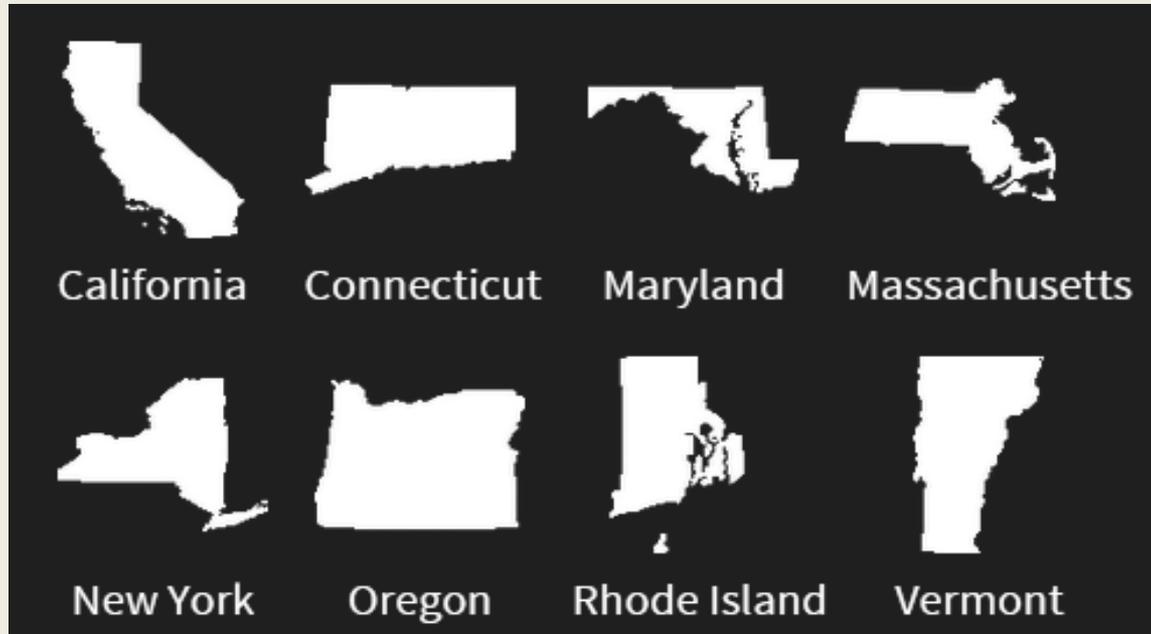


Collaborative State Efforts to Accelerate Electrification of Light Duty Vehicles



**Kathy M. Kinsey
Senior Policy Advisor**

**Northeast States for Coordinated Air Use Management
August 30, 2016**

Governors ZEV MOU & Multi-State Action Plan



State Zero-Emission Vehicle Programs Memorandum of Understanding

WHEREAS, the Signatory States have adopted regulations requiring increasing sales of zero-emission vehicles (ZEVs), or are considering doing so; and

WHEREAS, accelerating the ZEV market is a critical strategy for achieving our goals to reduce transportation-related air pollution, including criteria air pollutants, mobile source air toxics and greenhouse gas emissions (GHGs), enhance energy diversity, save consumers money, and promote economic growth; and

WHEREAS, our states are committed to reducing air pollution, including the emission of GHGs and other air pollutants from the mobile source sector; and

WHEREAS, many of our states have obligations or otherwise seek to reduce GHGs consistent with science-based targets by 2050; and

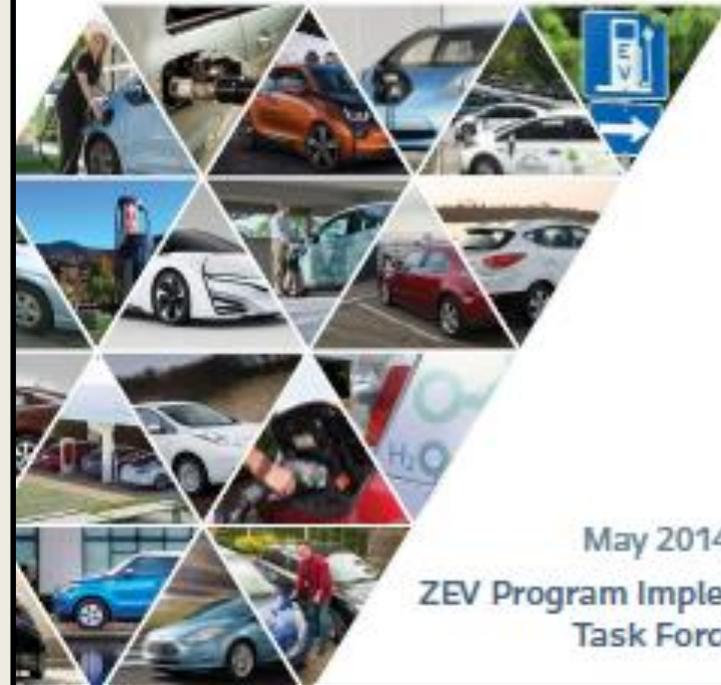
WHEREAS, motor vehicles are among the largest sources of GHGs and criteria air pollutants that adversely affect the health and well-being of our citizens in all of our states; and

