

ENERGY

# 2018 Energy Trends Across State Legislatures



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- Improve the quality and effectiveness of state legislatures
- Promote policy innovation and communication among state legislatures
- Ensure state legislatures a strong, cohesive voice in the federal system

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## Introduction

Across state legislatures, 2018 was a busy year for energy policy. Lawmakers considered more than 2,000 energy-related measures and of those, more than 400 bills were enacted. Although it is common to see only one-fifth of the bills introduced go into effect, the many energy-related bills considered each legislative session indicate the direction in which state energy policies are headed.

The one-year or two-year legislative sessions that concluded in 2018 offered a robust variety of energy policies. Interest in cybersecurity for the energy sector is growing as state legislatures consider ways to enhance critical infrastructure defenses. Many states are exploring broad grid modernization initiatives to address the United States' aging and outdated electricity network, while also harnessing new and innovative technologies—from smart thermostats and electric vehicles to rooftop solar panels and energy storage.

The challenge facing state policymakers is how to design policies that promote prudent investments while giving innovative technologies and new energy management approaches room to grow and compete in a rapidly shifting environment.

One of the biggest trends across state legislatures is how states manage rapidly evolving electricity markets. Traditional electricity generators are facing considerable economic challenges that are forcing certain plants to close prematurely. Nuclear power and coal are finding it harder to compete with sustained low natural gas prices and federal and state renewable energy incentives, declining solar and wind energy costs, and little growth in electricity demand. Although much less action has been provided regarding struggling coal plants, state legislatures in certain states with competitive electricity markets have taken more drastic measures to assist and prevent the closure of nuclear power plants. Some states are supporting policies intended to help nuclear power compete as a low-carbon electricity source and maintain its role in the energy mix.

Renewable energy and energy efficiency measures continue to dominate energy policy in state legislatures with almost 1,000 bills considered across the country in 2018. State interest in renewable energy, in particular, continues to grow, as it becomes more cost-effective and increasingly competitive with traditional generation sources. States considered bills addressing a variety of topics, including renewable portfolio standards, siting and permits for renewable energy facilities, interconnection standards, tax incentives, and net metering and compensation for renewable energy producers.

This year is sure to be no different. As states begin their legislative sessions, bills are being filed that support new and innovative technologies, and address challenges and needs related to aging infrastructure or traditional energy sources. Other bills examine new questions such as the state's role in addressing carbon emissions, or how the growth of electric vehicles may impact the electric grid.

This white paper provides an overview of the trending energy policies considered by state legislatures across the country. Action on most of these measures occurred in 2018, although some 2017 legislative examples are included for states that operate on a two-year legislative session. A few examples from prior years are also included to highlight growing trends.

## Grid Modernization

Technological innovation often moves faster than policy or regulatory response. This has been evident with policies related to grid modernization, where new policies focus less on specifics and more on desired outcomes. Grid modernization is still a nebulous concept—it can encompass everything from distributed energy resources and advanced controls, to smart meters and innovative rate designs. Some states have encouraged broad grid modernization initiatives by providing funding and a policy framework that allows utilities flexibility in deciding which investments would be most impactful for the company and its customers.

Minnesota, for example, passed several measures in recent years that broadly push utilities to invest in grid modernization efforts while also maintaining a level of accountability. In 2015, the state legislature passed [House Bill 1437](#). It requires utilities to regularly issue reports describing transmission and distribution system modernization investments and allows them to recover costs for those investments. In 2017, the Legislature followed up by passing [Senate Bill 1456](#) to provide financial support for a variety of grid modernization investments through a Renewable Development Account, funded by fines assessed on the state's two nuclear plants for the continued storage of spent nuclear fuel on-site.

Similarly, Virginia passed [Senate Bill 966](#) in 2018, which addresses grid modernization by directing state electric utility regulators to consider new demand-management practices. It provides new rate adjustment options for a variety of modernization initiatives, such as distribution system upgrades and smart meter deployment. However, in its first test since passage, state regulators rejected the majority of Dominion Energy's grid modernization and smart meter rollout plan.

The Washington Legislature [provided \\$13 million](#) for grants for advanced transmission and distribution controls, and to support research and development into smart grid technologies and grid modernization. Lawmakers in California required utilities to [consider the role of new energy technologies and demand management tools](#) in their integrated resource planning. And utility regulators in Illinois, building on a series of laws passed by the state Legislature, released a [draft report](#) outlining grid modernization policy options.

