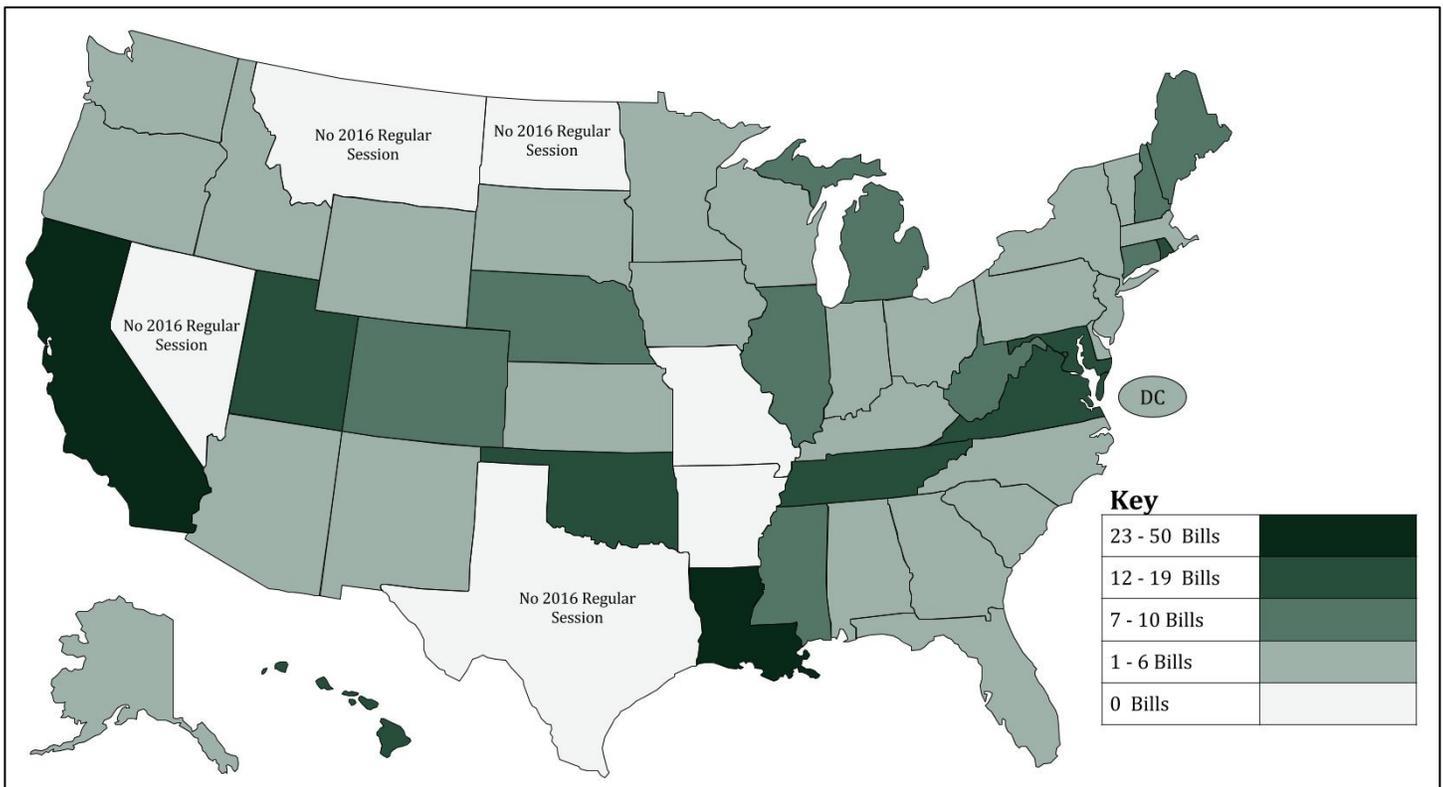


2016 Year in Review: State Advanced Energy Legislation December 2016

As of mid-December, 344 advanced energy-related bills have been enacted across the country.¹ The Center for the New Energy Economy (CNEE) has identified the following key highlights:

1. Four states did not hold a session, and Missouri and Arkansas held a session but did not enact any legislation. However, the number of significant bills enacted across the nation, in states like California, Illinois, Massachusetts, Nebraska, and Utah is noteworthy.
2. Important increases to Renewable Portfolio Standards (RPS) were adopted. Of the seven RPS bills enacted, Oregon's [SB 1547](#) and Rhode Island's [HB 7413](#) were most significant, increasing their renewable requirements to 50% by 2040 and 38.5% by 2035 respectively.²
3. Bills in the financing and financial incentives and regulatory categories continue to hold the top spots for total number of enacted bills. Natural gas development-related legislation edged out infrastructure-related legislation for the first time since 2013.

2016 Volume of Enacted Legislation (344 total)



¹ All data used in this paper reflects AEL Tracker data on December 9th, 2016. Companion legislation, identical or very similar bills introduced in both chambers of a state's legislature, are counted as a single bill in all analyses by CNEE.

