

50 STATES OF ELECTRIC VEHICLES

Q1 2021 Quarterly Report

Executive Summary



NC CLEAN ENERGY
TECHNOLOGY CENTER

May 2021

AUTHORS

Brian Lips
Autumn Proudlove
David Sarkisian

The [NC Clean Energy Technology Center](#) is a UNC System-chartered Public Service Center administered by the College of Engineering at North Carolina State University. Its mission is to advance a sustainable energy economy by educating, demonstrating and providing support for clean energy technologies, practices, and policies. The Center provides service to the businesses and citizens of North Carolina and beyond relating to the development and adoption of clean energy technologies. Through its programs and activities, the Center envisions and seeks to promote the development and use of clean energy in ways that stimulate a sustainable economy while reducing dependence on foreign sources of energy and mitigating the environmental impacts of fossil fuel use.

CONTACT

Autumn Proudlove (afproudl@ncsu.edu)

PREFERRED CITATION

North Carolina Clean Energy Technology Center, *The 50 States of Electric Vehicles: Q1 2021 Quarterly Report*, May 2021.

COVER DESIGN CREDIT

Cover design is by [Capital City Creative](#).

DISCLAIMER

While the authors strive to provide the best information possible, neither the NC Clean Energy Technology Center nor NC State University make any representations or warranties, either express or implied, concerning the accuracy, completeness, reliability or suitability of the information. The NC Clean Energy Technology Center and NC State University disclaim all liability of any kind arising out of use or misuse of the information contained or referenced within this report. Readers are invited to contact the authors with proposed corrections or additions.

PREVIOUS EDITIONS AND OTHER 50 STATES REPORTS

The full version of this report may be purchased [here](#). Previous executive summaries of *The 50 States of Electric Vehicles* are available for download [here](#).

In addition to *The 50 States of Grid Modernization*, the NC Clean Energy Technology Center publishes additional quarterly reports called *The 50 States of Solar* and *The 50 States of Grid Modernization*. These reports may be purchased [here](#). Executive summaries and older editions of these reports are available for download [here](#).

ABOUT THE REPORT

PURPOSE

The purpose of this report is to provide state and local lawmakers and regulators, electric utilities, the electric power industry, the transportation industry, and other energy stakeholders with timely, accurate, and unbiased updates about how states are choosing to study, adopt, implement, amend, or discontinue policies associated with electric vehicles. This report catalogues proposed and approved legislative, regulatory, and utility rate design changes affecting electric vehicles during the most recent quarter, as well as state and investor-owned utility proposals to deploy electric vehicles and charging infrastructure.

APPROACH

The authors identified relevant policy changes and deployment proposals through state utility commission docket searches, legislative bill searches, popular press, and direct communications with stakeholders and regulators in the industry.

Questions Addressed

This report addresses several questions about the U.S. electric vehicle landscape, including:

- How are states addressing barriers to electric vehicle and charging infrastructure deployment?
- What policy actions are states taking to support markets for electric vehicles and related infrastructure?
- How are utility companies designing rates and electric vehicle supply equipment companies designing charging equipment and controls to influence charging behavior of electric vehicle owners?
- Where and how are states and utilities proposing to deploy or pay for electric vehicles and electric vehicle charging infrastructure?

Actions Included

This report focuses on cataloguing and describing important proposed and adopted policy changes related to electric vehicles. For the purpose of this report, the definition of electric vehicle includes all-electric vehicles (EVs), hybrid electric vehicles (HEVs), and plug-in electric vehicles (PHEVs). In order to explore all policy actions related to electric vehicles, this report catalogs and describes actions related to the deployment of electric vehicle charging equipment, which is often referred to as electric vehicle supply equipment (EVSE). Additionally, the electric grid is impacted

by electric vehicle charging, so legislative and regulatory actions related to electric utilities are included in this report.

In general, this report considers an “action” to be a relevant (1) legislative bill that has been introduced, (2) executive order, or (3) regulatory docket, utility rate case, or rulemaking proceeding. Only statewide actions and those related to investor-owned utilities are included in this report. Specifically, actions tracked in this issue include:

Studies and Investigations

Legislative or regulatory-led efforts to study electric vehicles specifically, or electric vehicles as part of a broader grid modernization study or investigation.

