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Improving Data Reporting for State Renewable Portfolio Standards

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Improving Data Reporting for State Renewable Portfolio Standards

POLICY BRIEF
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Summary

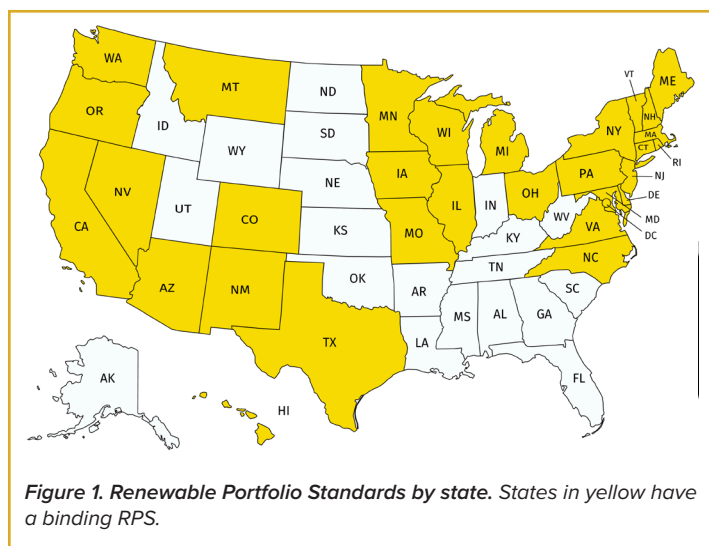
Renewable Portfolio Standards (RPSs) have become an important tool by which states encourage renewable energy growth. To fully understand the effects of RPSs, it is important that policymakers have ready access to complete, reliable data on the energy facilities that RPSs cover. Yet such data are often messy, incomplete, and stored in ways that impede analysis. This policy brief presents two simple strategies for improving state-level RPS data reporting. **First, states should include Energy Information Administration (EIA) plant codes in their RPS reporting templates.** Including EIA plant codes will allow easy integration of data from multiple states with robust, existing federal EIA datasets. **Second, all state templates for RPS data reporting should include baseline categories such as facility capacity, location, and fuel type.** Making such categories common to all state templates will help policymakers and researchers answer local, regional, and comparative questions about variability in renewable energy distribution and growth

Background

Renewable Portfolio Standards are state policies that set renewable-energy targets and timelines. RPSs play an important role in renewable energy growth in the United States: [approximately half of the growth in U.S. renewable energy can be attributed to these policies](#). Today, 30 states have adopted a binding RPS, though specifics vary greatly from state to state.

Renewable-energy development incurs many benefits, including creation of “green” jobs and reduced pollution. However, renewable-energy development can also result in drawbacks such as encroaching on sensitive wildlife habitat. The distribution and extent of benefits and drawbacks will differ both among states and within a single state. Ready access to complete, reliable RPS data is crucial for policymakers and researchers to understand such differential effects. For instance, policymakers

seeking to improve energy equity may want to know how municipal waste facilities classified as renewable are distributed among poor communities or communities of color. Biologists may need data on wind farms in order to explore impacts of RPSs on vulnerable bird populations.



Key Challenges

1. State RPS Datasets are Often Incompatible

State RPS datasets exhibit variation even among commonly reported data types. For example, states use different units to report facility power output (nameplate) capacity and different categories for fuel types. This variation makes it challenging to compare data across state lines. Moreover, the fact that there is no standard, nationally used identification for facilities in these datasets makes it impossible to quickly and accurately integrate state RPS datasets with each other and/or with federal datasets for analysis. This is particularly important as the Energy Information Administration (EIA) provides detailed information for individual utility-scale energy facilities that complements state RPS datasets.

2. State RPS Data are Missing or Incomplete

State RPS reports vary in terms of the data they present. All 24 of the states with RPS targets and easily accessible datasets report RPS facility names. All but one report nameplate capacity and fuel type. However, additional data beyond these basics are highly variable. For example, 7 of the 24 datasets lack any location data for facilities. For those that do include location data, granularity ranges from state location to GPS coordinates. The Montana dataset, which includes GPS data, nameplate capacity, and fuel type, provides a good example for other states, though it still lacks data that would allow it to synch with federal energy generation data such as Energy Information Administration reports.

3. State RPS Data are Difficult to Access and Use

There is currently no national standard for reporting data on RPS facilities, so each state sets its own requirements for reporting and publishing RPS data. As a result, data accessibility and usability varies from state to state. Not all states with RPS targets have datasets easily accessible to the public that list the contributions of individual facilities to overall RPS targets. RPS facility datasets are also sometimes improperly formatted for data analysis (e.g., mixing units within one data column), which makes them difficult to use.

Policy Recommendations

To streamline and improve RPS data reporting and access, state legislators should work with public utilities officials to enact the following recommendations:

1. Include the Energy Information Administration Plant Code in State RPS Datasets

To prevent confusion around facility identification and enable easier integration of state and federal datasets, all state RPS datasets should include the federal EIA plant code for each utility-scale facility. The EIA plant code is a unique code used for facilities reported in EIA datasets. Including these codes in state RPS data reports would allow policymakers and researchers to augment state data reports with information from federal datasets, such as information on facility location, standardized nameplate capacity,

and standardized fuel type categorization. Including these codes will also prevent confusion that arises when identifying facilities by name and will make it simpler for users to work with multiple datasets.

2. Require Standard Elements for RPS Datasets

All state templates for RPS data reporting should include some common categories, including facility name, state location, zip code location, nameplate capacity in megawatts, and fuel type. For multi-fuel facilities, data should also include the annual percentage of energy produced by each fuel type. RPS datasets should also include contact information (e.g., phone number or email) for included facilities, so that users can gather more information about individual facilities as needed.

3. Publish RPS Datasets for Public Use and Use Data Science Best Practices

State templates for RPS data reporting should require use of best practices from data science. Best practices include reporting data in unmerged rows and columns, avoiding special characters, and using consistent units within data columns. RPS facility datasets should be made easily available to the public on the website of each state's public utility commission. For additional resources on implementing best practices for open data see **Further Reading** below.

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Further Reading

Preparing Data for Publication in the Datastore. California Open Data Portal: <https://data.ca.gov/pages/preparing-data-publication-datastore>

Open Data Policy Guidelines. Open Data Policy Hub: <https://opendatapolicyhub.sunlightfoundation.com/guidelines/>