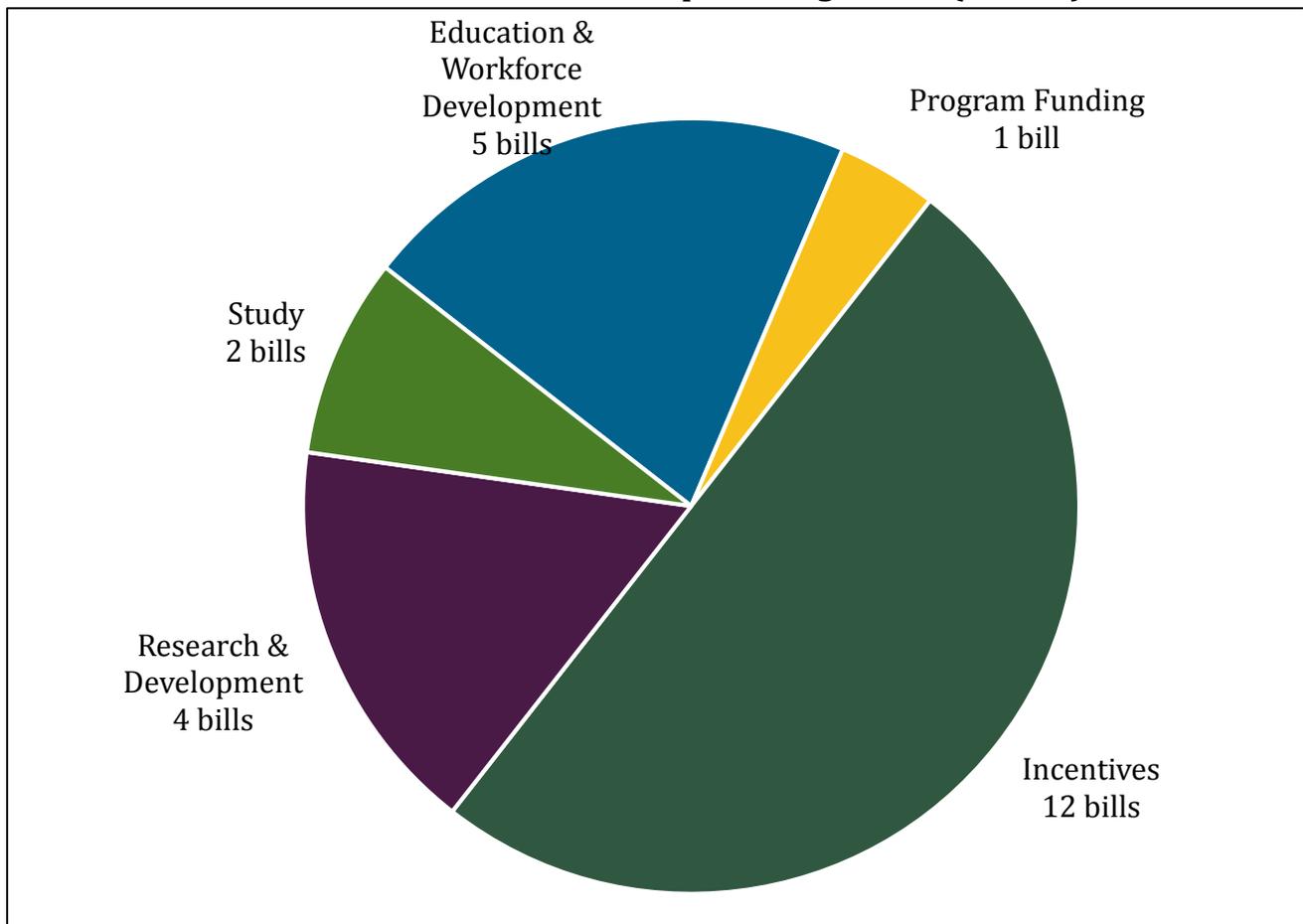
² Following a 2015 Order by Governor Cuomo, New York's Public Service Commission adopted a 50% by 2030 Clean Energy Standard in August.



Economic Development: Key Highlights

1. In 2016, bills related to state incentives to attract and retain clean energy-related businesses continued to be one of the most frequently enacted types of legislation. Bills relating to workforce development and to research and development also led the category.
2. While no single state stands out as the most active state in this category, noteworthy bills were enacted in several states. Rhode Island's [HB 7890](#) requires that the state's Workforce Board create workforce development programs to meet the demands of the clean energy sector. In Tennessee, [HB 2570](#) provides, among other things, tax incentives for high technology job creation. Lastly, Vermont's [HB 868](#) makes multiple changes to many of the state's programs, and Virginia's [SB 58](#) amends provisions relating to tax credits for research and development.

