

U.S. State Electricity Resource Standards: 2025 Data Update

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Download the data at: rps.lbl.gov

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Note: As a federally funded national laboratory, Berkeley Lab and the authors make no claim on the merits of state RPS and CES policies. However, because these policies impact the electricity sector, Berkeley Lab provides basic factual information about these programs through its annual data products.





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Summary

Evolution of state RPS and CES programs: A total of 28 states plus DC have enacted RPS policies, while 16 states have adopted broader CES policies (most of which also have an RPS). Since January 2024, 18 bills were enacted through state legislatures revising existing policies, including changes to targets and timelines, eligibility rules, and various other provisions.

Historical impacts on new generation development: Roughly 16 GW of generation capacity was added in 2024 for state RPS and CES needs, an all-time high, representing roughly 37% of all U.S. renewable capacity additions in that year. On a cumulative basis through 2024, RPS and CES policies have supported roughly 151 GW of new capacity additions.

Future RPS and CES demand and incremental needs: RPS and CES policies require roughly 300 TWh of additional electricity supply by 2030 and 1300 TWh by 2050, roughly double the rate of growth as required by those policies over the past 5 years.

RPS target achievement to-date: States have generally met their interim RPS targets in recent years, with a few exceptions reflecting unique, state-specific issues. Most CES targets are not yet in force and so have little compliance experience to-date.

REC pricing trends: Prices for NEPOOL Class I RECs remained near \$40/MWh over the past year, just below ACP rates in the larger state markets. PJM Tier I REC prices continued to rise through 2024, reaching an historical high of almost \$40/MWh as well, but have fallen over the course of 2025.

RPS compliance costs: RPS compliance costs averaged roughly 4% of retail electricity bills across states, based on the most recent year of available data (typically 2023 or 2024), though those costs varied widely from state to state, from less than 1% in 5 states to more than 10% in 3 others.



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History and Evolution of State RPS and CES Programs



Scope

Covers U.S. state renewables portfolio standards (RPS) and clean electricity standards (CES)

Renewables Portfolio Standard (RPS): A binding requirement on retail electric suppliers to procure a minimum percentage of generation from eligible sources of renewable electricity

Clean Electricity Standard (CES): Similar to an RPS but target is based on a broader set of eligible technologies, typically including nuclear and fossil energy with carbon capture

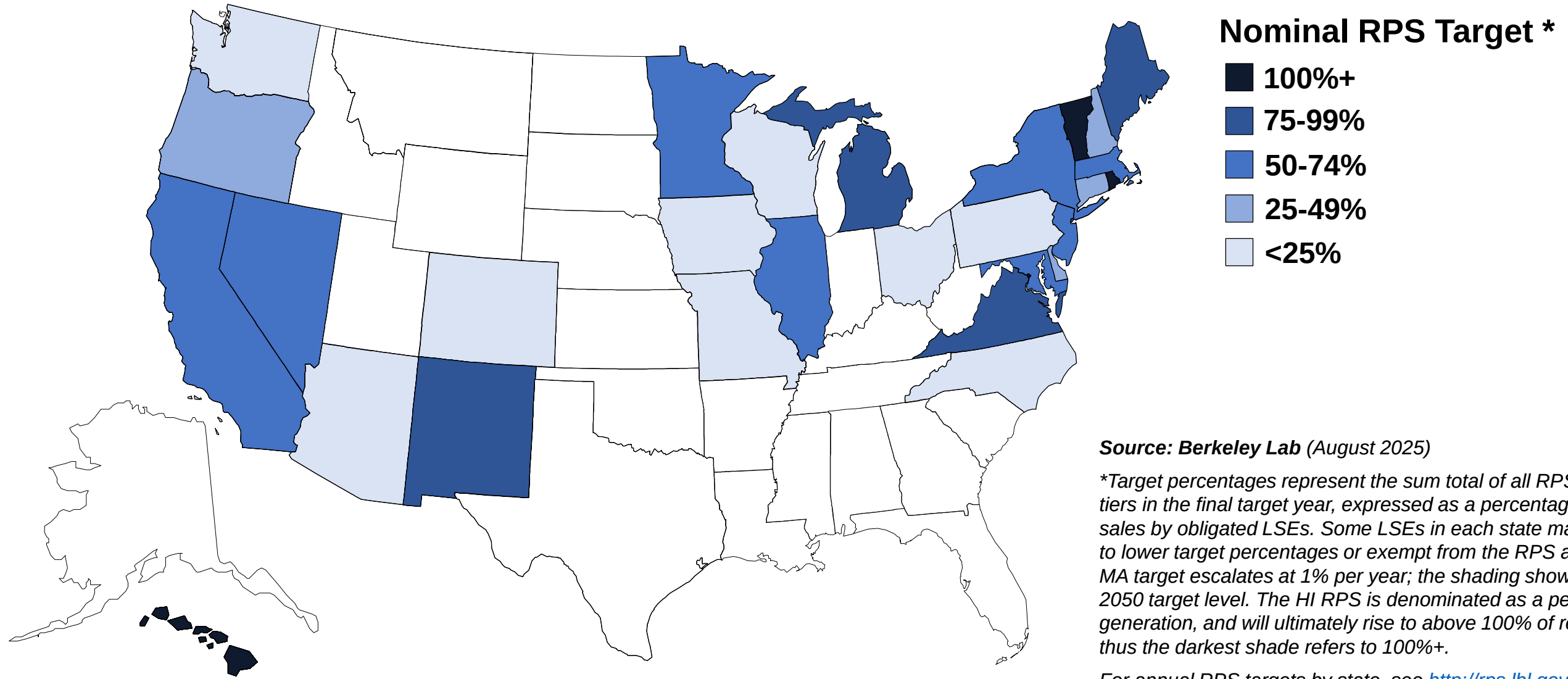
Electric-Sector Emissions Standard: Considered here to be a CES variant, but target is defined as a percentage reduction in electric-sector emissions relative to a baseline

Excluded from the Report:

- ❑ Economy-wide emission reduction targets without an electric sector-specific standard
- ❑ Targets adopted voluntarily by utilities or corporations, or targets established through executive order
- ❑ U.S. territories (though several, including Puerto Rico, do have an RPS or CES)

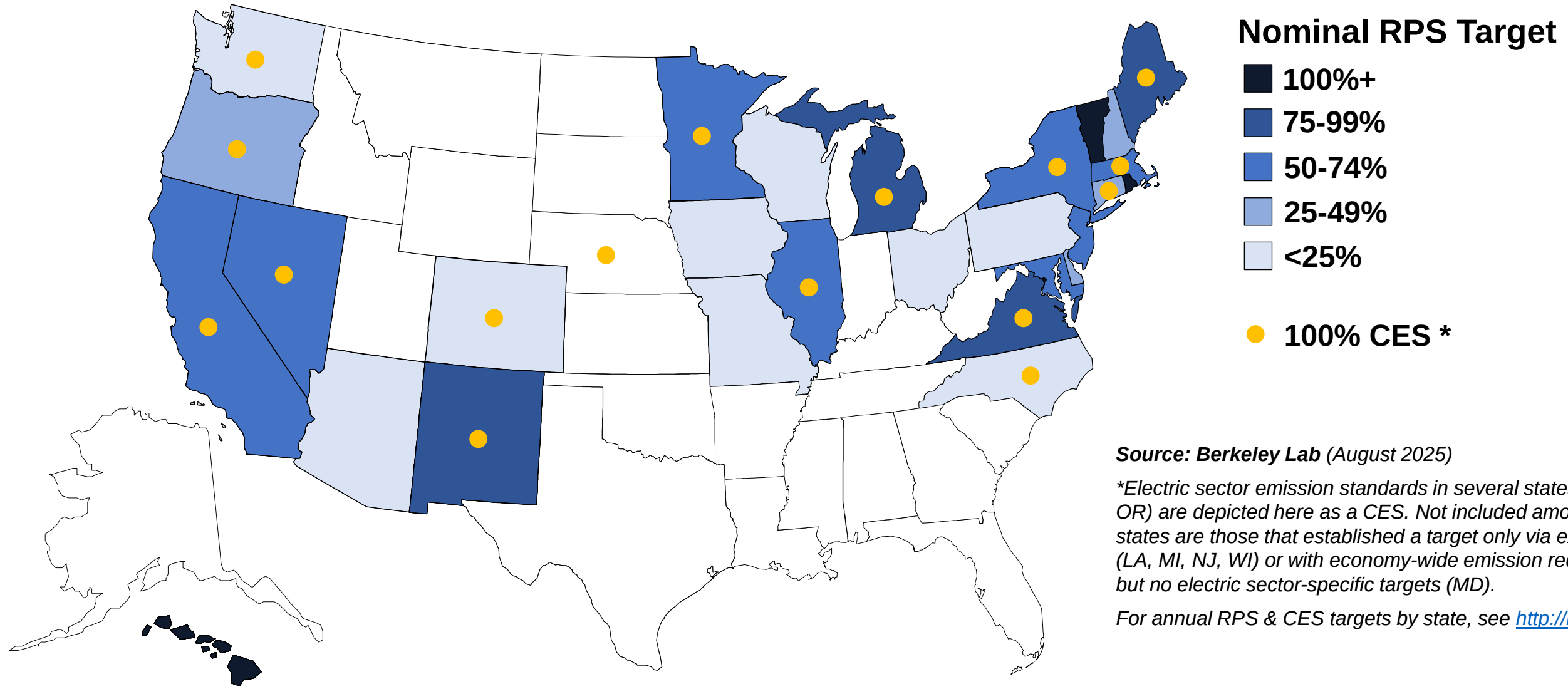
28 States + DC Have Mandatory RPS Policies

16 have final targets $\geq 50\%$ of retail sales, and 4 have a 100% RPS



16 States Have Established a Broader 100% CES

Typically in combination with an RPS

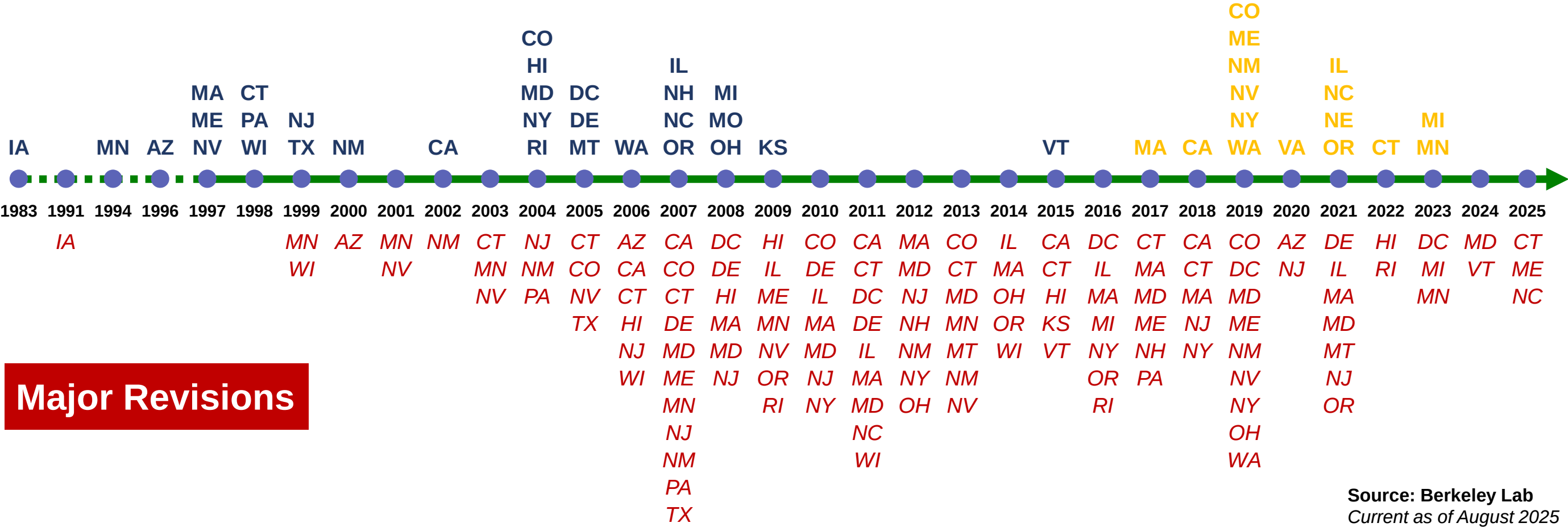


Most RPS Policies Have Been on the Books for More Than a Decade

But states continue to make significant revisions & adopt new CES targets

RPS Enactment

CES Enactment



Major Revisions

Source: Berkeley Lab
Current as of August 2025

Recent RPS and CES Legislation

RPS & CES Related Bills since Jan. 2024

	“Major”	“Minor”	Total
Introduced	108	54	162
Enacted	5	13	18

Data Source: EQ Research (August 16, 2025) and Berkeley Lab
Notes: Companion bills counted as a single bill

