NARUC Electric Vehicles State Working Group

AIR QUALITY AND REGULATOR COLLABORATION

AUGUST 27, 2024, 3:00 - 4:30 PM ET

Welcome

EV SWG Chair

Commissioner Katherine Peretick, Michigan Public Service Commission

EV SWG Vice Chair

Commissioner Milt Doumit, Washington Utilities and Transportation Commission

EV Commission Staff Leads

Ryan Cheney, North Carolina Utilities Commission

Steve Olea, Arizona Corporate Commission

NARUC Staff

Danielle Sass Byrnett and Robert Bennett

Agenda

Feel free to enter questions into chat at any time

3:00 PM	**Welcome and Announcements: Commissioner Peretick** • Agenda review • NEVI/Forth conference
3:05 PM	**Zoltan Jung, U.S. Environmental Protection Agency**
3:20 PM	**Megan O'Toole, Northeast States for Coordinated Air Use Management (NESCAUM)**
3:35 PM	**Peg Hanna, New Jersey Department of Environmental Protection (NJ DEP)**
3:50 PM	**Speaker Q&A**
4:05 PM	**Peer Sharing Discussion**
4:30 PM	**Adjourn**

EV Fact of the Week:

A Driver Can Easily Get More Miles from an Hour of Level 2 Charging while their EV is Parked than the Average Person Drives in a Day. For more info and other facts, visit DOE FOTW webpage.

EV Charging Infrastructure and Forth Roadmap Conference

- NARUC can provide ***travel stipends for EV SWG members*** to attend the **NASEO-AASHTO-JOET EV Charging Infrastructure National Conference** in Detroit, Michigan, on Sept 23-24, 2024.
- EV SWG members can get a discounted registration for the **Forth Roadmap 2024** on Sept 25 - 26.
  - Please contact Robert Bennett if you want a travel stipend or discount. rbennett@naruc.org

Presentations on Air Quality and Utility Regulator Collaboration

Moderator: Commissioner Katherine Peretick, Michigan Public Service Commission

Guest Speaker

- **Zoltan Jung, U.S. Environmental Protection Agency (EPA)**
  - Light- and Medium-Duty Vehicle Power-Sector Analysis
- **Megan O'Toole, Northeast States for Coordinated Air Use Management (NESCAUM)**
  - Introduction to State Zero Emission Vehicle Regulations (ACC 2 and ACT)
- **Peg Hanna, New Jersey Department of Environmental Protection (NJ DEP)**
  - NJ DEP and NC Board of Public Utilities Collaboration

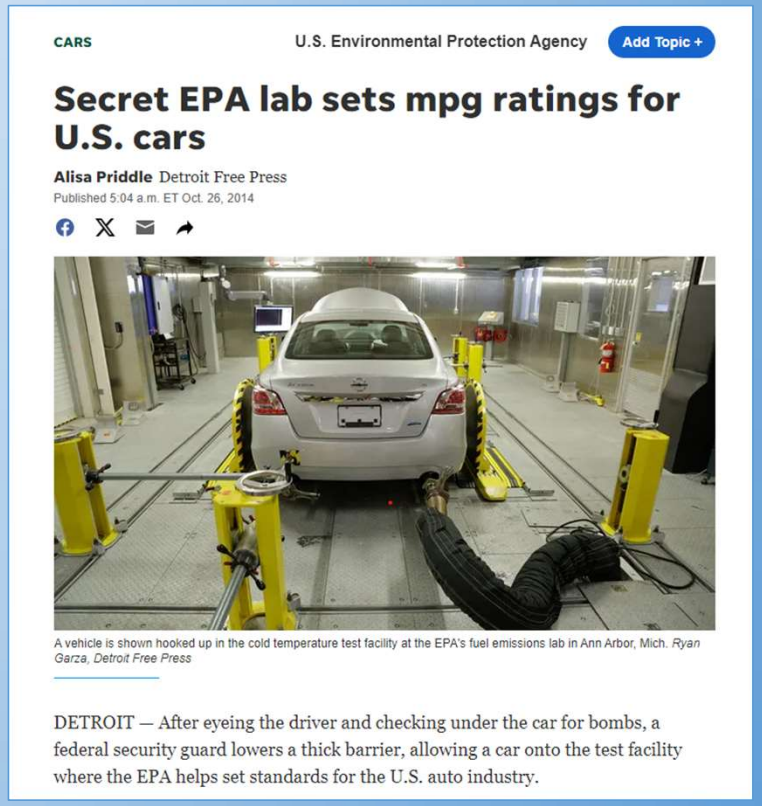
Light- and Medium-Duty Vehicle Power-Sector Analysis

Zoltan Jung
Office of Transportation and Air Quality
Assessment and Standards Division

August 27, 2024

Office of Transportation and Air Quality (OTAQ)

- We regulate emissions from things that *move*
- "Mobile Sources"
  - Any vehicle, including, but not limited to, any motor vehicle (automobile, truck, bus, etc.) or other landcraft; airplane or other aircraft; locomotive or other rail vehicle; ship, boat or other watercraft, which emits or may emit any air pollutant.



CARS U.S. Environmental Protection Agency Add Topic +

Secret EPA lab sets mpg ratings for U.S. cars

Alisa Priddle Detroit Free Press

Published 5:04 a.m. ET Oct. 26, 2014

A vehicle is shown hooked up in the cold temperature test facility at the EPA's fuel emissions lab in Ann Arbor, Mich. *Ryan Garza, Detroit Free Press*

DETROIT — After eyeing the driver and checking under the car for bombs, a federal security guard lowers a thick barrier, allowing a car onto the test facility where the EPA helps set standards for the U.S. auto industry.