WHEREAS, providing transportation alternatives such as ZEVs will help improve air quality, reduce the use of petroleum-based fuels in the transportation sector, protect consumers against volatile energy prices, and support the growth of jobs, businesses and services in a clean energy economy; and

WHEREAS, an increasing variety of vehicles that operate on hydrogen and low-cost electricity are commercially available and have the potential to significantly reduce emissions of criteria pollutants and GHGs, enhance consumer choice, and allow for home fueling; and

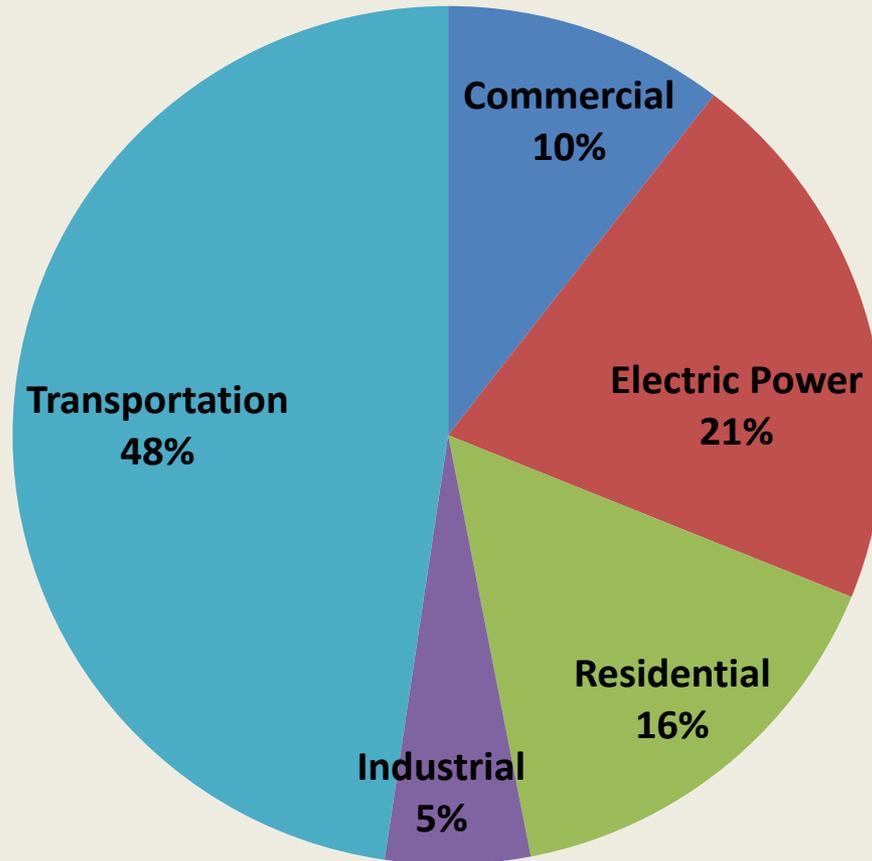