Enacted Bills with Major/Substantive Changes

State	Bill	Key Changes
CT	SB 4	Reduces Class I requirements through 2030, while removing LFG and certain biomass from eligibility
MD	SB 783	Creates a 150% multiplier under the solar carve-out for specific categories of <5 MW solar facilities
ME	SP 738	Extends Class IA targets through 2040 and creates a new Class III that includes nuclear and other zero-GHG resources
NC	S 266	Eliminates Duke Energy’s interim 2030 CES target, but retains the 2050 target
VT	H 289	Raised RPS to 100% by 2030 for most utilities, increased DG carve-out, and created new requirement for “new” renewables

- Many RPS/CES related bills introduced since January 2024, but only a small fraction enacted (18 of 162)
- Most of the enacted bills make only “minor” revisions; e.g., related to:
 - ▣ Resource eligibility and REC banking rules (CA, CO, MD, VA)
 - ▣ Procurement program processes/rules (CT, ME)
 - ▣ Treatment of accelerated renewable energy buyers (MO, VA) or exemptions for data center loads (MN)
- More substantial (aka “major”) revisions include changes related to:
 - ▣ Target levels and timelines (CT, ME, NC, VT)
 - ▣ Resource-specific carve-outs and tiers (MD, ME, VT)



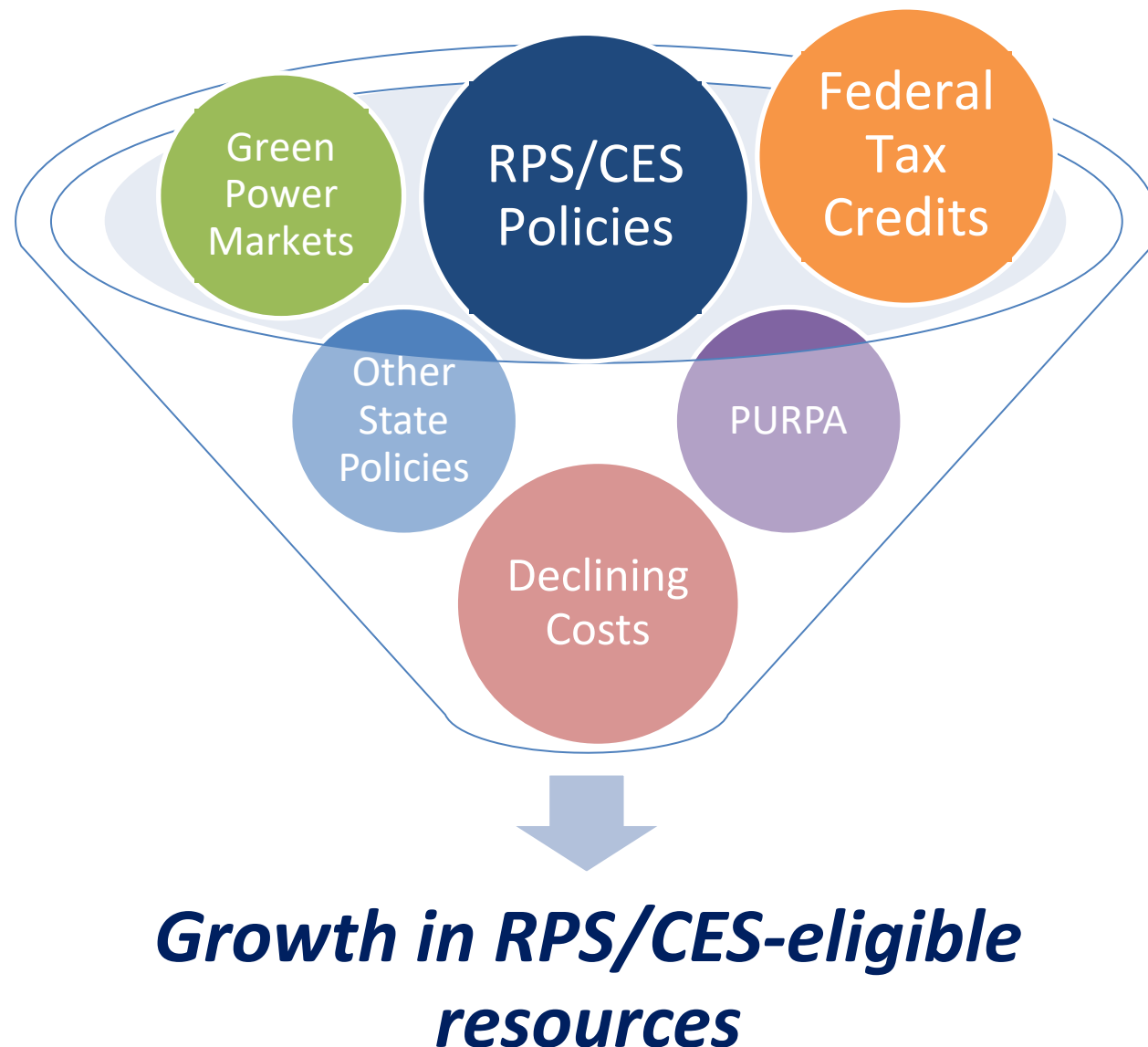
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Historical Impacts of State RPS and CES Policies on Electricity Resource Development



RPS and CES Policies Exist amidst a Broader Array of Market and Policy Drivers



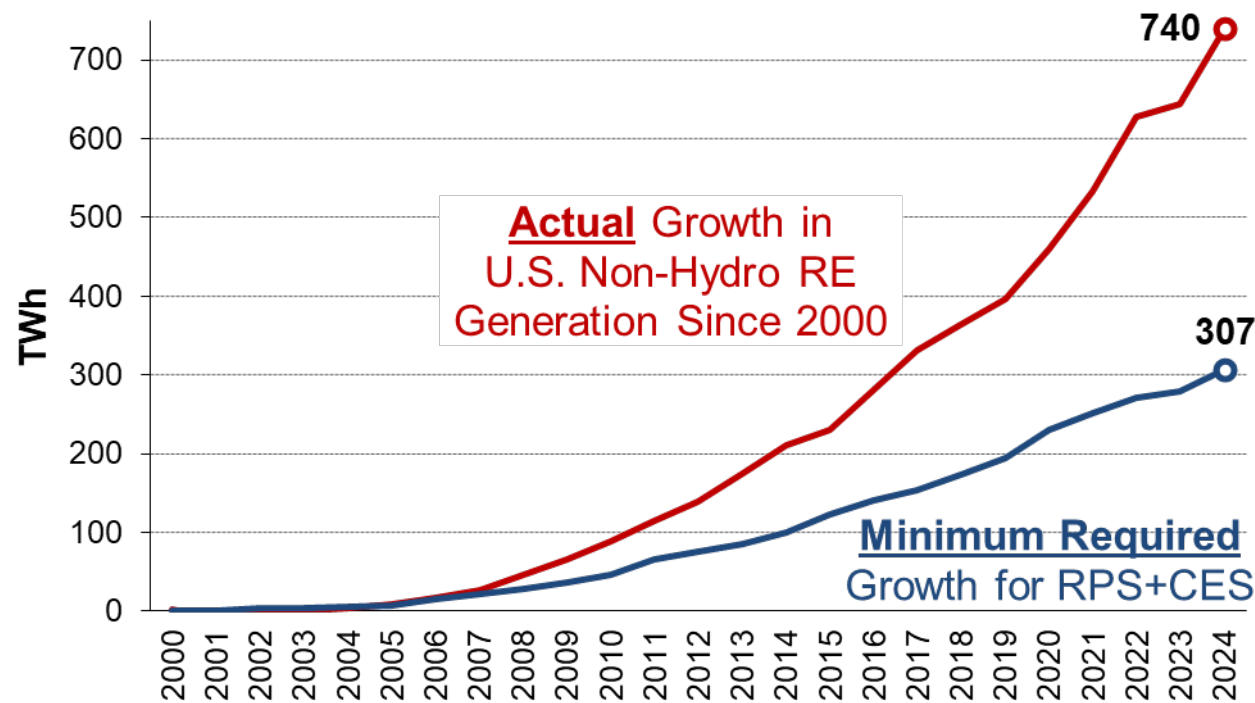
Parsing out the incremental impact of individual drivers for RE growth is challenging, given the many overlaps and interactions

We present two simple approaches for gauging the impact of RPS policies on RE growth—*without claiming strict attribution*:

1. Compare total historical RE growth to the minimum amount required to meet RPS demand
2. Quantify the portion of historical RE capacity additions directly serving entities with RPS obligations or certified for RPS eligibility

Non-Hydro Renewable Generation Has Grown Much Faster than Demand from State RPS & CES Policies

Growth in Non-Hydro Renewable Generation: 2000-2024



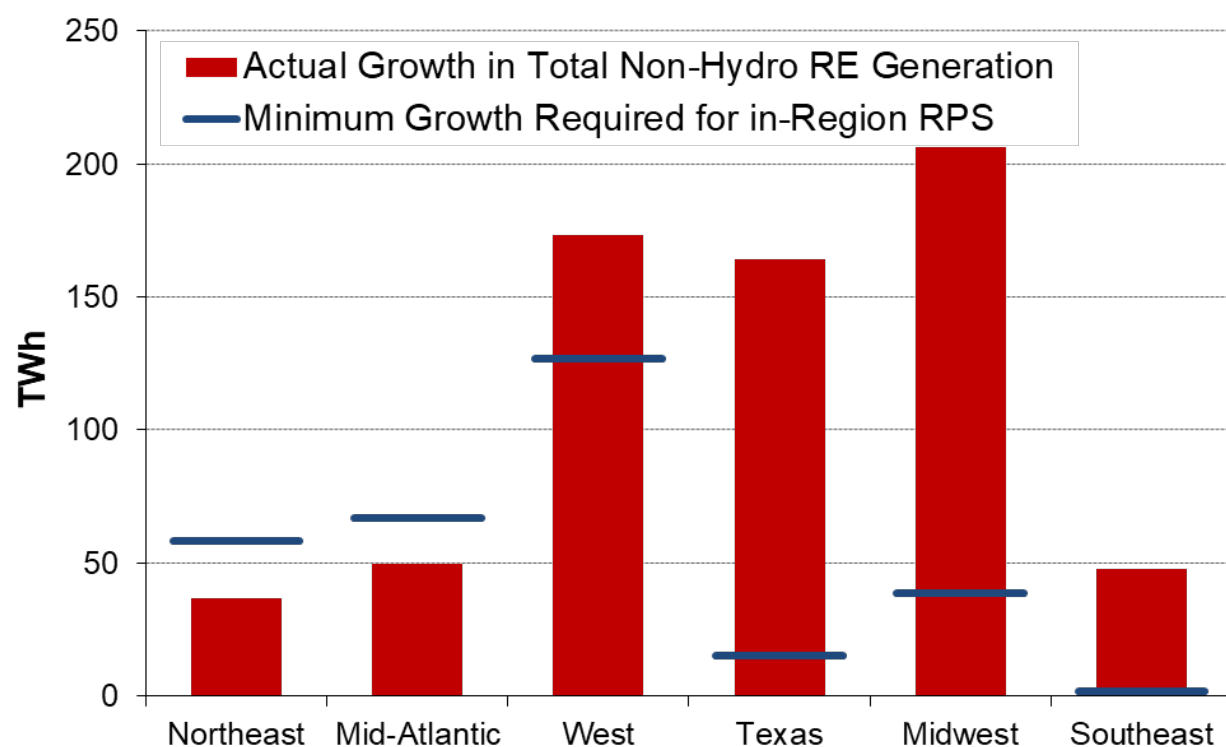
Notes: Minimum Growth Required for RPS excludes contributions compliance from pre-2000 vintage facilities, and from hydro, municipal solid waste, nuclear, and other non-RE technologies. This comparison focuses on non-hydro RE, because RPS rules typically allow only limited forms hydro for compliance.