Regulation

Changes to state rules related to electric vehicles, including registration fees, homeowner association limitations, and electricity resale regulations affecting vehicle charging.

Utility Rate Design

Proposed or approved changes to investor-owned utility rate design for electric vehicles, including new electric vehicle tariffs and significant changes to existing electric vehicle tariffs.

Market Development

New state policy proposals or changes to existing policies aimed at growing the electric vehicle market.

Financial Incentives

New state or investor-owned utility incentive programs or changes to existing incentive programs for electric vehicles and charging infrastructure.

State and Utility Deployment

Utility-initiated requests, as well as proposed legislation, to deploy electric vehicles or charging infrastructure.

Actions Excluded

While actions taken by municipal utilities and electric cooperatives are not comprehensively tracked in this report, particularly noteworthy or high-impact actions are included. The report also excludes actions related to grid modernization without an explicit electric vehicle component, as well as actions related to general time-varying rates not specific to vehicle charging; these types of actions are tracked in the 50 States of Grid Modernization report series.

EXECUTIVE SUMMARY

Q1 2021 ELECTRIC VEHICLE ACTION

In Q1 2021, 48 states plus DC took a total of 519 actions related to electric vehicles. Table 1 provides a summary of state and utility actions occurring during Q1 2021. Of the 521 actions catalogued, the most common were related to Regulation (133), followed by Financial Incentives (125), and Market Development (101).

Table 1. Q1 2021 Summary of Electric Vehicle Actions

Type of Action	# of Actions	% by Type	# of States
Regulation	133	26%	43
Financial Incentives	125	24%	32
Market Development	101	19%	23
Studies and Investigations	59	11%	28
Rate Design	57	11%	27 + DC
Deployment	46	9%	33
Total	521	100%	48 States + DC

Note: The "# of States/ Districts" total is not the sum of the rows because some states have multiple actions. Percentages are rounded and may not add up to 100%.

TOP ELECTRIC VEHICLE ACTIONS OF Q1 2021

Five of the quarter's most notable electric vehicle actions are noted below.