2016 Enacted Economic Development Legislation (24 bills)

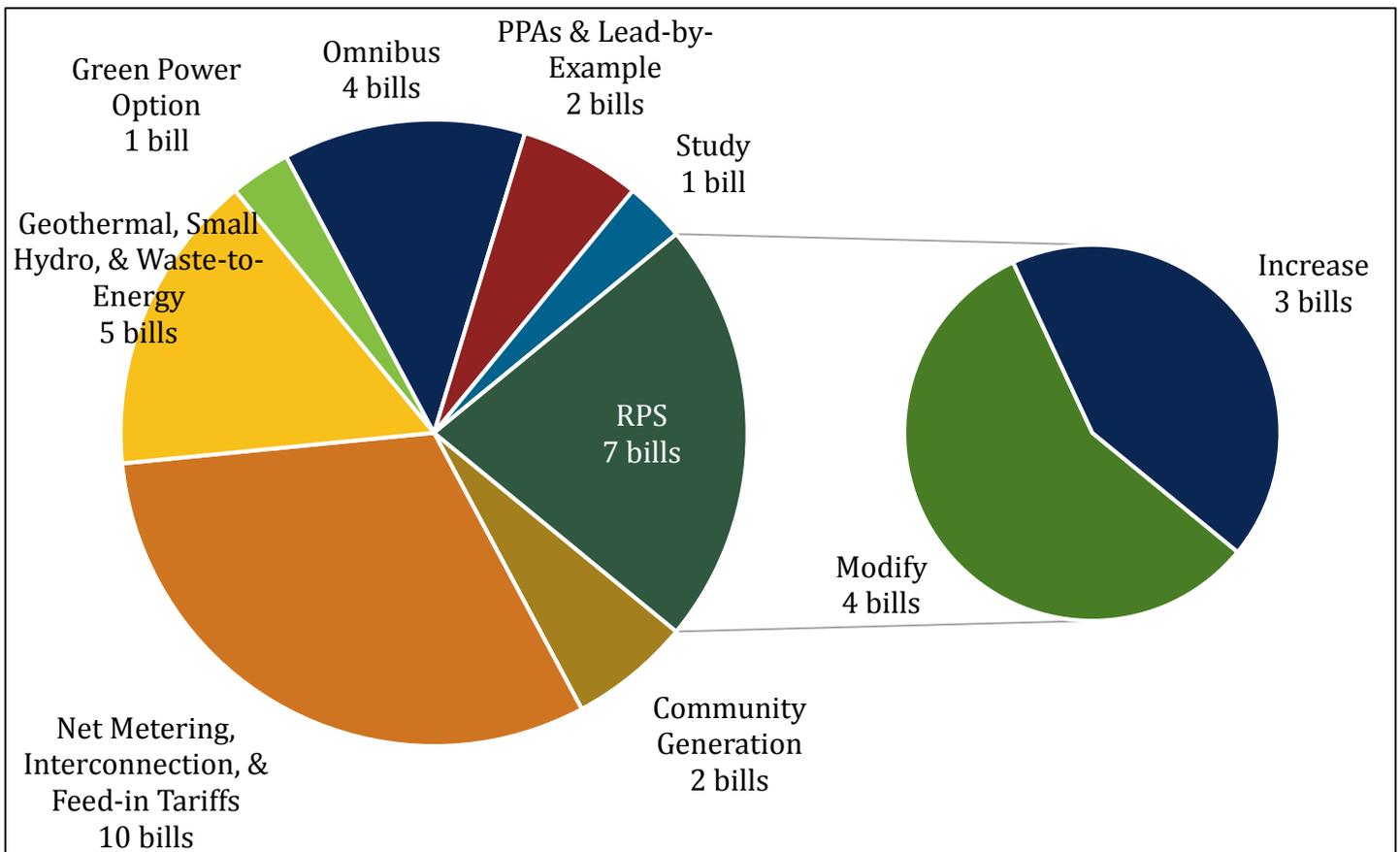




Electricity Generation: Key Highlights

1. Seven bills related to RPS's have been enacted. Three of these are significant increases. Oregon ([SB 1547](#)) increased the RPS for large investor-owned utilities to 50% by 2040. Rhode Island's [HB 7413](#) increased the RPS to 38.5% by 2035. In D.C., the city's mayor signed [B21-0650](#) increasing the RPS to 50% by 2032. Though legislators in Ohio passed [HB 554](#) to continue the freeze of the state's RPS and EERS, Governor Kasich has [threatened a veto](#), which would end the freeze.
2. Several bills relating to net metering, interconnection, and feed-in-tariffs have been enacted. A notable bill in New Hampshire ([HB 1116](#)) doubled the state's net metering cap. In Maine, a bill ([LD 1649](#)) to replace retail net metering with an incentive program designed to grow the state's solar industry was vetoed by Governor LePage.
3. Four omnibus bills were enacted. California's [SB 1393](#) addresses the state's energy plan, RPS, and other renewable energy procurement requirements. In Rhode Island, [HB 8354](#) allows virtual net metering and third party financing, and addresses taxation of commercial systems. The most notable provisions of Massachusetts' [SB 1979](#) create new solar incentives. Lastly, Massachusetts' [HB 4568](#), is a significant bill enacting provisions relating to the procurement of solar, off- and on-shore wind, hydroelectric, and energy storage resources. The bill also authorizes Commercial Property Assessed Clean Energy and requires the development of a statewide plan to repair leaking gas pipelines.