MULTI-STATE ZEV ACTION PLAN



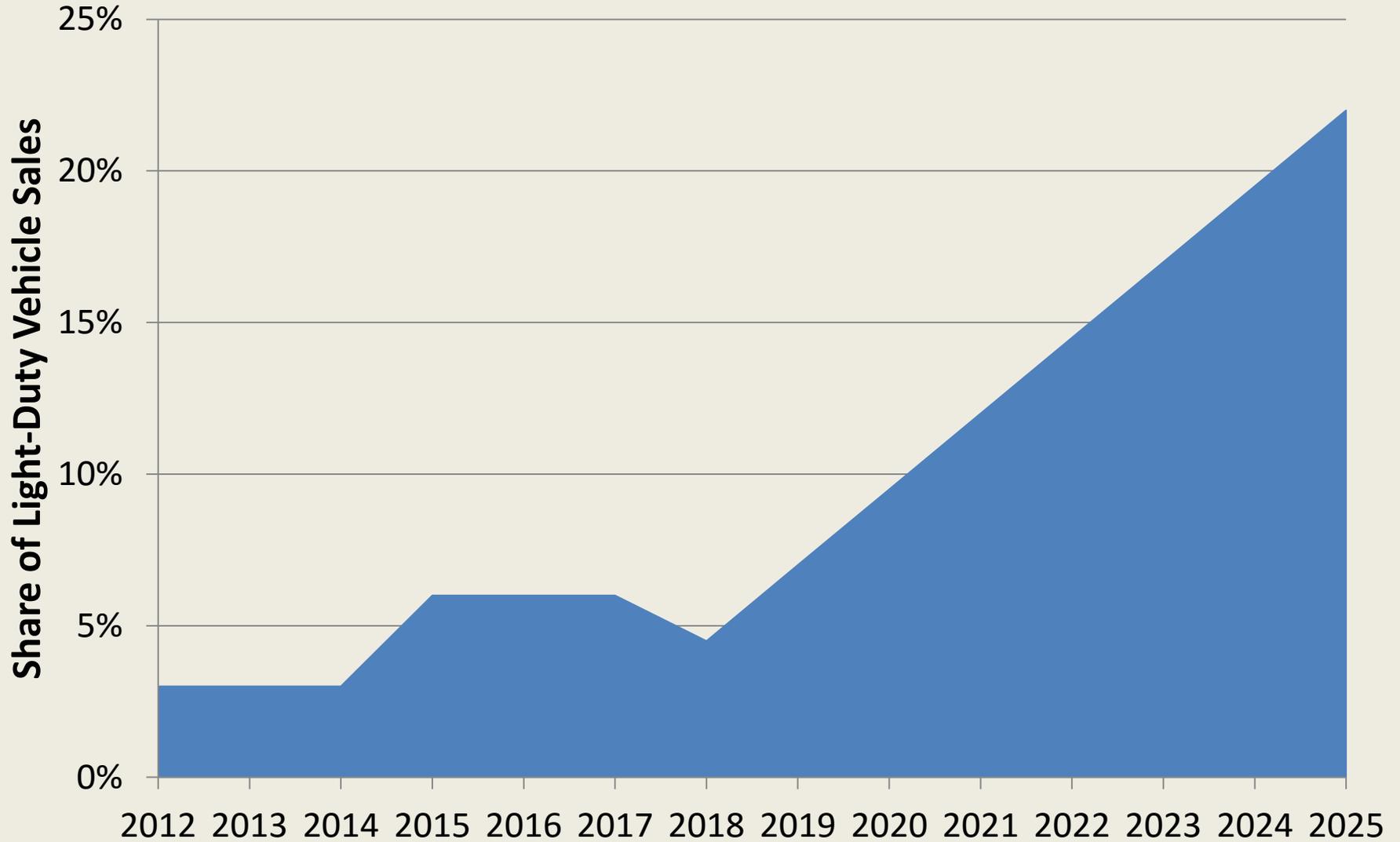
May 2014
ZEV Program Implementation
Task Force

Transportation Electrification: The Key to Achieving Climate Goals



2012 Section 177 ZEV State CO₂ Emissions

Increasing ZEV Credit Requirements



Consumer Education & Outreach Initiative:

Establish **public-private partnership** between automotive industry and eight ZEV MOU states.



Develop and launch a **multi-dimensional campaign** to engage consumers, familiarize them with the benefits and features of EVs, and inspire consumers to take action.