Why OTAQ?

- *Motor Vehicle Pollution Control Act of 1965* required the Secretary of Health, Education and Welfare to test motor vehicles
  - Became Section 206 of the *Clean Air Act* and it's still our authority today for certification testing
  - Additional authority now under section 208
- The Clean Air Act (CAA) of 1970 gives the EPA the authority to regulate air emissions from mobile and stationary sources, including vehicles and engines
- The *National Vehicle and Fuel Emissions Laboratory* (NVFEL) was established in 1971, shortly after the creation of EPA

How We Accomplish This

- **Vehicle manufacturers "tell" EPA of new product lines years before they enter into U.S. commerce when obtaining a required *Certificate of Conformity***
  - **Vehicles and engines used in the United States must be manufactured under the terms of an emissions certificate of conformity issued by EPA**
  - **Imported vehicles and engines must be EPA-certified**
- Conducts emissions testing of vehicles and engines on the production line and in-use following introduction into commerce.
- Vehicle Tear-Downs: EPA contractors disassemble vehicles, noting parts, weight, cost, materials, etc. => Estimate mass reductions
- Close interaction with Industry/National Lab SMEs

How We Accomplish This

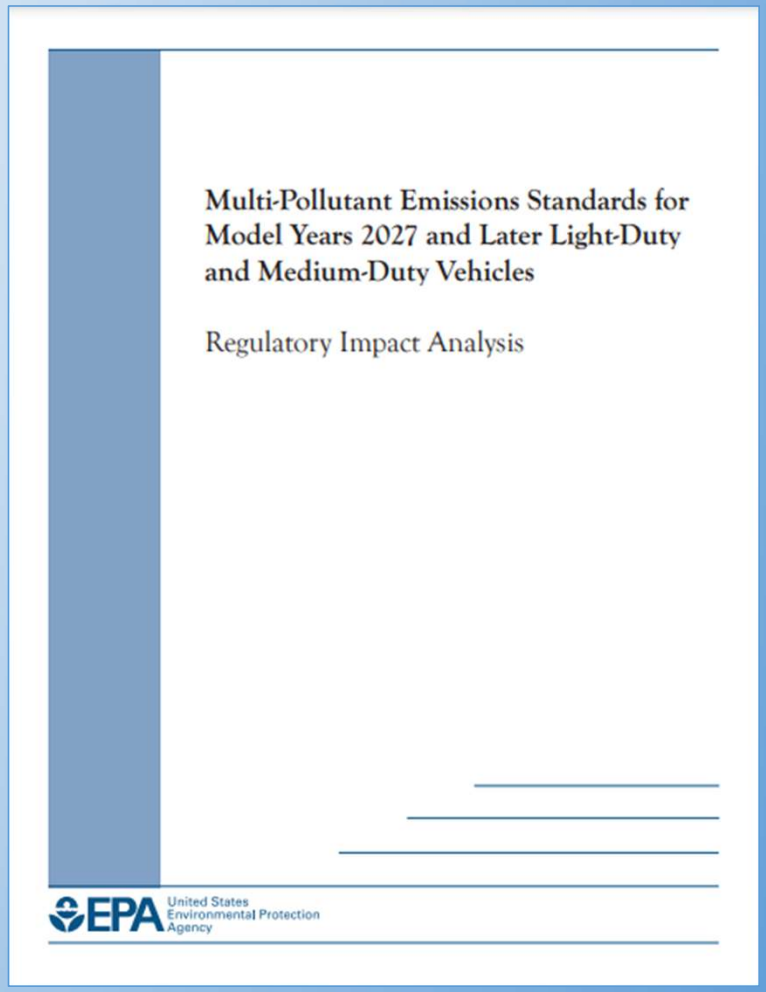
- Vehicle manufacturers "tell" EPA of new product lines years before they enter into U.S. commerce when obtaining a required *Certificate of Conformity*
  - Vehicles and engines used in the United States must be manufactured under the terms of an emissions certificate of conformity issued by EPA
  - Imported vehicles and engines must be EPA-certified
- **Conducts emissions testing of vehicles and engines on the production line and in-use following introduction into commerce.**
- Vehicle Tear-Downs: EPA contractors disassemble vehicles, noting parts, weight, cost, materials, etc. => Estimate mass reductions
- Close interaction with Industry/National Lab SMEs