New Jersey Regulators Approve Utility Electric Vehicle Programs

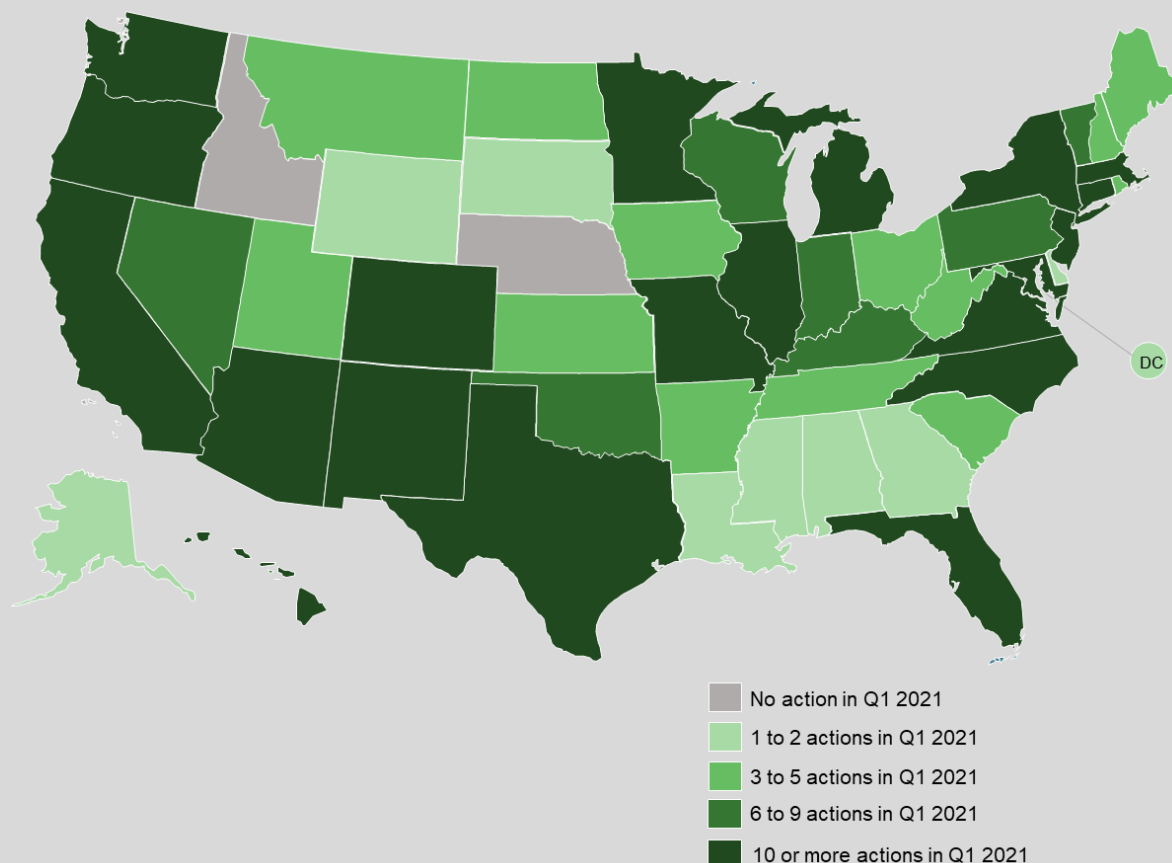
The New Jersey Board of Public Utilities approved electric vehicle programs proposed by Atlantic City Electric and PSE&G New Jersey during Q1 2021. Atlantic City Electric's program has a total budget of \$20.673 million, and PSE&G's program has a budget of \$166.2 million. Both programs include make-ready incentives for different customer types and demand charge alternatives for fast charging stations.

Virginia Lawmakers Approve Electric Vehicle Rebate and Grant Programs

Virginia lawmakers enacted two bills in March 2021, establishing an electric vehicle rebate program and an electric vehicle grant program. The rebate program will begin in 2022 and provide rebates of at least \$2,500 for the purchase of electric vehicles. Income-qualified residents will be eligible for an additional \$2,000 rebate. The grant program will award grants

on a competitive basis to school boards and non-profits to assist with the replacement of diesel school buses and vehicles with electric buses and vehicles.

Figure 1. Q1 2021 State and Utility Action on Electric Vehicles



Colorado Public Utilities Commission Approves Modified Transportation Electrification Plan for Xcel Energy

The Colorado Public Utilities Commission issued a decision in January 2021 approving Xcel Energy’s proposed transportation electrification plan with modifications. The decision approves an electric vehicle rebate program for low-income customers, residential home wiring rebates, a school bus electrification program, the development of utility-owned fast charging stations in underserved areas, utility deployment of charging stations for multi-family housing, and commercial charging rates, among other elements.

Oklahoma State Legislature Adopts Tax on Electric Vehicle Charging

The Oklahoma Legislature enacted a bill adopting a tax of \$0.03 per kWh on the sale of electricity used to charge electric and hybrid vehicles. Collection of this tax will begin in 2024

and will not apply to charging stations in service before November 2021, those with less than 50 kW of capacity, or those that supply electricity free of charge, including private residential stations. The bill also adopts a registration fee for electric vehicles and provides a tax credit for the amount of charging taxes paid, up to the registration fee amount.

Kansas and North Dakota Legislators Exempt Charging Stations from Public Utility Regulation

State legislators in both Kansas and North Dakota recently enacted bills allowing electric vehicle charging stations to resell electricity to the public without being classified as a public utility. Both bills specify that the electricity used for vehicle charging must be purchased from a retail electric supplier to avoid classification as a public utility.

