

AWEA State RPS Market Assessment 2013



Executive Summary



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Berkshire Wind Power Project
Massachusetts
Photo: Berkshire Wind Power Cooperative

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Quick Start Guide to Methodology

- ◆ Collect RPS compliance information from utility filings and public utility commission (PUC) reports.
- ◆ Forecast electricity sales, by state, to 2025 and apply to RPS standard in 2025 to determine total required renewable energy generation. Determine interim renewable requirements based on RPS implementation structure.
- ◆ Determine annual incremental RPS requirement, adjust for requirement already fulfilled and verified in utility compliance filings and/or PUC reports. This establishes the total annual renewable generation additions necessary to meet the full-RPS requirement in 2025 → **Total RPS Demand.**
- ◆ Subtract unmet RPS requirements where wind energy is not eligible to count towards compliance → **Eligible-Wind-to-Comply RPS Demand.**
- ◆ Adjust for expectations of wind energy capturing RPS demand market share → **Expected-Wind-to-Comply RPS Demand.**
- ◆ Convert results to wind equivalent MW capacity values using state-specific capacity factors.

Across the United States, 29 states and the District of Columbia have established renewable portfolio standards (RPS), requiring utilities serving customers in each state to supply a targeted portion of their electricity from renewable resources. This report looks out to the year 2025, when most RPS requirements must be met in full, to determine the amount of incremental renewable energy demand that RPS programs will drive.

Wind energy has historically been the renewable technology of choice to meet RPS requirements, fulfilling 86% of RPS requirements through 2011*. Given the success of RPS programs in driving significant wind energy development, this report looks beyond total RPS requirements to assess the incremental RPS demand that wind is eligible to capture as well as the RPS demand that wind is expected to capture going forward.

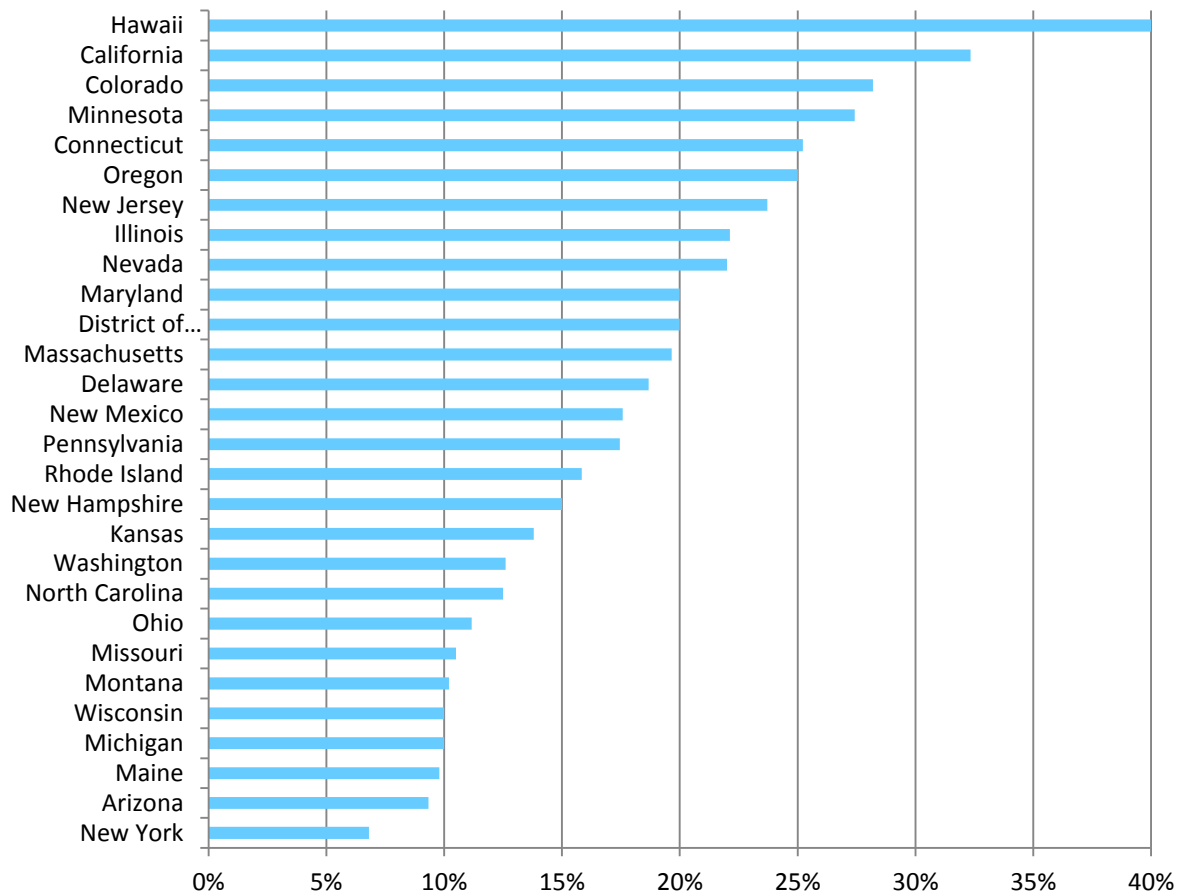
In this report, readers will learn more about:

- The structure of RPS programs in each state
- The amount of electricity sales obligated to meet RPS requirements
- The portion of RPS requirements that wind is eligible to fulfill
- Total, wind-eligible, and expected-wind RPS demand nationwide, by region, and by state
- Regional RPS demand
- State by state RPS demand

*Source: LBNL, 2012

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Effective Total RPS Requirement



RPS requirements are applicable to 2.4 billion GWh of electricity sales.

Six states—Hawaii, California, Colorado, Minnesota, Connecticut, and Oregon—have effective RPS requirements of 25% or greater.

Six states – Hawaii, California, Minnesota, Colorado, Oregon, Connecticut, and Nevada – provide wind the eligibility to meet 20% of total state electricity consumption through the RPS.

In 22 states, if wind were to capture 100% of wind-eligible RPS demand, at least 10% of electricity consumption would be wind generated.

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Total Incremental RPS Demand

Through 2025, RPS markets will drive the development of 189,800 GWh of renewable energy. This is more than 63 wind equivalent gigawatts (GWe) of new capacity.

The average annual requirement across 29 states and DC is 14,600 GWh, or 4.9 GWe.

Eligible-to-comply RPS Demand

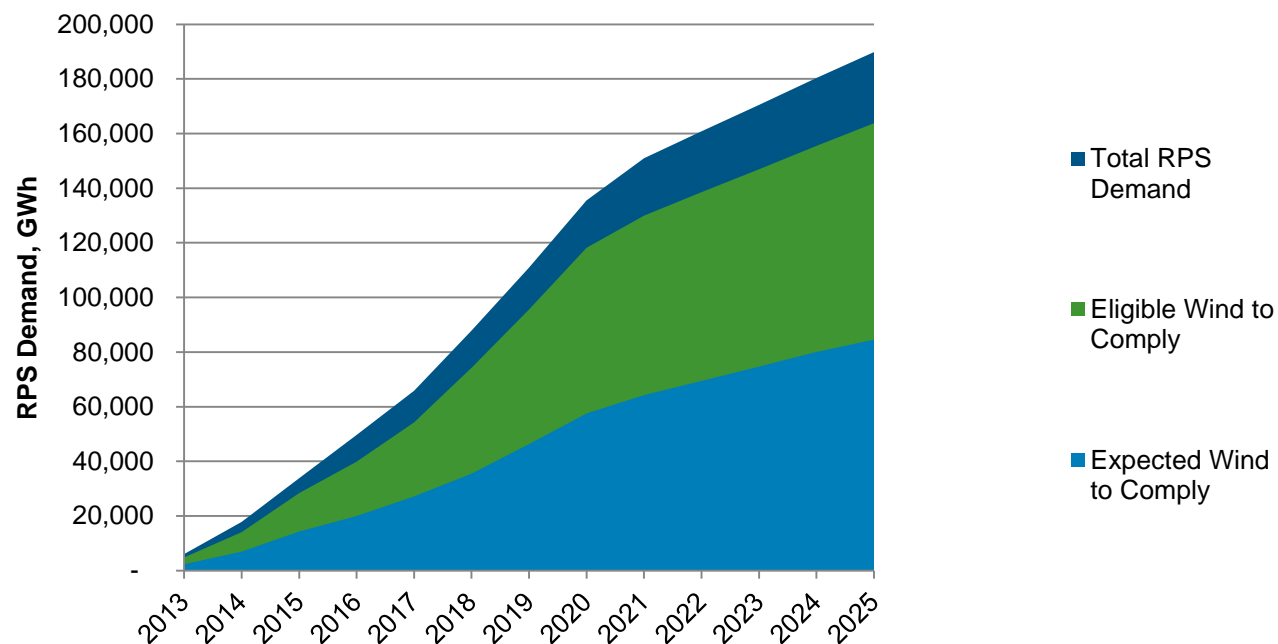
RPS demand where wind is an eligible resource approaches 164,000 GWh, or approximately 55 GWe.

