

50 STATES OF ELECTRIC VEHICLES

Q3 2019 Quarterly Report

Executive Summary



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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 [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

Q3 2019 ELECTRIC VEHICLE ACTION

In Q3 2019, 40 states plus DC took a total of 298 actions related to electric vehicles. Table 1 provides a summary of state and utility actions occurring during Q3 2019. Of the 298 actions catalogued, the most common were related to Financial Incentives (75), followed by Market Development (58), and Deployment (49).

Table 1. Q3 2019 Summary of Electric Vehicle Actions

Type of Action	# of Actions	% by Type	# of States
Financial Incentives	75	25%	21 + DC
Market Development	58	19%	17 + DC
Deployment	49	16%	20 + DC
Regulation	48	16%	20
Studies and Investigations	36	12%	26 + DC
Rate Design	32	11%	18 + DC
Total	298	100%	40 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 Q3 2019

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

North Carolina Department of Transportation Releases Zero-Emission Vehicle Plan

In late September 2019, the North Carolina Department of Transportation released its final Zero-Emission Vehicle Plan, as required by Executive Order 80. The plan identifies four action areas to support zero-emission vehicle adoption: education, convenience, affordability, and policy. The North Carolina Department of Environmental Quality released a Clean Energy Plan in September, which addresses transportation electrification.

Arizona Regulators Approve Electric Vehicle Implementation Plan

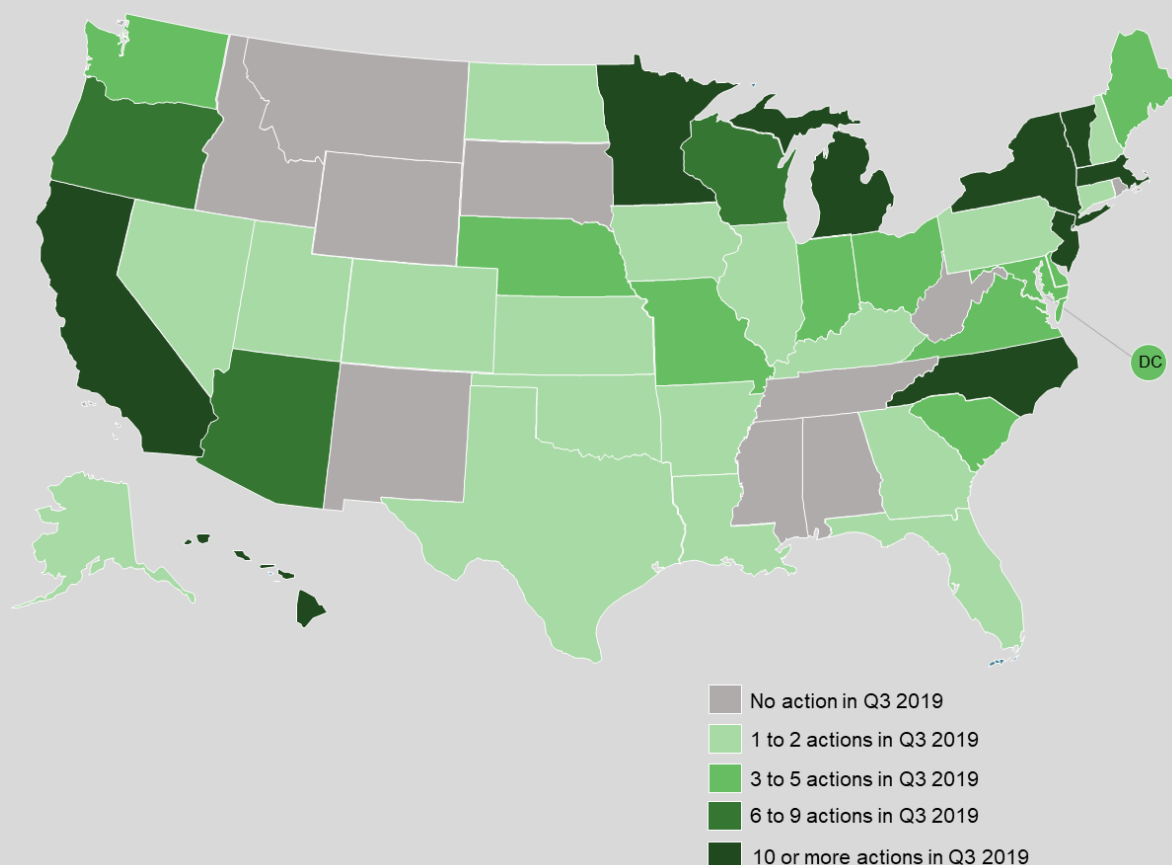
The Arizona Corporation Commission approved its Electric Vehicle Policy Implementation Plan in July 2019. The plan establishes guidelines for utility electric vehicle programs and directs the utilities to develop a joint, long-term comprehensive transportation electrification plan by

December 31, 2019. The plan also clarifies that charging stations are not classified as public utilities.