2016 Enacted Electricity Generation Legislation (32 bills)

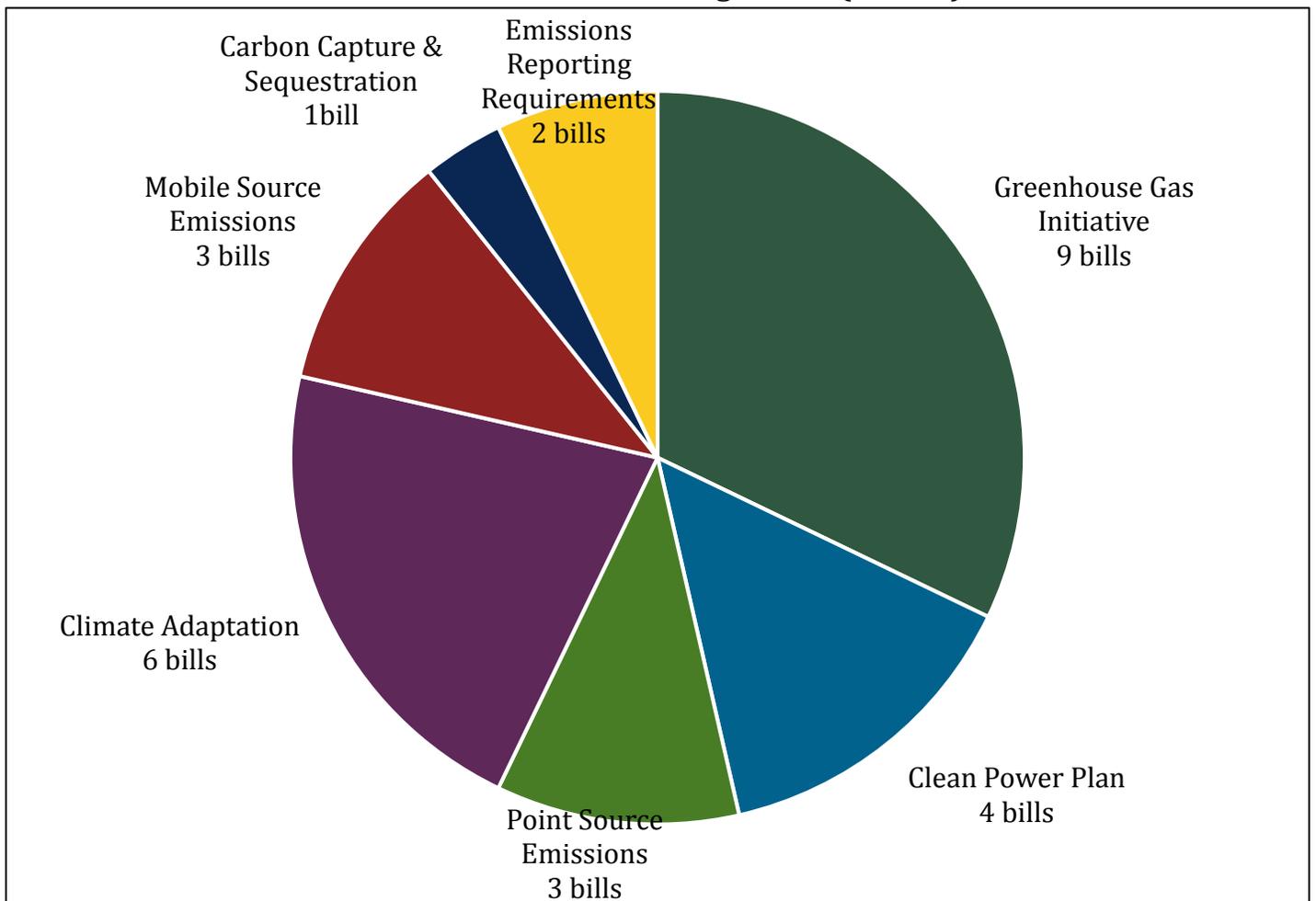




Emissions: Key Highlights

1. California was the most active state this year with lawmakers passing a total of 50 bills, 14 of which we classified in the Emissions category. Across our policy categories, many of the bills enacted in California this year support the state's Greenhouse Gas (GHG) reduction goals set out in the [California Global Warming Solutions Act of 2006](#), and [strengthened](#) by SB 32 (discussed below) and [AB 197](#) this year.
2. Of the eleven bills related to GHG Initiatives and emissions reporting requirements enacted this session, ten were passed in California. Of particular interest, California's [SB 32](#) requires the statewide reduction of GHG emissions to 40% below 1990 levels by 2030. In Maryland, [SB 323](#) requires a 40% reduction in statewide GHG emissions from a 2006 baseline by 2030.
3. [Illinois](#), [Kansas](#), [Pennsylvania](#), and [West Virginia](#) enacted Clean Power Plan-related legislation, focused largely on procedural and legislative approval processes for developing state compliance plans. These bills were also common in 2015.

2016 Enacted Emissions Legislation (28 bills)

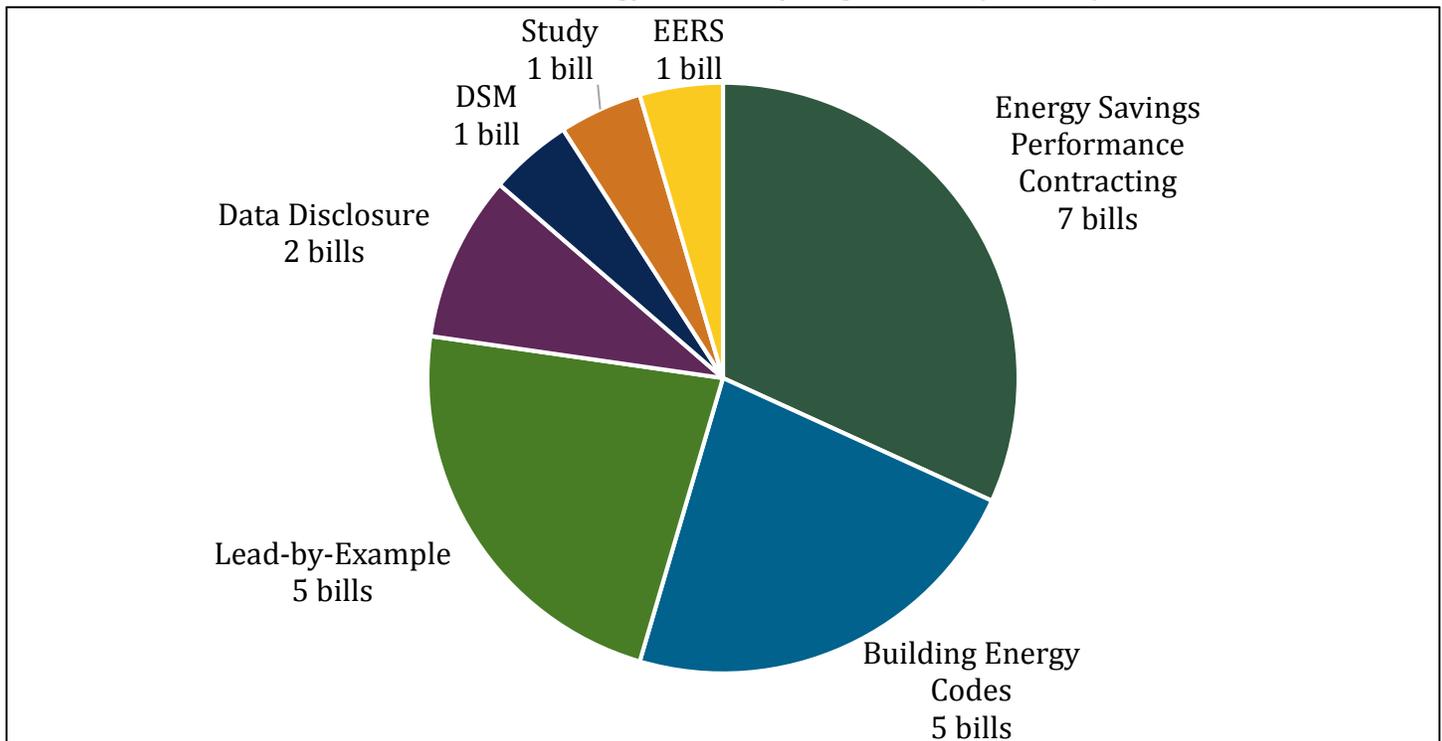




Energy Efficiency: Key Highlights

1. Bills related to Energy Savings Performance Contracting (ESPC) were the most common energy efficiency bill this session. Five bills enacted in Michigan ([HB 4990](#), [HB4991](#), [HB 4992](#), [HB 4993](#), [HB 4994](#)) enable local governments to leverage ESPC to achieve energy efficiency savings. In Nebraska, [LB 881](#) increased the energy efficiency measures available for ESPC, while South Dakota ([HB 1032](#)) and Connecticut ([SB 334](#)) made other revisions to their programs.
2. [Florida](#), [Illinois](#), [Maryland](#), [Mississippi](#), and Utah adopted Building Energy Code legislation, which was also a common type of legislation enacted in this category. Utah's [HB 316](#) was the most significant policy change, as it adopted the 2015 International Energy Conservation Code and included new compliance pathways.
3. Of the remaining bills, three are of note. First, Virginia adopted [SB 395](#) that requires the State Corporation Commission to study the establishment of uniform protocols for measuring, verifying, and validating energy efficiency measures. Second, Hawaii adopted [HB 2569](#), which requires the Department of Education to reach a net zero energy use target by 2035. The lone EERS bill, California's [AB 1330](#), requires that the state's utilities commission ensure that sufficient funds are available for electric and gas utilities to meet targets.

