THE MULTI-STATE ZEV ACTION PLAN

Hydrogen TAC
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ZEV Program States MOU

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

In October 2013, eight Governors announced an initiative to put 3.3 million ZEVs on their roads by 2025 in order to:

- **Reduce GHG emissions**
- **Improve air quality and public health**
- **Enhance energy diversity**
- **Save consumers money**
- **Promote economic growth**

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MOU Key Commitments

- **Harmonize building codes** to make it easier to construct new charging stations
- **Lead by example** by including zero-emission vehicles in public fleets
- **Evaluate and establish incentives** to promote zero-emission vehicles
- **Evaluate electricity rate design** for home charging systems
- **Develop common standards** for roadway signs and charging networks
- **Develop an action plan** that will include many of these strategies and others
- **Create ZEV Program Implementation Task Force**
- **Conduct study** of potential deployment strategies and infrastructure requirements for the commercialization of hydrogen fuel cell vehicles.

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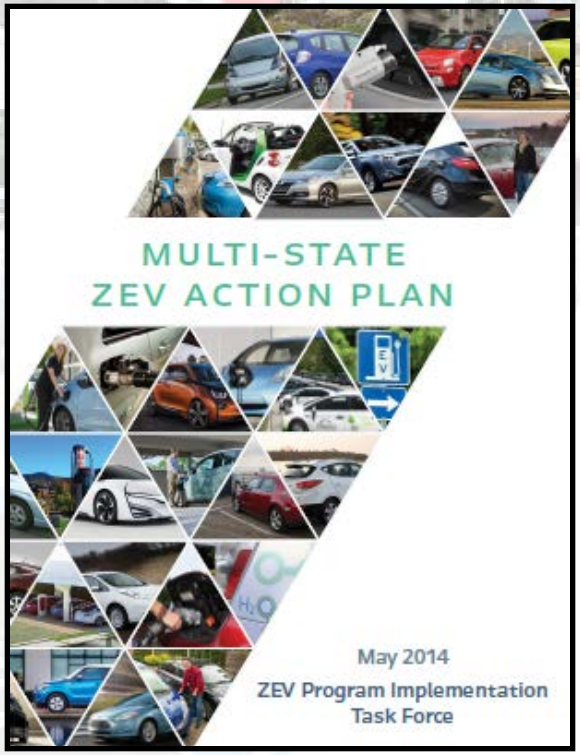
Multi-State Action Plan



- Released May 2014
- 11 specific recommendations to:
  - support MOU goals
  - guide interstate coordination
  - advise state-specific action
- Informed by intensive stakeholder process
- Stakeholder engagement will continue beyond release of Plan and into implementation phase

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FCEV & H_2-Related Actions:

- Pursue resource partnerships to design and execute an H_2 infrastructure feasibility study for the MOU states outside of California.
- Initiate a dialogue to address federal restrictions on electricity and hydrogen sales within certain limited access rights-of-way.
- Support the adoption of national standards for highway signs indicating hydrogen fueling stations.
- Follow and support national and California efforts to develop hydrogen infrastructure codes and standards for station configuration, fuel quality, and dispensing accuracy.
- Promote policies to enable the commercial sale of hydrogen as transportation fuel and ensure transparent pricing.
- Explore the use of hydrogen for grid support, especially with regard to storage of excess electricity produced by renewables.
- Coordinate with US DOE, H2USA, Breakthrough Technologies Institute, state hydrogen coalitions, and others to explore opportunities to advance hydrogen fuel cell vehicles in MOU states.

