2019 Legislative Energy Trends

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State legislatures wrapped up 2019 and have moved into 2020 exploring a wide range of energy policies. In 2019, lawmakers considered over 3,500 energy-related measures—a sizable increase compared to 2018—and enacted over 500 new laws.

This white paper provides an overview of the trending energy policies considered by state legislatures across the country. From electric vehicle fees and incentives to energy storage, workforce development and modernizing the grid, state lawmakers took action to encourage energy innovation and increase efficiency. The paper examines state legislative action in 2019, highlighting trends in state energy policy and which topics are likely to take priority in 2020 and beyond.

Clean Energy

Perhaps the biggest trend in 2019 dealt with state initiatives to reduce emissions from the electric sector, with a handful of states taking sweeping, decisive action toward decarbonization. Legislatures in 48 states, D.C. and Puerto Rico considered over 1,500 bills related to clean energy, renewable energy or emissions reductions in 2019 and over 200 of these measures were enacted or adopted. State legislation focused on a variety of clean energy technologies—including solar, offshore wind, biomass, hydropower, energy storage and nuclear power. States also looked to a variety of policy mechanisms to support a clean energy economy in proposing legislation that includes mandates, incentives and market-based strategies.

States are increasingly focused on policies aimed at reducing greenhouse gas emissions (GHGs) and, in particular, on reducing emissions from the nation’s largest-emitting sectors: transportation and power. During the 2019 legislative session, 33 states and Puerto Rico considered over 300 bills focused on reducing GHGs, with over 40 measures enacted or adopted. A number of states enacted binding GHG reduction targets and legislatures showed continued interest in carbon pricing policies.

In 2019, Colorado (HB 1261), Maine (SP 550), Nevada (SB 254), New York (SB 6599) and Puerto Rico (SB 773) enacted ambitious targets aimed at reducing GHGs across economic sectors, with more states considering similar legislation.

In addition to establishing emissions targets, states focused on creating a framework for agencies to implement the regulations necessary to achieve required reductions. For example, Colorado’s HB 1261 directs the state air commission (AQCC) to develop regulations that achieve incremental reductions culminating in 90% reductions in GHGs below 2005 levels by 2050. This new law also requires the AQCC to regularly engage with the General Assembly, biennially report on the state’s progress toward achieving its targets and make recommendations for future legislation to address climate change.

While most states focused on enacting statutory targets for the first time, others, like Maine, focused on establishing binding long-term targets. Maine law previously required a return to 1990
emissions levels by 2010 and a 10% reduction below that by 2020, but lacked any concrete long-term targets. Under SP 550, the state is required to reduce GHGs below 1990 levels by 45% by 2030 and 80% by 2050.

A growing number of regionally and politically diverse legislatures are also looking to carbon pricing policies to drive down emissions in their states, with 17 states considering over 40 bills on the topic. Carbon pricing policies broadly encompass a variety of mechanisms, such as taxes, fees and cap-and-trade markets, that put a per-ton price on GHG emissions. Most states with proposed legislation in this area considered policies to impose a direct tax or fee on emissions, with some states targeting specific sectors and others aiming to impose a tax that would apply economywide. Roughly half the carbon-pricing-related bills under consideration in 2019 either failed or were vetoed, but the other half are being taken back up in 2020. In addition to the number of carbon tax proposals considered in states like Montana, Texas and Massachusetts, a smaller number of states considered cap-and-trade legislation. Such proposals set overall emissions limits that decline over time and require regulated entities to obtain emissions allowances—allowing them to emit a specific amount of GHGs—that can be bought and sold through an allowance market.

A handful of eastern states, including Virginia, Vermont and Pennsylvania, considered legislation relating to the state’s participation in regional cap-and-trade programs, including the Regional Greenhouse Gas Initiative (RGGI) and the Transportation and Climate Initiative (TCI). Pennsylvania SB 950 (pending) would require explicit approval from the General Assembly before joining RGGI or implementing another cap-and-trade program. The Virginia governor vetoed two bills prohibiting the state’s involvement in RGGI and TCI without the legislature’s authorization, while pending legislation in Vermont (HB 461) would authorize the state’s participation in TCI.