Maine Public Utilities Commission Issues Beneficial Electrification RFP

In August 2019, the Maine Public Utilities Commission approved a request for proposals (RFP) for pilot programs to support beneficial electrification of the transportation sector, as required by legislation enacted earlier in the year. Proposals may address load management, utility investment in infrastructure for fast charging, fast charging fees, and customer engagement and awareness. The Commission is accepting responses from utilities, non-utility entities, and Efficiency Maine.

Figure 1. Q3 2019 State and Utility Action on Electric Vehicles



Portland General Electric Files Transportation Electrification Plan

Portland General Electric filed its transportation electrification plan with Oregon regulators in late September 2019. The plan includes activities to address passenger electric vehicle adoption and fleet electrification, such as rate reform, infrastructure investments, financial

incentives, and outreach. Planned efforts include vehicle-only time-of-use rates, demand charge relief, make-ready equipment deployment, and leasing of charging infrastructure.

Iowa Utilities Board Exempts Charging Infrastructure Served by Behind-the-Meter Generation from Utility Regulation

The Iowa Utilities Board issued a decision in September 2019, exempting all electric vehicle charging stations, including those served by behind-the-meter generation, from utility regulation. The Board adopted rules in April 2019 exempting charging stations that purchase electricity from the utility only from regulation. The revised rules specify that electricity sold for the purpose of vehicle charging at a commercial or public station does not constitute a resale of electricity.

