

50 STATES OF ELECTRIC VEHICLES

Q2 2021 Quarterly Report

Executive Summary



NC CLEAN ENERGY
TECHNOLOGY CENTER

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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)

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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

Q2 2021 ELECTRIC VEHICLE ACTION

In Q2 2021, 46 states plus DC took a total of 537 actions related to electric vehicles. Table 1 provides a summary of state and utility actions occurring during Q2 2021. Of the 537 actions catalogued, the most common were related to Regulation (134), followed by Financial Incentives (133), and Market Development (101).

Table 1. Q2 2021 Summary of Electric Vehicle Actions

Type of Action	# of Actions	% by Type	# of States
Regulation	134	25%	38 + DC
Financial Incentives	133	25%	32
Market Development	101	19%	23
Rate Design	61	11%	28
Studies and Investigations	59	11%	26
Deployment	49	9%	25
Total	537	100%	46 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 Q2 2021

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

Duke Energy Files Phase II Electric Vehicle Program Proposal in North Carolina

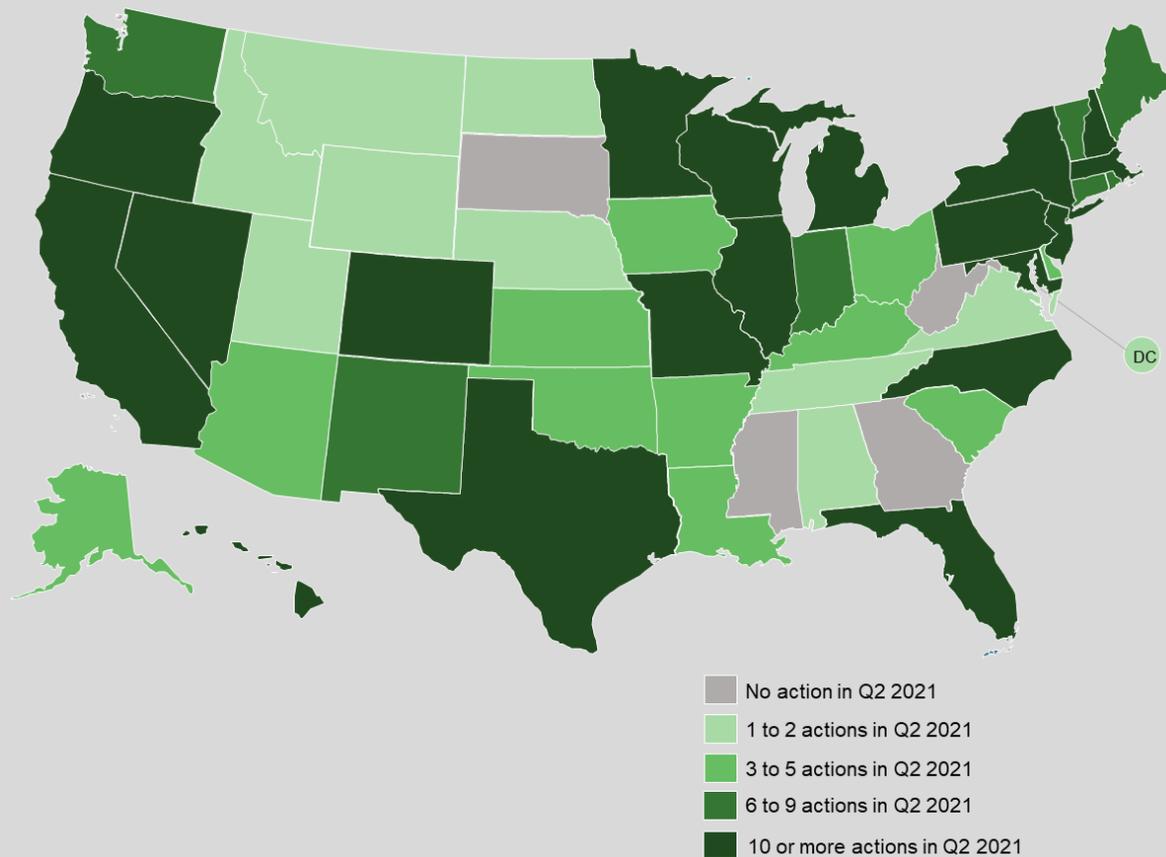
Duke Energy filed proposals for Make Ready Infrastructure Programs and Phase II Electrification of Transportation Pilot Programs during Q2 2021. The programs include incentives for make-ready equipment, a utility-owned and customer-operated charging station pilot, electric school bus charging infrastructure, fast charging station deployment in highway corridors, and other infrastructure deployment programs.