While these broad grid modernization efforts are taking place across the country, legislation targeting specific sectors of grid modernization are still common. In 2018, at least three states considered legislation to change the rate design process and how utilities are regulated.

Hawaii enacted [Senate Bill 2939](#), directing state regulators to implement performance-based regulation by 2020. The law directs the state Public Utilities Commission (PUC) to break with established tradition that links utility revenues with electricity sales. Instead, the Legislature required the PUC to create incentives and penalties to tie revenues to various customer-focused performance metrics,

including electric reliability, reduced price volatility and integration of renewables.

Pennsylvania enacted [House Bill 1782](#), which allows utilities to seek alternative ratemaking mechanisms as part of their base rate proceedings before state regulators, including the decoupling of utility profits from power sales. With the passage of [Senate Bill 564](#), Missouri now allows state regulators to approve decoupling mechanisms for electric utilities to address the effect on revenues caused by weather or by conservation initiatives.

## Energy Storage

The number of energy storage measures under consideration has jumped more than six-fold over the past several years as states introduced more than 80 bills last legislative session. At least 17 measures passed in nine states—more than the total number introduced three years ago—indicating significant momentum for this innovative technology.

Energy storage is a catchall term to describe a variety of technologies that work like batteries, taking electricity and storing it for later use. However, the reason that these technologies are piquing the interest of policymakers across the country is their ability to work flexibly with the grid—to absorb excess power when it’s cheap and plentiful and inject that same power back into the grid as demand grows.

Five states—California, Massachusetts, New Jersey, New York and Oregon—have energy storage targets established by state Legislatures, while the Nevada legislature has tasked the state Public Utilities Commission with establishing a target.

Although storage targets have received the most attention, states are tackling this topic through a variety of policies. For example, Maryland [Senate Bill 758](#) established energy storage tax credits. Other states commissioned studies to identify regulatory and market reforms to encourage development, funded demonstration projects and made it easier to interconnect storage to the grid. Additionally, Colorado enacted [House Bill 1270](#) in 2018 that establishes rules to encourage storage development by including storage in Integrated Resource Plans—roadmaps used by utilities to meet forecasted energy demand. Colorado also enacted [Senate Bill 9](#), which requires the adoption of rules to govern the installation, interconnection and use of customer-sited energy storage.

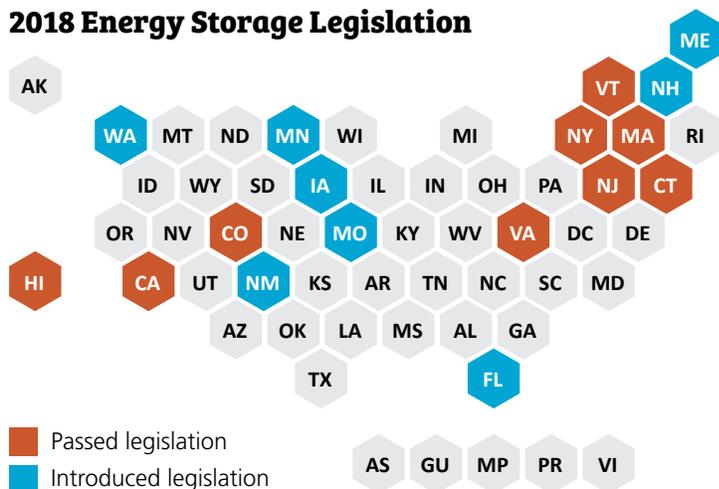
## Cybersecurity

The energy industry was the [most heavily targeted sub-sector of U.S. critical infrastructure for many years](#), according to the U.S. Department of Homeland Security, although in recent years attackers turned their attention to third-party suppliers of equipment and software as well as water and wastewater systems.

With the help of the North American Electric Reliability Corporation (NERC), the Federal Energy Regulatory Commission (FERC) is responsible for issuing cybersecurity guidelines and standards for critical infrastructure protection. However, those standards only apply to operators of the bulk power grid—by some estimates, only one-fifth of the grid’s total assets. The balance is made up of distribution utility assets, which fall under the jurisdiction of state regulators or policy-setting boards.

These distribution networks are owned and operated by investor-owned utilities, municipal utilities

### 2018 Energy Storage Legislation



Source: NCSL, 2018

and electric cooperatives, and the robustness of cybersecurity practices varies significantly. These utilities are working to bolster cyberdefenses, often through interactions with industry associations and federal and state governments.

