

50 STATES OF ELECTRIC VEHICLES

Q2 2022 Quarterly Report

Executive Summary



NC CLEAN ENERGY
TECHNOLOGY CENTER

August 2022

AUTHORS

Rebekah de la Mora
Brian Lips
Vincent Potter
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: Q2 2022 Quarterly Report*, August 2022.

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

Q2 2022 ELECTRIC VEHICLE ACTION

In Q2 2022, 47 states plus DC took a total of 569 actions related to electric vehicles. Table 1 provides a summary of state and utility actions occurring during Q2 2022. Of the 569 actions catalogued, the most common were related to Financial Incentives (161), followed by Market Development (135), and Regulation (111).

Table 1. Q2 2022 Summary of Electric Vehicle Actions

Type of Action	# of Actions	% by Type	# of States
Financial Incentives	161	28%	30 + DC
Market Development	135	24%	25
Regulation	111	20%	27 + DC
Rate Design	55	10%	29
Studies and Investigations	54	9%	27
Deployment	53	9%	20 + DC
Total	569	100%	47 + DC States

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 2022

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

Indiana and New Jersey Regulators Approve Utility Incentive Programs

Regulators in Indiana and New Jersey approved electric vehicle charging infrastructure incentive programs proposed by Duke Energy Indiana and Jersey Central Power & Light (JCP&L) during the quarter. JCP&L's program involves incentives for make-ready infrastructure, while Duke Energy's program includes rebates for electric vehicle supply equipment, among other programs.

Maine Lawmakers Adopt Zero-Emission Vehicle Targets

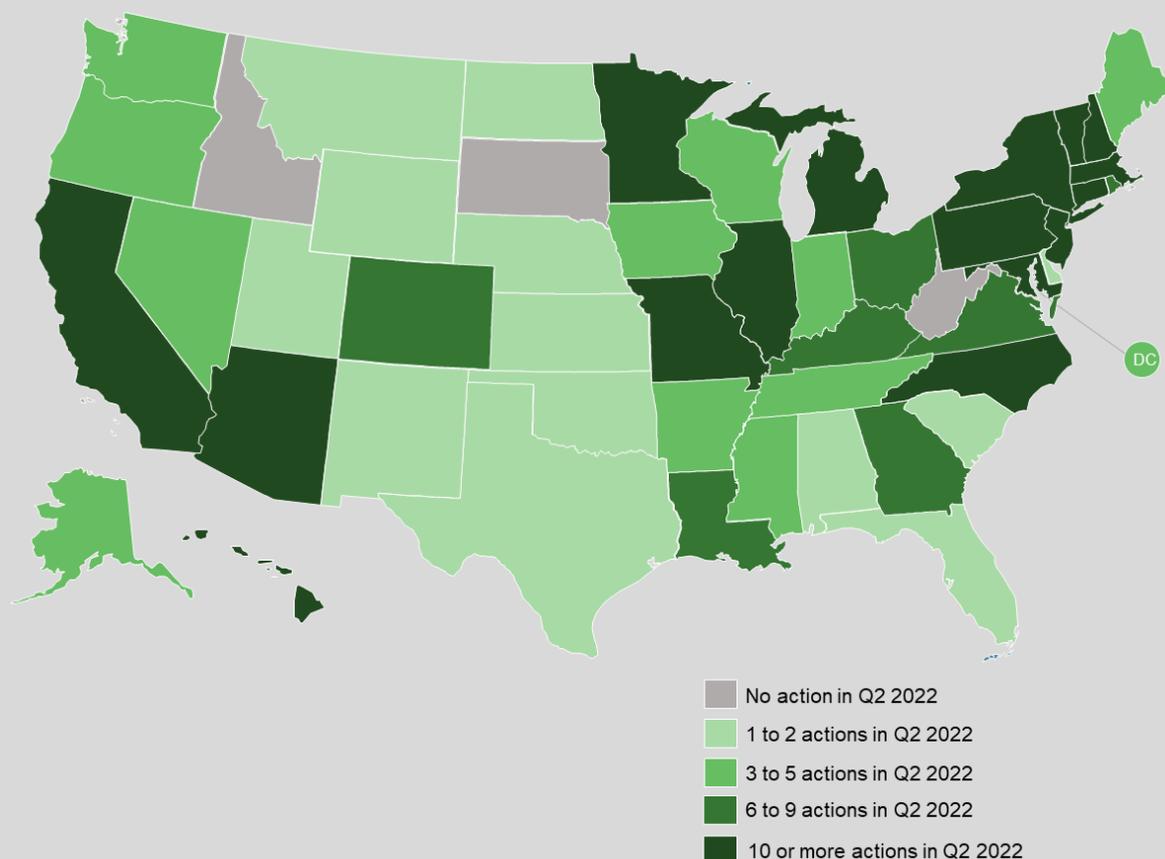
Lawmakers in Maine enacted legislation adopting zero-emission vehicle procurement targets in May 2022. The legislation requires that 100% of light-duty vehicle acquisitions are plug-in hybrid electric vehicles and zero-emission vehicles by 2030, and that 75% of annual school