A few states considered cap-and-trade legislation targeting emissions across multiple economic sectors. In 2019, Oregon and Washington considered legislation to create in-state, multi-sector programs that would have linked with other carbon markets, including cap-and-trade programs currently implemented in California and the Canadian province of Québec. In particular, Oregon’s HB 2020 would have capped total GHG emissions from fossil fuels, electricity and industrial processes in the state. It would also have established a declining annual allowance necessary to achieve new GHG emissions reduction targets culminating in 80% reductions below 1990 levels by 2050. Despite passing in the House, HB 2020 died after failing to pass the Senate. Washington’s similar cap-and-trade bill (SB 5981, pending) would also establish aggressive GHG reduction targets in the state.

In addition to reducing GHGs, state legislatures are increasingly interested in policies that decarbonize the power sector and support a transition toward clean energy technologies. States were particularly focused on updating or expanding their Renewable Portfolio Standard (RPS) policies, which require renewable resources to supply a certain percentage of utilities’ electricity sales. Some states broadened their policies to allow for “clean” or “zero-emitting” technologies to meet certain targets. These new Clean Energy Standard (CES) policies often allow all zero-emitting sources to count toward a particular target, including nuclear power.

Legislatures considered laws to set more aggressive long-term RPS targets and amend statutory definitions of “renewable” or “clean” to expand or restrict qualifying resources. At least 23 states considered over 100 bills related to RPS or CES policies, with at least eight states and Puerto Rico enacting laws that establish new percentage requirements. The vast majority of these bills (eight out of nine) increased the state’s renewable or clean energy target to 50% or greater. Some states with voluntary policies considered legislation that would make compliance mandatory. Virginia considered such legislation in 2019 and is taking the issue up again in 2020.

Enacting new, aggressive long-term clean energy targets that expand the list of qualifying resources beyond traditional renewable energy is emerging as a major trend in state energy policymaking. While RPS policies
aim to deploy renewable energy, CES policies focus on reducing power sector GHGs. In 2019, five states—Colorado, Nevada, New Mexico, New York and Washington—enacted 100% clean energy targets that allow for the use of “clean” or “zero-emitting” energy sources to meet the most aggressive targets. For example, Washington’s recently enacted SB 5116 requires that 100% of the electricity sold in the state come from non-emitting or renewable resources by 2045. Washington’s new CES broadly defines non-emitting resources to include those that do not “emit greenhouse gases as a by-product of energy generation,” but notably excludes newly constructed large hydroelectric facilities. Some states have designed their CES policies to prioritize specific sources that are driving GHG emissions in their state, while others are considering CES policies that would open doors for non-renewable energy sources, namely nuclear.

In close alignment with current state policy prioritizing methane emissions reduction (Executive Order 2019-003), New Mexico’s recently enacted CES (SB 489) includes within its definition of “zero carbon resource” electricity generation that reduces methane emissions by a certain amount. Meanwhile, Pennsylvania lawmakers debated CES legislation (SB 510) that would have targeted support for nuclear power as the state’s largest source of clean energy. Several of the state’s nuclear plants are at risk of shutting down prematurely, and the state has spent years debating whether to support and preserve its largest source of carbon-free power.

States are also reassessing the role of energy efficiency measures in expanding their CES policies. This includes updating their Energy Efficiency Resource Standards (EERS), requiring that utilities save a certain percentage of electricity or natural gas to support their more aggressive targets. In enacting a new 100% CES and setting a more aggressive 50% RPS, Nevada preserved the role of energy efficiency to give utilities flexibility in achieving near-term targets, but eliminated efficiency measures from the program after 2025. Other states with recently enacted CES targets also passed complementary EERS policies, with New Mexico requiring new long-term energy savings targets for 2026 through 2030 and Washington expanding its EERS to include natural gas for the first time.

Ohio offered an interesting contrast to these trends when it enacted HB 6, which expanded support to its nuclear plants while reducing the state’s RPS and eliminating its EERS over the next seven years. The bill also touches on another trend (discussed further in the Fossil Fuels section) by ensuring payments to two struggling coal plants. The bill provides financial support for nuclear generation in the state using ratepayer dollars that were previously supporting RPS and EERS programs.

In enacting new clean energy incentives and mandates, state legislatures are also considering policies that focus on ensuring lower-income communities have access to—and stand to benefit from—clean energy programs. Delaware and Washington enacted laws focusing on availability of—and funding for—energy assistance programs for lower-income residents. Other states enacted new laws designed to make renewable energy and energy efficiency technologies more accessible to lower-income consumers. Maine recently enacted a new law requiring state agencies to identify and consider lower-income consumers in energy efficiency programming. Virginia passed HB 2741, creating a pilot program providing financial support for lower-income households to install solar energy systems.