Campaign Objectives	Actions To Encourage	Desired Outcomes
<ul style="list-style-type: none"> ➤ Educate and inspire car buyers to consider EVs ➤ Provide common themes and messages to supplement, connect, and increase effectiveness of existing efforts ➤ Use trusted and straightforward materials to inform consumers about EVs and answer common questions 	<ul style="list-style-type: none"> ❖ Test drive EVs at ride-and-drive events or dealerships ❖ Talk to someone who drives an EV ❖ Visit campaign website to learn more about the variety and types of EVs ❖ Visit OEM websites and dealerships to learn more about specific brands 	<ul style="list-style-type: none"> ✓ Campaign recognizes take actions encouraged by the campaign ✓ Increase interest, understanding and acceptance of EVs ✓ Increase number of consumers who will consider EVs for their next vehicle

EV Campaign: Phased Approach

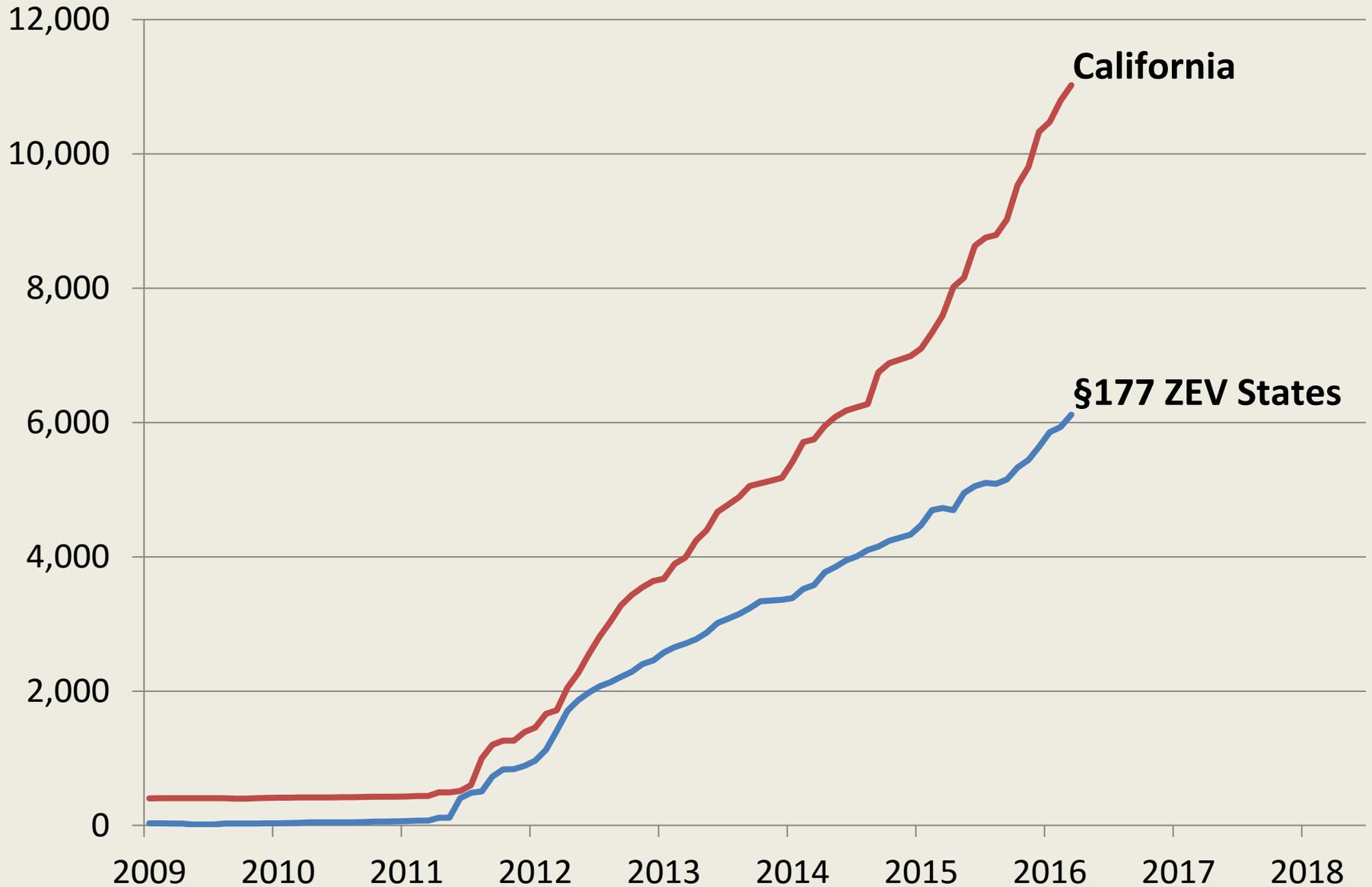
Phase 1 2016

- Retain marketing firm to **conduct market research and develop campaign strategy** under two or more budget scenarios.