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Action Plan Implementation

- Eight parallel implementation "teams":
  - Consumer Education
  - Dealerships
  - Fleets
  - Hydrogen & Fuel Cells
  - Infrastructure- Planning & Deployment
  - Infrastructure – Regulatory
  - Policy & Incentives
  - Workplace Charging
- Teams will rapidly develop strategy for completion of "handbook" for states containing best practices and policy recommendations

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Plan in Action

- Announced June 2014:
  - Massachusetts "MOR-EV" consumer rebate program
  - Mass EVIP Workplace Charging Program

- Announced July 2014:
  - Maryland EV tax credit maximum increased from $1,000 to $3,000
  - Maryland EVSE credits increased and changed to rebates

- As of October 2014:
  - Individual Action Plans in development in 4 MOU states

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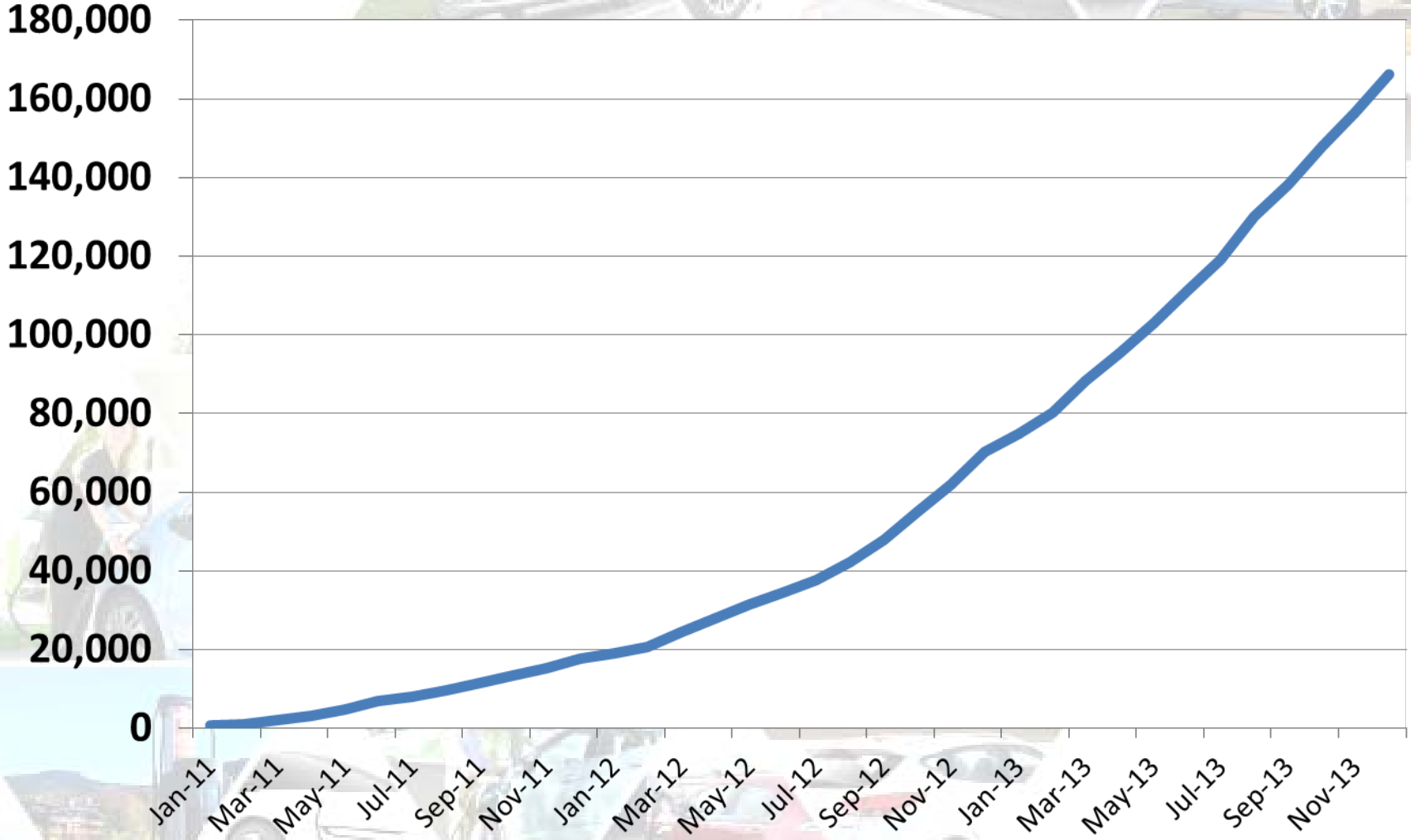
Cumulative PEV Registrations in US