Additionally, at least 12 states considered more than 30 bills related to community solar in 2019, with at least three states passing new laws. New Hampshire enacted SB 165, designed to increase access to solar in low-income communities, while Colorado, through HB 1003, increased allowable capacity for commu-
Community solar projects. Maryland also enacted two community solar bills, with the first prohibiting limitations on the number of subscribers allowed for community solar projects (SB 520). The second increases project generating capacity and extends a pilot program to 2024 (HB 683).

States have also increasingly focused on engaging lower-income and disadvantaged communities in mapping out their clean energy future. Colorado’s recently enacted HB 1261 requires the state Air commission to identify communities that may “experience disproportionate environmental harms and risks,” including minority and low-income communities, and engage these groups in developing regulations under the statute. Moreover, New York’s Climate Leadership and Community Protection Act establishes a number of working groups to engage with environmental justice communities disproportionately affected by environmental pollution. It also requires that disadvantaged communities receive at least 35% of the benefits of clean energy and efficiency program spending.

Fossil Fuels

State action around fossil fuels gravitated toward two opposites in 2019, as some states with clean energy goals moved to tighten regulations and restrict development while others considered a variety of measures to support and expand the continued use of oil, natural gas and coal. More than 900 bills were considered last session and almost 160 measures enacted, with hydraulic fracturing and measures associated with the drilling process being some of the most common. States considered approximately 115 measures to protect public health and the environment in areas where hydraulic fracturing occurs, while also tapping into the economic potential associated with this oil and gas drilling technology.

Colorado passed SB 181, modifying the regulatory oversight of the Colorado Oil and Gas Conservation Commission, the primary regulatory body overseeing oil and gas drilling in the state. The new law requires that the commission “regulate the development of oil and gas in a manner that protects public health, safety, and welfare, including protection of wildlife resources,” whereas previous law focused on cost-effectiveness and technical feasibility. The bill also provides additional regulatory authority over oil and gas operations to local governments. New Mexico’s HB 546, enacted in 2019, also makes significant changes to the regulation and oversight of oil and gas drilling by restoring the state regulator’s authority to enforce oil and gas protections—authority it lost in a 2009 state Supreme Court ruling. The bill also promotes recycling or reusing water produced in drilling or hydraulic fracturing operations.

Initiatives to support struggling coal plants continued into 2019, with Ohio’s HB 6 being the most direct example by ensuring increased revenue to two plants.
Oil and gas states routinely consider measures amending severance tax allocations associated with oil and gas drilling, and 2019 was no exception. North Dakota’s SB 2312 changed the allocation of tax revenue from oil and gas drilling on tribal trust lands so that 80% of the revenue from new wells will be allocated to the tribe and 20% to the state. The previous agreement authorized a 50-50 split.

Other states, like Connecticut, Oregon and Washington, took a different approach to hydraulic fracturing in 2019, with all three passing measures banning or further restricting hydraulic fracturing or disposing waste associated with the drilling process. At least six states—California, Florida, New Hampshire, New Jersey, New York and Oregon—enacted measures banning offshore drilling or leasing public lands for oil and gas-related activities.

But those weren’t the only oil and natural gas bills last session. States also examined pipeline safety and considered new regulations to prevent pipeline leaks, or to provide support to replace aging pipeline infrastructure. At least seven states passed bills addressing natural gas pipeline safety, including South Dakota’s SB 18. It establishes new safety standards for gas pipelines, in accordance with federal law, and increases the maximum civil penalty for certain pipeline safety violations. SB 194 in Rhode Island creates a special legislative commission to study and evaluate the state’s electric and natural gas transmission and distribution system infrastructure. Five states—California, Nevada, Oregon, Utah and Washington—also considered support for newer technologies, like renewable natural gas. Of those, California’s AB 1195 was the only measure that failed, when the bill was vetoed by the governor.

At least nine states introduced measures to support the coal industry, protect public health and the environment, or assist workers who may be displaced by closing plants. Illinois, Indiana, North Dakota and Virginia all passed bills related to coal combustion residuals, otherwise known as coal ash. North Dakota’s SB 2108 reaffirms the state’s position that current regulations surrounding the use and disposal of coal ash are acceptable. The bill also provides for citizen participation in the event a violation occurs around proper coal ash compliance. Illinois’ SB 9 creates the Coal Ash Pollution Prevention Act, which prohibits discharge of coal ash, establishes a new regulatory framework, and requires the cleanup of coal ash waste in the state.