Figure 2. Top Electric Vehicle Actions of Q1 2021

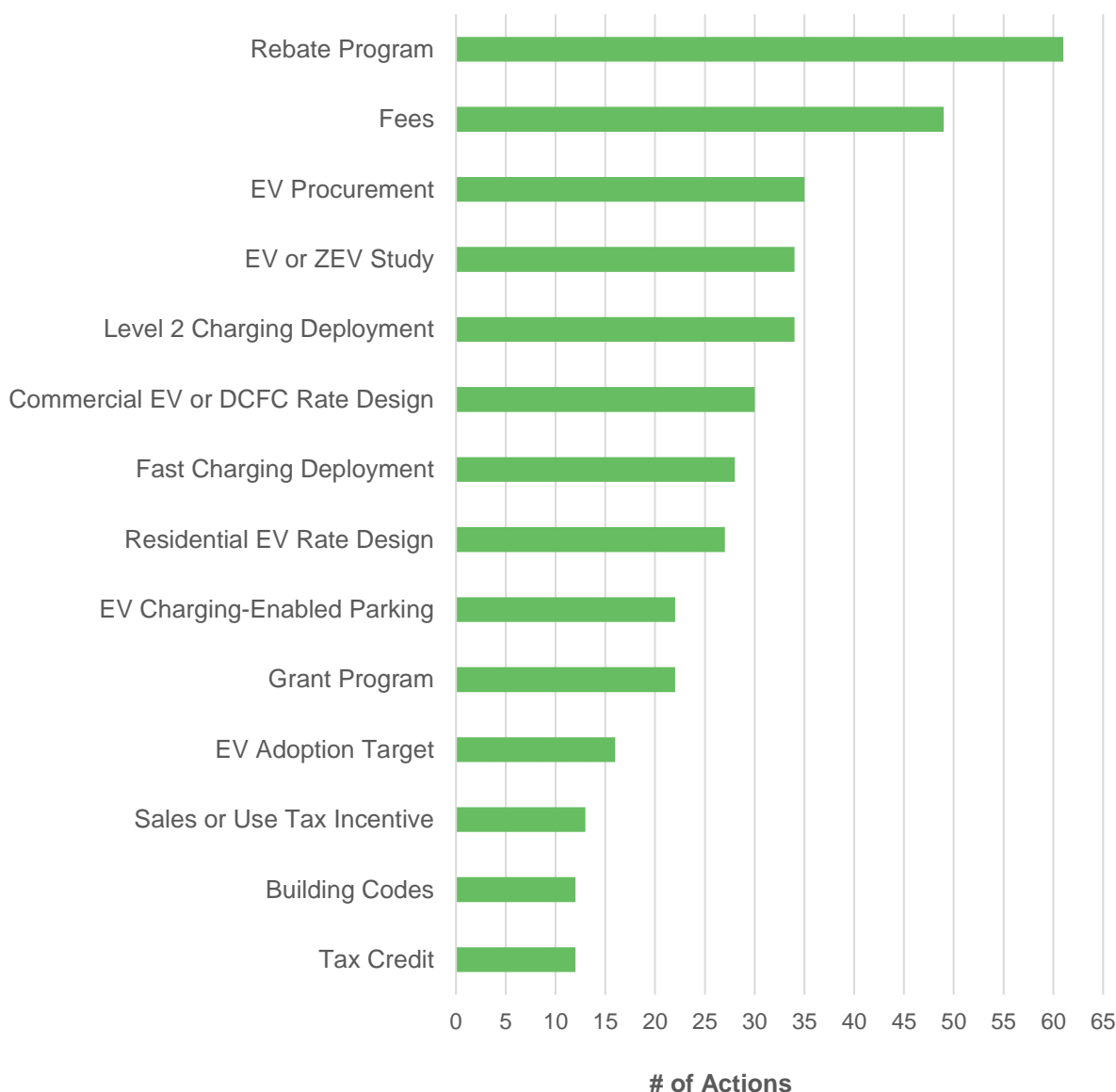
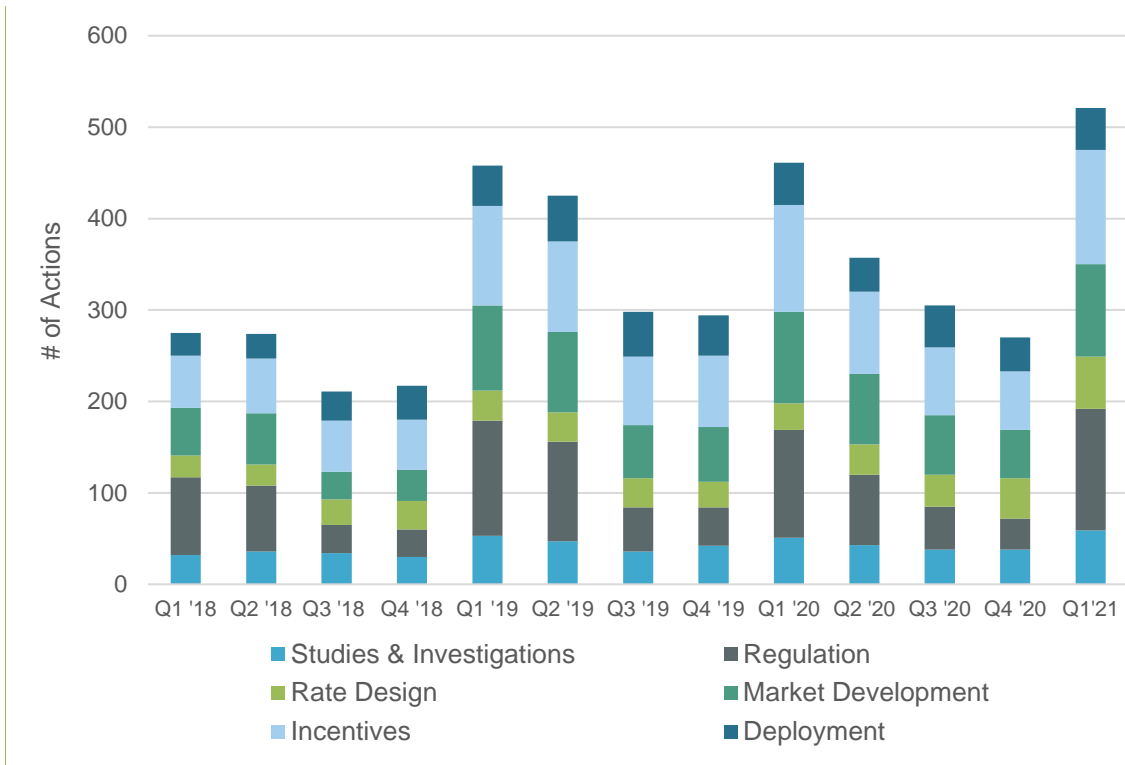