How We Accomplish This

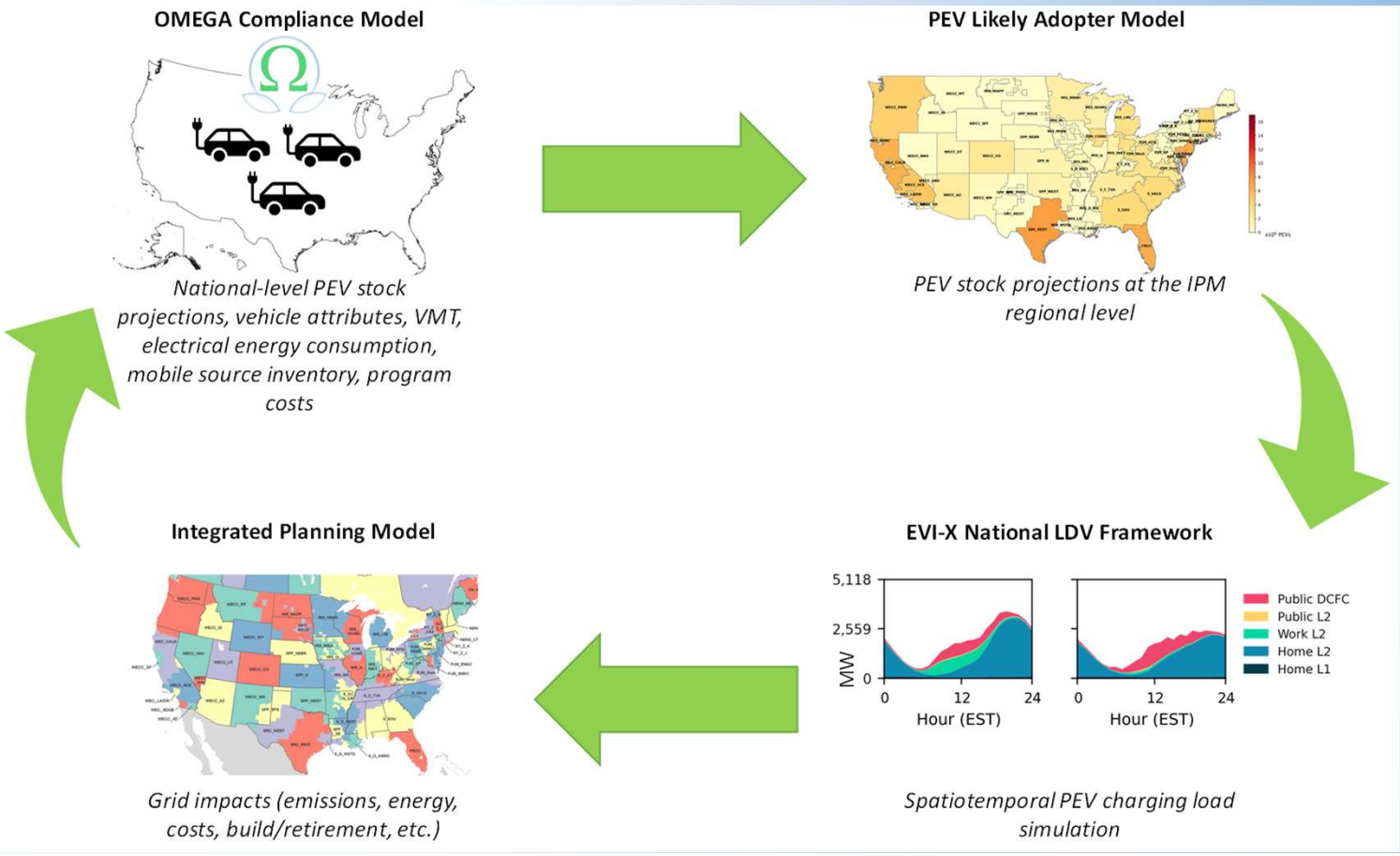
- Vehicle manufacturers "tell" EPA of new product lines years before they enter into U.S. commerce when obtaining a required *Certificate of Conformity*
  - Vehicles and engines used in the United States must be manufactured under the terms of an emissions certificate of conformity issued by EPA
  - Imported vehicles and engines must be EPA-certified
- Conducts emissions testing of vehicles and engines on the production line and in-use following introduction into commerce.
- **Vehicle Tear-Downs: EPA contractors disassemble vehicles, noting parts, weight, cost, materials, etc. => Estimate mass reductions**
- **Close interaction with Industry/National Lab SMEs**

Recent Rules & Standards

- The *Light- and Medium-Duty Vehicle Multipollutant Rule* (LMDV) and the *Heavy-Duty Phase 3 GHG Rule* (HDP3) were finalized in March 2024
- Power sector analysis was a collaborative effort
  - LMDV analyses of power sector emissions, costs, grid reliability, and resource adequacy were largely based on lessons learned from previous EPA CAA § 111 regulations
  - Close coordination with
    - EPA Clean Air and Power Division (CAPD)
    - EPA Office of General Counsel
    - DOE *Office of Policy* and the DOE *Vehicle Technologies Office*
      - Weekly interagency coordination meetings
      - Work directly supporting rulemaking analyses was conducted at DOE National Laboratories under EPA/DOE Interagency Agreements
        - National Renewable Energy Laboratory (NREL)
        - Lawrence Berkeley National Laboratory (LBNL)
        - Others (ANL, INL, ORNL, etc.)
      - DOE-funded reports were directly cited within the LMDV FRM package



Data “Walk” for Power Sector Modeling



ALPHA

- A vehicle simulation tool used to predict tailpipe CO_2 emissions and energy consumption for advanced technologies
  - Results for various vehicle technologies over thousands of vehicle combinations
  - Characterizes any future vehicle's GHG emissions based on its *size*, *weight*, *power*, and *road loads*.
  - Estimates consumer responses to determine the stock of new and used vehicles and the associated allocation of total VMT.
  - Yields solution which simultaneously satisfies producer, consumer, and policy requirements while *minimizing the producer generalized costs*