- Total non-hydro RE generation in the U.S. has grown by 740 TWh since 2000
- RPS+CES policies required a 307 TWh increase over the same period (41% of total RE growth)
- Provides a rough indication of policy impact, but by no means a precise attribution:
 - ▣ Some of that growth would have occurred without RPS+CES requirements
 - ▣ Conversely, some build-out for RPS/CES may be occur ahead of schedule
 - ▣ RPS+CES policies have likely had some spill-over effects, facilitating non-RPS-related growth (e.g., by providing a stable source of demand for industry to build around)

RPS & CES Role in Driving RE Growth Varies by Region

Most impactful in the Northeast, Mid-Atlantic, and West; less so in other regions

Growth in Non-Hydro Renewable Generation: 2000-2024



Notes: Northeast consists of New England states plus New York. Mid-Atlantic consists of states that are primarily within PJM, in terms of load served, including Illinois. The comparisons shown here should be not interpreted as indicative of compliance levels; see later sections of the report for data on historical compliance levels by state.

Northeast and Mid-Atlantic: RPS needs have outpaced actual in-region RE growth (deficit partly met by imports), suggesting that RPS demand has been a key driver of non-hydro RE growth

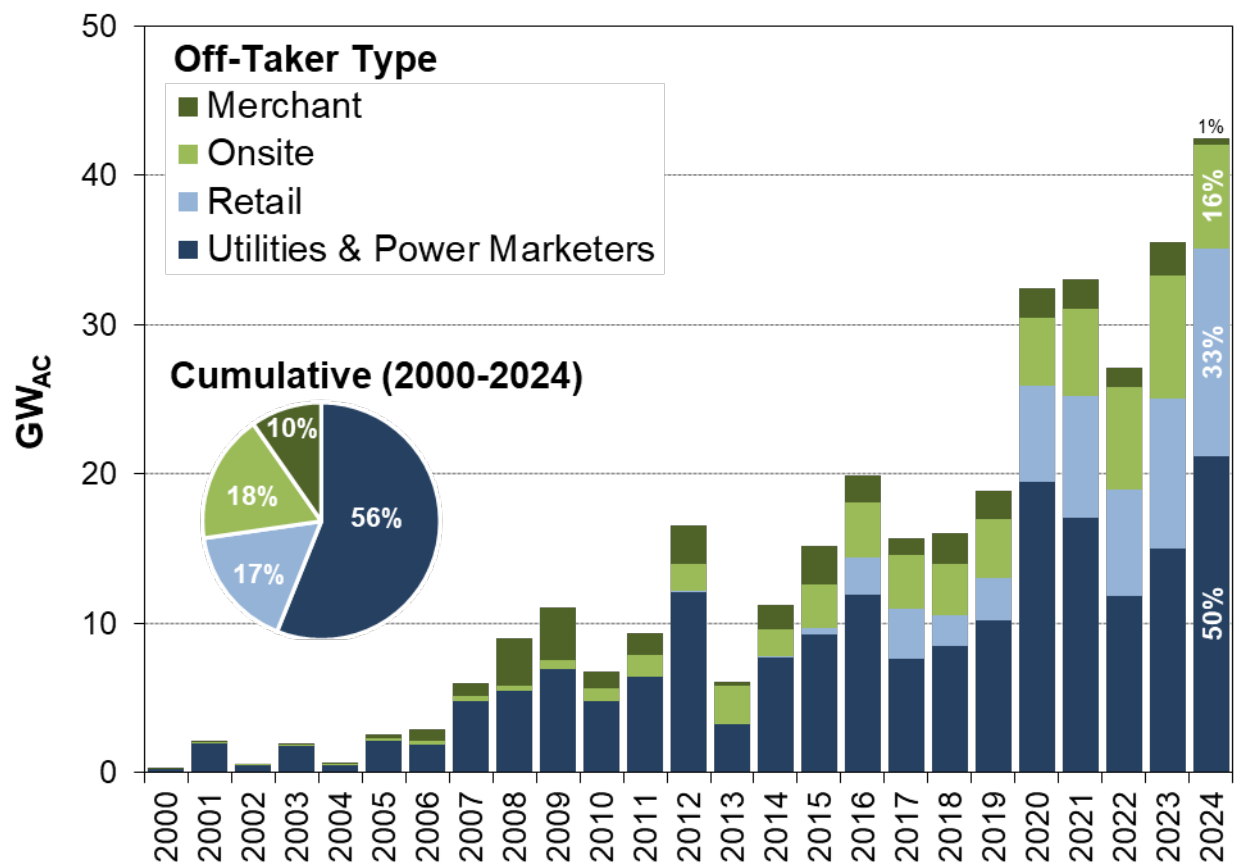
West: Actual RE growth has exceeded RPS requirements, partly due to net metered PV (which is mostly not used for RPS)

Texas and the Midwest: RE growth has far outpaced RPS needs

Southeast: Negligible regional RPS demand (NC), though some RE growth serves RPS demand in PJM

Utilities & Power Marketers are Still the Largest Class of Off-takers, but Retail Projects Have Become a Sizeable Share

Annual Renewable Capacity Additions



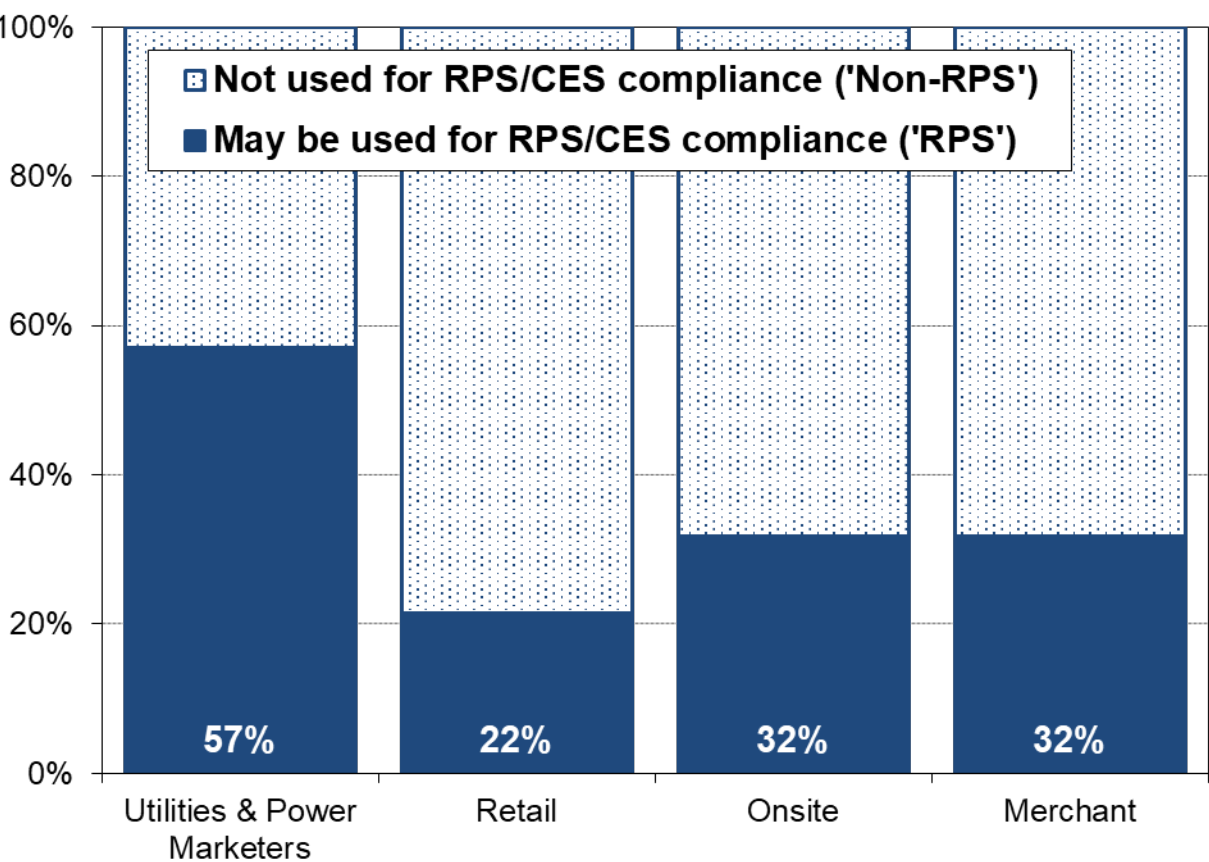
Sources: LBNL, ABB Ventyx, EIA, American Clean Power Association

- Total renewable capacity additions in 2024 totaled 42 GW
- Utilities and power marketers (load-serving entities) continue to represent the largest class of off-takers for new RE capacity (50% in 2024, 56% cumulatively)
- Retail off-takers (corporate PPAs and commercial green power tariffs), have become more prominent since 2020, comprising 33% of new RE capacity added in 2024
- Onsite projects (DG solar) declined in both absolute and percentage terms, representing 16% of RE adds in 2024
- Merchant sales have a long history but are a small share of new RE additions (1% in 2024)

Definitions: **Utilities & Power Marketer** projects are those where the power is sold to or owned by utilities or competitive retail electricity suppliers, including community solar or other projects used for voluntary green power programs. **Retail** projects are those where the power is sold to specific end-use customers through corporate PPAs or commercial green power tariffs. **Onsite** projects are those installed at customer facilities and used to directly serve onsite load (i.e., behind-the-meter). **Merchant** projects are those where the power is sold into wholesale spot markets. In cases where details about the off-taker have not been disclosed, Berkeley Lab makes a best guess as to the most likely type of off-taker, based on project attributes and regional trends.

Within Each Class of Off-takers, a Portion of RE Capacity Additions Is—or May Be—Used for RPS/CES Compliance

Percent of Cumulative Renewable Capacity Additions by Off-Taker (2000-2024)



Notes: Going forward, we use the shorthand “RPS” and “Non-RPS” to refer to the categorization shown here, based on the decision-rules explained to the right.