2016 Enacted Energy Efficiency Legislation (22 bills)

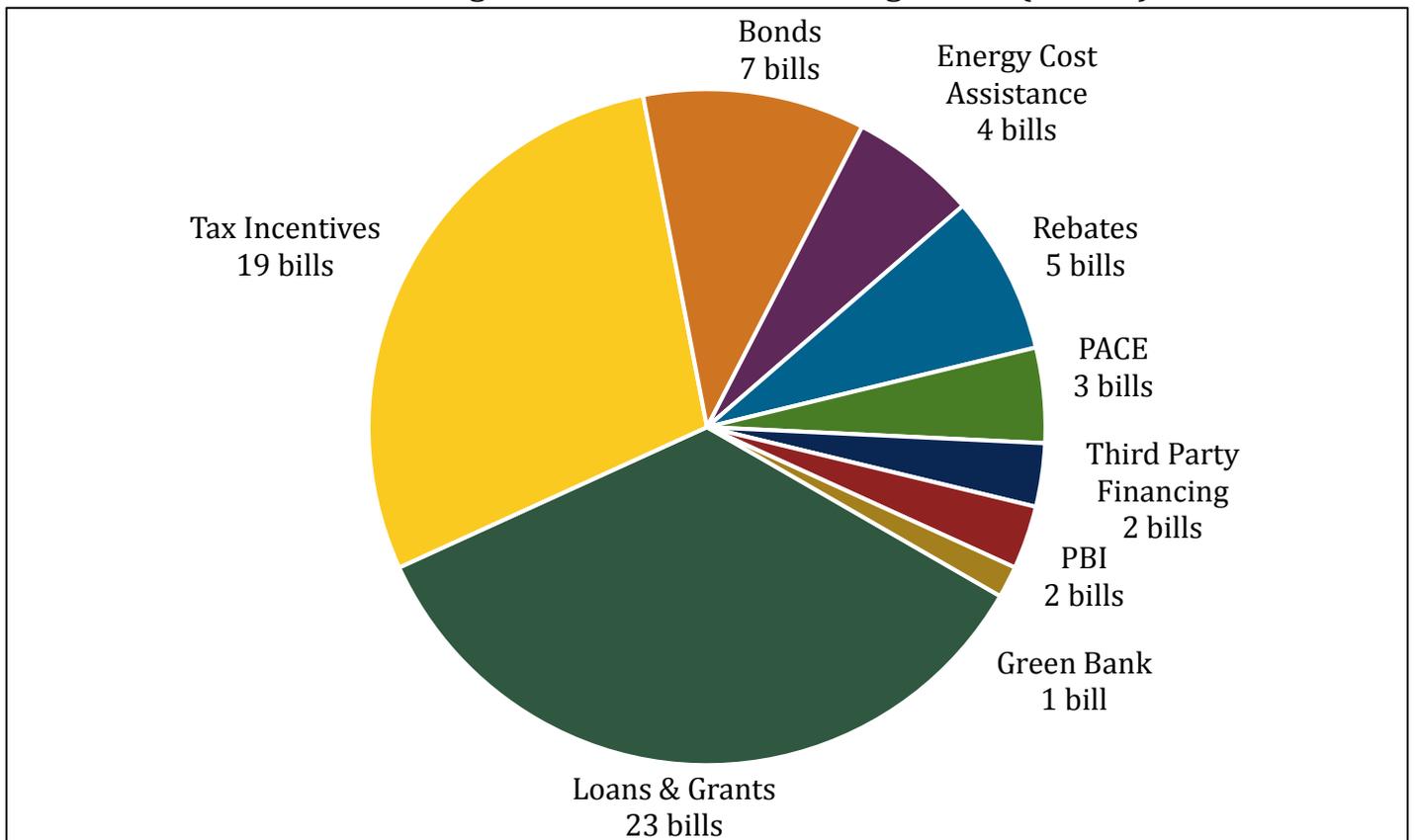




Financing and Financial Incentives: Key Highlights

1. For the first time, loans and grants-related legislation, rather than tax incentive bills, led the category in total number of bills enacted. Of note in this cohort, Utah's [SB 246](#) establishes a Throughput Infrastructure Fund, which can be used to support electric transmission line investments among other things. In Connecticut, [SB 272](#) expanded the state's microgrid loan and grant program to include energy storage and distributed resources. In New Jersey, [S 1969](#) expands the state's residential efficiency programs statewide.
2. In the tax incentive category, Florida's [HB 195](#) placed Amendment 4 on the ballot. The amendment was subsequently approved with [73%](#) of the vote and provides property tax breaks for distributed solar. In Colorado, [HB 1332](#) amended provisions relating to the innovative motor vehicle and truck tax credits. The bill sets fixed amounts for the tax credits and allows taxpayers to elect to transfer the credit to a financing entity.
3. Three other bills were of particular interest this year. Nebraska's [LB 1012](#) grants municipalities the authority to establish commercial and residential Property Assessed Clean Energy (PACE) programs. Conversely, Louisiana's [HB 766](#) repealed PACE enabling language. Lastly, Utah ([HB 244](#)) expanded options for third-party financing by exempting third-party providers from regulation as public utilities. The bill also includes required contract stipulations for third-party agreements.