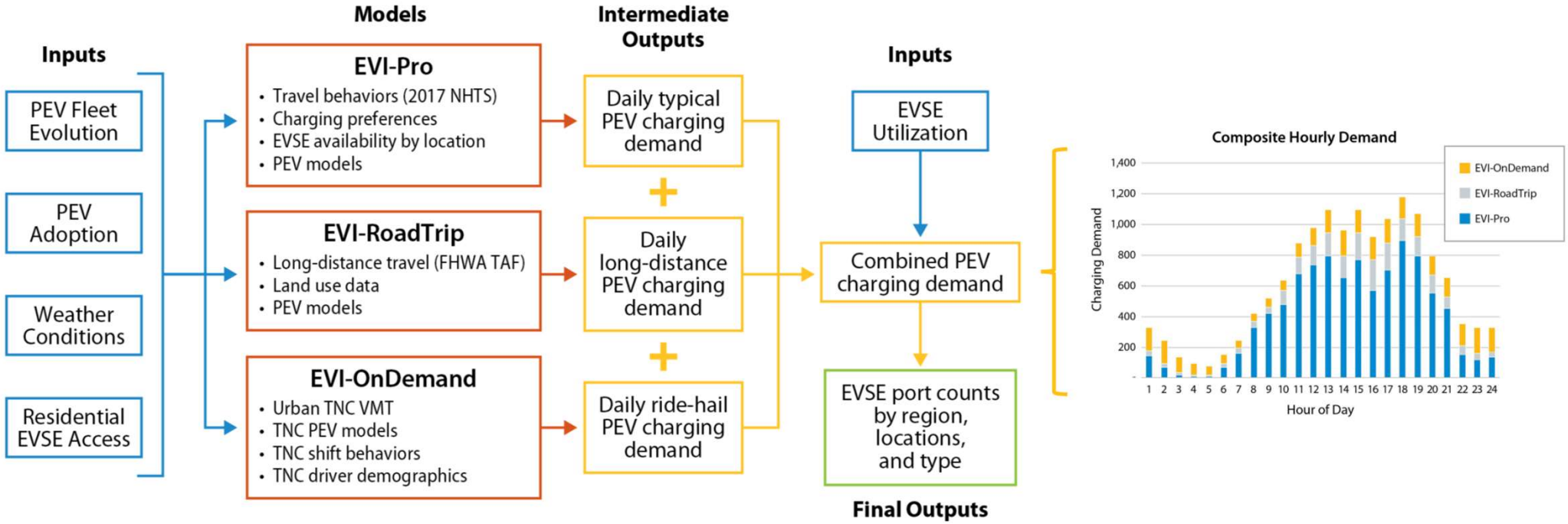
OMEGA

- A manufacturer ***compliance model***, incorporates ALPHA/other results to find *cost-efficient pathways for manufacturers to achieve compliance with desired emissions standards*
- OMEGA models interactions between *vehicle producers' policy response* and *consumers who own and use vehicles affected by the policy*.
  - Producer's **compliance planning** and **vehicle design decisions** both *influence*/are *influenced* by the **sales** and **shares** of vehicles demanded and the GHG credits assigned under the policy.
    - Iteration between the *Producer* and *Consumer* modules ensures that modeled vehicles are also accepted by the market at the quantities and prices offered by the producer
    - Iteration between the Producer and Policy modules accounts for compliance implications of each successive vehicle design and production option considered by the producer

Modeling PEV Charging Demand and its Regional Distribution

- OMEGA: National-Level data
  - Models *compliant vehicle fleets* for each vehicle manufacturer
    - DOE/EIA's NEMS/other models do not
  - National-Level PEV stock and VMT
  - National-Level PEV annual charge demand by vehicle type
- NREL Tools: Disaggregates OMEGA data into IPM regions
  - Developed under Interagency Agreement with DOE
  - Likely Adopter Model
    - EVI-X Suite
      - EVI-Pro: For typical daily charging needs
      - EVI-RoadTrip: For fast charging along highways supporting long-distance travel
      - EVI-OnDemand: For electrification of transportation network companies

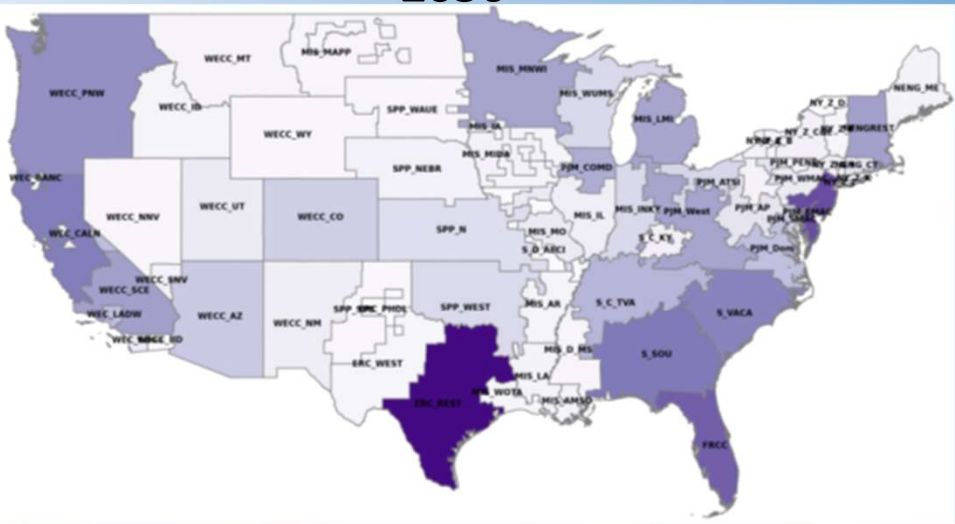
EVI-X (Consumer Choice Model)