bus acquisitions are zero-emission vehicles by 2035. The bill also sets a goal of having 220,000 electric and plug-in hybrid vehicles registered in the state by 2030.

New Hampshire Public Utilities Commission Approves Electric Vehicle Charging Rates

The New Hampshire Public Utilities Commission approved new electric vehicle charging rates for Liberty Utilities and Unitil in Q2 2022. Regulators approved time-of-use rates for electric vehicle charging, as well as a 50% demand charge reduction. Eversource filed a settlement agreement during the quarter regarding its proposed electric vehicle rates, which would include a purely volumetric rate for public charging.

Figure 1. Q2 2022 State and Utility Action on Electric Vehicles



Arizona Utilities File Transportation Electrification Plans

Arizona’s three investor-owned utilities filed their transportation electrification plans in June 2022. Tucson Electric Power (TEP) and UNS Electric are both proposing a variety of new electric vehicle incentive programs, while TEP is also planning to implement a managed

charging program, and UNS is requesting approval for new electric vehicle charging rates that mirror those previously approved for TEP.

California Regulators File Zero-Emission Vehicle Regulations

The California Air Resources Board filed its proposed Advanced Clean Cars II regulations in April 2022, which would implement the Governor’s executive order setting a goal of having all new passenger vehicle sales in the state be zero-emission vehicles by 2035. The regulations would set interim requirements of 35% of sales by 2026 and 68% of sales by 2030. The Board is scheduled to vote on the rules in late August 2022.