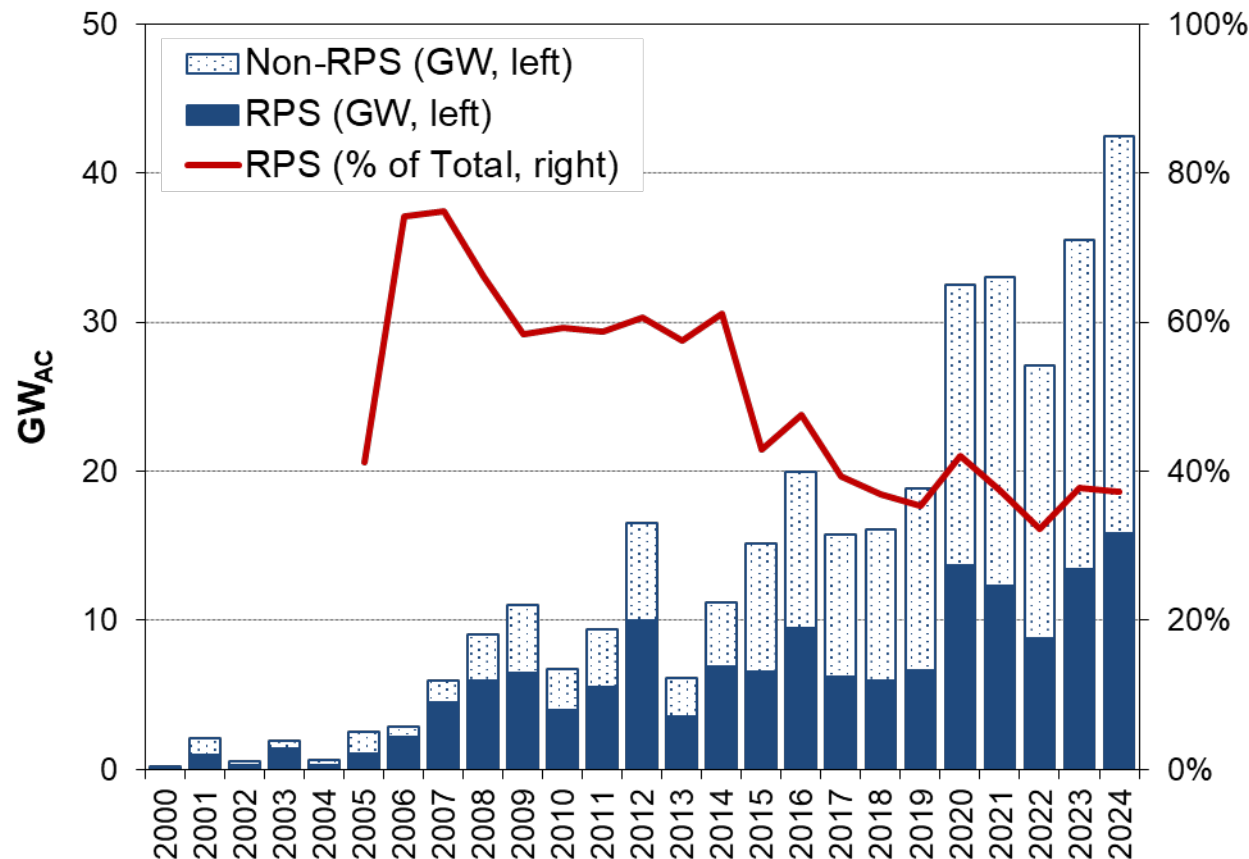
The criteria for assessing whether a project may be used for RPS compliance depend on the off-taker type and region:

- ❑ **Utilities & Power Marketers:** Roughly **57%** of RE capacity additions since 2000 is owned by or contracted to load serving entities with active RPS or CES compliance obligations
- ❑ **Retail:** Roughly **22%** of capacity additions has been certified for RPS eligibility in one or more state, meaning that the RECs *could* be re-sold for RPS compliance (and potentially “swapped out” with cheaper voluntary-market RECs)
- ❑ **Onsite:** Roughly **32%** of capacity adds (almost all DG PV) is either being claimed by a utility for RPS compliance (typically through an incentive program) or is RPS-certified in one or more state and thus potentially selling SRECs into the RPS market
- ❑ **Merchant:** Roughly **32%** of capacity additions has been certified for RPS compliance in PJM or ISO-NE, or was developed in Texas during the period when the state’s RPS was binding.

These percentages represent upper bounds on the portion of new RE capacity actually being applied toward RPS compliance

RPS Capacity Additions Have Been Growing in Absolute Terms, but Shrinking as a Percentage of Total RE Capacity Additions

Annual Renewable Capacity Additions

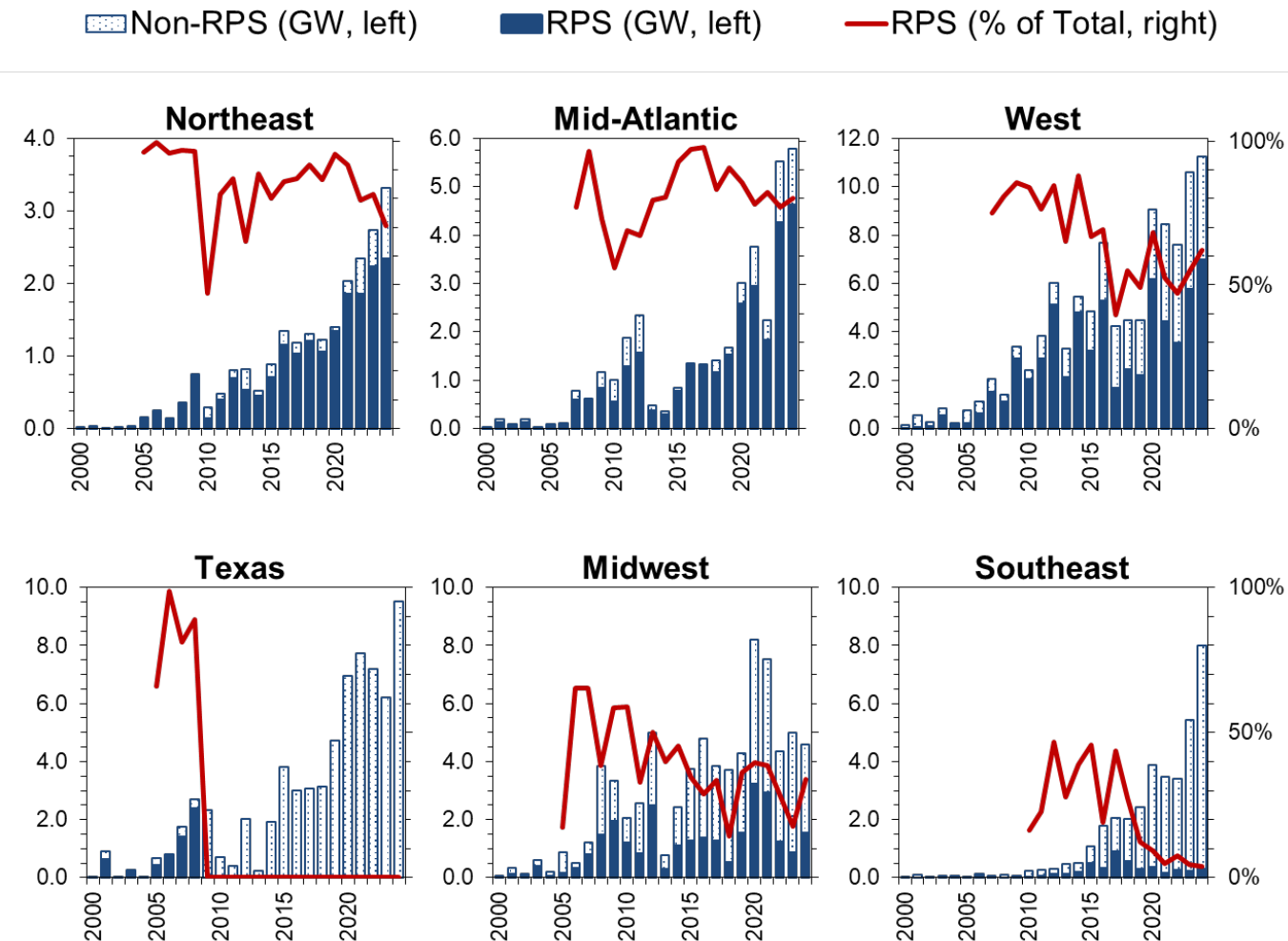


Notes: The criteria for assessing whether a project may be used for RPS compliance depend on the off-taker type and region. See previous slide for further details.

- “RPS-related” RE capacity additions grew to ~16 GW in 2024, an all time high
- Cumulatively, RPS-related capacity additions comprise 44% of all RE capacity adds since 2000 (151 GW out of 192 GW)
- That share has generally declined over time, dropping to 37% of RE additions in 2024, compared to 60-70% in earlier years, owing to more-rapid growth in the voluntary markets
- Non-RPS capacity additions in 2024 consisted mostly of:
 - ▣ 11 GW of retail contracts not certified for RPS eligibility
 - ▣ 10 GW of utility/power marketer procurement in non-RPS states, some potentially serving community solar and green power programs
 - ▣ 5 GW of onsite solar not used for RPS

RPS Policies Remain Central to RE Growth in Particular Regions

Recent RE additions in Northeast and Mid-Atlantic primarily serve RPS demand



Notes: See previous slide for regional definitions and further details on the criteria for sorting RE capacity additions into RPS and Non-RPS categories.

RPS policies have been a larger driver in...

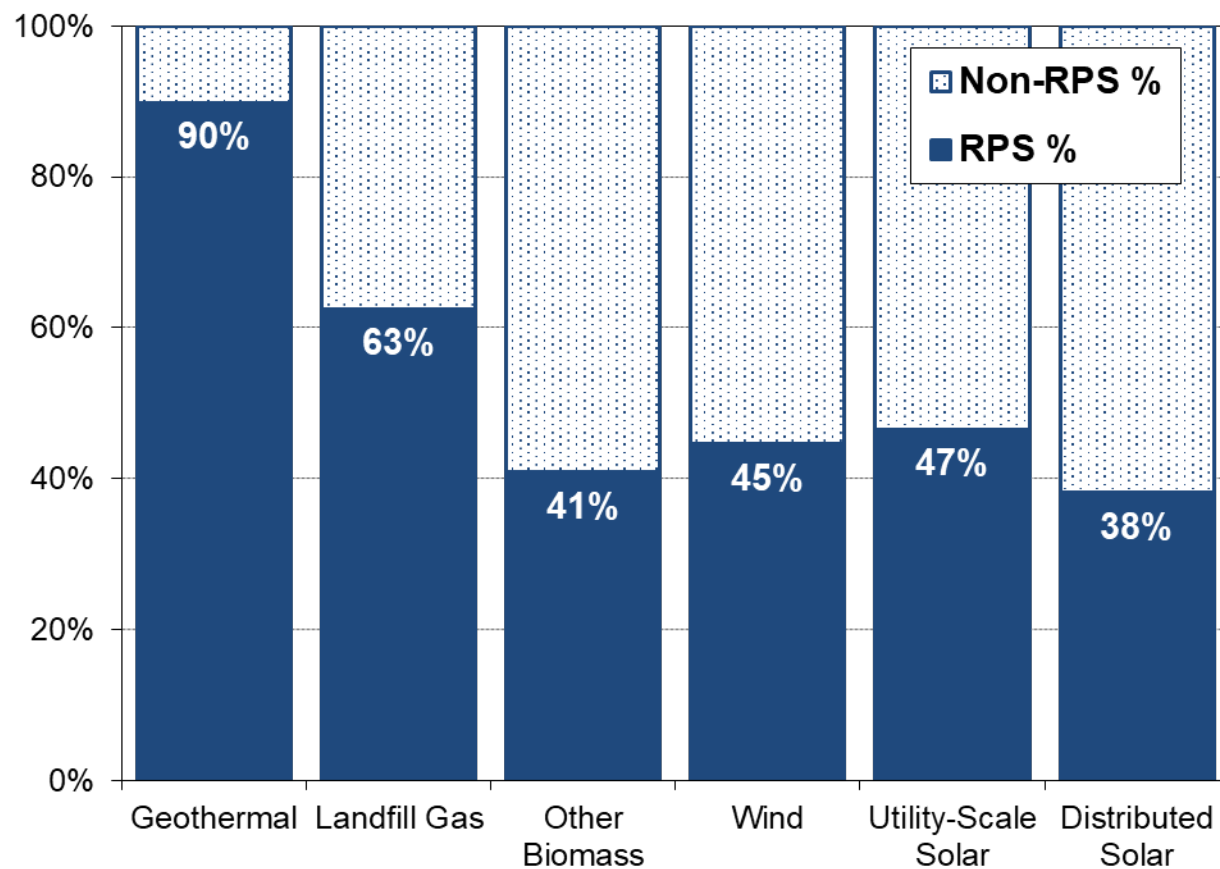
- **Northeast:** Relatively small market, but almost all RE capacity additions serving RPS demand, consisting mostly of onsite and community solar in recent years
- **Mid-Atlantic:** Mostly solar carve-out capacity and corporate PPAs with RPS-certified projects potentially selling RECs into compliance markets
- **West:** RPS additions driven by aggressive long-term RPS and CES targets throughout the region; non-RPS additions are mostly onsite solar

But have been a smaller driver in...