Most state action is occurring in the following policy areas:

- **State-level cybersecurity advisory councils:** Over the past two years, at least eight states—California, Delaware, Maryland, Nevada, New Jersey, New York, Texas and Washington—considered legislation to establish state-level cybersecurity advisory councils, while many more established legislative committees on the subject.
- **Open records exemptions:** These measures [restrict public disclosure through the Freedom of Information Act \(FOIA\)](#) of certain information that could reveal cyber vulnerabilities to critical infrastructure. Iowa and Virginia passed measures related to this in recent legislative sessions.
- **Cyberattacks in the criminal code:** California added cyberterrorism to the list of conditions that could constitute a state or local emergency, while Washington and Oregon have considered other measures. A [bill considered in Illinois](#) would add the offense of cyberterrorism to the criminal code.

## Energy Resiliency

Weather events in the past several years have forced energy resiliency back into the spotlight as states deal with destruction wrought by hurricanes, catastrophic wildfires and record flooding. Energy resiliency can be broken into three distinct categories: damage prevention, service survivability and rapid recovery. Damage prevention primarily involves upgrading and planning for more resilient infrastructure, which can mean requiring utilities to place electrical lines underground or undertake comprehensive adaptation management plans. Service survivability can involve microgrids or backup power sources, while rapid recovery measures look at ways to aid recovery work in a storm's aftermath.

The California Legislature passed three bills related to wildfires in 2018, though Governor Jerry Brown vetoed [Assembly Bill 2346](#), which would have allowed utilities to establish wildfire cost-recovery accounts. The governor signed the most comprehensive of the three, [Senate Bill 901](#), which changes the way the state plans for and funds wildfire mitigation, from state agency policies to mitigation requirements for electrical utilities. It also changes the wildfire cost-recovery process and supplements the wildfire mitigation planning process for utilities to include independent evaluation. Another bill, [Senate Bill 465](#), included wildfire safety improvements in the state's Property Assessed Clean Energy (PACE) program.

Several other states passed measures with a broader focus. Connecticut passed [Senate Bill 7](#), which among other things looks at long-term adaptation planning, and Missouri passed [House Bill 1355](#), which established a Joint Committee on Disaster Preparedness and Awareness.

Puerto Rico passed six bills dealing with resiliency and disaster recovery in the aftermath of Hurricane Maria, in addition to establishing [rules to facilitate microgrid development](#). [California](#) and [Hawaii](#) passed measures to establish microgrid service tariffs, while Maine passed [House Bill 190](#) to allow municipalities to work with utilities to develop microgrids—though Maine's former Governor Paul LePage vetoed the measure.

The debate over energy resiliency has spilled over in recent years to include the concept of fuel security—essentially, how long a generator can stay in operation in the event of fuel supply disruptions. The U.S. Department of Energy (DOE) proposed a grid resiliency rule that would have provided additional compensation for resources determined to have a set amount of fuel in reserve.

The Pennsylvania legislature [passed resolutions](#) in support of the DOE proposal. DOE has not pursued the rulemaking, but the concept of shifting how electricity markets compensate various resources has continued to be a major talking point.



## Electricity Markets

The debate over how resources are valued and compensated in wholesale electricity markets boils down to one primary consideration: Can those markets absorb state policies that favor certain resources over others while still remaining competitive?

States have pushed through a variety of measures in recent years to support certain resources—such as renewable or nuclear power and energy storage. In 2018, New Jersey and Connecticut joined Illinois and New York in establishing policies to support nuclear power plants. New York and Illinois have each implemented zero emissions credits (ZECs) programs that offer compensation to nuclear plants for each megawatt-hour of carbon-free electricity they produce. New Jersey [Senate Bill 2313](#) established a similar ZECs-style mechanism, while also advancing several policies favorable to renewables. Meanwhile, Connecticut’s [Senate Bill 1501](#) allowed nuclear plants to compete in a market that has been set aside for renewables—a market that receives higher prices. Ohio and Pennsylvania also considered legislation to assist struggling nuclear plants, although no bills passed in 2018. At least eight states passed policies supporting energy storage, even as state renewable requirements continue to be tweaked.