Figure 2. Top Electric Vehicle Actions of Q2 2022

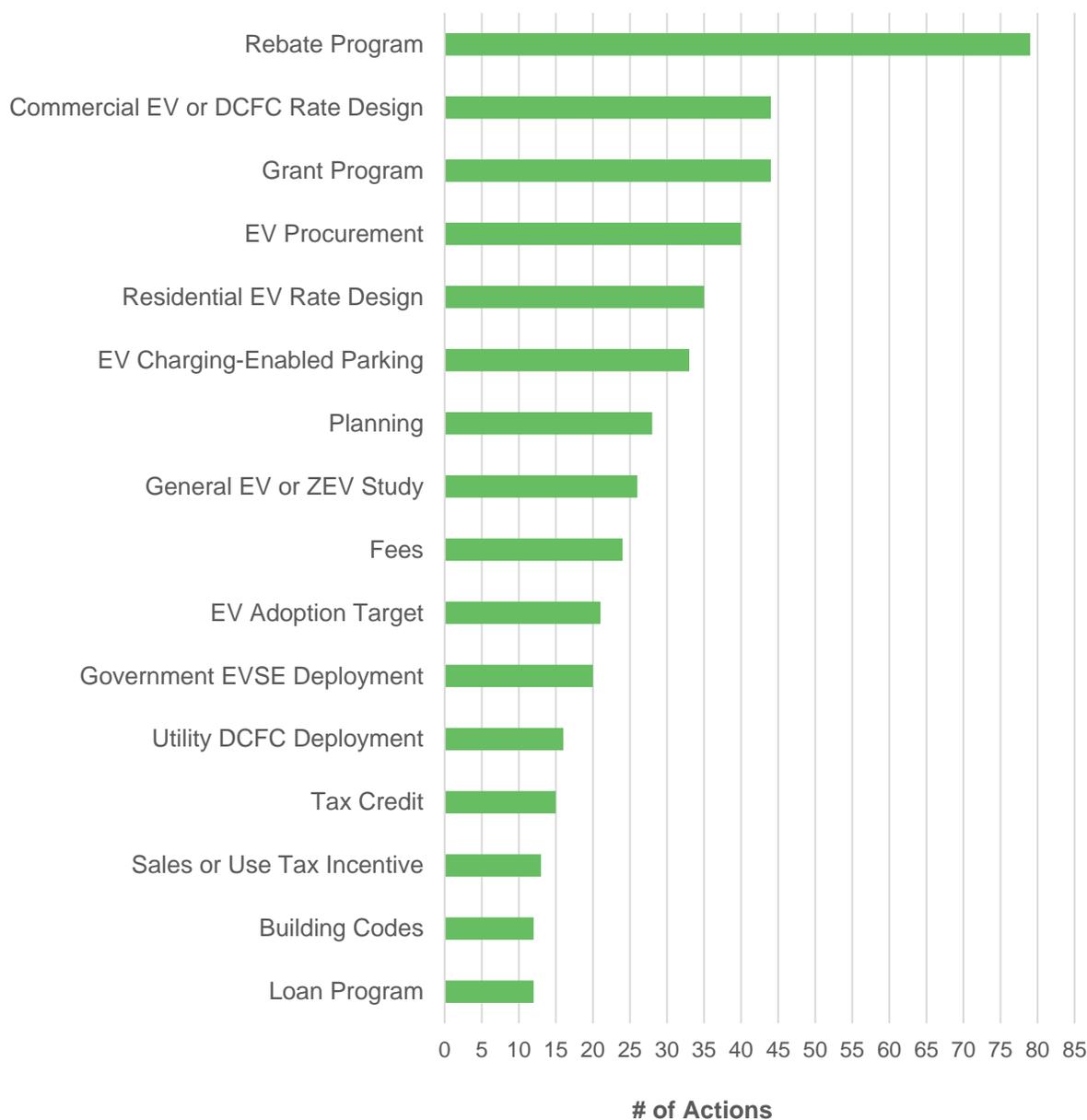
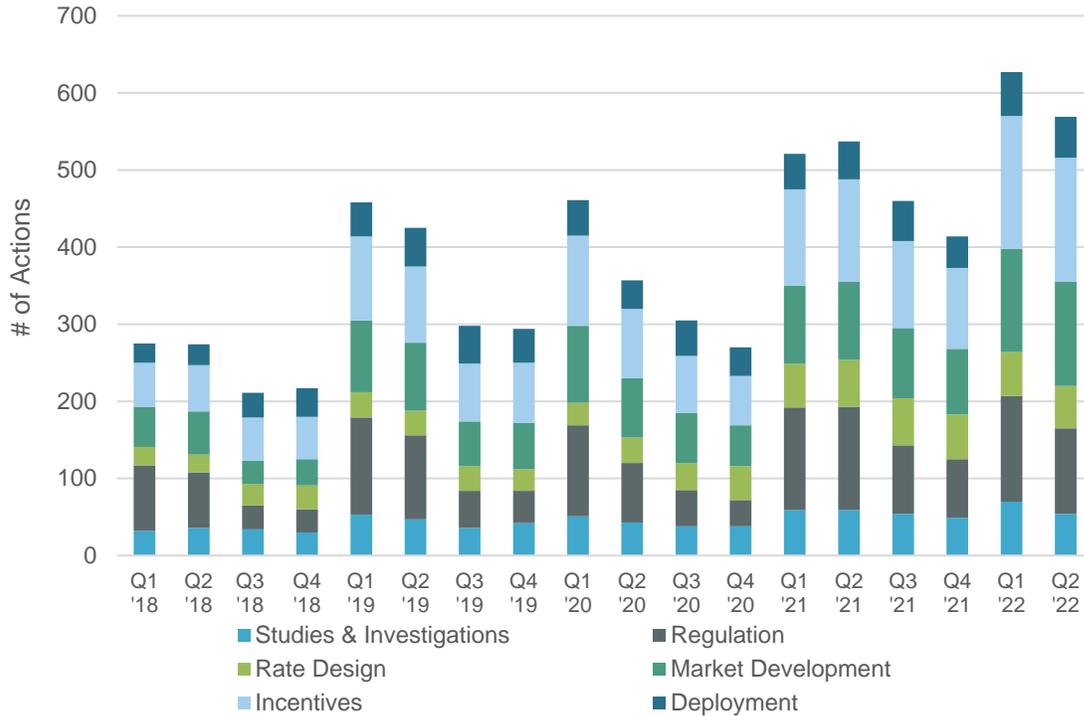


Figure 3. Electric Vehicle Action by Quarter, Q1 2018 to Q2 2022



TOP ELECTRIC VEHICLE POLICY TRENDS OF Q2 2022

States Encouraging Zero-Emission School Bus Deployment

A number of states have been taking recent steps to encourage the deployment of zero-emission buses. Legislation enacted in New York during the quarter requires that all school buses in the state be zero-emission by July 2035. The bill authorizes lease terms for up to ten years for zero-emission buses, as opposed to five years. In Maine, lawmakers enacted a bill setting a goal of having at least 75% of annual school bus acquisitions be zero-emission vehicles by 2035. The bill also allows a loan or lease-purchase agreement term of fifteen years for zero-emission buses, rather than the typical five. Meanwhile, Maryland legislators enacted bills creating an electric school bus pilot program. The program would provide rebates for electric school buses and pilot vehicle-to-grid capabilities. In Arizona, lawmakers enacted a bill that facilitates contracting for electric school buses and charging services.