Figure 3. Electric Vehicle Action by Quarter, Q1 2018 to Q1 2021



TOP ELECTRIC VEHICLE POLICY TRENDS OF Q1 2021

Utilities Requesting Approval for New Electric Vehicle Program Portfolios

Several utilities filed new proposals in Q1 2021 to implement electric vehicle program portfolios. Utilities are continuing to take individualized or state-specific approaches to their transportation electrification programs. In Kansas and Missouri, Evergy requested approval for transportation electrification portfolios including charging station rebates and new rates designed for business and transit charging. Jersey Central Power & Light filed its EV Drive Program proposal, which includes make-ready incentives, off-peak usage credits, and utility deployment of fast chargers. Indianapolis Power & Light filed a petition for an electric vehicle portfolio involving a managed charging program and off-peak charging incentive. In Washington, Avista Utilities filed an application for a series of programs including utility deployment of residential and commercial charging stations, DC fast charger deployment, and new commercial charging rates.

State Lawmakers Considering Road Usage Fees and Electricity Taxes

State lawmakers across the country have been considering new types of fees applicable to electric vehicles during the 2021 legislative session – primarily road usage fees based on miles traveled and taxes on electricity used for vehicle charging. Oklahoma legislators recently enacted a bill establishing a \$0.03 per kWh tax on the sale of electricity used to charge electric

or hybrid vehicles at public charging stations beginning operation after November 2021. State legislators in Georgia, Minnesota, and Nevada also considered taxes on electricity used for vehicle charging, while lawmakers in California, Minnesota, Missouri, and Washington introduced bills adopting road usage fees for electric vehicles. In Montana, legislation under consideration would adopt a trip-based fee for electric motortrucks and truck tractors licensed in another state. Numerous states continue to consider registration fees for electric vehicles as well, with Oklahoma and South Dakota recently adopting new fees.

Policymakers Addressing Government Procurement of Electric Vehicles

While the federal government recently announced plans to transition the federal fleet to electric vehicles, many state policymakers have also been considering electric or zero-emission vehicle procurement targets for state fleets. Legislation passed by the Hawaii House and Senate requires that 100% of light-duty state fleet vehicles are zero-emission vehicles by the end of 2030. In Maryland, lawmakers passed a bill requiring that new bus purchase contracts are for zero-emission buses. The New Hampshire Senate has passed a bill setting a goal of having all of the state’s motor vehicles be zero-emission vehicles by 2042. Legislators in many other states, including Connecticut, Illinois, Massachusetts, Minnesota, and New York are also considering bills establishing electric vehicle procurement targets, and some states are contemplating targets for electric vehicle adoption in the private market.

Figure 4. 2021 Proposed Legislation on Electric Vehicles (As of 5/4/2021)