EVI-X Annual Light-/Medium-Duty PEV Charging Demand

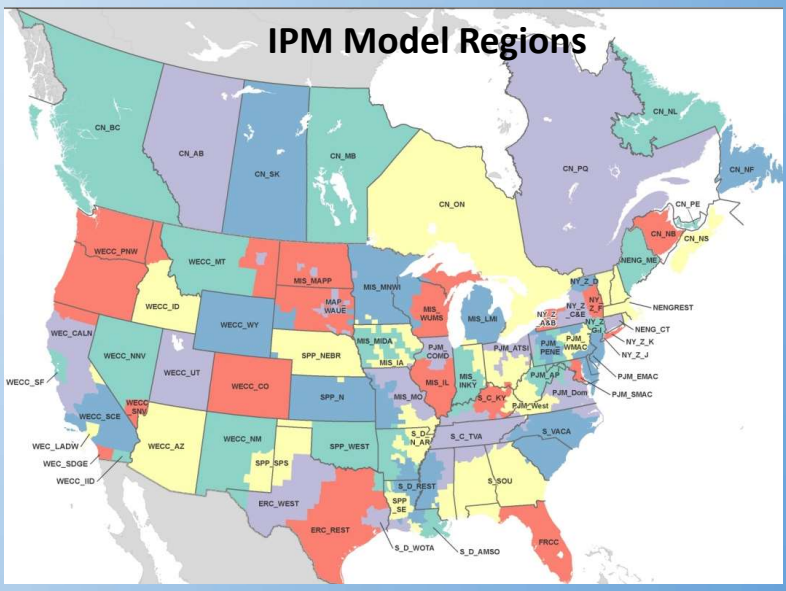
2030

2050



Integrated Planning Model (IPM)

- IPM is EPA's regulatory power sector model
- Spatiotemporally disaggregated electrical load
  - Light/Medium-Duty vehicles: EPA *OMEGA* & NREL *EVI-X*
  - Buses: EPA *MOVES* & NREL *EVI-X*
  - Class 4-8 Heavy-Duty: EPA *MOVES* & LBNL *HEVI-LOAD*
- Inclusion of IRA power sector impacts
  - *Clean Electricity* Production and Investment Tax Credits
  - Existing *Nuclear Production* Tax Credit
  - *Carbon Capture and Storage* 45Q Tax Credit
- Power sector impacts due to recent EGU regulations
- LMDV power sector loads hard-wired into IPM