Utilities Proposing Charging-As-A-Service Programs

A growing number of utilities are filing applications to offer charging-as-a-service programs, where the utility will install and own charging stations at customer locations in exchange for a monthly fee. Entergy requested approval for new offerings in Arkansas and Mississippi, where customers can choose their desired charging equipment, up to a full turn-key solution, with the utility owning and operating the portion of equipment that the customer does not want to. DTE

Electric proposed residential and commercial charging-as-a-service programs in Michigan as part of a general rate case application, where customers would pay a monthly fee over ten years for utility-owned charging equipment. Duke Energy filed a motion to withdraw its proposed charging-as-a-service program that was included in its Phase II pilot programs filing in North Carolina and refile it later as a standalone application. In Indiana, regulators approved a similar program offering proposed by Duke Energy.

States and Utilities Continue Examining Demand Charge Alternatives for Commercial Charging

Many states and utilities are continuing to examine alternatives to traditional demand charges to encourage commercial electric vehicle charging, and especially DC fast charging. The New York Public Service Commission opened a new proceeding in April 2022 to establish alternatives to traditional demand-based rate structures for commercial charging. New Hampshire regulators approved a 50% demand charge reduction as part of Unitil’s proposed electric vehicle rates, and Eversource filed a settlement agreement that would approve its purely volumetric rate for public electric vehicle charging as an alternative to a demand rate. As part of a general rate case filed by Georgia Power, the utility is proposing a new public commercial electric vehicle charging tariff that would modify monthly billing demand with a billing demand adjustment factor that decreases over time.

Figure 4. 2022 Proposed Legislation on Electric Vehicles (as of late July 2022)