Phase 2 2017

- Procure professional agencies to **implement campaign**. Media selection, geographic scope and duration determined by funding.

Public and Private EV Charging Outlets



Need for Utility Investment in Transportation Electrification

- States and OEMs playing critical role in current infrastructure build-out
- Limited resources to support the charging network on the scale needed
- Electric utilities are in the infrastructure business and best positioned to lead deployment

BMW, Volkswagen team up to build electric car charging stations

Nearly 100 DC fast chargers will be installed to support long distance and metropolitan electric vehicle travel with the BMW i3, Volkswagen e-Golf and other electric cars, along heavily trafficked corridors and coastal routes.

Ford to install electric vehicle charging stations for employees

Ford Motor Co ([F.N](#)) said on Monday it will install charging stations at more than 50 of its U.S. and Canadian offices and plants so that employees can refill their electric vehicle batteries at work.

The second-largest U.S. automaker said it will start installing the charging stations and the

Nissan's DC Quick-Charging Stations: 630 CHAdeMO Sites Live Today

[John Voelcker](#) In **January** 2013, there were roughly 160 CHAdeMO quick-charging sites live, mostly on the West Coast and in Texas. Nissan said then that it hoped to [triple that number over the following 18 months](#), adding up to 500 fast chargers in locations across the country, including many at its dealers.

Attorney General Gansler Announces \$1 Million for Network of Electric Vehicle Fast-Charging Stations Throughout Maryland

Devices will allow for 30-minute charging, promote sale and use of electric vehicles statewide

Baltimore, MD (April 24, 2014) - In an Earth Week announcement,

Attorney General Douglas F. Gansler outlined a new public-private grant program to build a statewide network of Level 3

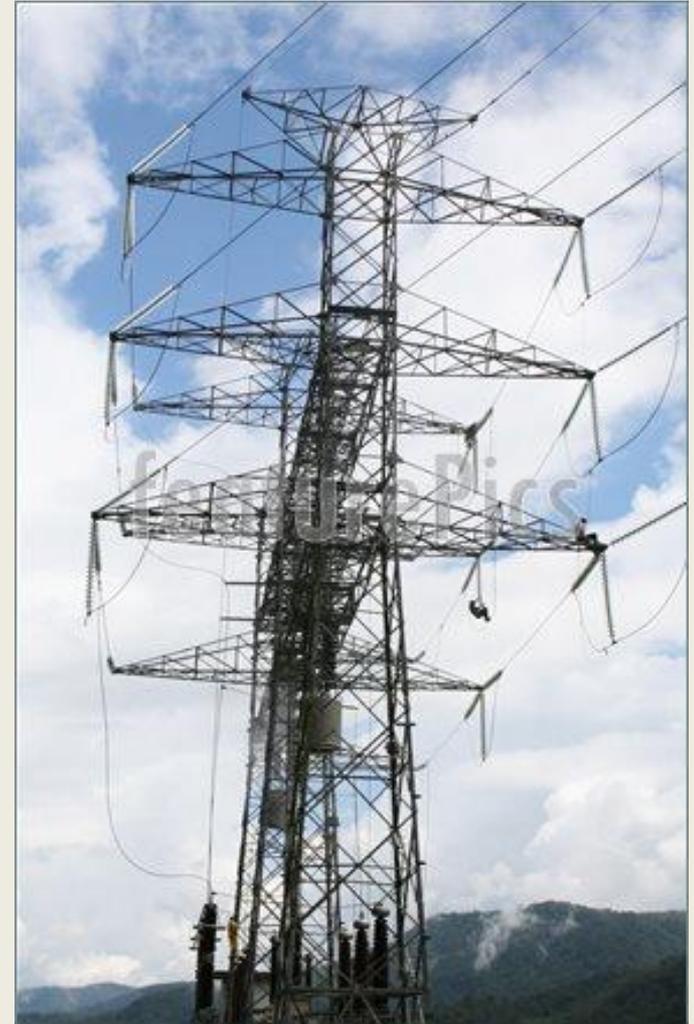
Utility Business Case for Investment in Transportation Electrification



- Charging infrastructure promotes widespread EV adoption
- EVs new source of load to compensate for stagnating and declining load growth
- Generates revenue in excess of energy delivery costs
- EV charging increases throughput and reduces fixed costs of operating grid
- Facilitates integration of solar and wind energy sources