In addition, initiatives to support struggling coal plants continued into 2019, with Ohio’s HB 6 being the most direct example by ensuring increased revenue to two plants. In Kentucky, two resolutions—SR 90 and HR 91—urged the Tennessee Valley Authority (TVA) to delay voting on closing the Paradise Fossil Plant Unit 3. However, TVA moved forward with the plant closure, saying it’s no longer financially beneficial to keep the plant open. Montana also passed a resolution, HJR 4, urging the federal government to support the state’s right to export coal, a direct response to Washington state opposing a coal terminal that would send Montana coal abroad. As of 2020, the two states are asking the U.S. Supreme Court to weigh in to settle the feud.

Indiana came close to passing SB 472, which would have established a two-year moratorium on the construction of new power plants over a certain size—a move that many argued would have benefitted the state’s coal fleet. The trend appears likely to continue into the current legislative session, as the Indiana House passed HB 1414, which would require approval by state regulators before a utility can retire a coal plant. Supporters argue it will prevent utilities from taking steps that would substantially alter the state’s resource mix until a task force can deliver its final report on the state’s energy future. The proposed law would sunset in 2021.

**Workforce Development**

Workforce development has emerged as a critical issue as the energy sector transitions toward new technologies. States are growing increasingly concerned about the availability of a qualified workforce to replace the impending large-scale retirement of technicians capable of installing and operating new infrastructure and systems necessary to power a modern electric grid. In addition, some areas of the energy sector are seeing significant growth in job opportunities as new technologies and resources come online. But even as clean energy jobs grow, lost jobs in the fossil fuel industries—and in the coal industry, in particular—have been a major concern in a variety of states. According to a 2019 U.S. Energy and Employment Report published by the National Association of State Energy Officials and the Energy Futures Initiatives,
the energy sector employed around 6.7 million Americans—or 4.6% of the workforce. While the clean energy sector offers a significant number of new job opportunities, the report indicates that hiring qualified workers is a problem for virtually all energy-related jobs.

With these concerns looming, many states legislatures are looking for ways to grow, support and retain a qualified workforce across the energy sector. In 2019, legislatures introduced more than 70 bills related to job retention, training or other workforce development issues. The most common type of legislation enacted relates to support for green or clean energy jobs. For example, Hawaii’s HB 560 creates a new program to provide training to county departments responsible for permitting, licensing, inspecting or approving renewable energy systems and new technologies, such as energy storage. Administered by the University of Hawaii’s community colleges, the training is designed to help county officers and employees keep up with advanced technologies and distributed electric systems.

Maryland also passed the Clean Energy Jobs Act in 2019 (SB 516), which in part establishes a new account for grants that support workforce development programs, like job training for pre-apprenticeship and registered apprenticeship in advanced energy and transportation jobs.

In addition, New Mexico’s Senate Memorial 24 prioritizes growing and diversifying the state’s energy economy, which will require that employees be trained in renewable energy, fossil energy, nuclear energy and energy storage, among other areas. Through the measure, the legislature requests that state agencies advance and support policies that remove access barriers, improve outreach, and better align education and training programs with energy workforce needs.

As state legislatures consider new energy technologies, there is also a growing interest in creating and promoting jobs related to cybersecurity. In 2019, Florida enacted SB 2500, providing funding for the state Department of Education to establish workforce development and training programs in a variety of areas, including cybersecurity. Also, in Illinois, HB 3017 (pending) would create the Veterans Cyber Academy Pilot Program to develop certifications, apprenticeships and additional resources encouraging military veterans to enter the cybersecurity field.

State action is not only centered on promoting new technologies, but also on how to address immediate effects of retiring plants. As more coal plants are slated for decommissioning, states are considering ways to assist workers in finding news jobs or providing retraining for other positions in the energy sector. Colorado passed HB 1314, creating the Just Transition Office in the Division of Employment and Training at the state Department of Labor and Employment. The new office is required to identify or estimate the timing and location of facility closures and job layoffs related to the coal industry and recommend how to respond to the economic needs of workers. The bill also requires a plan to provide benefits to coal transition workers and education and training opportunities to support their new careers. The measure includes grants for eligible entities in coal transition communities that seek to create a more diversified, equitable and vibrant economic future for those communities.
Grid Modernization and Infrastructure

States have also steadily moved toward modernizing the electric grid, enacting legislation that improves or replaces aging infrastructure. Throughout 2019, states continued to consider new legislation and to implement programs enacted in previous sessions.