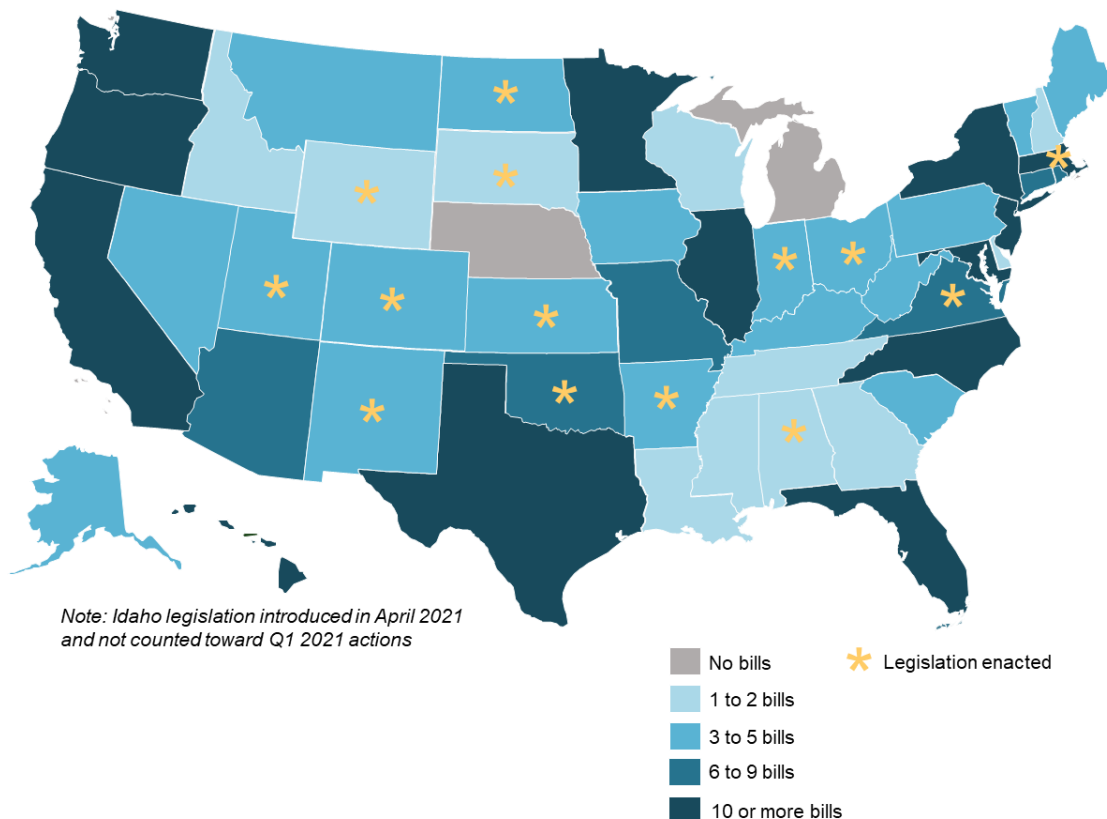
