

50 STATES OF ELECTRIC VEHICLES

Q1 2019 Quarterly Report

Executive Summary



NC CLEAN ENERGY
TECHNOLOGY CENTER

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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.

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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 at [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 grow 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 2019 ELECTRIC VEHICLE ACTION

In Q1 2019, 48 states plus DC took a total of 458 actions related to electric vehicles. Table 1 provides a summary of state and utility actions occurring during Q1 2019. Of the 458 actions catalogued, the most common were related to Regulation (126), followed by Financial Incentives (109), and Market Development (93).

Table 1. Q1 2019 Summary of Electric Vehicle Actions

Type of Action	# of Actions	% by Type	# of States
Regulation	126	27%	44
Financial Incentives	109	24%	28 + DC
Market Development	93	20%	23 + DC
Studies and Investigations	53	12%	32 + DC
Deployment	44	10%	19 + DC
Rate Design	33	7%	18 + DC
Total	458	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 2019

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

Maryland Public Service Commission Approves Electric Vehicle Programs

In January 2019, Maryland regulators approved a scaled down version of a statewide electric vehicle portfolio program developed by a working group as part of the state's grid modernization proceeding. The program as originally proposed would have deployed approximately 24,000 charging stations, while the approved program will deploy over 5,000. The program includes a combination of utility deployment, incentives, and new rate options.

Arizona Regulators Adopt Electric Vehicle Policy Statement

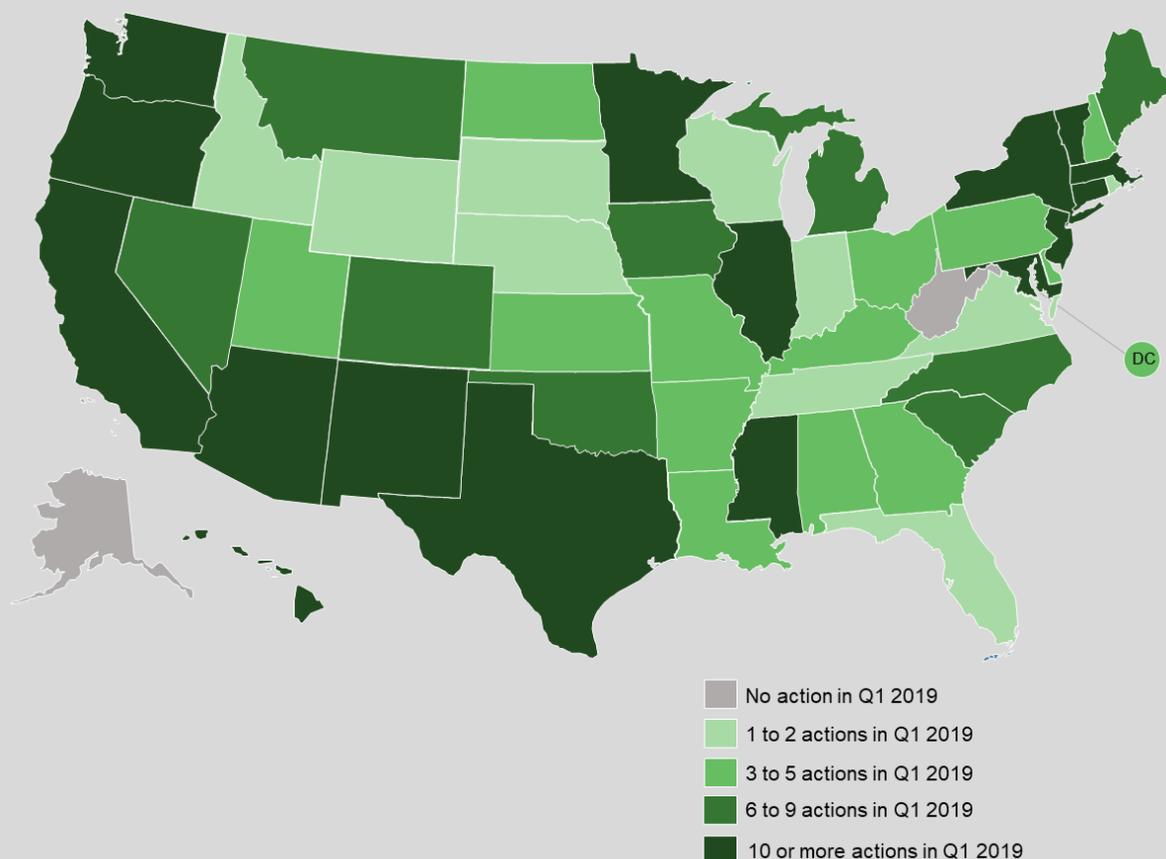
The Arizona Corporation Commission adopted an electric vehicle policy statement in January 2019. The policy statement encourages utilities to develop new rate designs for electric vehicle charging and consider deploying charging infrastructure in low utilization areas. The

Commission Staff filed a draft implementation plan in March 2019, which encourages utilities to propose pilot programs by June 1, 2019.