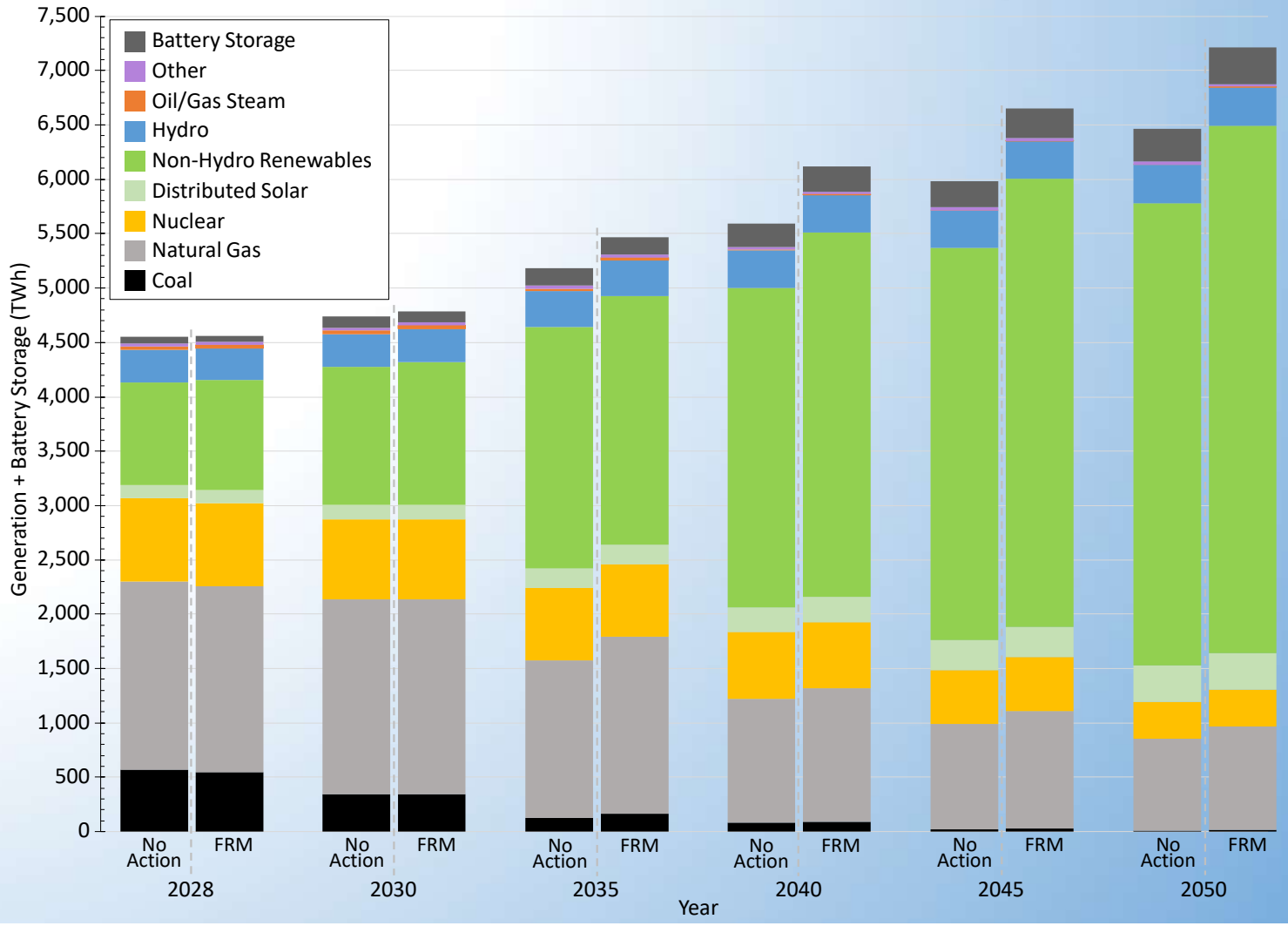


67 U.S. and 11 Canadian Regions modeled

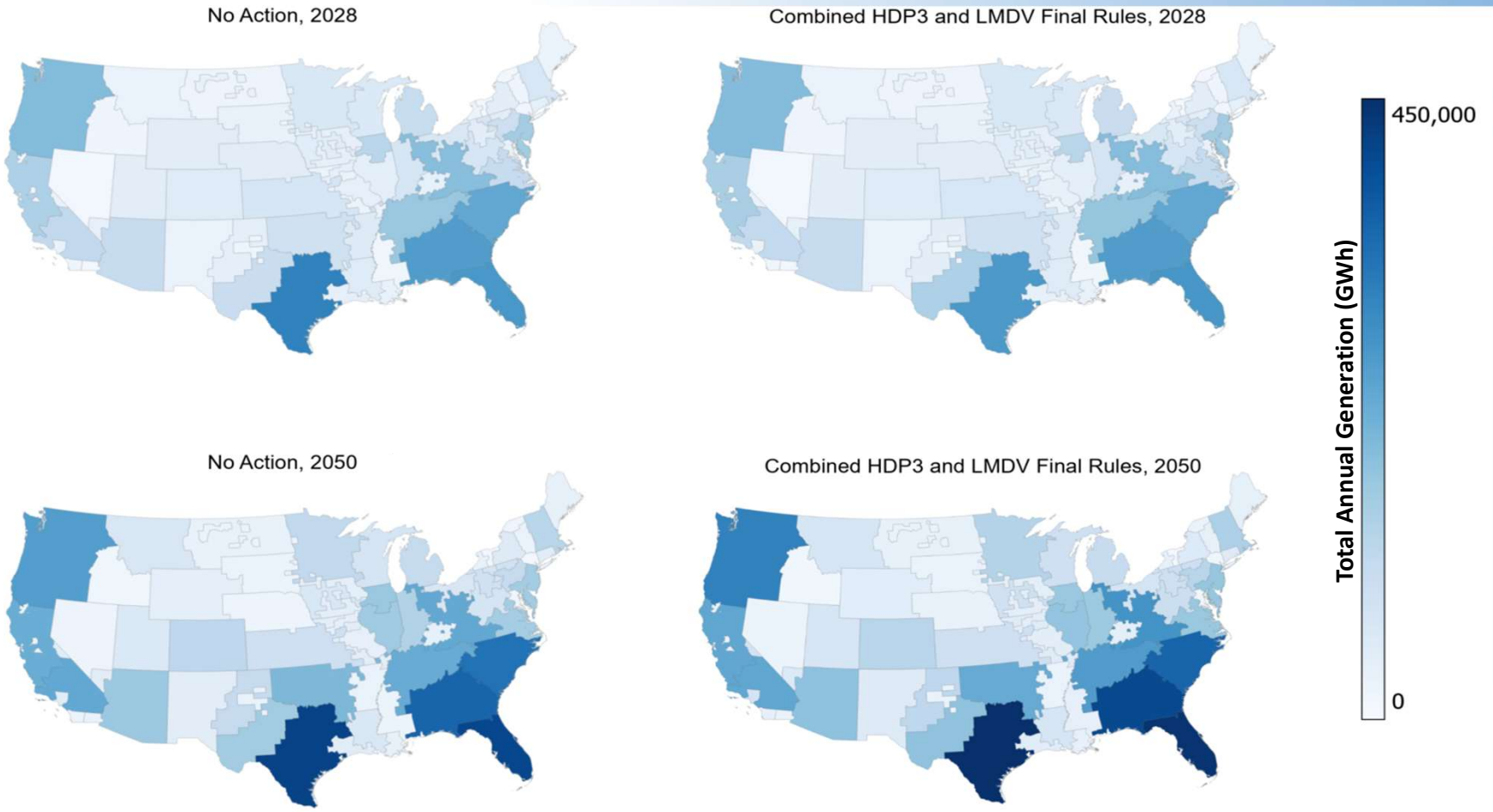
Power Sector Demand, Generation and Costs

	2028		2030		2035		2040		2045		2050	
	No Action	FRM	No Action	FRM	No Action	FRM	No Action	FRM	No Action	FRM	No Action	FRM
Total Demand (TWh)	**4,457**	**4,475**	**4,593**	**4,646**	**4,924**	**5,222**	**5,230**	**5,734**	**5,546**	**6,173**	**5,893**	**6,578**
Light- and Medium-Duty Vehicle PEV Demand (TWh)	98	110.8	157	193.2	266	436.8	326	617.1	362	736.9	384	809.6
Light- and Medium-Duty Vehicle PEV % of Total Demand	2.2%	2.5%	3.4%	4.2%	5.4%	8.4%	6.2%	10.8%	6.5%	11.9%	6.5%	12.3%
Total Generation (TWh)	**4,548**	**4,562**	**4,739**	**4,783**	**5,183**	**5,469**	**5,593**	**6,117**	**5,982**	**6,651**	**6,465**	**7,212**
% Change in Generation (from no action)	-	0.293%	-	0.932%	-	5.52%	-	9.38%	-	11.2%	-	11.6%