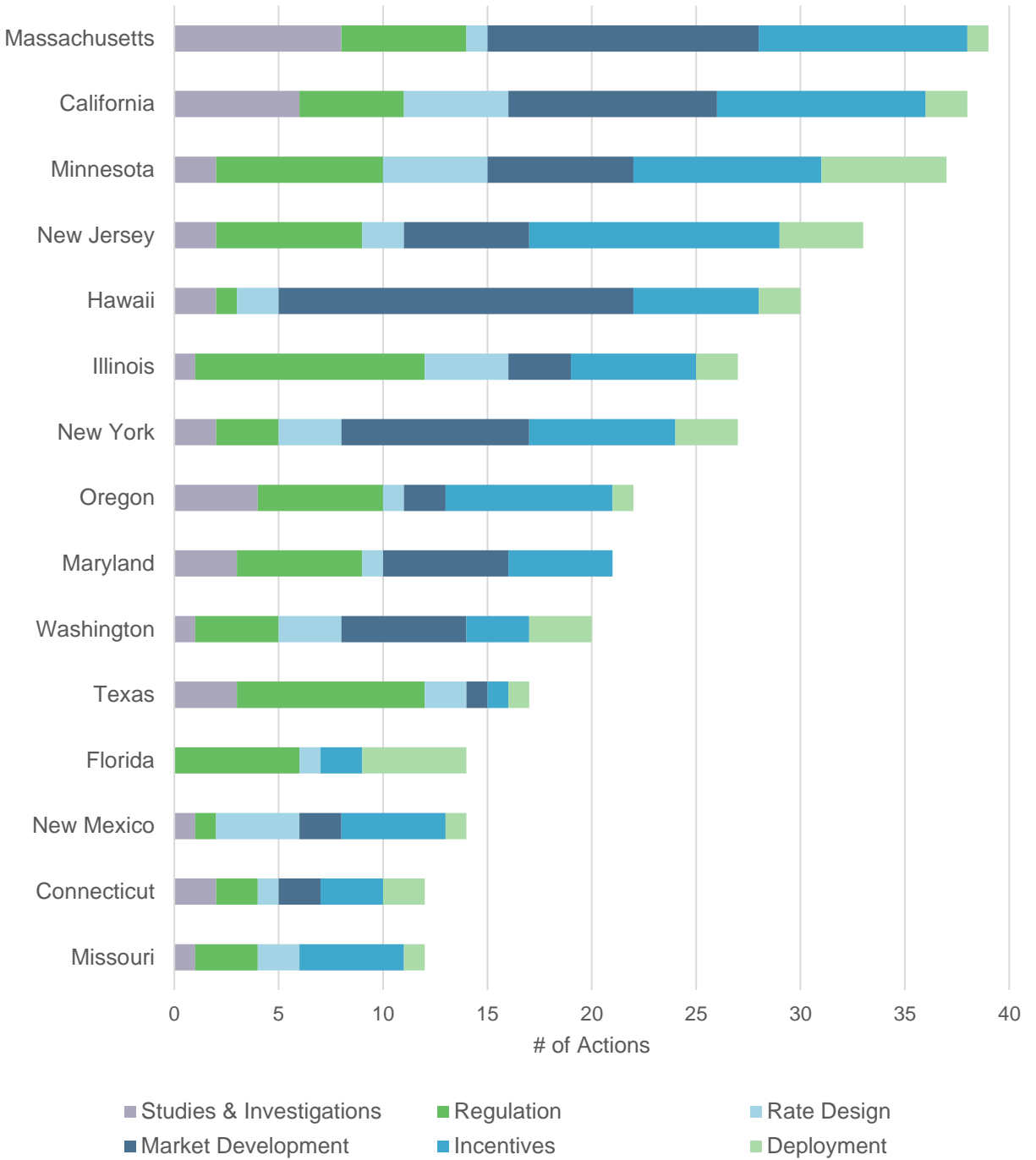


