Atlantic region has the greatest expected wind demand, driving an estimated 5,390 MW of wind capacity.
- New York has the second highest expected wind demand at 3,340 MW, and the Northwest comes in third with 2,130 MW of wind.



Executive Summary

State RPS Demand

- New York leads the RPS states in expected wind demand, with 3,340 MW of wind expected through 2025. Ohio has the second highest demand with 1,630 MW of expected wind.
- The top five states in terms of expected wind demand are New York, Ohio, New Jersey, California, and Oregon. These five states contain 59% of all expected wind RPS demand.
- Washington, Maryland, Michigan, Pennsylvania, and Illinois round out the top ten states.
- Out of the top ten, California, Maryland, Michigan, New York, and Oregon have all increased their RPS targets since 2015, demonstrating the role of RPS policies in creating new demand for renewables.
- Two states (Montana and Wisconsin) have already met their RPS targets, and three states (Arizona, Massachusetts, and Vermont) do not require additional resources through 2025.