Wind is eligible to meet approximately 86% of total incremental RPS Demand.

Expected-wind-to-comply RPS Demand

AWEA estimates that RPS markets will drive the development of approximately 28 GWe of wind power capacity from 2013-2025.

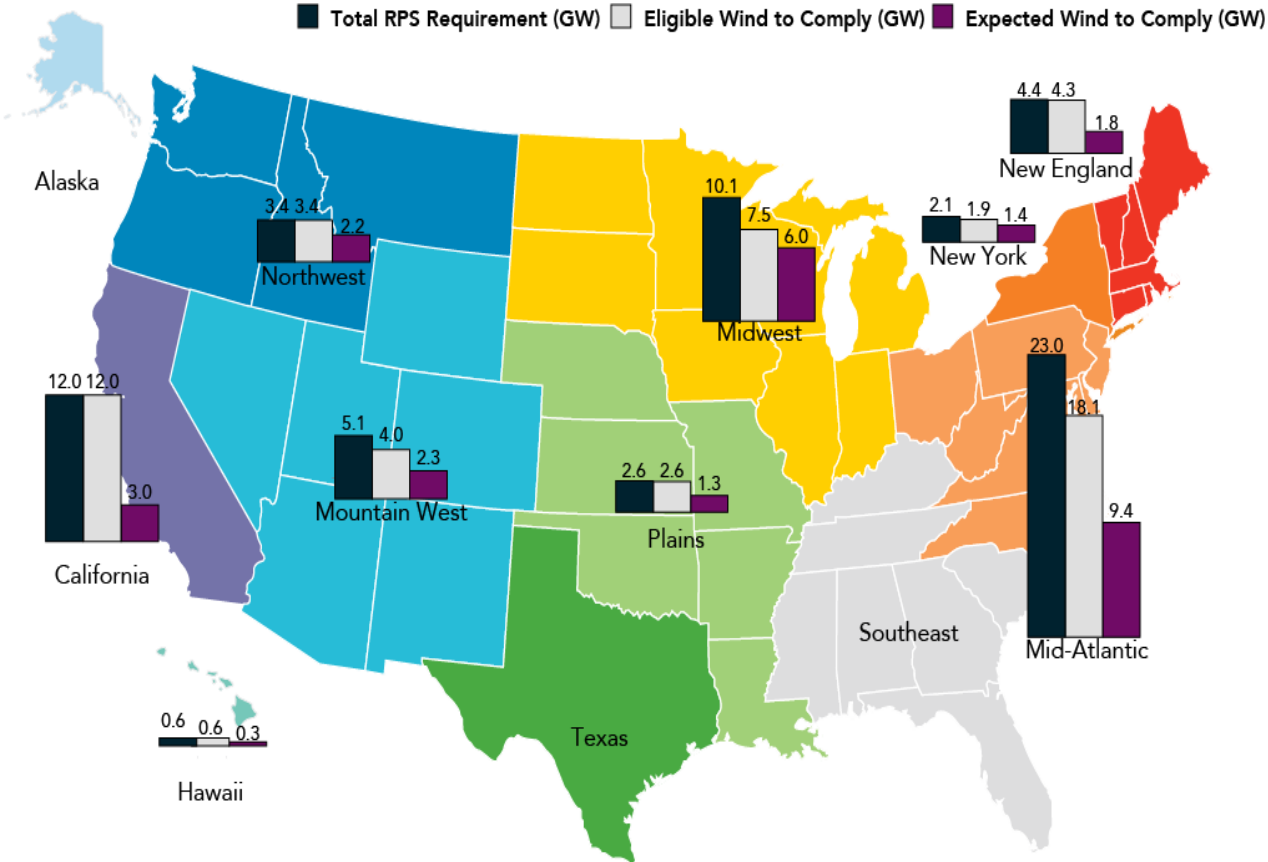
Incremental RPS Demand, 2013-2025



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Regional RPS Demand

Total RPS Requirement (GW)
 Eligible Wind to Comply (GW)
 Expected Wind to Comply (GW)



Mid-Atlantic states contain the most wind-eligible RPS demand, requiring an estimated 18,086 MWe.

California, Hawaii, New England, New York, the Northwest, and the Plains all allow wind to meet more than 98% of total incremental RPS demand.

The Mid-Atlantic (33%), California(22%), and Midwest (14%) contain the most eligible-wind-to-comply RPS demand, representing nearly 70% of all wind-eligible RPS demand.