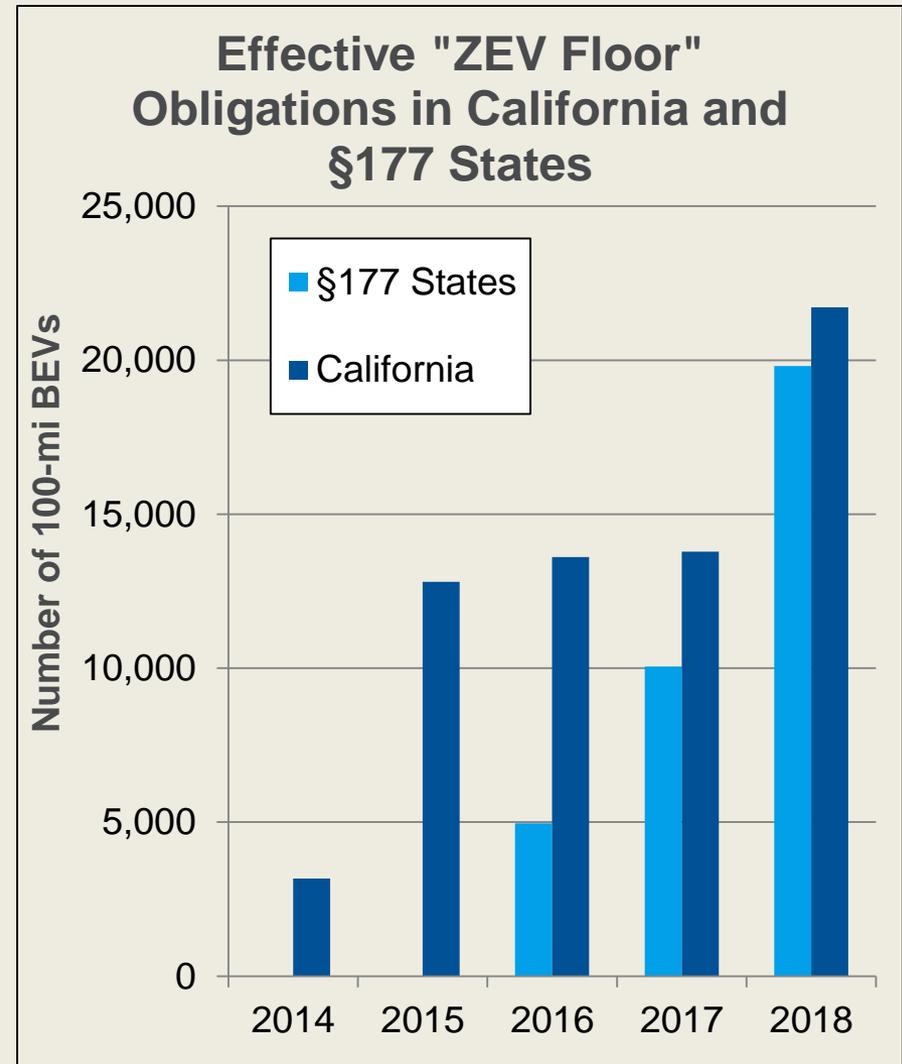
Efforts to Promote NE Utility Investment in Transportation Electrification

- May 2016 Utility Workshop in Boston
- Ongoing continuing utility dialogue
- Economic benefits analysis underway for northeast utilities
- July 2016 Maryland Public Service Commission Public Conference
- Next steps: Regional Northeast and Mid-Atlantic Public Utility Commission Workshops