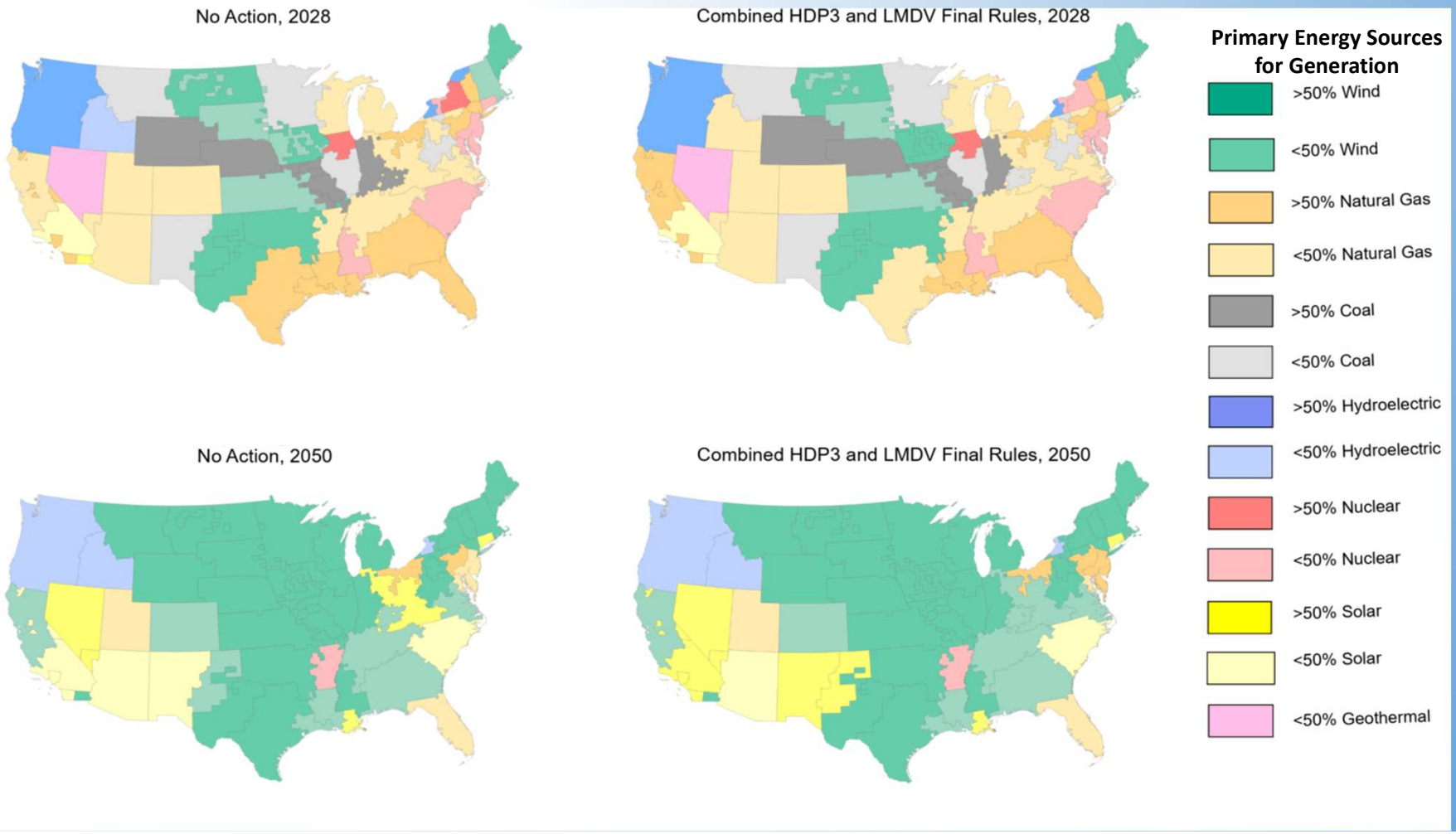
Annual Generation and Grid Mix Through 2050



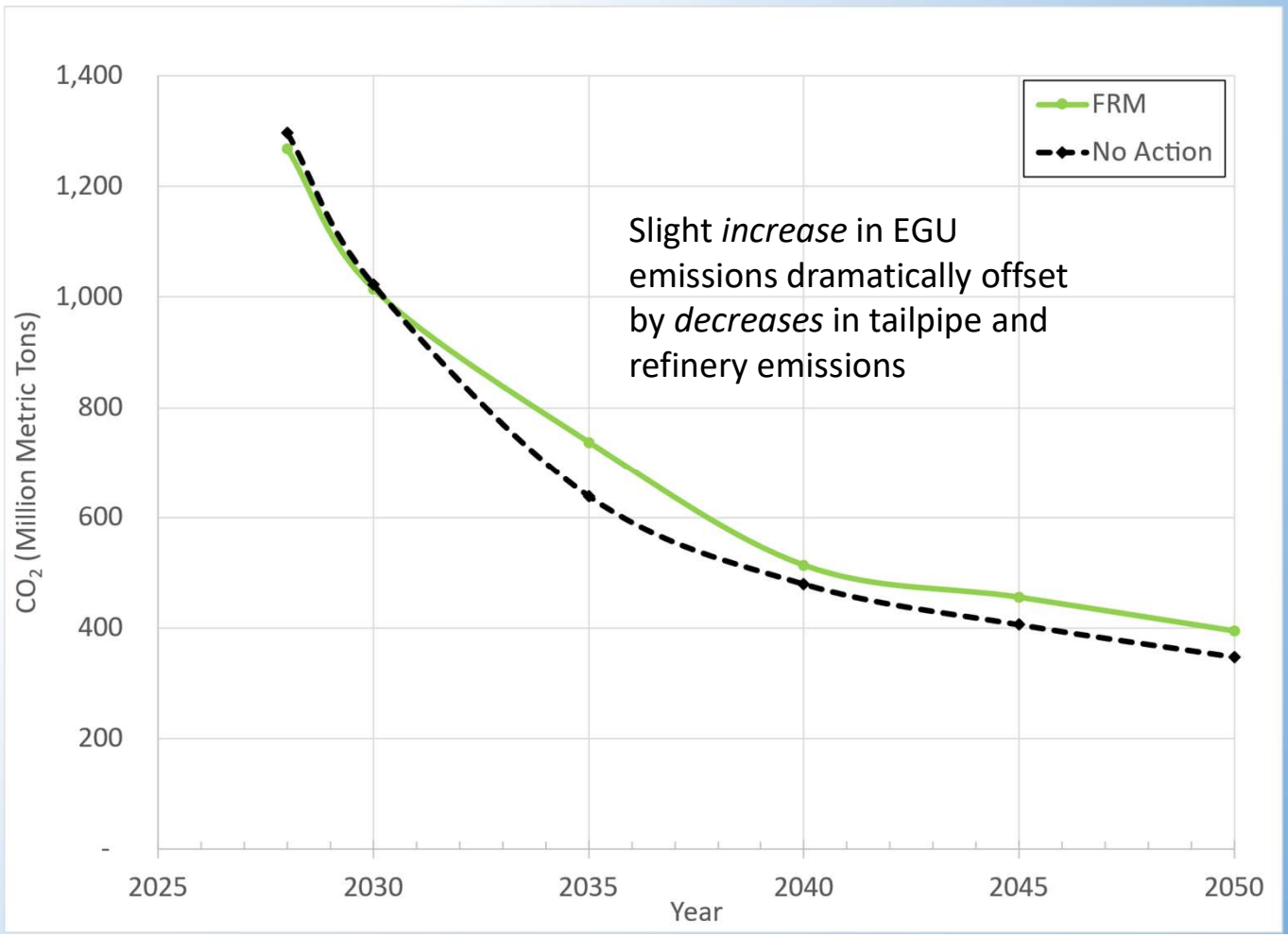
Generation by IPM Region in 2028 and 2050