In each case, states have sought a level of control over shaping their resource mix that had been ostensibly turned over to market dynamics. While markets have absorbed a number of these policies, the issue appears to be reaching a tipping point. States continue to introduce and pass legislation that offers around-market compensation for preferred resources, while non-preferred resources have started to file lawsuits in protest. FERC may ultimately decide the matter, even as some of the lawsuits are set to reach the U.S. Supreme Court. FERC has opened a docket in which it is considering a variety of hybrid solutions.

## Emissions Reductions

States legislatures are increasingly active in efforts to reduce carbon emissions. In 2018, states considered and enacted legislation to create or increase existing greenhouse gas emissions targets, establish carbon pricing structures and adopt requirements of the Paris Climate Accord at the state level by requiring state membership in the U.S. Climate Alliance.

Connecticut enacted [Senate Bill 7](#) that requires the implementation of an interim target to reduce greenhouse gas emissions by 45 percent from a 2001 baseline by 2030. Similarly, Maine enacted a measure increasing and [extending emissions reduction requirements](#) for the state. Legislation enacted in [Hawaii](#) established a zero-emissions carbon target to be achieved by 2045, and created a task force to identify best practices, policies and incentives to strengthen carbon sequestration efforts. Hawaii also enacted [House Bill 1986](#), which establishes a carbon offset program to fund projects that generate further carbon offset credits or enhance the state’s climate change mitigation and adaptation efforts.

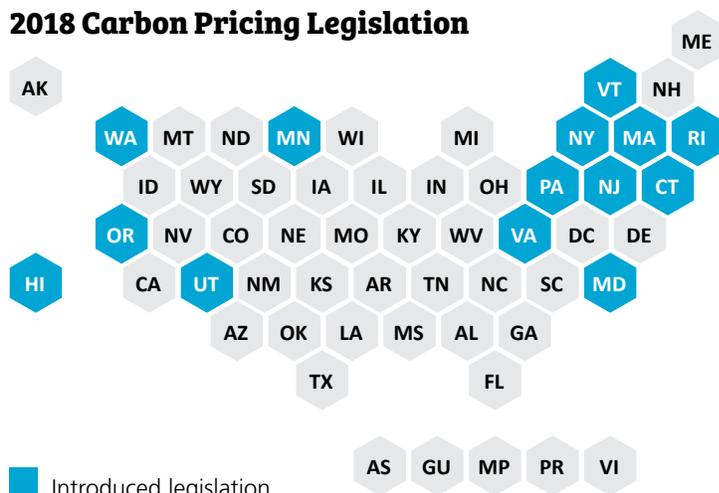
[House Resolution 490](#) and [Senate Resolution 655](#) in Illinois, along with legislation in [Maryland](#) and [New Jersey](#), urged or required participation in the U.S. Climate Alliance and established commitments to meet the goals of the Paris Climate Accord. Maryland’s bill also prohibits the governor from withdrawing the state from the U.S. Climate Alliance unless the legislature approves.

Carbon pricing policies, such as carbon taxes or fees and cap-and-trade programs, also increased in 2018. Carbon taxes are fees levied on fossil fuel emissions. They are intended to either motivate emissions reductions or generate revenue that can be directed to mitigating the effects of those emissions. Cap-and-trade programs establish a cap on emissions and either provide an allotment of emissions credits to regulated entities or require all entities to buy credits on a market created for emissions credit trading. At least 10 states considered legislation to establish a carbon tax —including [Connecticut](#), [Hawaii](#), [Maryland](#). Multiple bills in Massachusetts, Minnesota, New York, Rhode Island, Utah, Vermont and Washington. Washington also included [Initiative 1631](#) on the November ballot to create a carbon tax, but the measure failed.

Additionally, Oregon and Pennsylvania considered legislation to create a cap-and-trade program. Virginia introduced legislation to join the Regional Greenhouse Gas Initiative (RGGI) and New Jersey considered several bills to rejoin the initiative, while Rhode Island considered a bill to allow the proceeds generated by the state’s participation in RGGI to be used for additional purposes.

New Hampshire, New York and Virginia introduced bills to study carbon taxes or cap-and-trade programs. New Mexico adopted [Senate Memorial 23](#) that requires a legislative interim committee to study how a carbon tax could be implemented and its effects on the economy, jobs, health and greenhouse gas emissions.