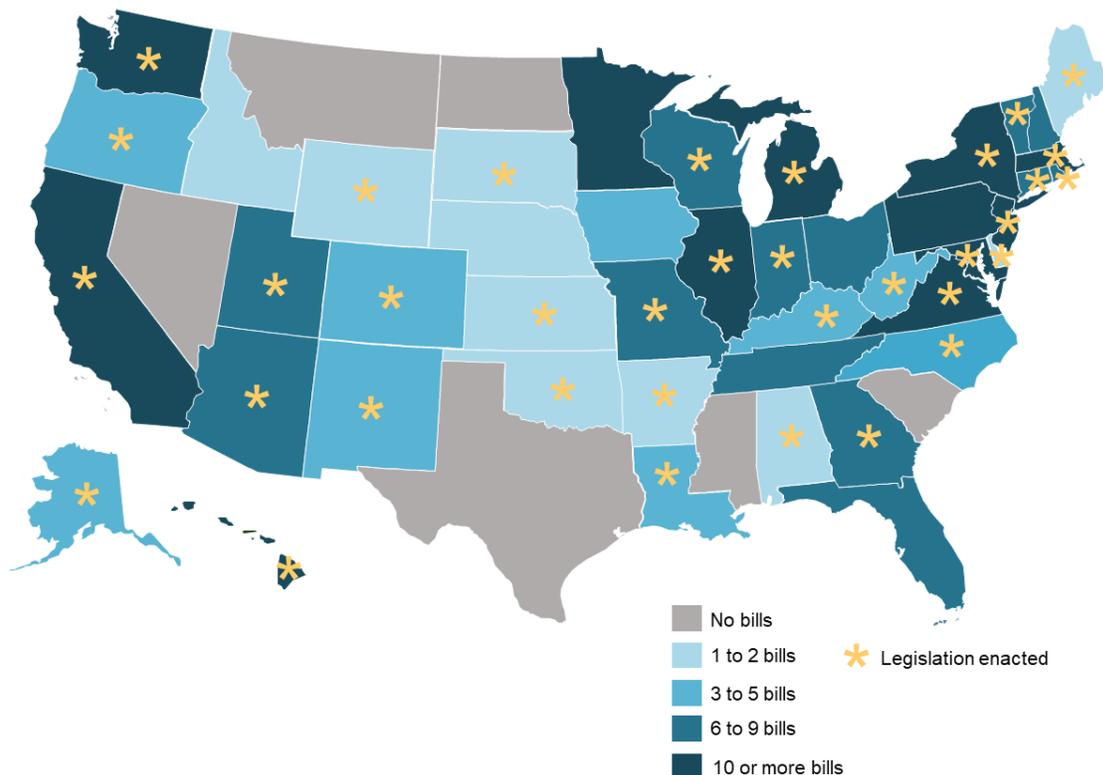
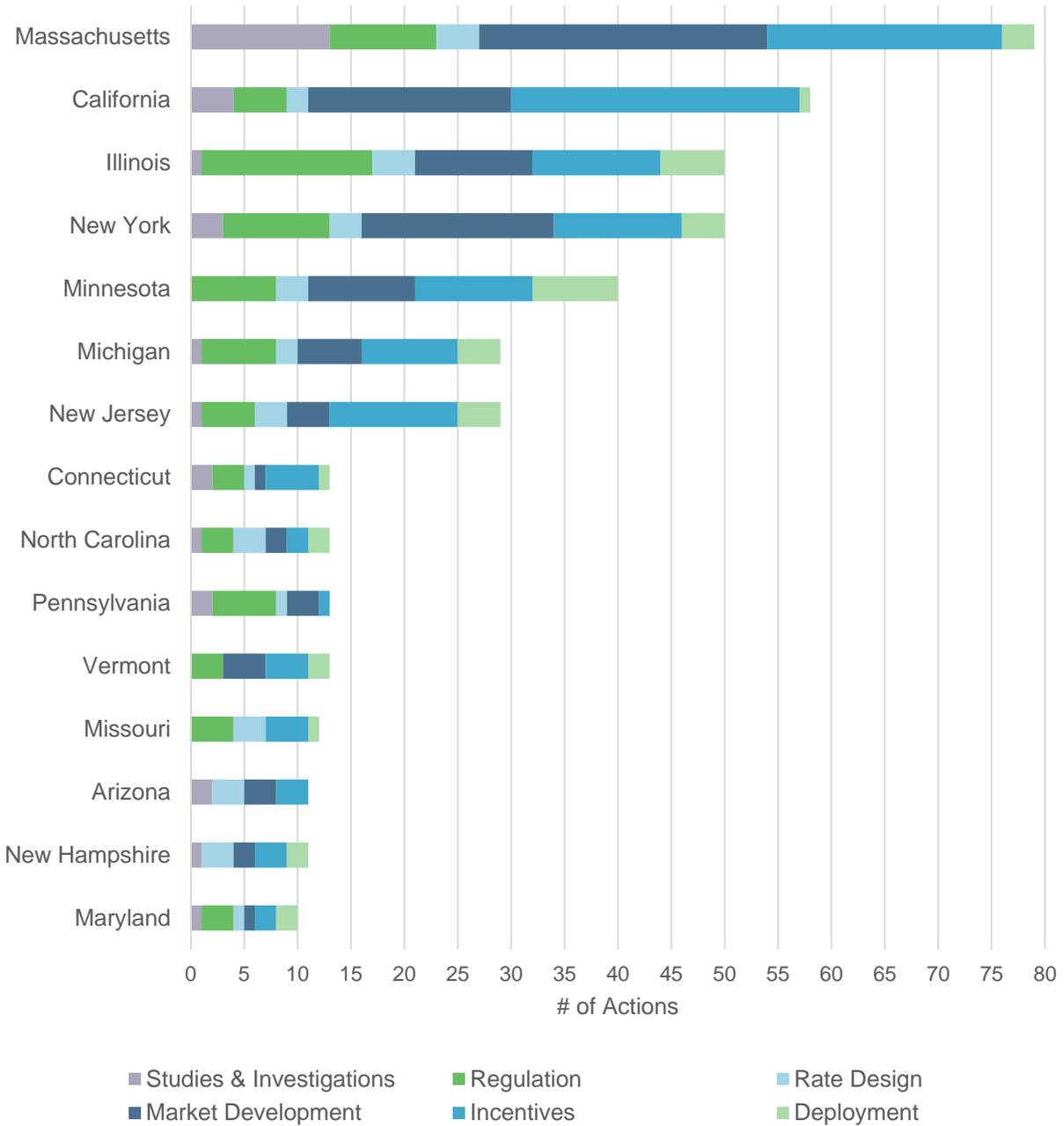


Figure 5. Most Active States of Q2 2022



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 Q2 2022 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.