Arizona, Oregon, and South Carolina Initiate Transportation Electrification Investigations

Arizona regulators opened a docket to consider transportation electrification in April 2021, while the Oregon Public Utility Commission opened a new proceeding in April 2021 to develop a transportation electrification investment framework. Workshops are scheduled for Q3 2021

in both proceedings. South Carolina lawmakers also enacted legislation during the quarter establishing a Joint Committee on the Electrification of Transportation to study a variety of issues related to transportation electrification.

Figure 1. Q2 2021 State and Utility Action on Electric Vehicles



Colorado Lawmakers Enact Expansive Transportation Bill

Colorado legislators enacted an expansive transportation bill during the quarter, which includes a change to the state’s electric vehicle registration fee and a new road usage equalization fee for electric and hybrid vehicles. The bill also includes enterprises focused on community access, clean fleets, and clean transit to provide electric vehicle incentives or deploy charging infrastructure.

Connecticut and Hawaii Legislators Adopt Zero-Emission Vehicle Procurement Targets for State Fleets

Lawmakers in both Connecticut and Hawaii enacted bills adopting electric vehicle procurement targets for state fleets during the quarter. In Connecticut, 50% of cars and light-duty trucks

purchased or leased by the state must be zero-emission vehicles by 2030, as well as 30% of buses. In Hawaii, 100% of light-duty passenger vehicles in the state fleet must be zero-emission vehicles by the end of 2030.

California Regulators Approve San Diego Gas & Electric Power Your Drive Program Extension

The California Public Utilities Commission approved a \$44 million extension for San Diego Gas & Electric’s Power Your Drive program in April 2021. The decision requires that the utility offer multi-unit dwelling site hosts the option of direct ownership of charging equipment, rather than utility ownership as proposed. The order also specifies that 50% of charging station sites should be in underserved communities.