### 2018 Carbon Pricing Legislation



Source: NCSL, 2018

## Energy Efficiency

Energy efficiency offers multiple reliability, economic and environmental benefits. In addition to lowering energy bills, efficiency decreases emissions and reduces energy demand, alleviating stress on the electric grid and reducing the need to build new infrastructure. States have a range of efficiency policies to choose from—including setting building-efficiency or reporting requirements, creating



efficiency targets or incentives, designating sales tax holidays for buying efficient appliances, and enacting various financing and funding initiatives. During the 2018 session, states considered nearly 300 efficiency-related bills, ultimately enacting more than 60.

Iowa passed an [omnibus energy bill](#) that removes the requirements for energy efficiency programs for municipal utilities and electric cooperatives with fewer than 10,000 customers, which together serve roughly one-third of homes in Iowa. The bill exempts gas and electric utilities from adopting efficiency programs that result in costs greater than 1.5 and 2 percent of the utility's expected annual revenue, respectively. Additionally, the measure allows utility customers to opt out of paying for any utility efficiency or demand-response programs that do not pass the Ratepayer Impact Measurement test, a cost-effectiveness test. The policy is unprecedented nationally.

In New Jersey, [Assembly Bill 3723](#) requires the Board of Public Utilities to adopt electric and gas efficiency programs to ensure investment in cost-effective energy efficiency measures. Each electric utility is directed to achieve annual reductions in electricity use equal to 2 percent of the average annual usage for the previous three years. And Rhode Island's companion bills—[House Bill 7807A](#) and [Senate Bill 2500B](#)—require the Office of Energy Resources to conduct a study of electric and gas utilities' efficiency programs to examine implemented programs and planned conservation measures and review and confirm the claimed energy savings.

States also considered legislation to update or strengthen building energy codes, which can help owners and renters realize the economic and comfort benefits of improved heating and cooling systems, insulation and ventilation. New York [Assembly Bill 8922](#) requires the New York State Energy Research and Development Authority (NYSERDA) to establish standards and criteria for affordable, green residential buildings, and to connect stakeholders with resources on financing and best practices. [Assembly Bill 6255](#) requires NYSERDA to study the feasibility of making significant improvements to energy efficiency in commercial buildings through design, construction and high-performance efficiency measures. [Vermont legislation](#) added efficiency standards for 16 products, including air conditioners, computers and faucets, to the state's appliance efficiency law and corrected a loophole that exempted certain types of fluorescent light tubes from efficiency standards.

Efficiency mandates for public buildings, such as state-owned buildings, or specific facilities, such as schools, are also becoming more common across state legislatures. State policies may include percentage-based requirements or adherence to rating systems, such as the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED). Illinois enacted [Senate Bill 3031](#), which requires state-funded building construction and major renovations of certain existing facilities to achieve at least LEED silver certification or an equivalent standard. In Maryland, [House Bill 1783](#) requires the development of incentives for greater use of energy efficient technologies in public schools. It also requires the construction of new school buildings that are net-zero energy. Net-zero buildings produce as much energy as they use, or more, by combining a high degree of efficiency with on-site renewable energy generation.

Additionally, Michigan and Tennessee enacted legislation on financing efficiency improvements to state facilities. Michigan [House Bill 5238](#) allows school boards or districts to contract with qualified providers to acquire or finance energy conservation improvements to school facilities or infrastructure. Tennessee [House Bill 2432](#) authorized state procurement agencies to develop and implement five energy performance or guaranteed energy savings contract pilot projects for state-owned buildings.