- **Texas:** Achieved its final RPS target in 2008 (7 years ahead of schedule); all growth since is Non-RPS
- **Midwest:** Lots of wind development throughout the region, some contracted to utilities with RPS needs
- **Southeast:** RE growth primarily driven by utility procurement and PURPA

RPS Policies Have Had Differing Impacts Across the Eligible Technologies

Percent of Cumulative Renewable Capacity Additions by Technology (2000-2024)



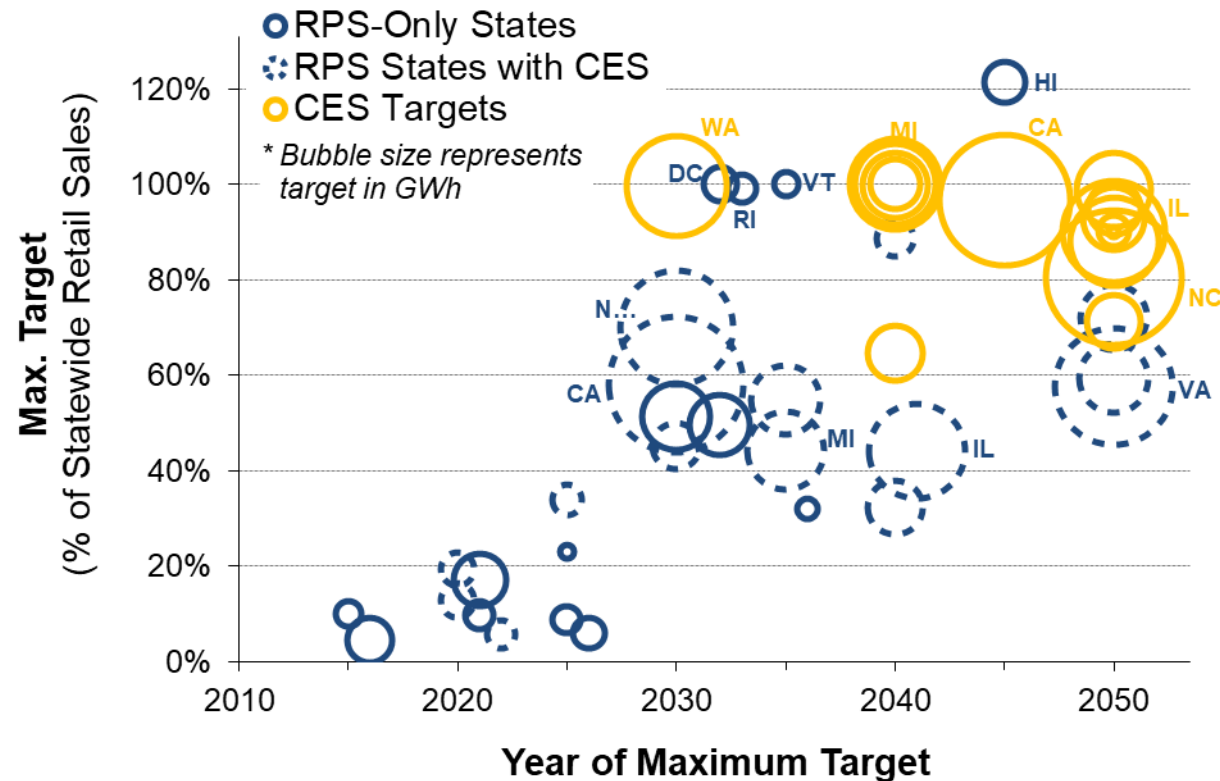
- **Geothermal:** Virtually all geothermal capacity added since 2000 (90%) is being used to serve RPS needs
- **Landfill Gas and Other Biomass:** RPS policies have supported the majority of new landfill methane gas (LFG) capture projects as well as a large share of other biomass capacity additions (e.g., cogeneration at pulp and paper mills, agricultural waste, etc.)
- **Wind and Utility-Scale Solar:** RPS policies have contributed to just under half of all growth in these technologies cumulatively since 2000 (but significantly lower shares in recent years, as indicated previously)
- **Distributed Solar:** At a national level, RPS have had proportionately less impact on distributed solar growth, due to the presence of policies and programs aimed at supporting distributed solar, though policies have been more central to distributed solar growth in some regions

Required Future RPS & CES Demand and New Supply



Target Levels and Timeframes Vary Widely

Max. RPS & CES Targets and Target Years

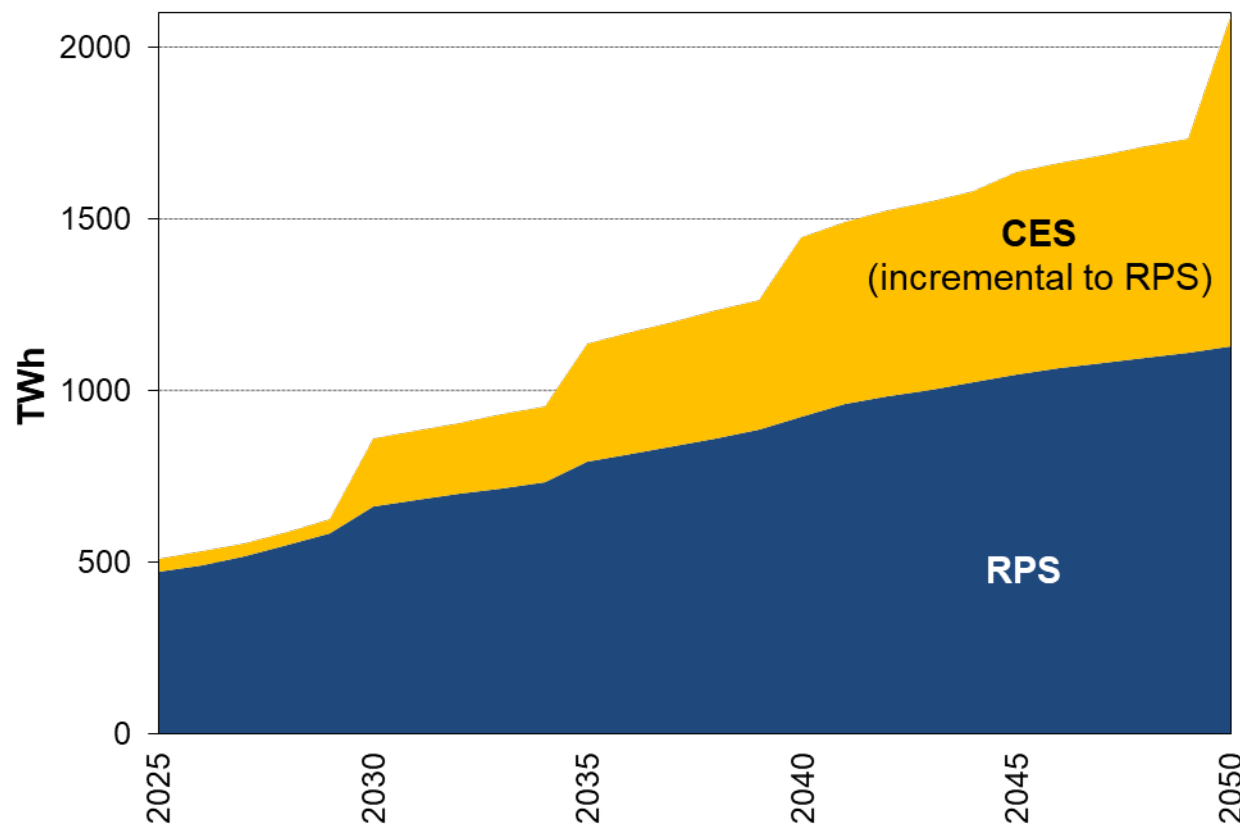


Notes: The figure shows each state's maximum RPS and CES percentage target and the associated year when that target must be reached. Targets are shown here as the percentage of total statewide retail sales, which may differ from nominal targets if those apply to only a subset of LSEs in a state. The RPS target for HI is denominated as a percent of total statewide generation and thus is greater than 100% of retail sales. Bubble sizes represents the target in GWh terms; in the case of the CES targets, bubble sizes reflects only the incremental GWh above and beyond the RPS.

- Targets translated into a percentage of *statewide* retail sales
 - ▣ Note, though, that eligibility rules and other key provisions can vary significantly, so percentage targets not fully comparable
- RPS states can be grouped into three sets
 - ▣ Legacy RPS programs with final targets of roughly 15-25% by 2015-2025
 - ▣ A sizeable contingent of states with higher RPS targets ($\geq 50\%$) in the 2030-2035 timeframe
 - ▣ States with similarly high targets but longer timeframes (2040-2050)
- Most of the states in the latter two groups, with relatively high RPS targets, have also adopted even higher, longer-term CES targets

Future RPS+CES Demand under Existing State Laws Rise with Increasing Targets and Load Growth

Estimated Future RPS + CES Demand

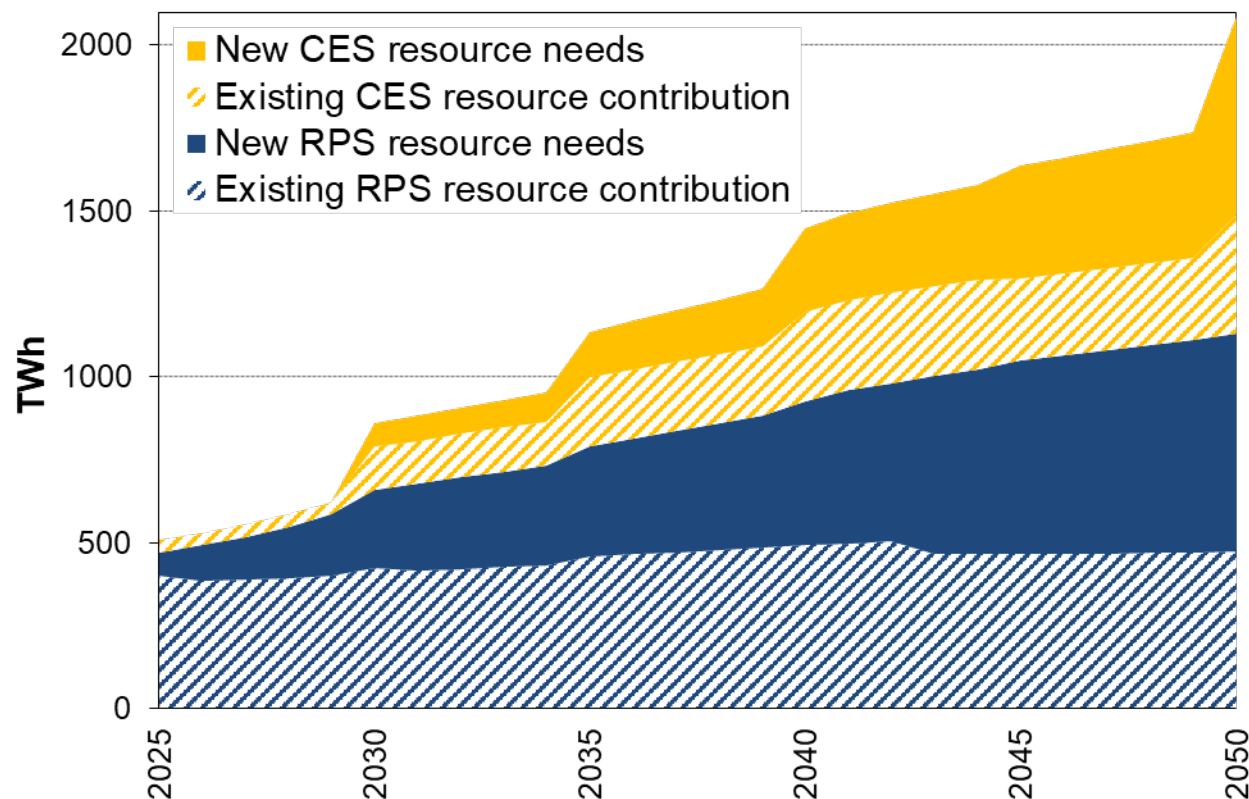


Notes: Projected RPS+CES demand is estimated based on current targets, accounting for exempt load, likely use of credit multipliers, and other state-specific provisions. Underlying retail electricity sales forecasts are based on regional growth rates from the most-recent EIA Annual Energy Outlook reference case.