The 2016-2020 period dominates wind-eligible RPS demand with an estimated 29,675 MWe. The Mid-Atlantic region (10,522 MWe) and California (8,038 MWe) will be the source of the majority of this demand.

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The top five states in terms of wind-eligible-to-comply RPS demand are California, Ohio, Illinois, New Jersey, and North Carolina. These five states contain 56% of all wind-eligible RPS demand.

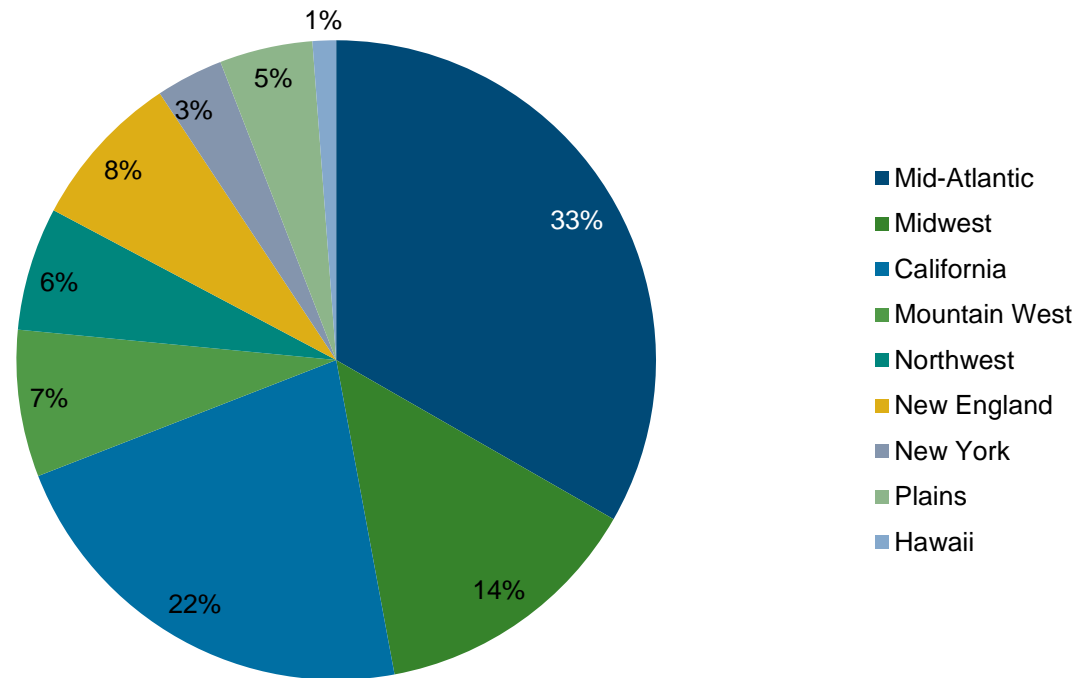
Six states, including California, New York, and North Carolina, require new renewable generation this year.

A full five states have added enough renewable generation in recent years to meet interim RPS requirements out to 2020.

Ohio's RPS is expected to drive the most wind installations, followed by Illinois, California, New Jersey, and Colorado. These five states contain 54% of all expected-wind-to-comply RPS demand.

Regional RPS Demand, 2013-2025

Eligible Wind to Comply



Find More Info in the Full Report

- Effective wind-eligible RPS requirements
- Wind eligibility to meet RPS requirements, by state
- Chart showing incremental RPS Demand, 2013-2025
- Annual breakdown of RPS Demand, 2013-2025
- Annual expectations for wind to capture RPS market share
- Regional chart showing RPS demand in 9 regions across the U.S.
- Regional market share breakdown of nationwide RPS demand
- Temporal breakdown of regional RPS demand
- Map showing wind-eligible RPS demand, by state
- Heat map denoting when states' will need to add additional renewable resources
- RPS demand state rankings
- State-by-State assessment of RPS demand
- Summary of recent RPS legislative developments
- Charts depicting each states' share of regional and national RPS demand
- Quick guide on the RPS characteristics in each state
- Map summarizing RPS requirements in 29 states and DC
- Chart showing RPS-covered electricity load
- Table summarizing RPS-covered load as a percentage of total state electricity sales
- Summary of assumptions

For the full “AWEA State RPS Market Assessment 2013” report, please log-in to the AWEA member center in the upper-right hand corner of www.awea.org

For a spreadsheet with underlying data or with any corrections, please contact John Hensley at jhensley@awea.org



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