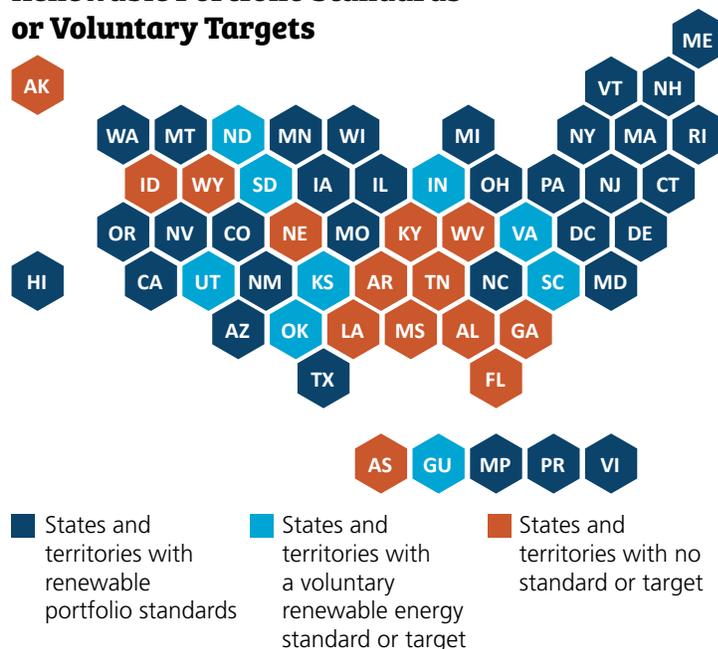
## Renewable Portfolio Standards

**Renewable portfolio standards (RPS)** require utilities to meet a growing portion of their electricity needs with renewable sources. Twenty-nine states, Washington, D.C., and three territories have established an RPS, while eight states and one territory have set voluntary renewable energy goals. Last year, states introduced more than 100 RPS-related bills, including those to increase or decrease states' RPS requirements, refine resource eligibility rules for hydroelectric and biomass facilities, and require long-term renewable energy procurement contracts for utilities.

California enacted [Senate Bill 100](#), increasing the state's RPS to 60 percent by 2030 and establishing a 100 percent clean energy mandate that requires utilities to procure all their electricity from clean sources by 2045. Previously, Hawaii was the only state to have a 100 percent RPS, requiring the state to transition to all renewable energy by 2045. Washington D.C., through [Bill 904](#), established a 100 percent RPS by 2032. Connecticut enacted [Senate Bill 9](#), increasing the state's RPS requirement to 40 percent by 2030.

Massachusetts [House Bill 4857](#) established the country's first clean peak standard, which requires utilities to procure a certain amount of electricity during peak demand hours from clean energy resources, including renewable energy, energy storage and demand response. The measure directs the Massachusetts Department of Energy Resources to set the initial standard, which will increase by 0.25 percent annually. In addition to increasing and extending the state's RPS to 50 percent by 2030, New Jersey [Assembly Bill 3723](#) phases out the solar carve-out and increases the carve-out for offshore wind to 3.5 gigawatts.

### Renewable Portfolio Standards or Voluntary Targets



Source: NCSL, 2018

## Renewable Energy Siting, Permitting and Interconnection

State siting, permitting and interconnection policies are essential components of state renewable energy policy and can alter the barriers to expansion of new renewable energy projects. Siting and permitting can determine setback requirements and affect the interconnection process. Interconnection policies govern the process of connecting renewable energy systems to the electric grid. A streamlined interconnection process can reduce project delays and additional costs while expediting a project’s return on investment.

Several states enacted measures pertaining to wind energy facility siting. New Hampshire [House Bill 337](#) prohibits municipalities from setting a noise level limit for small wind energy systems lower than the state’s [rules outline](#). Oklahoma companion bills—[House Bill 3561](#) and [Senate Bill 1576](#)—established requirements that the construction or operation of proposed wind energy facilities or expansion projects must not encroach on or have a significant adverse impact on any military installation. Tennessee [House Bill 1731](#) implemented the recommendations of a study committee on wind siting by establishing siting and impact assessment requirements, setbacks, noise limits and financial security requirements to decommission the wind facilities. New Jersey [Senate Bill 1217](#) requires the Board of Public Utilities (BPU) to allow the submission of an amended application for a 20 to 25 MW offshore wind project, which the BPU had previously rejected due to cost concerns. The review of the application is limited to addressing modifications made to resolve the financial viability concerns.