- Aggregate RPS demand more than doubles from 470 TWh in 2025 to 1100 TWh in 2050
- RPS demand growth slows after 2030, as most states pass their maximum percentage target
- CES targets add 950 TWh of additional demand by 2050
 - ▣ Lumpy growth, reflecting staggered targets; corresponding supply growth likely smoother
 - ▣ CES targets may not always be binding in the same manner as RPS policies
- Increase in RPS/CES demand does not directly equate to required increase in supply

Existing Nuclear and Hydro Can Meet a Portion of Demand Growth

Existing vs. New Resource Contributions to RPS and CES Demand

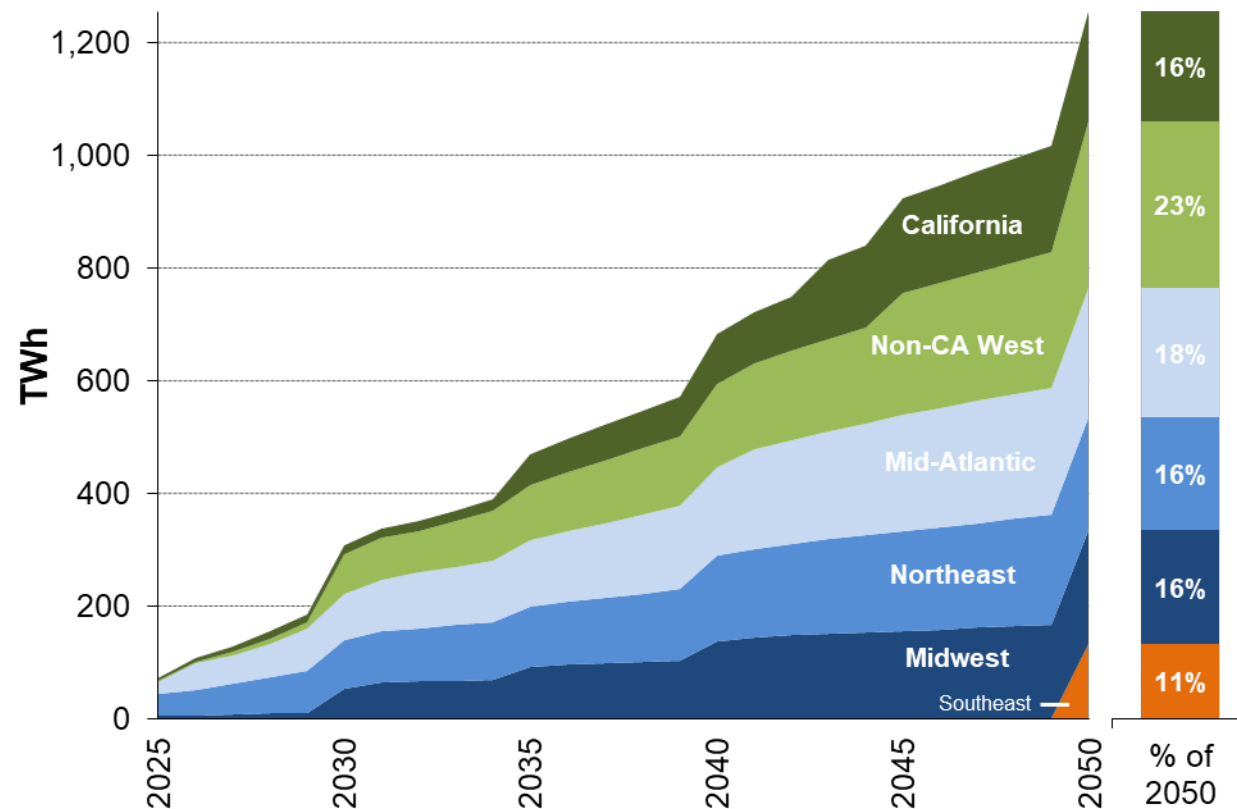


Notes: Existing RPS/CES resources represent the potential contribution to future RPS and CES demand from resources in operation as of year-end 2024, including banked RECs, but without considering future retirements. New resource needs represent the gap between total RPS/CES demand and existing resources.

- RPS demand growth requires a nearly equivalent increase in eligible sources of electricity supply
- In contrast, roughly half of CES demand growth could be met with existing resources, primarily nuclear & large hydro (assuming re-licensing)
- Collectively, RPS+CES policies require ~300 TWh of new electricity supply by 2030 and 1300 TWh by 2050 if existing targets are to be achieved
 - ▣ Equates to annual growth of 50-60 TWh/yr, compared to ~25 TWh/yr required over the past 5 years
- Important factors not captured here:
 - ▣ New projects already in the pipeline
 - ▣ Retirements of existing RPS and CES resources
 - ▣ New inter-regional transmission
 - ▣ The voluntary market may absorb a larger portion of current RPS-eligible supply than assumed here

Required New Supplies Concentrated in Mid-Atlantic & Northeast in the Near Term, but Dispersed Across the U.S. Longer Term

New RPS+CES Supply Needs



Notes: See notes on earlier slides about regional definitions and about how new supply needs are determined and defined, which may differ from the definitions used by individual states.

California: Minimal new supply needs until the mid-2030s, due to current surplus and REC banking

Non-CA West: Near-term needs driven by 2030 CES targets in OR & WA; longer-term needs reflect rising RPS & CES targets throughout the region (including CO, NV, NM)

Mid-Atlantic: Resource needs driven principally by aggressive RPS targets in VA and IL (ComEd) and draw-down on banked RECs throughout the region

Northeast: Near-term needs mostly for NY RPS; longer-term needs also reflect rising RPS/CES targets in New England

Midwest: Largest resource needs are for MI RPS/CES, but also significant needs for MN RPS/CES and NE CES

Southeast: Consists solely of NC 2050 CES, though still a meaningful share of the U.S. 2050 total



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RPS Target Achievement To-Date

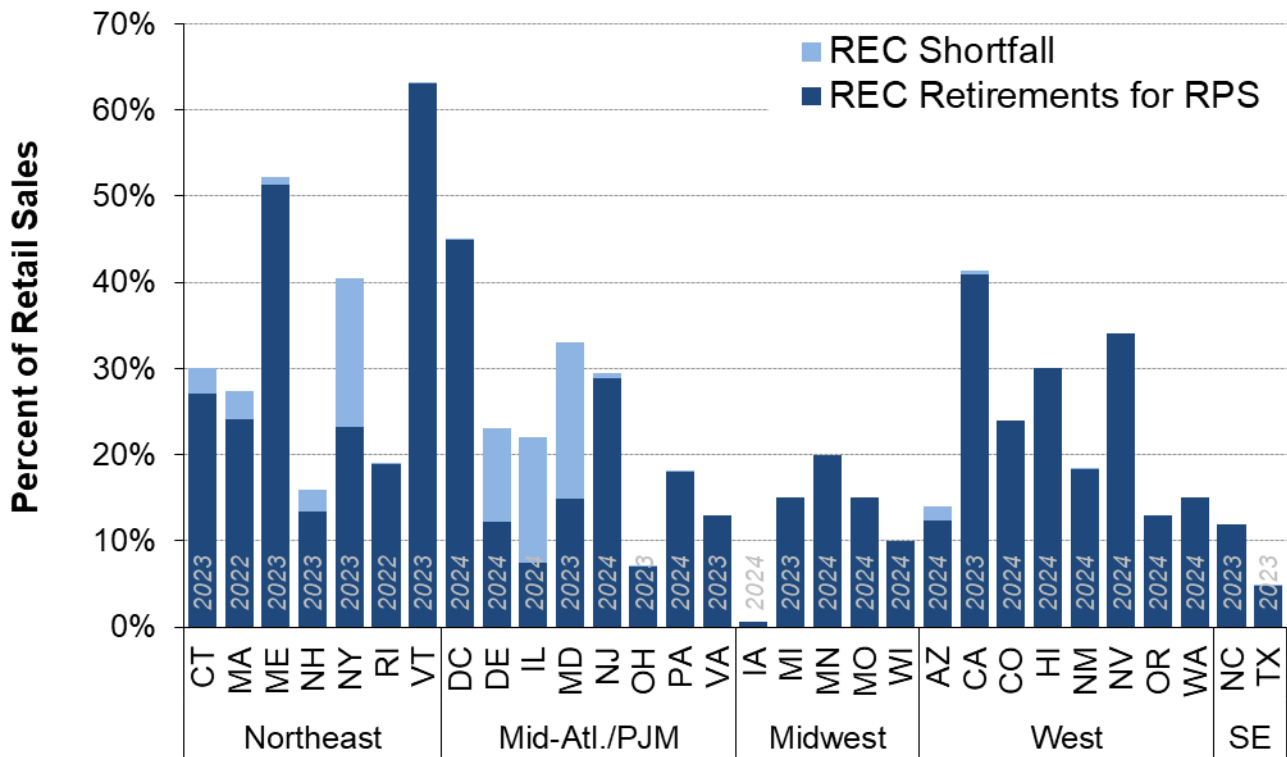


Characterizing RPS Achievement: Key Background Concepts

- RPS's typically consist of interim targets that ramp up each year
- Compliance demonstrated through the retirement of RECs
 - ▣ Individual LSEs may bank surplus RECs for compliance in future years (so REC or renewable energy procurement may exceed REC retirement)
 - ▣ Many states allow LSEs to submit alternative compliance payments (ACPs) in lieu of retiring RECs
 - ▣ In other cases, shortfalls may be granted a waiver, deferred to future years, or result in a penalty
- Compliance data typically reported via annual compliance filings by obligated LSEs and/or summary reports prepared by the state PUC
 - ▣ Usually a 6-month to 2-year lag in data availability after the end of a compliance year
- We characterize “RPS achievement” in terms of REC retirements relative to RPS obligations
 - ▣ Only RECs retired for RPS compliance are counted
 - ▣ Shortfalls for individual states indicate that one or more LSE retired fewer RECs than required; does not necessarily indicate that the state, as a whole, is under-supplied
 - ▣ Not equivalent to “compliance”, per se, as ACPs are a form of compliance

Interim RPS Target Achievement

RPS REC Retirements and Shortfalls (most-recent compliance year data)