2016 Financing and Financial Incentives Legislation (66 bills)

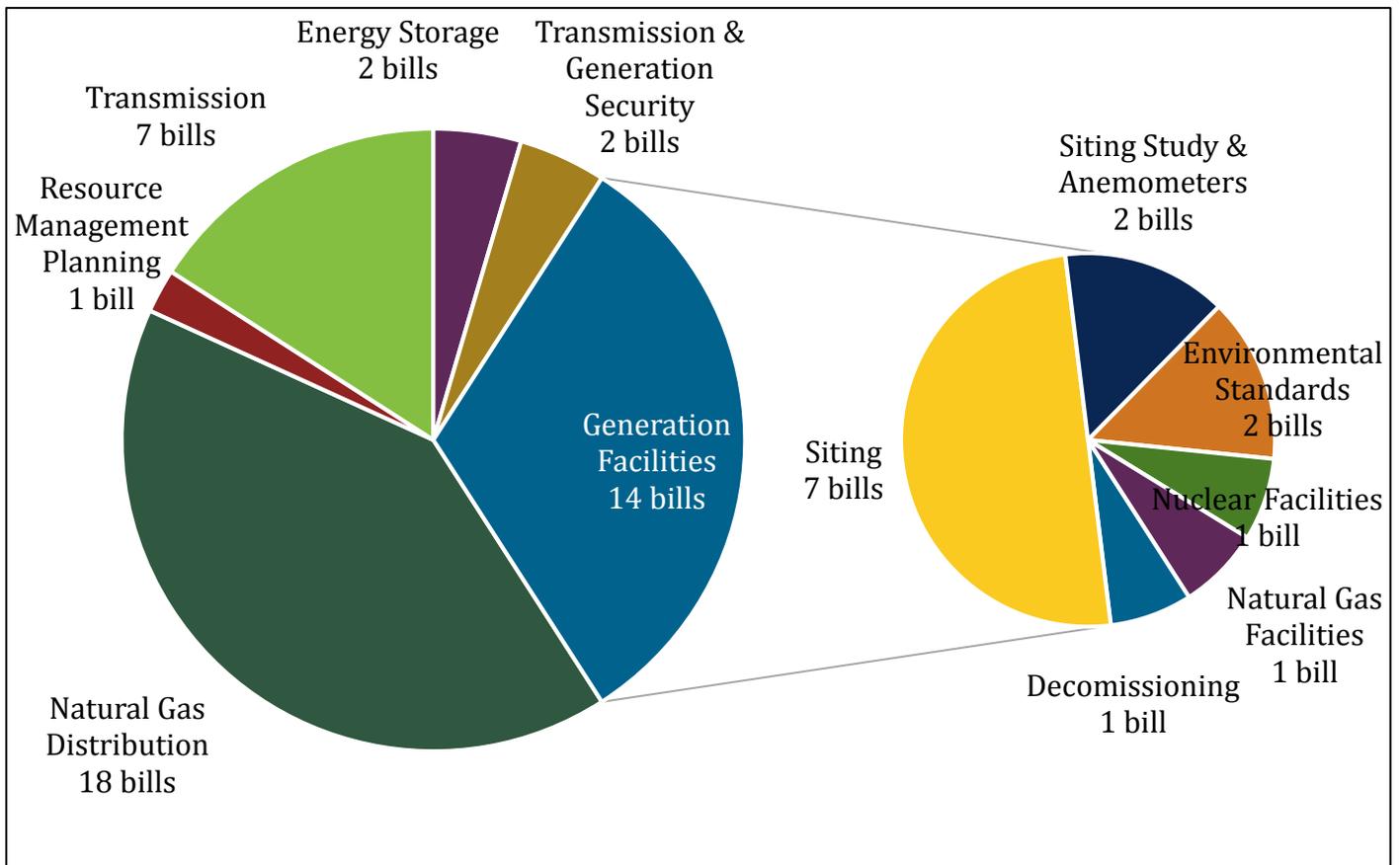




Infrastructure: Key Highlights

1. As was the case for the last three years, bills related to natural gas distribution infrastructure siting and safety account for a large portion of enacted legislation in the infrastructure category. In South Carolina, [SB 868](#) made headlines for preventing the use of eminent domain by private, for-profit companies. The bill is a [reaction](#) to Kinder Morgan's proposed Palmetto Pipeline.
2. Another 23 bills relate to transmission and generating facilities. Several of these made significant changes to existing state statutes. In Nebraska, [LB 824](#) removes regulatory barriers by exempting private wind developers from regulation by the Power Review Board. New Hampshire's [HB 626](#) creates a task force charged with studying the designation of energy infrastructure corridors for major transmission lines. In Vermont, [SB 260](#) made several changes to the state's energy siting process and created a one-year pilot program that sets aside a portion of the state's existing standard offer program for projects sited in preferred locations. In Washington, [SB 6248](#) allows electric companies to create a fund to pay for the future decommissioning of two units at Montana's Colstrip coal-fired generating facility. Wisconsin's [AB 384](#) amends provisions relating to the approval process for nuclear power plants.
3. In California, two bills amended provisions relating to energy storage. The first, [AB 33](#) requires the PUC to study energy storage resources that would support increased grid integration of renewable energy. The second, [AB 2868](#) requires the PUC to direct the state's three largest utilities to develop programs to accelerate the adoption of energy storage systems.