Data Source: InsideEVs.com

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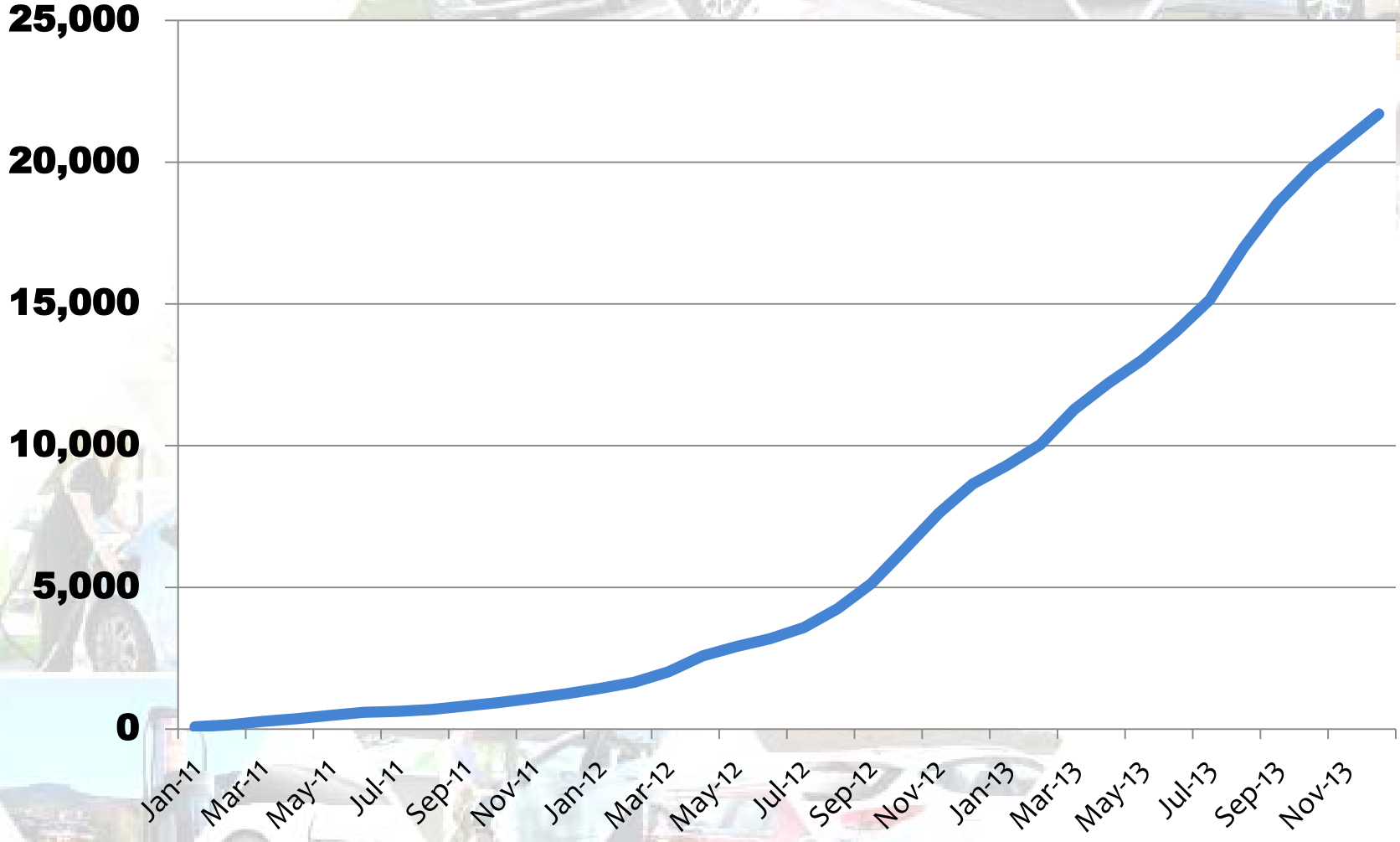
Cumulative PEV Registrations, Eastern ZEV States*