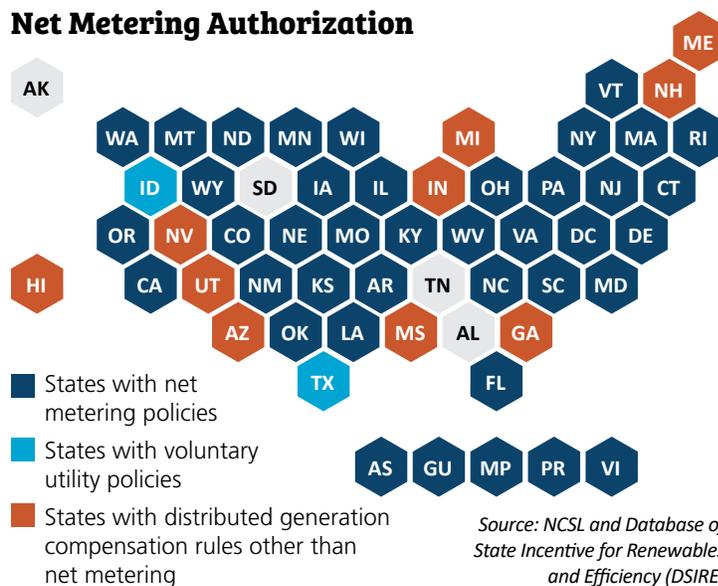
Legislation enacted in Vermont, [Virginia](#) and Washington, D.C. addressed siting for solar photovoltaic (PV) installations. The [Vermont bill](#) exempts solar PV facilities installed on parking lot canopies from setback requirements but allows the Public Utilities Commission to establish new setback requirements for such facilities. The bill also waives application fees for roof-mounted solar PV systems of up to 500 kW in capacity and establishes a beneficial habitat and pollinator-friendly standard for solar energy sites. Washington, D.C. [Bill 229](#) establishes a [solar rights law](#) for the district that prohibits homeowners, condominium owners and other housing associations from restricting a resident from installing solar energy devices on their property or residential unit.

## Net Metering and Compensating Customers

Net metering [policies](#) allow distributed generation customers to sell excess electricity to their utility at the retail rate and receive credit on their utility bill. In 2018, some states made changes to their net metering or shared renewable energy policies. Connecticut enacted [Senate Bill 9](#) ending net metering for new customers when the [Residential Solar Investment Program](#) concludes or when state regulators establish the new compensation program—whichever occurs first. Existing customers will be grandfathered in until December 2039, while new customers will have two options: a buy-all, sell-all structure or a tariff structure, with rates for both determined by state regulators. Utah [Senate Bill 141](#) establishes a repeal date of Jan. 1, 2036 for the state’s net metering policy and modifies solar tax credit provisions.

[Senate Bill 9](#), enacted in Colorado, permits solar-plus-storage projects to net meter. New Hampshire enacted three bills related to group net metering, the state’s [shared renewable energy](#) program. Senate Bills [321](#) and [367](#) include provisions related to group net metering hosts, while [House Bill 1202](#) allows municipalities to establish revolving loan funds to facilitate transactions for group net metering. Michigan and South Carolina also considered legislation related to net metering, but the measures failed to pass.

### Net Metering Authorization



## Financing Clean Energy

Financing programs can remove some of the barriers to clean energy adoption by reducing the amount of up-front capital required for investment in energy efficiency and renewable energy technologies. They can also provide certain demographics—such as small businesses and lower-income homeowners—with access to capital. Many states are exploring financing strategies such as loans, credit enhancements, on-bill financing and repayment, and Property Assessed Clean Energy (PACE) financing.

In recent years, PACE financing has been a topic of growing interest among states, and 2018 was no exception. PACE financing programs allow local governments to provide financing for energy efficiency, renewable energy and water efficiency projects that building owners or homeowners pay back through property tax assessments. During the 2018 legislative session, at least seven states—including California, Delaware, Illinois, Michigan, Minnesota, Pennsylvania and Utah—enacted PACE-related legislation. [Delaware](#) and [Pennsylvania](#) enacted legislation authorizing commercial PACE financing and allowing local governments to adopt PACE programs for various energy improvements. Minnesota enacted [Senate File 3245](#) expanding PACE financing to include homeowners by authorizing PACE-implementing entities to establish residential PACE (R-PACE) programs. The bill also included R-PACE consumer protection provisions. California's [Assembly Bill 2063](#) and [Senate Bill 1087](#) provide additional consumer protection measures for PACE financing customers, while [Senate Bill 465](#) added wildfire safety improvements as projects eligible for PACE financing in localities designated as Very High Fire Hazard Severity Zones.

Alaska enacted [House Bill 374](#), which authorizes on-bill financing. This allows customers to enter into a financing agreement with a utility to purchase and install renewable energy systems and energy efficiency and energy storage devices and repay the utility through charges on their utility bill. Washington state [Senate Bill 6090](#) created a revolving loan fund to support increased deployment of energy efficiency and renewable energy technologies, while Washington, D.C. [Bill 257](#) established the Green Finance Authority to increase private investment in clean energy and other green infrastructure projects in the district. The Green Finance Authority will offer loans, loan guarantees, credit enhancements, bonds and other financing mechanisms for qualified projects.