While a variety of states considered grid modernization legislation last year, only a handful of measures passed. Puerto Rico passed a sweeping new energy package (SB 1121) to reorganize territorial agencies responsible for energy planning and regulation, and establish parameters guiding the development of a resilient, modern grid consisting of micro-networks that incorporate distributed resources. Virginia enacted SB 966, providing a platform for utilities to pursue an array of grid modernization projects while ensuring rate protections for customers.

To provide greater financial flexibility to its utilities, Indiana passed HB 1470. The bill allows utilities to recover costs on transformation and modernization projects for the state’s transmission and distribution grids that are outlined and approved under long-term plans. It eliminates the need for utilities to seek state regulatory approval to raise rates to fund the projects. In theory, the law should make it easier for utilities to finance and pursue these types of modernization initiatives, but the bill drew criticism from consumer advocates claiming it offers too much leeway for utilities to spend money.

The law in Indiana reflects a larger shift toward using electric distribution system planning as a tool for regulators to take a more granular look at distribution grids. The process complements integrated resource plans (IRPs) that many utilities regularly submit to state regulators, mapping out how they plan to meet bulk system issues, including load forecasting and meeting future demand. Distribution system planning takes a deeper look into distribution networks, assessing physical and operational challenges, and outlining how a utility plans to prepare and adapt to accommodate changing dynamics, such as increased use of distributed energy resources and advanced technologies. Washington enacted HB 1126, setting requirements for distributed energy resources in electric utility planning. In particular, the bill requires utilities to forecast growth of distributed energy resources on the utility’s distribution system, provide a 10-year distribution system investments plan, and evaluate how cybersecurity and data privacy policies are evolving with the distribution system. Illinois, Massachusetts, Nebraska, New Hampshire, New Jersey and New York all considered legislation that would have studied, amended or adopted elements of distribution system planning requirements.

Cybersecurity

As states evaluate strategies for incorporating new technologies, legislatures are growing increasingly concerned about the cybersecurity of the energy sector, and state legislators are increasingly focused on addressing those vulnerabilities. During the 2019 legislative session, at least 16 states considered nearly 50 measures intended to address grid cybersecurity and other critical infrastructure—an increase of around 30% over the previous year. Of the bills introduced, at least 11 states passed more than a dozen measures.

Texas had the busiest legislative session when it came to cybersecurity. The legislature passed SB 475 to mitigate the risk of cyber and physical attacks on the state’s electric system by creating the Electric Grid Security Council. The council is tasked with developing and communicating “best security practices” to the electric industry, developing educational programs to promote workforce development in these areas, and collaborating among relevant stakeholders to prepare for events that could threaten grid security. In addition, Texas
enacted SB 936 authorizing the state utility commission to contract with an entity to run a Cybersecurity Monitor Program to oversee and work with the state’s electric sector. That third-party monitor is expected to meet with utilities regularly to discuss emerging threats, best practices and training opportunities, as well as to review utility self-assessments and keep the utility commission updated on the electric sector’s cybersecurity preparedness. The new law also authorizes state regulators to approve cost recovery for utilities pursuing cybersecurity activities.

Arkansas’ SB 632 authorizes the state Economic Development Commission to create a cyber initiative responsible for mitigating cybersecurity risks by increasing education about threats and defense, providing threat assessments to private and public sectors, and fostering the growth of cybersecurity technology and IT development. Meanwhile, Kansas’ SB 69 creates an energy policy task force to study how utility cybersecurity programs, among other things, will affect electricity rates. (For more information about energy-related cybersecurity initiatives, see NCSL’s resource, “Cybersecurity and the Electric Grid”).

At least three states—Colorado, Nebraska and North Dakota—passed open record exemptions related to critical infrastructure cybersecurity. (For more information regarding open record exemptions and critical infrastructure, see NCSL’s publication, “Open Government Laws and Critical Energy Infrastructure”).

Resiliency

Utility equipment bears the brunt of nature’s more destructive tendencies. Perhaps unsurprisingly, as the decade with the most devastating natural disasters in the nation’s history comes to a close, resiliency and grid-hardening are top issues for many state legislators.