Figure 2. Top Electric Vehicle Actions of Q2 2021

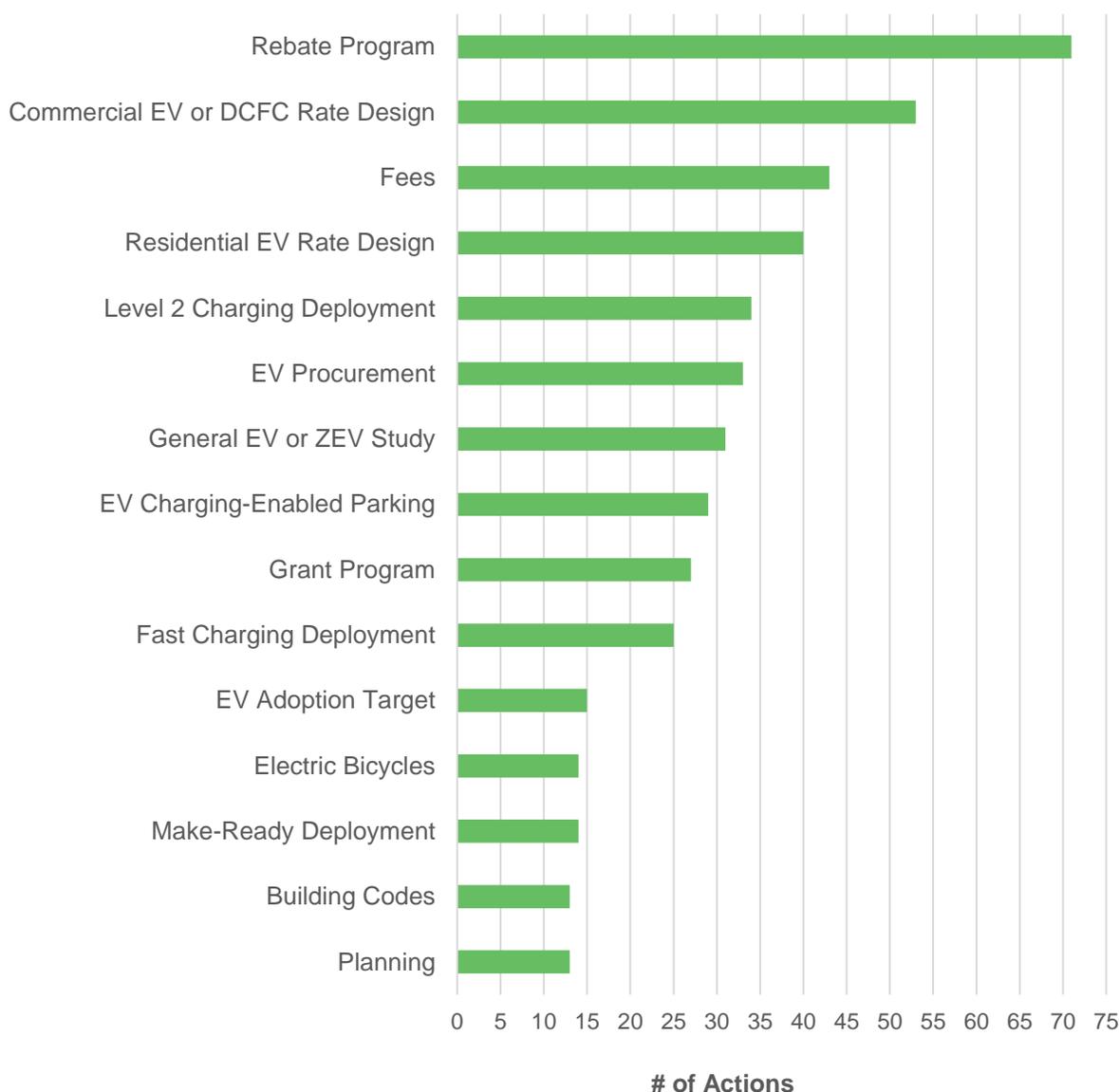
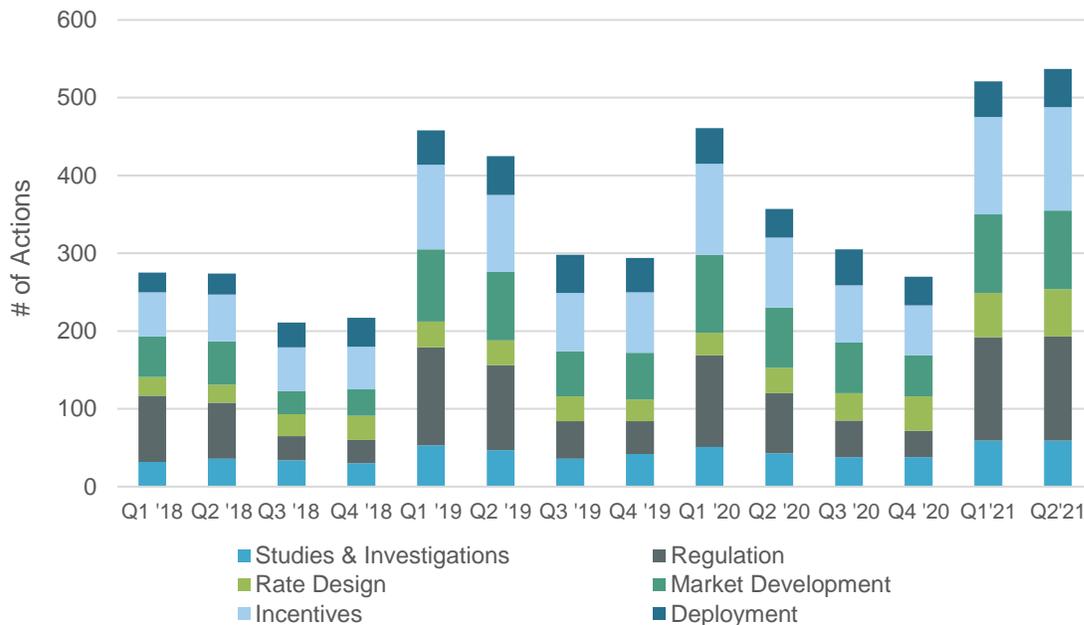


Figure 3. Electric Vehicle Action by Quarter, Q1 2018 to Q2 2021



TOP ELECTRIC VEHICLE POLICY TRENDS OF Q2 2021

Utilities Piloting Utility-Owned Residential Charging Station Programs

Several utilities are planning to pilot utility-owned residential charging station programs, wherein the utility installs and owns charging equipment at residential customer locations and the customer typically pays a fixed monthly fee. Wisconsin regulators recently approved such programs for We Energies and Wisconsin Public Service Corporation, and Washington regulators allowed Avista Utilities' direct install program to go into effect during Q2 2021. A July decision in Connecticut approves a utility-owned Level 2 charging station lease program for multi-unit dwellings. Empire District Electric's Missouri transportation electrification portfolio includes a subscription service involving deployment of utility-owned smart chargers at residences, although the Commission Staff has expressed concern with utility ownership of property deployed within customer homes. Duke Energy has also proposed a program in North Carolina where the utility will own and maintain charging stations at customer locations.