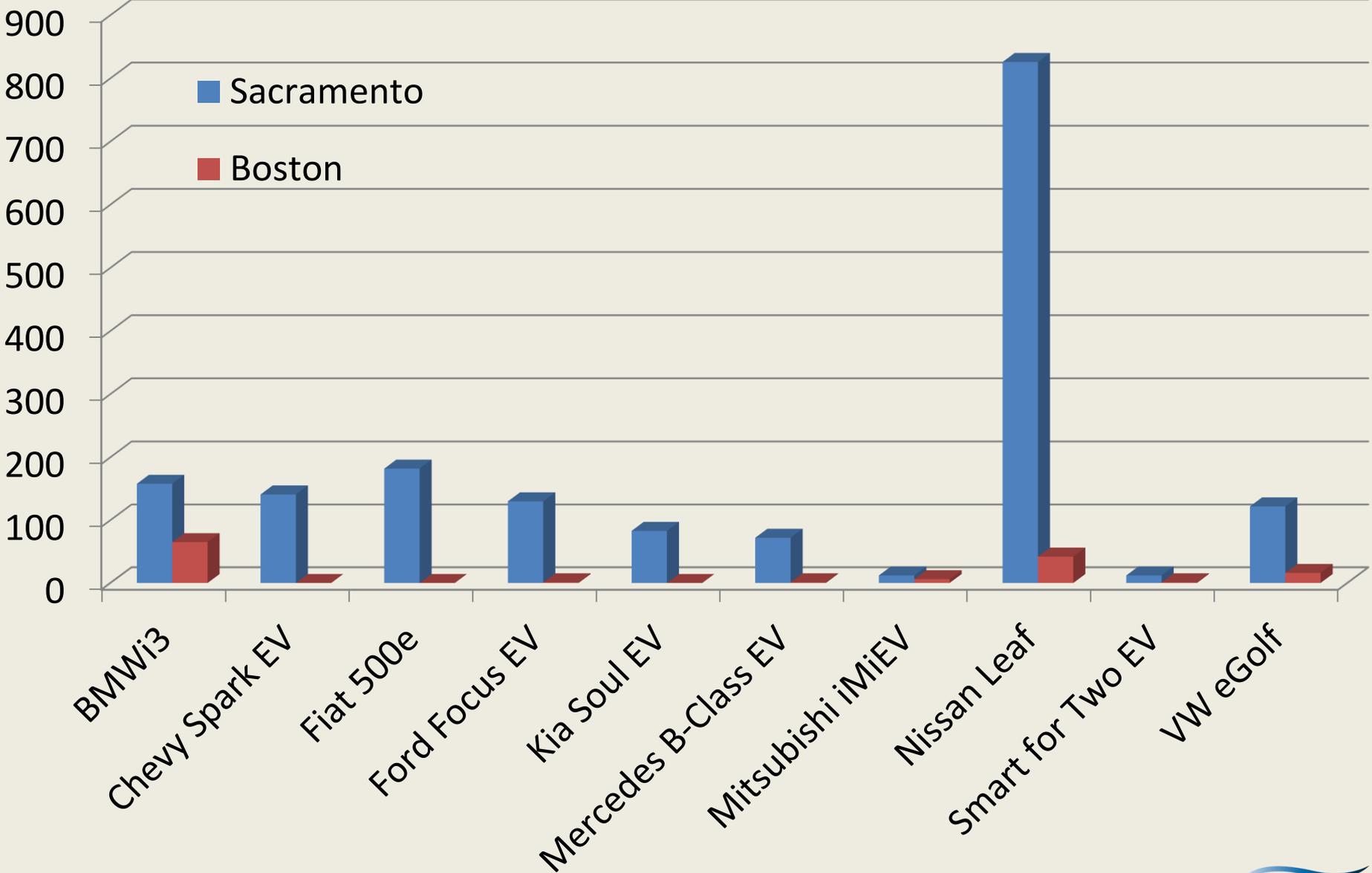


Expiration of Travel Provision Will Boost Sales in Section 177 States

- Travel provision gives automakers credit in all other ZEV states for cars placed in California
- Intended to allow automakers to focus early technology and market development in California
- Many models available in small numbers, or only in California
- Expiration of travel provision at the end of 2017 will boost sales in the Northeast states



Number of Vehicles at Dealerships Within 100 Miles



Source: cars.com, accessed on May 13, 2016

EVs – Becoming a Viable Transportation Option for Mainstream Consumers

In one generation (2012-2017) affordable full battery electric vehicles will have increased range by about 2.5x while holding costs consistent



2012 Nissan Leaf: \$35,200 / 84 Miles
(2012 MSRP)



2017 Chevrolet Bolt: \$37,500 / 200 Miles
(projected MSRP)

\$30,000 w/Federal Tax Credit

GM Press Release: [“Chevrolet Commits to Bolt EV Production”](#)



2017 Tesla Model 3: \$35,000 / 200 Miles
(projected MSRP)

\$27,500 w/Federal Tax Credit

Green Car Reports: [“Tesla Model 3: Revealed Next Year, Production Starts 2017, Company Confirms.”](#)



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