The 2019 legislative session was dominated by the wildfires out West, although recent hurricane seasons in the Southeast and Caribbean continued to affect policymaking in many states.

The California legislature, in particular, passed nine bills during the session to address the growing list of problems from yet another destructive wildfire season. The bills touched on nearly every aspect of the issue, from fire prevention practices to utility communications requirements and emergency management. The legislature passed three measures to create, consolidate or define wildfire-specific mandates for planning and disaster management agencies, including the Catastrophe Response Council (AB 111), the California Wildfire Safety Advisory Board (AB 1054) and the Natural Resources Agency (AB 38).

Under SB 247, utilities must notify the Department of Forestry and Fire Protection after completing portions of their vegetation management plans and the department must audit utility compliance. Also, one year after establishing robust wildfire mitigation planning requirements for its electric utilities, the California legislature enacted SB 70. The law amends these requirements to include placing portions of the state’s electrical lines in areas that have the highest risk of wildfires underground.

The legislature also decided to enhance state oversight when utilities cut power to portions of the grid to reduce the chance of sparking a fire. SB 560 changes how utilities notify and communicate with customers, while SB 156 requires utilities to work with customers with medically essential electricity needs. AB 1144 supports community storage-plus-renewables systems to increase resiliency in high fire risk districts.

California wasn’t alone in addressing wildfires, as Montana adopted resolution HJR 12 to study ways to protect infrastructure from natural disasters and wildfires, and Nevada passed SB 329 establishing natural disaster and wildfire protection planning requirements for its electric utilities.

Florida and Virginia, meanwhile, expanded on grid-hardening initiatives, with a special focus on “under-
grounding”—placing vulnerable electric lines underground. Florida’s SB 796 requires utilities to develop transmission and distribution system storm protection plans, including substantial undergrounding and flood mitigation, and provides for cost recovery on investments. Virginia enacted SB 1759, establishing a pilot program to place electric distribution lines underground around certain transportation infrastructure projects. A number of other states—including Hawaii, Illinois, Iowa, Massachusetts, Missouri, New Jersey and Texas—also considered infrastructure hardening legislation.

Puerto Rico commissioned two studies on the collapse of the electric system and subsequent recovery efforts after Hurricane Maria in 2017. Several other states considered studies to identify specific infrastructure that could be hardened to increase resilience in the future.

Lastly, there were more than two dozen bills introduced on microgrids, with two passing, one of which was vetoed. Virginia enacted SB 1077, requiring licensed assisted living facilities with six or more residents to have backup power on-site. The New Hampshire General Assembly passed HB 183, which would have established a committee to study potential microgrid applications, along with any necessary legal and regulatory changes, but the bill was vetoed by the governor.

That’s not to say there wasn’t significant state action on microgrids in 2019. In fact, following the legislative action of previous years, state regulators in California, Hawaii and Puerto Rico all initiated or finalized significant new rulemakings related to microgrids in 2019.

### Energy Storage

Following a year in which several states established ambitious energy storage targets that grabbed headlines, 2019 continued that impressive streak in a more subtle manner, as a variety of states wrapped energy storage into preexisting clean energy policies.

Over the past several years, NCSL has tracked the rapid increase in the number of energy storage-related measures introduced in state legislatures. Last year continued the previous growth trend for energy storage as state legislators introduced close to 180 measures—more than double the number introduced in 2018. At least 25 states passed 37 of those bills, which also represents twice the previous year’s numbers.

Primarily, these measures were bills of inclusion that wrapped energy storage into preexisting policies, such as net metering and renewable standards. Arkansas and Maine enacted measures that include energy storage in net metering policies. Illinois’ HB 3501 includes energy storage in the list of qualifying projects that can be financed through Property Assessed Clean Energy (PACE) programs. New Hampshire’s HB 464 and Oregon’s HB 2618 grant rebates and property tax exemptions for storage systems paired with renewables. Oregon also passed HB 2496, which includes battery storage in its definition of green energy technology, and at least three states—Hawaii, New Mexico and New York—considered extending current renewable tax credits to energy storage.

Along with passing an ambitious bill to bolster the state’s renewable energy requirements, Maryland passed SB 573, establishing an energy storage pilot program requiring utilities to solicit 10 MW of storage capacity. Meanwhile, California’s AB 1144 and Utah’s HB 411 expand on the community solar concept to include community renewables-plus-storage projects. California’s new law also allocates money to fund community storage pilot projects in areas at elevated risk of wildfires.