Policymakers and Utilities Taking Steps to Encourage Fleet Electrification

Across the country, many utilities are developing programs that are focused specifically on fleet electrification. During Q2 2021, Portland General Electric filed an application for a Fleet Electrification Make-Ready Pilot, which would provide make-ready infrastructure to non-residential customers that own or operate fleets. In Pennsylvania, Duquesne Light Company proposed a new Fleet and Transit Charging Pilot, which will involve deployment of make-ready and charging infrastructure to customers with fleets. The pilot will also include fleet

electrification advisory services. In Texas, SWEPCO has proposed a new charging rate for commercial fleet service. States are also taking steps to electrify their own fleets, with legislators in Connecticut and Hawaii adopting new requirements for state fleet electrification. Colorado lawmakers also approved a bill establishing a new clean fleet enterprise to offer incentive programs, and the Governor of Illinois signed an executive order promoting state fleet electrification.

Utilities Working to Grow Fast Charging Networks

Many utilities are working to grow networks of fast charging stations in order to alleviate range anxiety and make it easier for drivers to take longer trips in electric vehicles. The Electric Highway Coalition, a group of utilities agreeing to provide drivers with a network of fast chargers in their service territories, continues to announce new member utilities. In April 2021, Eversource filed a petition for a make-ready infrastructure program to support the development of a fast charging corridor through New Hampshire. Duke Energy’s North Carolina Phase II transportation electrification program application includes a pilot to deploy fast chargers in highway corridors. Avista Utilities’ latest transportation electrification plan in Washington also includes deployment of fast charging stations along major travel corridors at less than 50 mile intervals, and an application filed by Xcel Energy in Minnesota involves the development of a network of public fast charging stations.

Figure 4. 2021 Proposed Legislation on Electric Vehicles (as of Mid-July 2021)