2016 Enacted Infrastructure Legislation (44 bills)

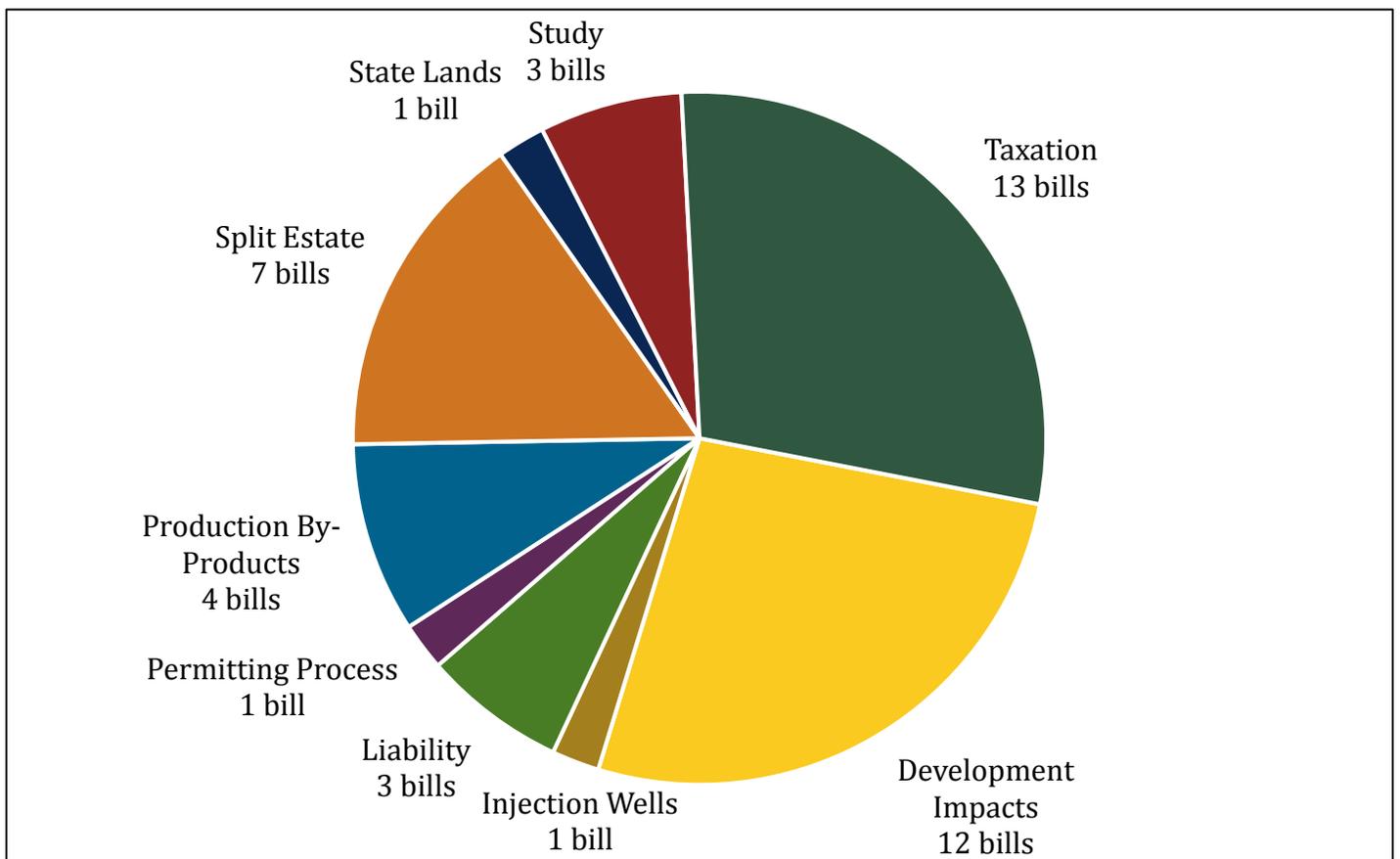




Natural Gas Development: Key Highlights

1. Fewer bills related to the split estate were enacted than in previous years. Bills relating to severance and other taxes and bills addressing the local impacts associated with natural gas exploration and development continue to make up a significant portion of the bills enacted in this category.
2. One of the more active states in this category, Oklahoma enacted seven bills relating to natural gas development. While five of these amend provisions relating to production taxes, [SB 1122](#) requires the Corporation Commission to work with other state agencies to encourage the industrial use of produced water. A [reaction](#) to the recent surge in earthquakes linked to the injection of wastewater, [HB 3158](#) allows Oklahoma's Corporation Commission to take any necessary actions, without notice and hearing, to respond to oil- and gas-field emergencies.
3. California's lawmakers continue to respond to the [Aliso Canyon gas leak](#). Enacted in May, [SB 380](#) continues the prohibition against Southern California Gas Company injecting any natural gas into the storage facility until certain safety reviews have been completed. The bill also directs the state's utilities commission to examine the feasibility of minimizing or eliminating the use of the facility. California's [AB 2729](#) enacts provisions to ensure that idle oil and gas wells are properly managed and plugged, and [SB 888](#) and [SB 887](#) both amend provisions relating to natural gas storage and leak mitigation.