Figure 5. Most Active States of Q1 2021



FULL REPORT DETAILS & PRICING

FULL REPORT DETAILS

Content Included in the Full Quarterly Report:

- Detailed tables describing each pending and recently decided state and investor-owned utility action related to electric vehicles and charging infrastructure. Actions are broken out into the following categories:
 - Studies and Investigations
 - Regulation
 - Rate Design
 - Market Development
 - Financial Incentives
 - State and Utility Deployment
- Links to original legislation, dockets, and commission orders for each legislative and regulatory action
- Excel spreadsheet file of all actions taken during the quarter and separate Powerpoint file of all summary maps available upon request
- Qualitative analysis and descriptive summaries of electric vehicle policy action and trends
- Outlook of action for the next quarter

WHO SHOULD PURCHASE THIS REPORT

The 50 States of Electric Vehicles allows those involved in the electric and transportation industries to easily stay on top of legislative and regulatory changes. The report provides a comprehensive quarterly review of actions. At a cost of \$500 per issue (or \$1,500 annually), the 50 States of Electric Vehicles offers a significant time and financial savings. With direct links to original sources for all actions, customers may stay on top of legislative and regulatory developments between quarterly reports.

Electric Vehicle and Charging Infrastructure Companies

- Identify new market opportunities, as well as changing and risky markets
- Stay on top of state policy developments relevant to your business
- Give your own team a head start in tracking legislative and regulatory proceedings

Electric Utilities

- Learn about the approaches being taken by other utilities facing similar opportunities and challenges
- Stay on top of relevant state policy developments

- Utilize an objective source of information in legislative and regulatory proceedings

Investors and Financial Analysts

- Identify new investment opportunities and emerging areas of growth, as well as risky investments
- Identify active utility investment proceedings

Advocacy Organizations

- Learn about the electric vehicle actions under consideration across the country
- Learn about the outcomes of other states' policy discussions
- Utilize an objective source of information in legislative and regulatory proceedings

Researchers and Consultants

- Access valuable data requiring a vast amount of time to collect first-hand
- Identify research needs to inform electric vehicle proceedings
- Cite an objective source in your own research and analysis

PRICING

Visit <https://www.dsireinsight.com/subscriptions/> to purchase the full 50 States of Electric Vehicles Q1 2021 Quarterly Report or learn more about our additional subscription offerings.

Subscription Type	Annual Subscription	Single Report
50 States of Electric Vehicles Report	\$1,500	\$500
Single-Tech Subscription (Electric Vehicles) <i>(Includes 50 States of Electric Vehicles report, plus biweekly legislative & regulatory electric vehicle tracking, policy data sheets, & curated monthly email policy updates)</i>	\$4,500	N/A
All-Tech Subscription <i>(Includes 50 States of Electric Vehicles report, 50 States of Solar report, & 50 States of Grid Modernization report; plus biweekly legislative & regulatory tracking; policy data sheets, & monthly email policy updates for solar, grid modernization/energy storage, & electric vehicles)</i>	\$10,500	N/A

NON-PROFIT / GOVERNMENT DISCOUNT

A 20% discount is now available for non-profits and government entities. Please [contact us](#) for more information.

COMPLIMENTARY COPIES FOR POLICYMAKERS

We offer complimentary copies of the 50 States of Electric Vehicles, as well as the 50 States of Grid Modernization and the 50 States of Solar, to **policymakers and regulators** (limited to federal and state legislators and staffers, utility commissioners, utility commission staff, state consumer advocate office staff, and state energy office staff). [Contact us](#) to receive a complimentary copy of the most recent report.

CUSTOMIZED SOLUTIONS

The NC Clean Energy Technology Center also offers customized policy research and analysis services. Visit <http://www.dsireusa.org/services/> to learn more.