Figure 2. Top Electric Vehicle Actions of Q3 2019

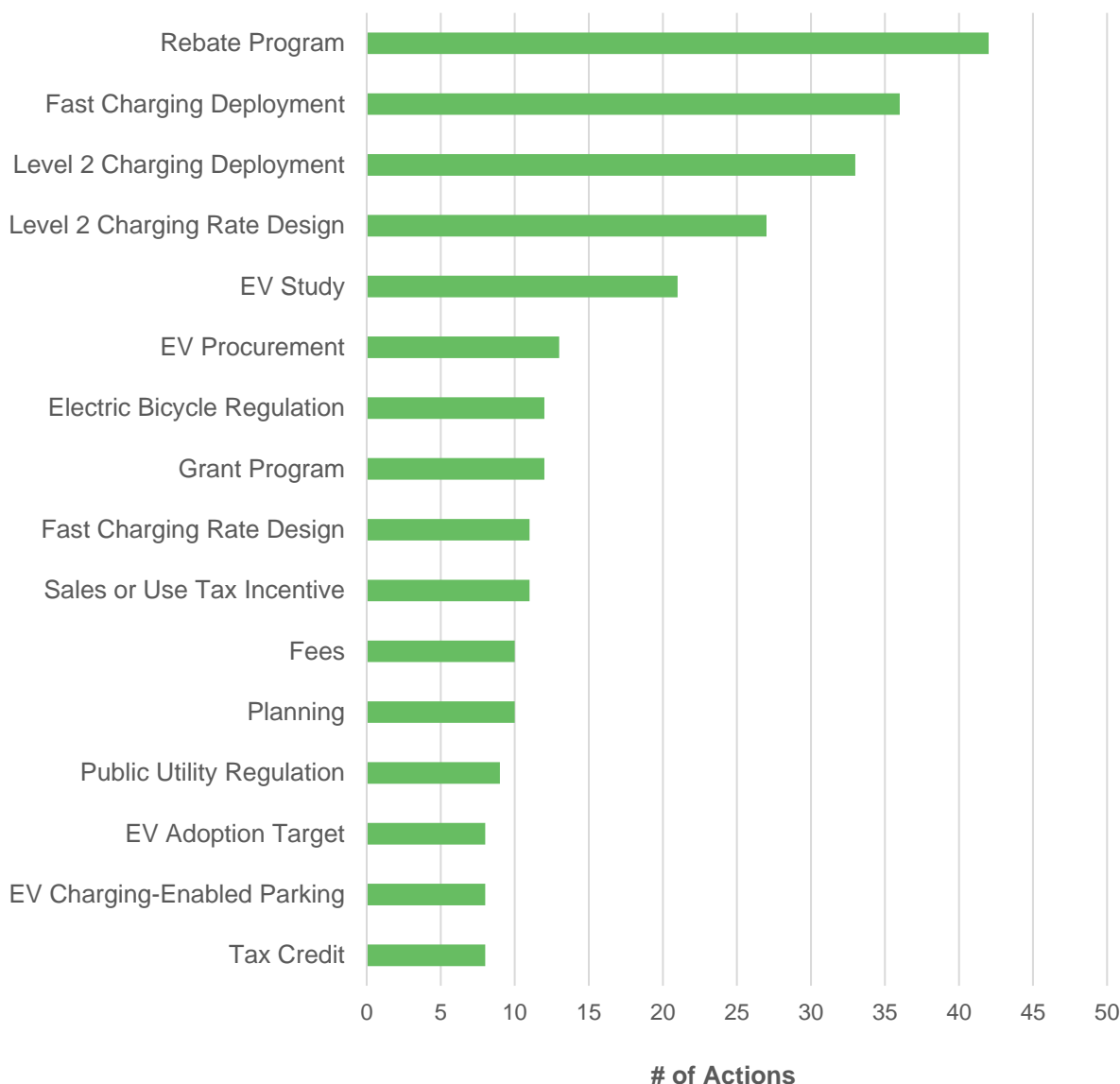
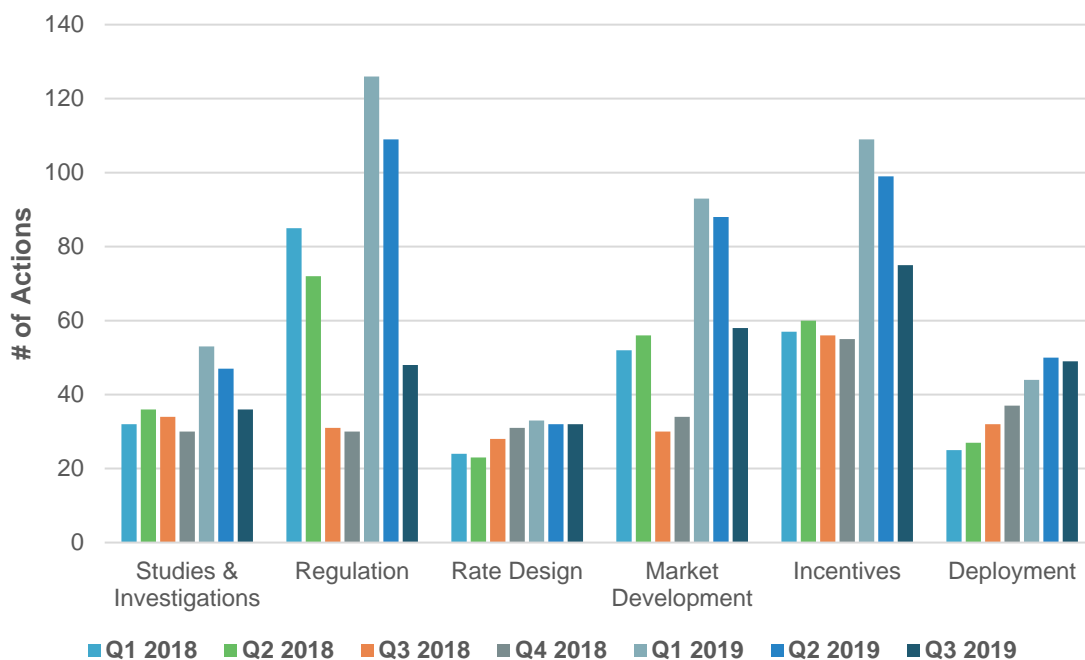


Figure 3. Electric Vehicle Action by Category, Q1 2018 to Q3 2019



TOP ELECTRIC VEHICLE POLICY TRENDS OF Q3 2019

States and Utilities Focus on Rebate Programs for Electric Vehicles and Charging Infrastructure

The most commonly addressed topic of Q3 2019 was financial incentives for electric vehicles and charging infrastructure, with the majority of incentives under consideration being rebate programs. Hawaii lawmakers enacted legislation creating a new rebate program for electric vehicle charging infrastructure in July 2019, while the Vermont General Assembly enacted a bill establishing a new incentive program for electric vehicles last quarter. In New Jersey, the Board of Public Utilities took steps toward developing an electric vehicle incentive program. Several utilities have filed proposals for rebate programs, typically as part of broader transportation electrification initiatives. Duke Energy has requested approval for charging station rebates in Indiana, Kentucky, North Carolina, and South Carolina, while Indiana Michigan Power has filed rebate proposals in both Indiana and Michigan.