Missouri and Wisconsin Regulators Open Electric Vehicle Proceedings

Regulators in Missouri and Wisconsin opened new investigatory proceedings related to electric vehicles in Q1 2019. Missouri's proceeding is focused on mechanisms to facilitate charging station installation, while the Wisconsin Public Service Commission is examining a wide range of electric vehicle issues, including infrastructure ownership, cost recovery, grid impacts, and rate design.

Figure 1. Q1 2019 State and Utility Action on Electric Vehicles



New Mexico Legislators Pass Transportation Electrification Bill

In March 2019, New Mexico legislators passed a bill requiring public utilities to file transportation electrification applications by January 2021. These applications may include incentives, infrastructure deployment, rate designs, and customer education and outreach

programs. The bill also exempts electric vehicle charging stations from public utility regulation. The Governor signed the bill into law in early April 2019.

Five States Adopt or Increase Electric Vehicle Registration Fees

Legislatures in four states – Alabama, Arkansas, Kansas, North Dakota – adopted new registration fees for electric vehicles in Q1 2019 or early Q2 2019, while another state – Wyoming – increased its electric vehicle registration fee. Fees in Alabama, Arkansas, and Wyoming are now \$200 for electric vehicles and \$100 for hybrid vehicles, while Kansas is requiring a \$100 fee for electric vehicles and \$50 for hybrids, and North Dakota approved a \$120 fee for electric vehicles and \$50 for hybrids.

Figure 2. Most Active States of Q1 2019

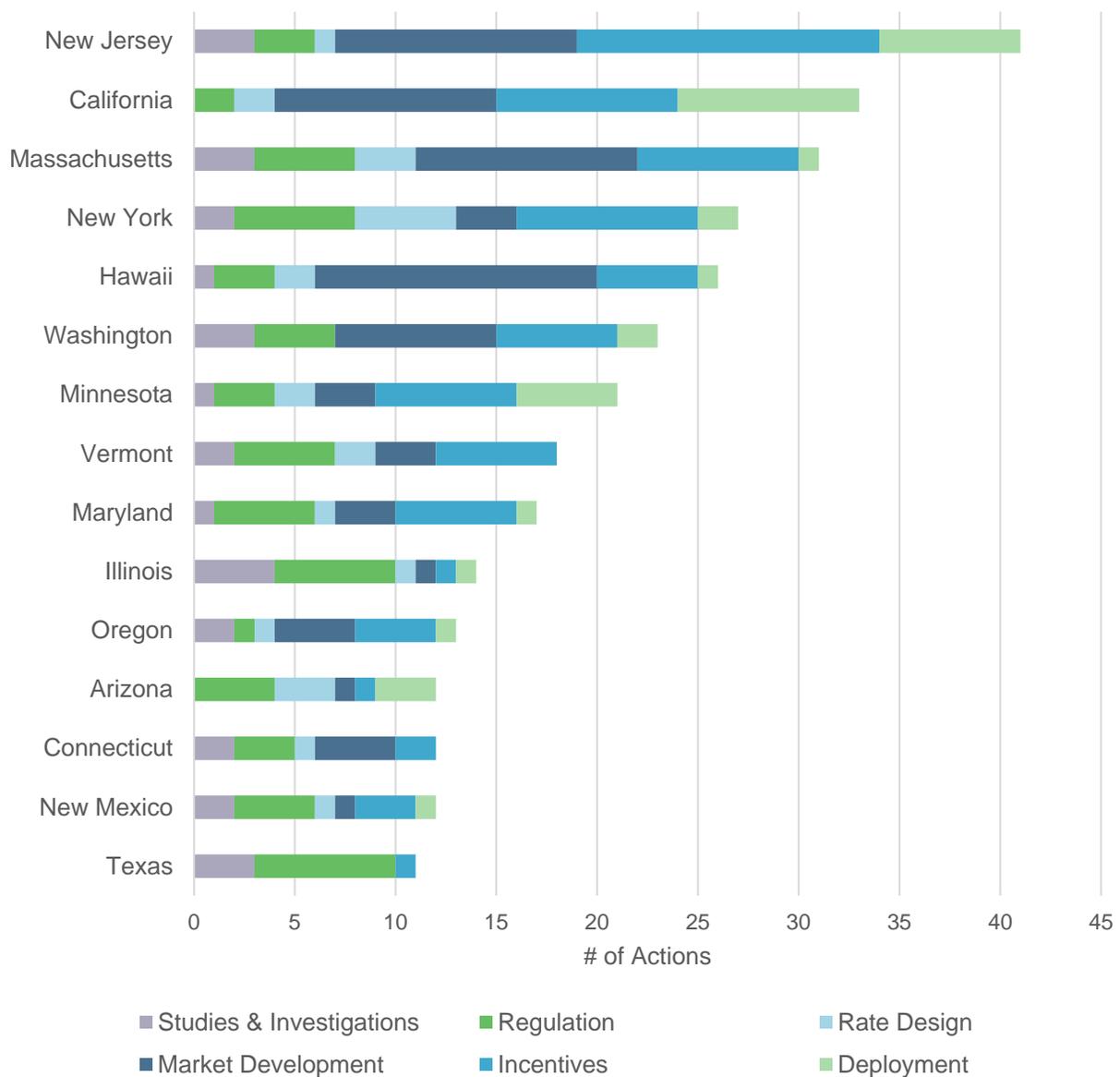
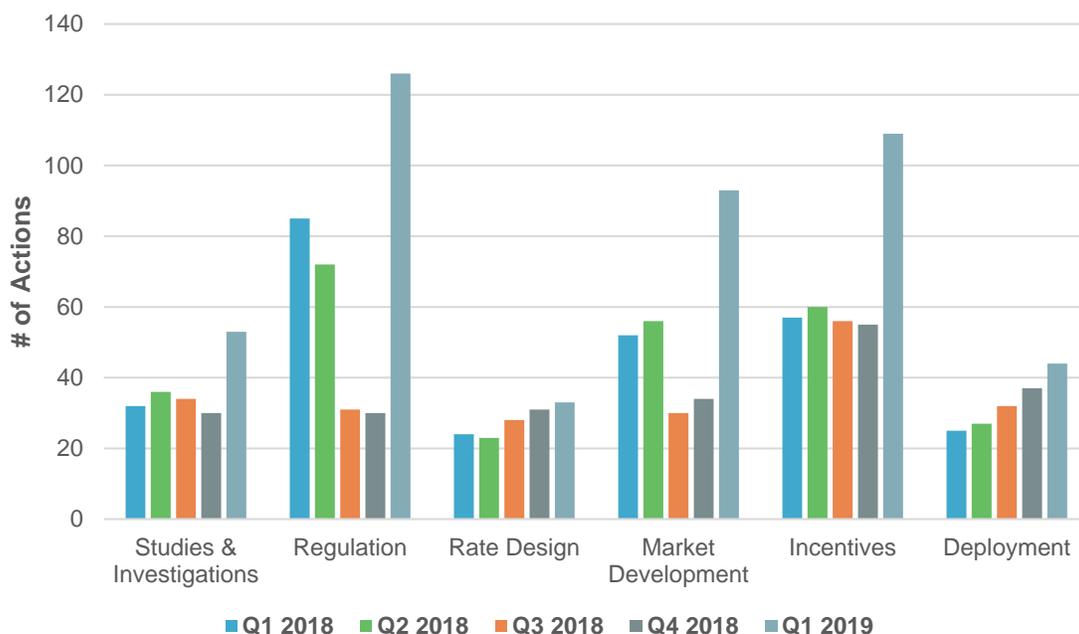