## Special Fees for Electric Vehicles

Up 81 percent over the prior year, 2018 was a banner year for electric vehicle sales in the U.S., with more than 361,000 cars sold. Electric vehicle sales currently make up only about 1 percent of all light-duty car sales across the nation but, as sales continue to climb, there are concerns this may lower gasoline tax revenues. Improvements and repairs to the nation's highways have traditionally been funded through federal and state taxes collected at the pump. Hybrid and electric vehicles use less or no gasoline, so they do not contribute in the same way as traditional vehicles to the upkeep of highways.

As the revenue from gasoline taxes declines—due not only to electric vehicles—state policymakers are looking for ways to maintain our nation's roads. One growing policy trend is a separate registration fee for certain hybrid or electric vehicles. These fees come in addition to standard motor vehicle registration fees and proponents support the fees to bring equity among drivers—attempting to get all drivers to pay for the use of roadways.

State legislators considered more measures applying electric vehicle fees in 2017 than any other action related to electric vehicles. As of March 2019, 20 states have laws requiring a special registration fee for select hybrid and plug-in electric vehicles. Mississippi ([House Bill 1](#)) and Utah ([Senate Bill 136](#)) are the most recent states to enact measures—joining nine states that passed bills in 2017.

The fees range from \$50 each year in Colorado to \$200 for a plug-in electric vehicle in Georgia and West Virginia. Wyoming became the first state of 2019 to pass [legislation](#) on electric vehicle fees—increasing the current fee from \$50 to \$200 annually. Some states also impose a fee for plug-in hybrid vehicles that operate on a combination of electricity and gasoline, as well as hybrid electric vehicles

that aren't recharged using electricity. The fee for plug-in hybrid vehicles is \$47.50 in Michigan and \$100 in West Virginia. Indiana includes plug-in hybrid vehicles and hybrid electric vehicles in its \$50 annual fee. South Carolina is the only state without an annual fee, and instead requires a payment of \$120 for all-electric cars and \$60 for plug-in hybrid vehicles, once every two years.

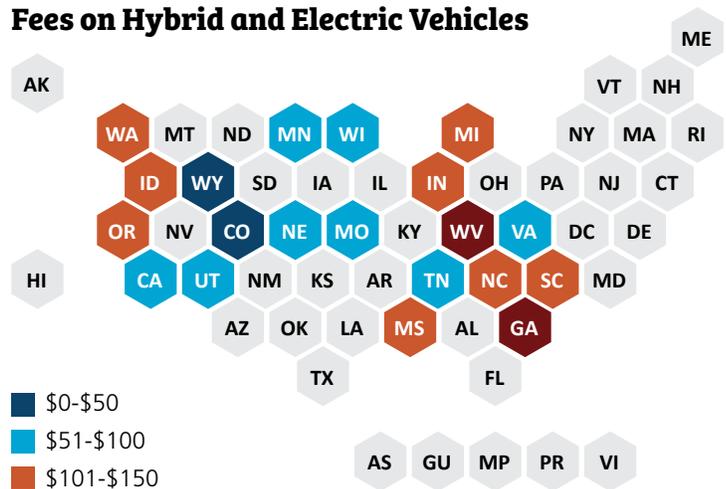
In at least four states—California, Indiana, Mississippi and Utah—these special fees are structured to grow over time. By tying the fees to the consumer price index or another inflation-related metric, these states are striving to avoid the declining purchasing power that gas taxes suffered due to years of fixed-rate structures.

State policymakers will continue to look for ways to address the revenue shortage to pay for transportation infrastructure. If sales of hybrid and electric vehicles continue to grow, states could see future revenue streams increase because of electric vehicle adoption and these new registration fees.

## Conclusion

State policymakers are considering a wide range of measures that impact the energy sector. From examining policies that help or hinder specific energy sources to establishing guiding principles that seek to modernize energy systems, state lawmakers play an important role in shaping the future of the U.S. energy sector. This white paper serves as a resource highlighting the many state policies and considerations that state legislatures have proposed in recent years and how these policies may help inform future trends.

## Fees on Hybrid and Electric Vehicles



Source: NCSL, 2018

**Notes:** Utah's fee increases to \$120 in 2021; South Carolina's fee is biennial; Idaho, Indiana, Michigan, Missouri, Mississippi, South Carolina, Utah and Wisconsin charge separate fees on hybrids.

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