In enacting SB 1012, the Texas Legislature clarified how energy storage should be treated in its electricity market. Because the state’s utilities are prohibited from owning generation assets, it was unclear whether utilities could own energy storage. The new law establishes that these utilities can own and operate energy storage without unintended and adverse consequences.

Given that the storage market is dominated by lithium-ion battery projects, which are often limited to four-hour discharges, some states considered measures intended to broaden the field of potential technolo-
gies, with a particular focus on “long-duration” storage projects. States with ambitious clean energy goals view grid-scale, long-duration storage as essential to meeting those goals. While California considered two measures that would have supported this type of project, Oregon adopted SCR 1, declaring the legislature’s support for pumped storage energy projects that tend to offer longer-duration discharge.

Illinois’ HB 2296 tightened regulations around the recycling and disposal of lithium-ion batteries, while California, Massachusetts and North Carolina also considered lithium-ion recycling requirements. Finally, Maine enacted HB 1166, commissioning a study on the economic, environmental and energy benefits that energy storage could offer the state’s electric grid, while Illinois, New Jersey and Virginia all considered studying energy storage.

**Electric Vehicles**

As states consider policies to expand on storage initiatives broadly, they’re also considering policies that grapple with the growth of battery-powered plug-in vehicles. States introduced or amended more than 500 measures related to alternative fuels in 2019, with the majority of those affecting electric vehicles (EVs). State legislatures considered new incentives for plug-in electric vehicles—such as promoting electric vehicle charging infrastructure and offering tax credits or rebates on the sale of new cars—or additional registration fees for certain hybrid and electric vehicles.

Several states enacted measures promoting increased adoption of plug-in electric vehicles or supporting additional infrastructure. Hawaii enacted HB 1585, providing rebates for certain types of electric vehicle charging stations, with preference given to publicly available stations or those that service electric vehicle fleets. Colorado passed HB 1159, amending and extending the state’s hybrid, hydrogen fuel cell and electric vehicle tax credits through 2025. The new rebate is $4,000 toward the purchase of a plug-in electric vehicle in 2020. It is a $1,000 decrease from the previous rebate but remains one of the largest state tax credits for plug-in cars in the country. The new Colorado law applies to both purchased and leased vehicles, and also allows ride-hailing companies, like Uber or Lyft, to qualify for the purchase rebate even if their cars are leased, so long as the lease is two years or longer. Few states extend these incentives to leased cars or have offered specific incentives to ride-hailing companies.

As the 2020 state legislative sessions got underway, New Jersey enacted a bill establishing goals and incentives for the increased adoption of plug-in electric vehicles. SB 2252 provides a rebate for plug-in electric vehicle purchases of $25 for each mile of electric-only range on a vehicle—up to $5,000—and up to $500 toward the installation of a residential charging station.

While electric vehicles make up less than 1% of all light-duty vehicle sales across the nation, states are concerned that as sales climb in the coming years they may receive less gasoline tax revenues. Improvements and repairs to the nation’s highways have traditionally been funded by federal and state taxes collected at the pump. Because hybrid and electric vehicles use less or no gasoline, they do not contribute to the upkeep of highways in the same way as traditional vehicles.

As the revenue from gasoline taxes declines—due not only to electric vehicles—state policymakers are looking for new ways to maintain the nation’s roads. One growing 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 argue they bring equity among drivers for their use of roadways.
Ten states—Alabama, Arkansas, Hawaii, Illinois, Iowa, Kansas, North Dakota, Ohio, Washington and Wyoming—enacted laws in 2019 amending or adding new fees for electric and certain hybrid vehicles, more than any previous year. As of January 2020, 28 states have laws requiring a special registration fee for plug-in electric vehicles and 14 states impose a fee specifically on plug-in hybrid vehicles that operate on a combination of electricity and gasoline.

The fees range from $50 each year in Colorado and Hawaii to $212.78 for a plug-in electric vehicle in Georgia. Alabama, Arkansas, Ohio and Wyoming all enacted bills in 2019 setting or increasing fees to $200 annually for electric vehicles. Distinguishable from most other states, Alabama’s HB 2 also requires a portion of that revenue to be used for new electric vehicle infrastructure.

As 2020 gets underway, hybrid and electric vehicle incentives or fees will remain a topic of discussion across state legislatures.