Figure 3. Electric Vehicle Action by Category, Q1 2018 to Q1 2019



TOP ELECTRIC VEHICLE POLICY TRENDS OF Q1 2019

States Considering Aggressive Electric Vehicle and Zero-Emission Vehicle Targets

While state-level momentum toward 100% clean or renewable energy targets is quickly picking up, a similar movement is beginning to emerge in the transportation sector. A bill considered in Hawaii bans the sale of new vehicles with internal combustion engines beginning in 2030, while an Oregon bill prohibits the registration of new non-electric vehicles in highly populated counties beginning in 2035. Many other states are considering electric or zero-emission vehicle requirements for state fleets. Bills in Massachusetts, New Hampshire, and Washington set target dates for all new state vehicles to be electric or zero-emission vehicles, while bills in Connecticut and Rhode Island establish dates by which 50% of new state vehicles are to be zero-emission vehicles.

Regulators Examining Ownership Models for Charging Infrastructure

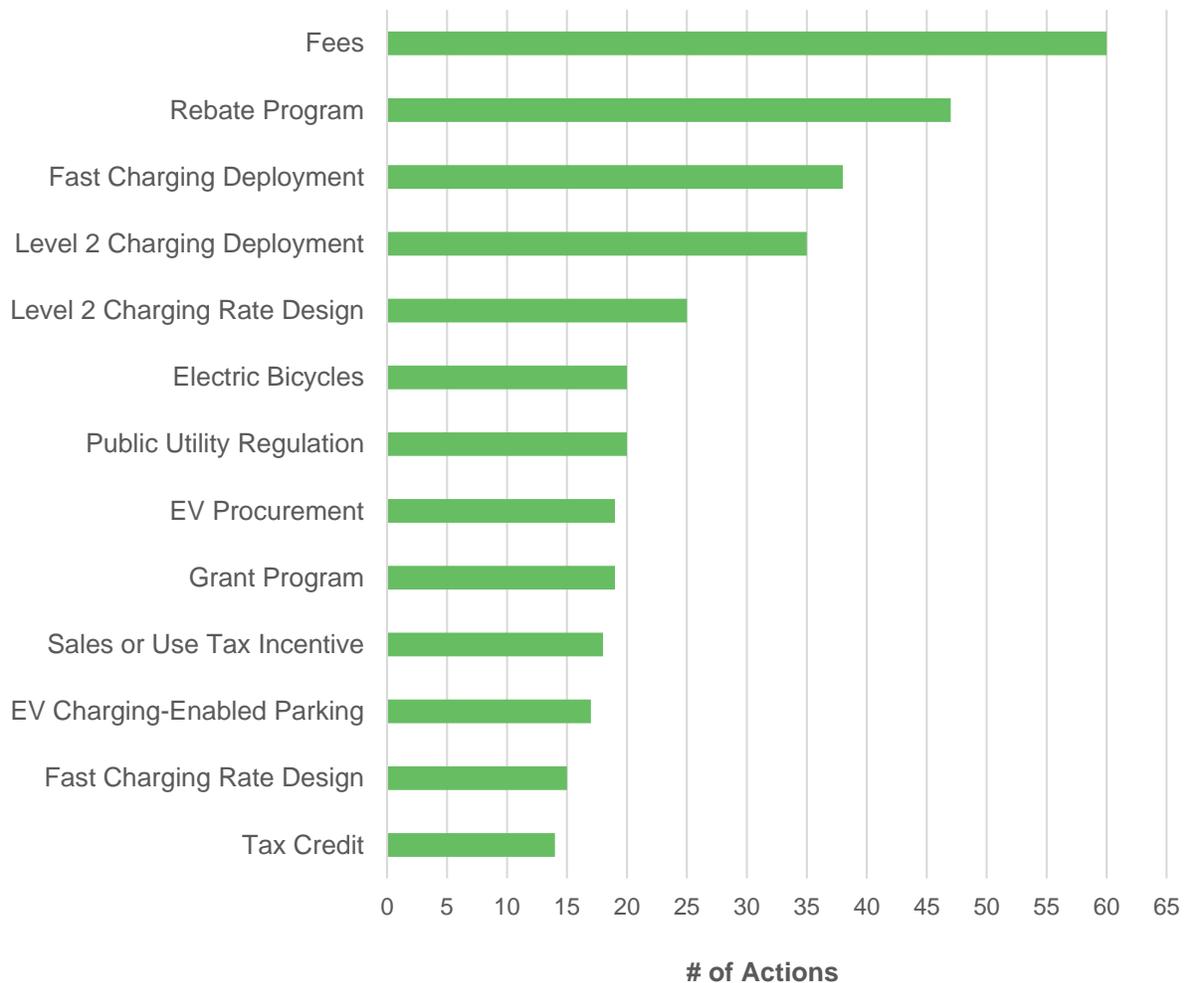
Regulators in several states are evaluating different ownership models for electric vehicle charging infrastructure, and particularly the appropriate role for utilities in charging station build-out. The Missouri Public Service Commission opened a new proceeding in February 2019 to evaluate different ownership options, including a model where utilities own and operate charging stations, a make-ready model, and an incentive approach. The Wisconsin Public Service Commission also opened a new proceeding in Q1 2019 to examine a number of electric vehicle issues, including infrastructure ownership and operation. In Maryland, the Public Service Commission considered these issues in a recent decision, allowing utilities to

own and operate a limited number of charging stations in order to jumpstart the development of a public charging network.

State Legislatures Addressing Transportation Infrastructure Funding

Transportation infrastructure funding was a major issue under consideration across the country during Q1 2019, with legislatures in at least 28 states considering the adoption of additional fees for electric vehicles to compensate for reduced gasoline tax revenue. In Q1 2019 or early Q2 2019, five states – Alabama, Arkansas, Kansas, North Dakota, and Wyoming – adopted additional registration fees for electric vehicles. These fees range from \$100 to \$200 for all-electric vehicles and \$50 to \$100 for plug-in hybrid vehicles. A few states, including Nevada and Vermont, are considering per-kWh charges on electricity used for vehicle charging, and some states are evaluating vehicle miles traveled fees. Other states are considering studies to examine the impact of increased electric vehicle adoption on gasoline tax revenues and options to compensate for this decreased tax revenue.

Figure 4. Top Electric Vehicle Actions of Q1 2019



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, & quarterly webinars)</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, & quarterly webinars for solar, grid modernization/energy storage, & electric vehicles)</i>	\$10,500	N/A

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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.

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