*New registrations of BEV and PHEV in CT, MA, MD, ME, NJ, NY, RI, VT. Source: R.L. Polk

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177-State ZEV Programs

- Identical to California rule per CAA §177
- Require manufacturers to meet increasing share of total sales in state with BEV, PHEV, or FCV
- Technology neutral – each OEM develops own preferred compliance strategy
- Substantial compliance flexibility mechanisms
  - credit banking and trading
  - alternative compliance options
  - cross-state credit pooling
- *State ZEV programs are key driver of early ZEV successes and will be critical to ensure continued momentum*

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ZEV Pooling

- Optional Compliance Path allows OEMs to "pool" ZEV credits among eastern ZEV program states (CT, ME, MD, MA, NJ, NY, RI, VT).
- States have opportunity to compete for ZEV deployments.
- Automakers that choose OCP will earn ZEV credits *everywhere in the pool* for vehicles placed *anywhere in the pool*.
- Total number of vehicles required equal to the sum of requirements in each "pooled" state

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The Travel Provision

E) ***Counting Specified ZEVs Placed in Service in a Section 177 State and in California.*** Large volume manufacturers and intermediate volume manufacturers with credits earned from hydrogen fuel cell vehicles that are certified to the California ZEV standards applicable for the ZEV's model year, delivered for sale and placed in service in California or in a Section 177 state, may be counted towards compliance in California and in all Section 177 states with the percentage ZEV requirements in subdivision 1962.2(b). The credits earned are multiplied by the ratio of a manufacturer's applicable production volume for a model year, as specified in subdivision 1962.2(b)(1)(B), in the state receiving credit to the manufacturer's applicable production volume as specified in subdivision 1962.2(b)(1)(B), for the same model year in California(hereafter, "proportional value"). Credits generated from ZEV placement in a Section 177 state will be earned at the proportional value in the Section 177 state, and earned in California at the full value specified in subdivision 1962.2(d)(5)(A).

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What can states do to accelerate the ZEV market?

Consumer Incentives

Infrastructure Expansion

Green Fleets

Regional Coordination

Codes and Standards

Outreach & Education

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What can states do to accelerate the ZEV market?

Incentives

- HOV lane access
- Sales tax exemption
- Point-of-sale rebate
- Income tax credit
- Public parking
- Time-Of-Use electricity pricing
- Exempt EVs from special fees in the absence of VMT-based taxation

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What can states do to accelerate the ZEV market?

Infrastructure

- Support EVSE Deployments
  - Tax credit for public EVSE
  - Level II at destinations, transit hubs
  - Public DC Fast Charging network
- Rebates for residential chargers
- DOE Workplace Charging Challenge
- Request PSC proceedings on:
  - commercial and residential rate design
  - level of regulatory oversight for electric vehicle charging providers
  - siting and cost allocation of public charging
  - the role of utilities in providing/facilitating public access to EVSE
  - demand charges
  - smart metering

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What can states do to accelerate the ZEV market?

Green Fleets

- Procurement targets for state-owned fleets
- Support municipal deployments through state grant programs
- Include EVs and EVSE on state purchasing contracts
- Requirements for electric vehicles in state rental contracts
- Review state purchase policies (e.g., "Buy America" provisions) for opportunities to expand EV fleet options

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What can states do to accelerate the ZEV market?

Interstate Coordination

* Governors' ZEV MOU & Action Plan
* Harmonized standards for signage, EZ-pass, payments, other incentives
* Coordinated planning for EVSE networks, particularly DCFC
* Create a consistent electricity regulatory framework
* Share best practices for codes and standards, outreach, data sharing

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Thank You!

Matt Solomon

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