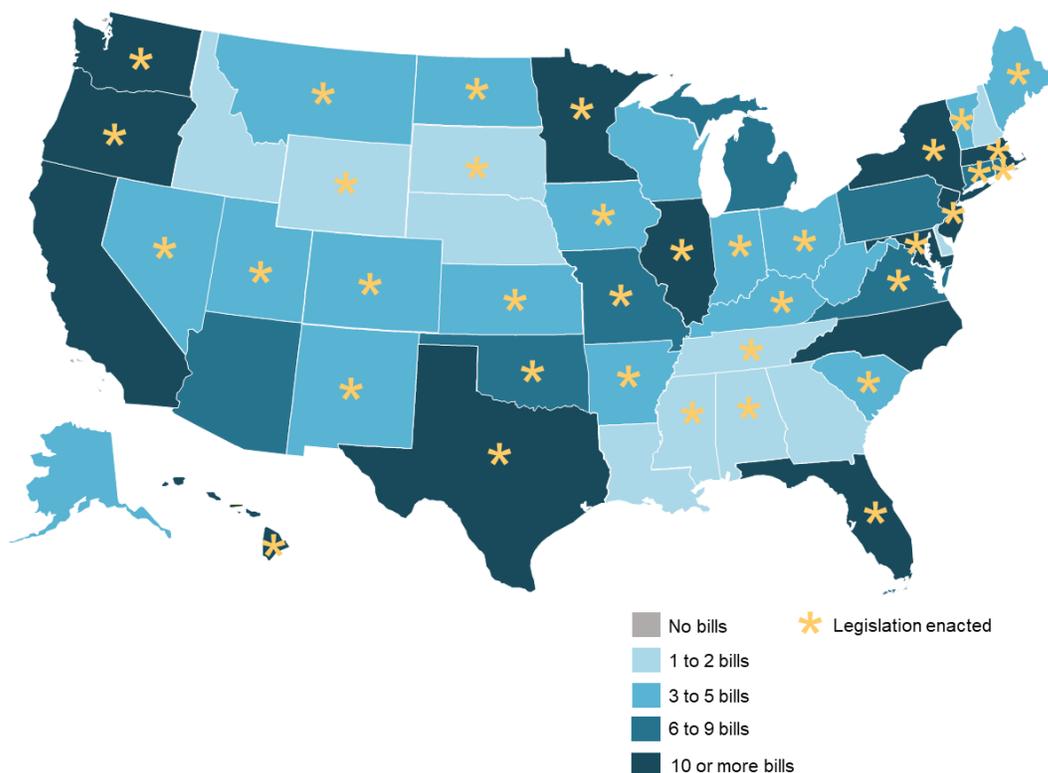
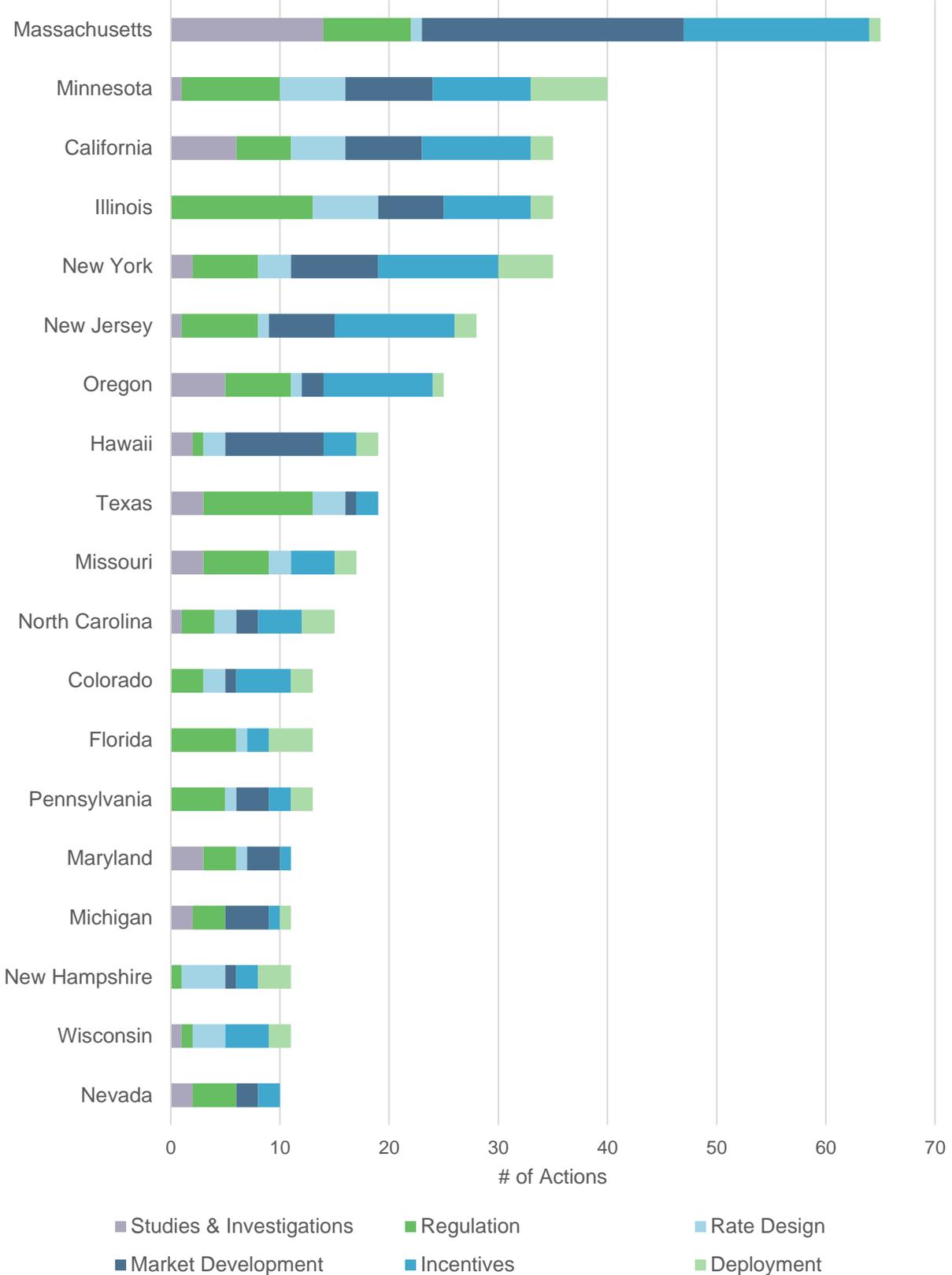


Figure 5. Most Active States of Q2 2021



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

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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

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