**Building Efficiency**

States are also increasingly considering electric vehicle infrastructure as they consider legislation to update or expand on energy efficiency requirements for buildings. At least 32 states considered over 100 bills on building and appliance efficiency in 2019, a number of which also focused on increasing vehicle charging infrastructure for new buildings. Connecticut’s HB 5002 in part directs the commissioner of Energy and Environmental Protection to develop new regulations for state building construction that promote green buildings, align with a national model of sustainable construction and provide for inclusion of EV charging stations. Washington’s *comprehensive energy efficiency legislation* requires installing EV charging stations at all new buildings with on-site parking. The bill also establishes new energy savings requirements for commercial buildings, requires utilities to offer incentives to building owners for achieving the standards early, and provides for utilities to receive tax credits for payments made to incentivize early compliance with the building standards.

Other states focused on expanding oversight of local building efficiency codes or incentivizing efficiency in schools. For example, *Colorado* enacted legislation requiring county commissions to use the most recent versions of building energy standards when updating building codes and submit code changes to the state energy office for review. Additionally, *Virginia* enacted a law to support energy efficiency in public schools, declaring the legislature’s intent that newly built or renovated school buildings be built in accordance with specific efficiency standards.

State legislatures also focused on improving appliance efficiency, with at least seven states enacting new laws. New York’s *AB 7779* requires the secretary of state to issue a report to legislative leaders and the governor on the status of state energy efficiency regulations for appliances, including an evaluation of whether such regulations have been deemed preempted by federal requirements. *Hawaii* empowered the director of business, economic development and tourism to establish new efficiency standards for appliances not covered by current federal requirements, such as those for computers, faucets, certain fluorescent lamps, showerheads and spray sprinklers.
Looking Ahead

With legislative sessions underway around the country, NCSL anticipates a continuation—and even an acceleration—of several of these trends. The steady increase in bills seeking to address energy storage and cybersecurity, reducing GHGs, amending clean energy standards, and examining electric vehicle incentives or charging infrastructure have already moved strongly into the 2020 legislative sessions. At the same time, it can be hard to predict what happens with topics like grid-hardening and resiliency, given that movement on these issues tends to be driven by recent disasters.

Recent years have seen a renewed focus on infrastructure broadly, and grid modernization initiatives designed to address the nation’s aging electric grid certainly fall within that scope of work. Increasingly, states are endowing utility regulatory commissions with the authority and mandate to oversee significant changes to how electricity is generated, delivered and consumed. These include changes to utility business models, rate design and distribution system planning, with an increased appetite for distribution and transmission system upgrades that will enhance efficiencies, reduce congestion and lower costs.

Another big issue playing out in the background is a recent decision by the Federal Energy Regulatory Commission (FERC) with significant implications for state clean energy goals. The new capacity market rule for the PJM Interconnection, the nation’s largest wholesale electricity market, has spurred significant debate surrounding the potential challenge it poses to state clean energy programs. The MOPR order—named after the Minimum Offer Price Rule that FERC is expanding on—requires resources that receive state supports to enter capacity market bids at higher, predetermined prices. This primarily leaves fossil fuel resources that may not receive the same type of state support in a more advantageous position. In many ways, the decision pits federal policy against state policy—and some states are already having discussions about whether their goals are even compatible with the proposed market construct. In reality, states will likely spend most of 2020, like everyone else, waiting to see what happens with the MOPR decision, as a number of groups have already contested the FERC ruling and indicated they will challenge the rule in court.

While NCSL anticipates continued momentum on many energy issues, there are other factors that could affect the number and types of measures expected in state legislatures this year. Many state legislators will be out on the campaign trail, between primaries and the general election, which could affect the breadth of state legislation in 2020. In addition, four states—Montana, Nevada, North Dakota and Texas—are not meeting in legislative sessions this year. Nevertheless, state lawmakers play an important role in shaping policies around the energy sector and we’ll likely see these continued legislative trends in 2020.
The National Conference of State Legislatures is the bipartisan organization dedicated to serving the lawmakers and staffs of the nation’s 50 states, its commonwealths and territories.

NCSL provides research, technical assistance and opportunities for policymakers to exchange ideas on the most pressing state issues, and is an effective and respected advocate for the interests of the states in the American federal system. Its objectives are:

- 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.

The conference operates from offices in Denver, Colorado and Washington, D.C.

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