Utilities Proposing Programs to Address Multiple Charging Types and Locations

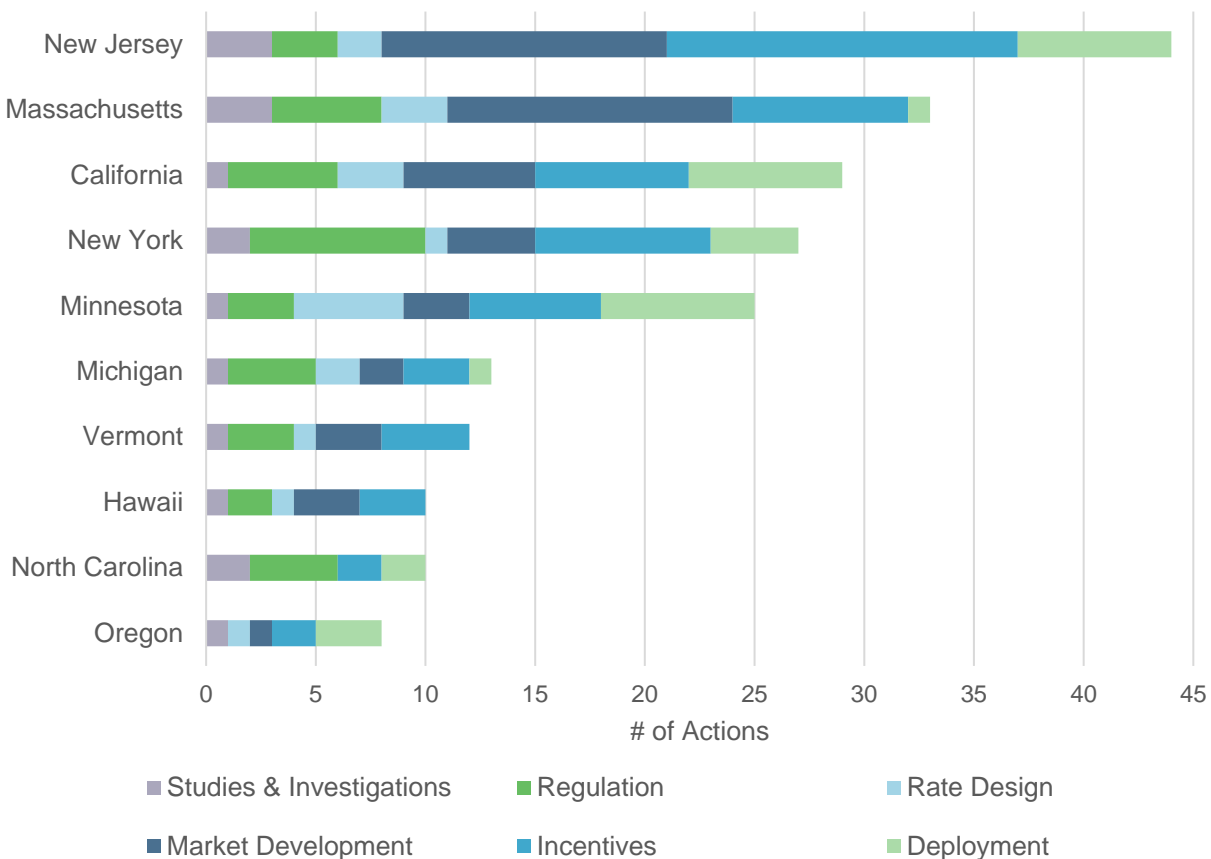
Many of the utilities requesting approval for transportation electrification initiatives are proposing a portfolio of programs addressing multiple charging types (such as Level 2 or DC fast charging) and locations (such as single-family homes, multi-family dwellings, businesses, and workplaces). The majority of the residential and commercial programs under consideration take the form of incentive programs and new rate offerings, while the majority

of the fast charging programs involve utility deployment or new rate designs to reduce the impact of demand charges. Duke Energy’s newly proposed pilot programs in Indiana and Kentucky include programs for fast charging, electric transit buses, residential charging, and commercial charging. Recently approved programs in DC, Delaware, and Maryland also address several different charging segments.

Utilities Proposing Innovative Electric Vehicle Pilot Projects

A number of utilities are proposing innovative electric vehicle pilot projects to demonstrate and study new technologies and applications. Dominion Energy Virginia requested approval to deploy a limited number of DC fast charging stations to study and support electrification of the rideshare segment. A Commission order on Georgia Power’s integrated resource plan requires the utility to develop a pilot project that uses battery storage for a grid-connected charging system. As part of Portland General Electric’s transportation electrification plan, filed in September 2019, the utility indicated that it will be pursuing an electric truck demonstration charging sandbox. Last quarter, the Utah Public Service Commission approved Rocky Mountain Power’s proposed project that will test a power balance and demand response system at a transit hub in Salt Lake City.

Figure 4. Most Active States of Q3 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
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