2016 Enacted Natural Gas Legislation (45 bills)

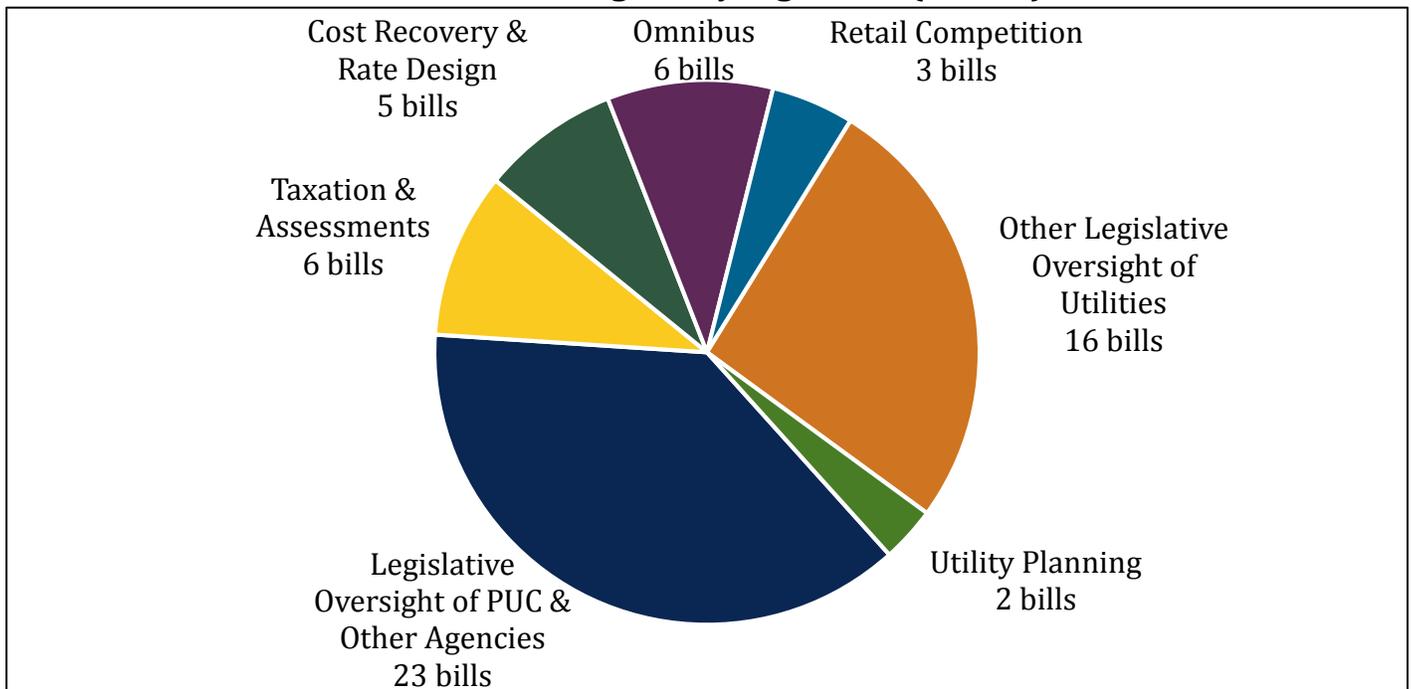




Regulatory: Key Highlights

1. As has been the case for the last four years, legislatures continue to be active providing procedural direction to and amending the authority and structure of state agencies. As an example, Mississippi's [HB 116](#) requires that “at least a majority” of the members of the state’s Commission on Environmental Quality not receive a significant portion of their income from individuals or entities subject to requirements under the Clean Air Act.
2. State legislatures also continued to revise provisions relating to municipal, cooperative, investor-owned utilities, and other energy providers. [Maryland](#), [Pennsylvania](#), and [Rhode Island](#) enacted legislation to protect and educate consumers in competitive markets, and [Illinois](#) and [South Dakota](#) amended provisions relating to tax assessments for wind energy devices and facilities.
3. Illinois, Utah, Vermont, and Wisconsin enacted notable omnibus bills. Illinois’ [SB 2814](#) is a major piece of legislation amending provisions relating to workforce development, solar development and solar incentives, shared renewable energy projects, the RPS and efficiency requirements, and nuclear subsidies. While disentangling the impacts of this bill will take some time, [Midwest Energy News](#) provides a thorough discussion. Utah’s [SB 115](#) makes several important amendments to the state’s clean energy programs and restructures cost recovery for Rocky Mountain Power (RMP). The bill also allows RMP to invest in programs for electric vehicle infrastructure, battery storage, and solar energy. In Vermont, [HB 577](#) requires that members of municipal and cooperative utilities vote before these utilities engage in certain activities and power purchases. The bill also creates a working group to evaluate state purchasing and management of certain hydroelectric facilities in the state. Wisconsin’s [AB 804](#) changed permitting procedures for certain utility facilities, eliminates the Public Service Commission’s (PSC) role in sulfur dioxide compliance plans, and amends provisions relating to the PSC’s assessment authority, funding for Focus on Energy programs, and utility contracts with affiliated interests.

2016 Enacted Regulatory Legislation (61 bills)

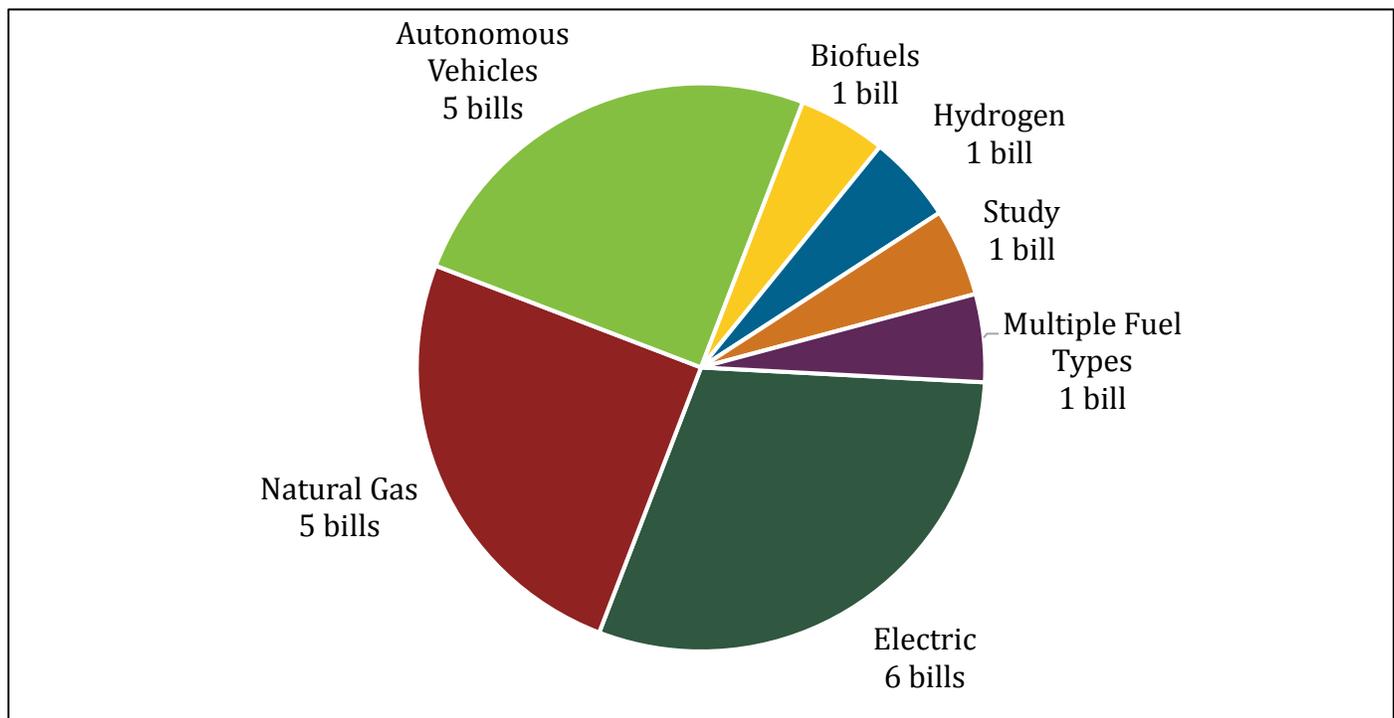




Transportation: Key Highlights

1. Bills relating to electric and natural gas vehicles were the most frequently enacted in this category. Within the electric vehicle category, California ([SB 838](#)) and Maryland ([HB 1179](#)) adopted legislation extending electric vehicle access to High Occupancy Vehicle (HOV) lanes. In Connecticut, [HB 5510](#) made several amendments to provisions relating to electric vehicles, data collection, charging stations, and charging rates. All five states that adopted bills related to natural gas vehicles ([Kansas](#), [Louisiana](#), [Minnesota](#), [New Mexico](#), and [Oklahoma](#)), did so to allow these vehicles to exceed certain maximum weight limits.
2. Five states enacted bills addressing autonomous vehicles. California's [AB 1592](#) and Florida's [HB 7061](#) enact provisions to support testing by removing the requirement for including a person in certain testing activities. Louisiana's [HB 1143](#) adds definitions of autonomous vehicles. In Tennessee, [SB 1561](#) barred local governments from banning autonomous vehicles, provided they meet all applicable safety standards. Finally, Utah's [HB 280](#) commissioned a study to evaluate the best regulatory approach for these vehicles.
3. Of the remaining bills, two are of note. Colorado's [HB 16-1053](#) establishes hydrogen refueling infrastructure standards and sets fees to fund compliance oversight. In Indiana, [HB 1254](#) asks the legislative council to study whether manufacturers that engage in direct sales to consumers should be subject to additional licensing requirements.

2016 Enacted Transportation Legislation (20 bills)



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