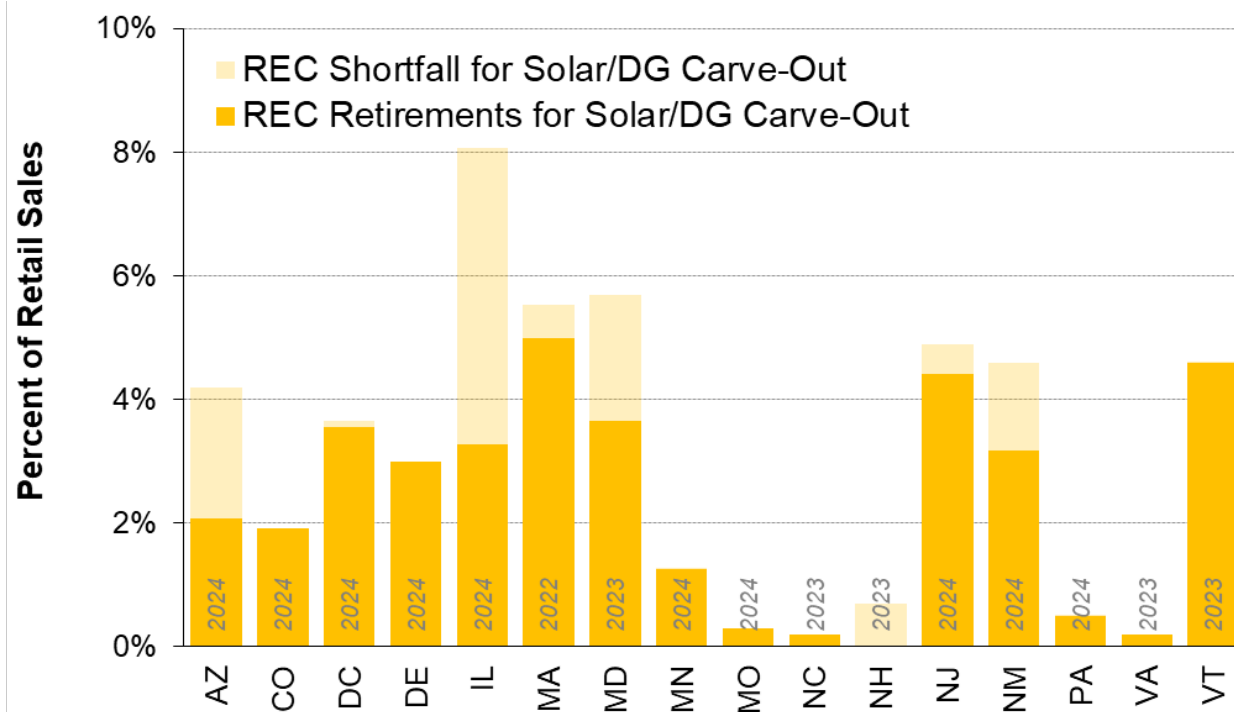


Notes: The compliance year shown for each state is indicated in grey. The height of the stacked bars represents the annual RPS compliance obligation, inclusive of all RPS tiers. In states that allow the use of ACPs, REC shortfalls represent the portion of the target met with ACPs. NY target is interpolated based on 2021 and 2030 targets.

- Current RPS targets range from 10-40% of retail sales in most states, albeit with widely varying eligibility rules (so not strictly comparable)
- Many states achieved their most-recent interim targets, though others have not
 - Small shortfalls are common, often associated with individual LSEs or specific resource tiers
 - NY and IL: Large volume of contracted projects in development
 - DE and MD: Large shortfalls due to low ACPs compared to other states in the region, plus added demand from VA
- Some states/utilities have met interim targets by relying on stockpiles of banked RECs from prior years

Interim Solar or DG Carve-Out Achievement

RPS REC Retirements and Shortfalls (most-recent compliance year data)



Notes: See previous slide for general notes on figure construction. CO data represent the retail DG requirement; IL data represent the new solar procurement requirement; MA data represent the SREC I and SREC II programs; MD data represent carve-out for IOUs and competitive retail suppliers; NM data represent the combined solar and DG diversity requirements; VA data represent Dominion's carve-out for <1 MW DG.

- Current solar and/or DG carve-out targets are typically in the range of 1-5% of retail sales
- 9 of 16 states met their latest interim targets, while others were short, including:
 - ▣ AZ: Actual installed DG well exceeds target level, but non-incentive systems don't count toward the target
 - ▣ IL: Shortfalls reflect procurement lag
 - ▣ MD: Carve-out target ramped up significantly in recent years, outpacing new in-state solar builds; state has relatively low solar ACP
 - ▣ NM: One utility has received recurring waivers for the solar and DG requirements
- In some cases, solar/DG carve-out shortfalls may be made-up with general RPS resources

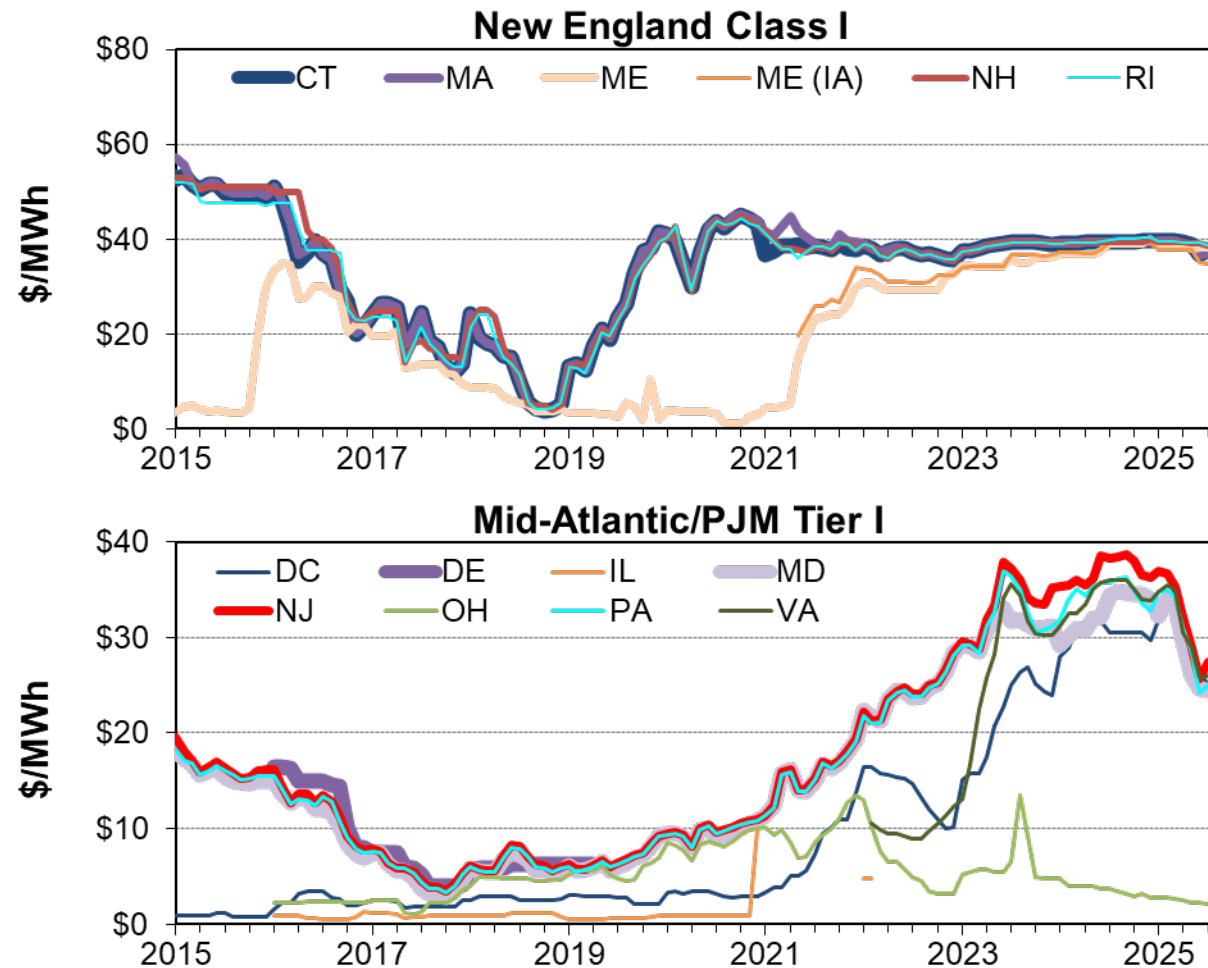
REC Pricing and RPS/CES Compliance Costs



REC Pricing Fundamentals

- Spot-market prices a function of current and expected future supply-demand balance and ACP rates
 - ▣ Can be volatile and sensitive to changes in eligibility rules
- Regional markets (e.g., in New England and Mid-Atlantic) form based on common pools of eligible REC supplies
 - ▣ States in those regions with looser eligibility rules have lower prices
- Solar REC (SREC) pricing is highly state-specific due to *de facto* in-state requirements in most states
- The key driver for RPS compliance costs in states that rely heavily on unbundled RECs

REC Pricing Trends for Primary Tier RPS Obligations



Source: Marex. Plotted values are the mid-point of monthly average bid and offer prices for the current or nearest future compliance year traded in each month.

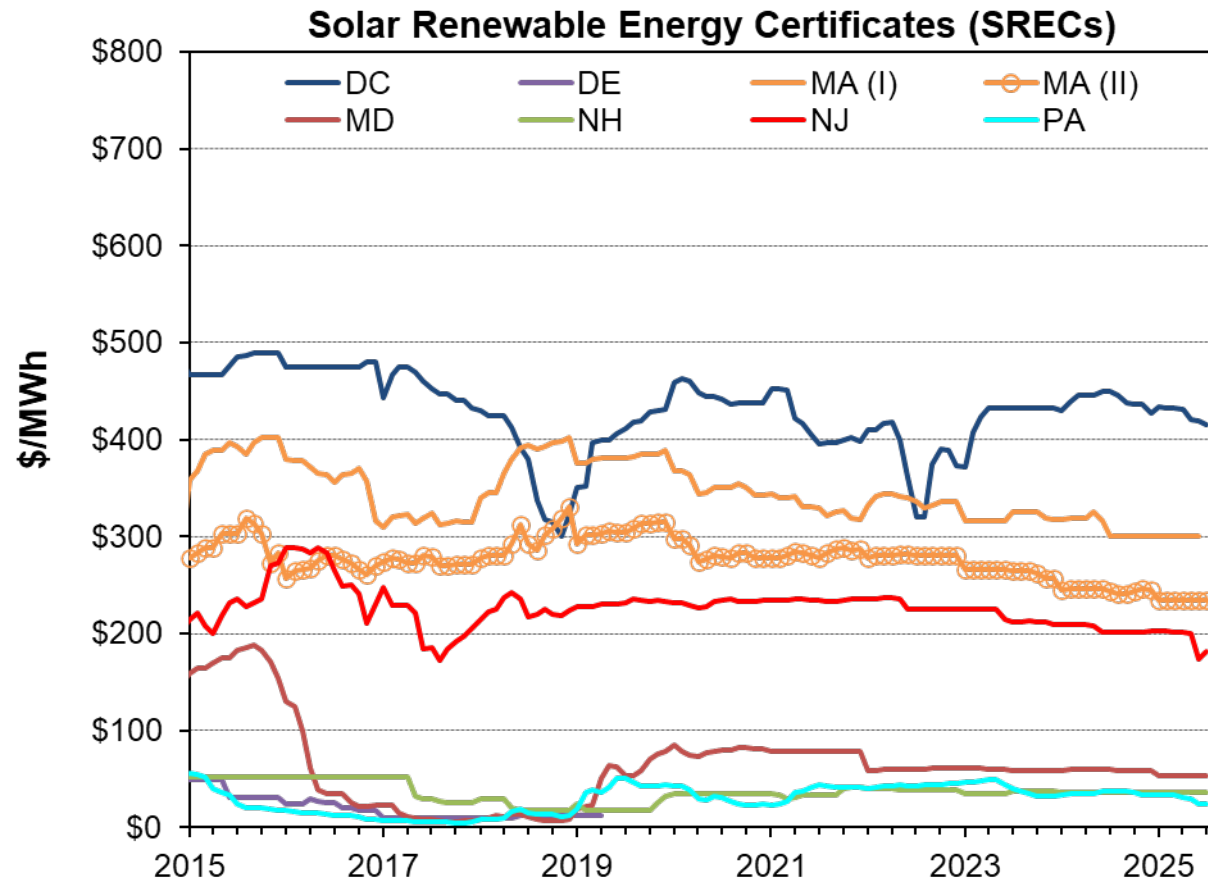
New England:

- Pricing relatively stable over the past few years, hovering just below the current MA/CT ACP
- Maine prices were historically lower, due to broader biomass eligibility, but rose as new RE tier (Class IA) ramped up

Mid-Atlantic/PJM:

- Prices rose steadily from 2019-2024, as regional RPS demand growth outpaced new supplies
- But 2025 has seen a sharp drop in prices, potentially reflecting NJ RPS freeze, scheduled changes in VA eligibility rules, and other factors

SREC Pricing Trends for RPS Solar Carve-Outs



- **DC:** Prices have remained high, due to fundamental challenges of meeting target with in-district resources
- **MA and NJ:** Both states have transitioned away from SREC markets, but SREC pricing for legacy carve-outs has remained relatively high
- **MD:** Prices capped by low solar ACP (currently \$55/MWh)
- **NH and PA:** modest carve-outs (0.7% and 0.5%, respectively) heavily oversupplied

Source: Marex. Plotted values are the mid-point of monthly average bid and offer prices for the current or nearest future compliance year traded in each month.

RPS and CES Compliance Costs

Definition, data sources, and limitations

Compliance Costs: Net cost to the load-serving entity (LSE), above and beyond what would have been incurred in the absence of the RPS/CES*

Can be measured in terms of different metrics; we summarize costs primarily in terms of a percentage of average retail electricity bills in each RPS/CES state

Retail Choice States

- Compliance primarily via unbundled RECs
- We estimate compliance costs based on REC plus ACP expenditures
- Rely wherever possible on PUC-published data on actual REC costs; otherwise use broker spot market prices

Vertically Integrated States

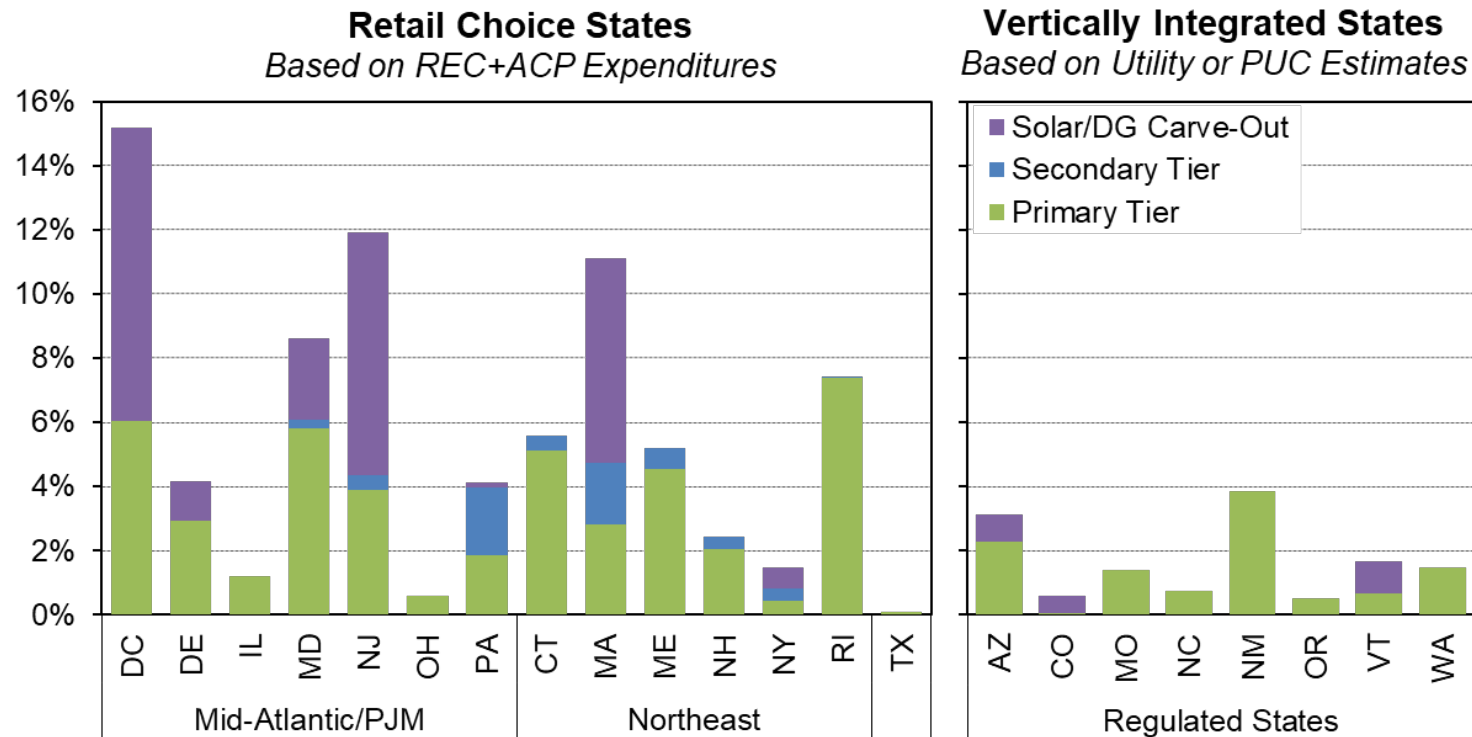
- Compliance primarily via bundled PPAs
- We synthesize available utility and PUC compliance cost estimates, which rely on varying methods
- PUCs/utilities impute compliance costs by comparing gross procurement costs to a counterfactual (e.g., market prices or avoided cost projection)

***Key Limitation:** The underlying data and methods used here represent only a partial accounting of the full suite of costs and benefits associated with RPS and CES policies, and are available for only a limited subset of vertically integrated states

Compliance Costs by Resource Tier

Total compliance costs average ~4% of customer electricity bills but vary widely

RPS Compliance Costs for Most-Recent Available Year (Percentage of Average Retail Electricity Bill)



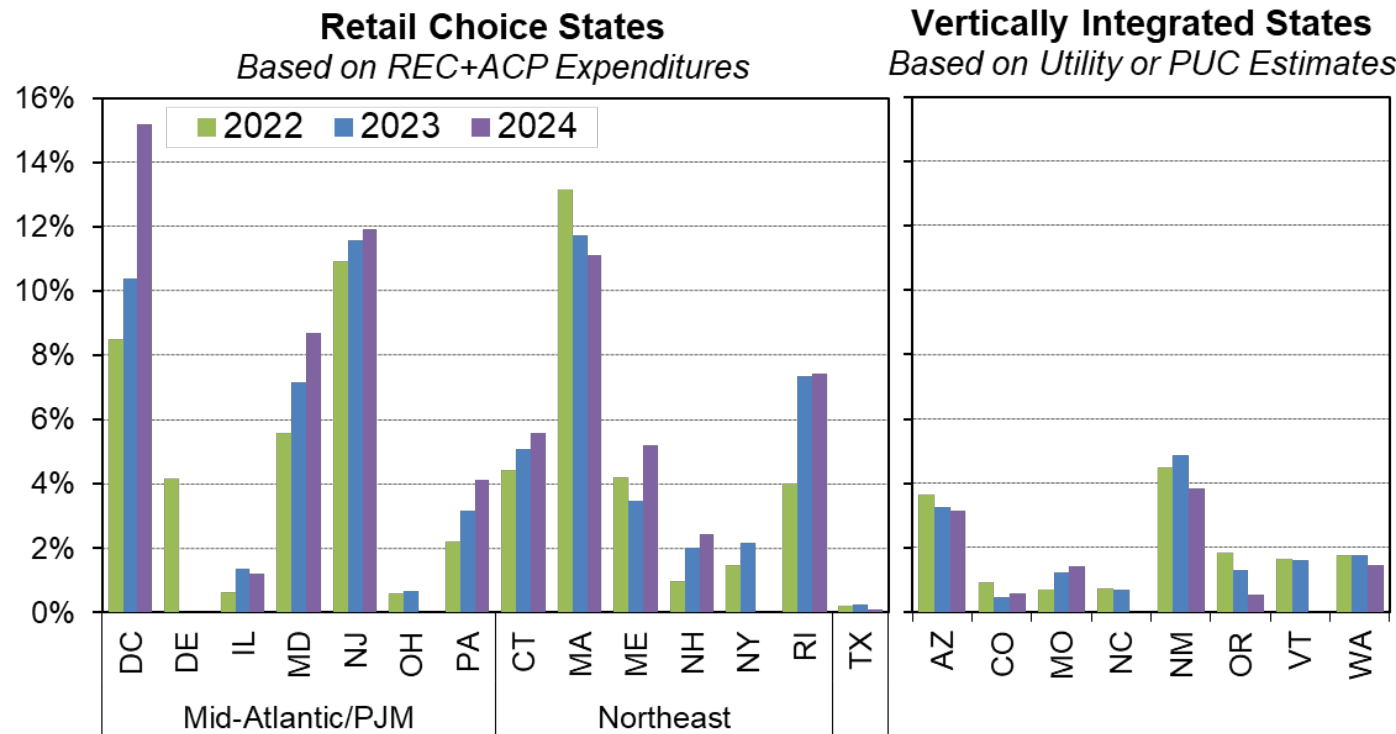
Notes: See earlier slide for general explanation of compliance cost estimates. Data for most states are based on either the 2023 or 2024 compliance year. For MA, the solar carve-out includes SREC I and SREC II, and the Primary Tier includes the residual Class I requirement, including SMART, plus the CES. Solar/DG carve-out costs are included in the Primary Tier costs for IL, MO, NC, NM, and OR, as data do not exist to separately break those costs out.

- RPS compliance costs vary across states reflecting differences in policy design, procurement structure, and RE economics
- Highest compliance costs are related to solar carve-outs in states with high SREC prices (though for NJ and MA, these are legacy programs in the process of ramping down)
- Primary tier costs in retail choice states driven by differences in target level and REC pricing
- Secondary-tier costs are generally a marginal contributor, due to low REC prices, though several states are seeing costs on the order of 2% of customer bills
- Compliance costs in vertically integrated states are generally lower than in retail choice states, reflecting greater reliance on bundled PPAs

RPS Compliance Cost Trends (2022-2024)

Rising in some states while holding steady or declining in others

RPS Compliance Costs (Percentage of Average Retail Electricity Bill)



- Time trends driven by underlying trajectories in RPS targets and REC prices and/or PPA prices (most notable in PJM, due to rising Tier 1 REC prices)
- Greater reliance on long-term contracts in vertically integrated (and some retail choice) states mutes YoY changes in compliance costs
- Recent inflationary increases in retail electricity rates dampens RPS compliance costs on a percentage basis

Notes: See earlier slide for general explanation of compliance cost estimates. For NY, costs are based on NYSERDA expenditures for CES and NY-Sun. For other northeastern states, costs also account for long-term PPAs, where REC costs are imputed based on comparison to wholesale energy and capacity market prices. Compliance cost data are unavailable for states not shown.

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Note: As a federally funded national laboratory, Berkeley Lab and the authors make no claim on the merits of state RPS and CES policies. However, because these policies impact the electricity sector, Berkeley Lab provides basic factual information about these programs through its annual data products.