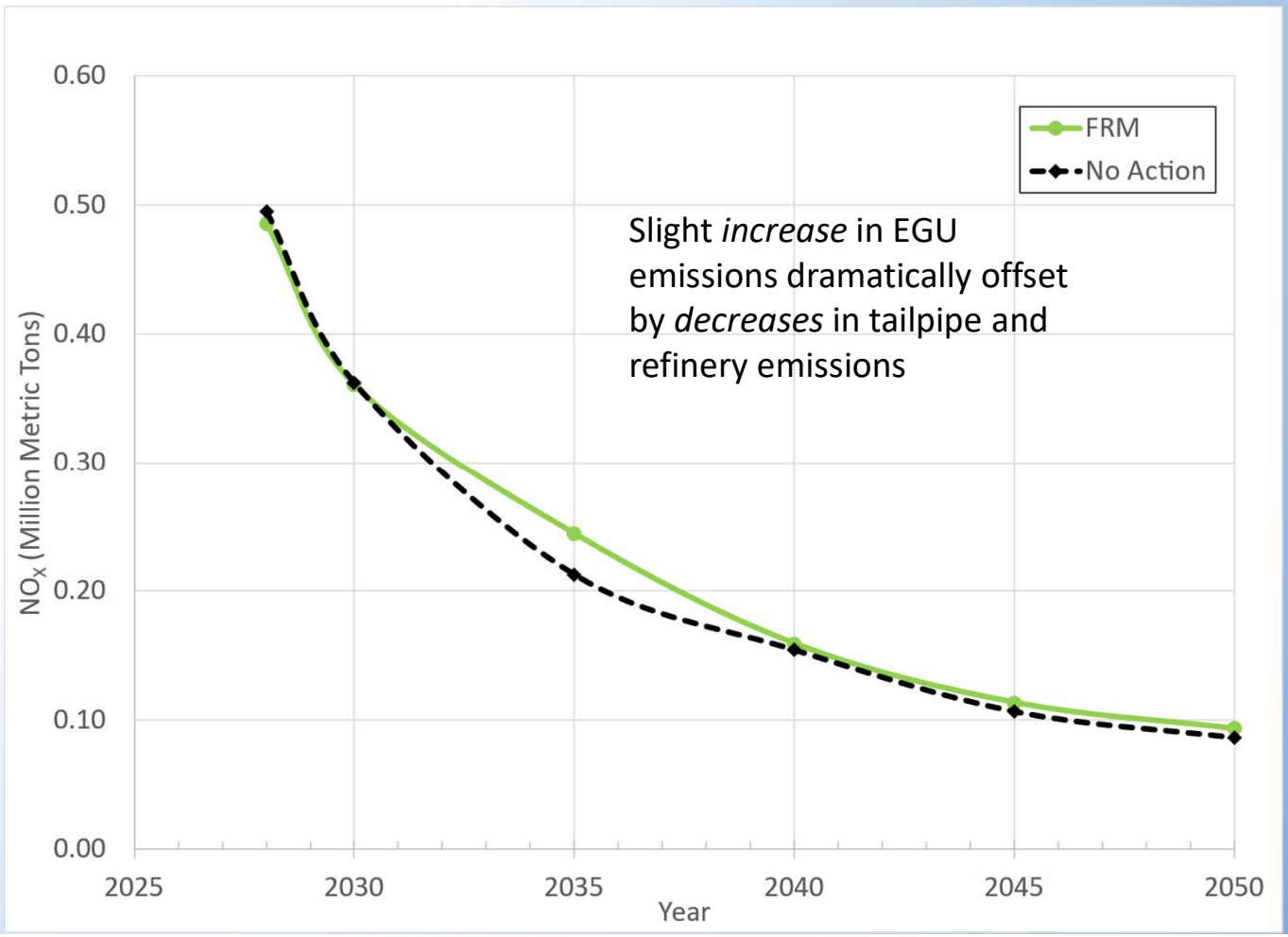
Primary Energy Source by IPM Region in 2028 and 2050



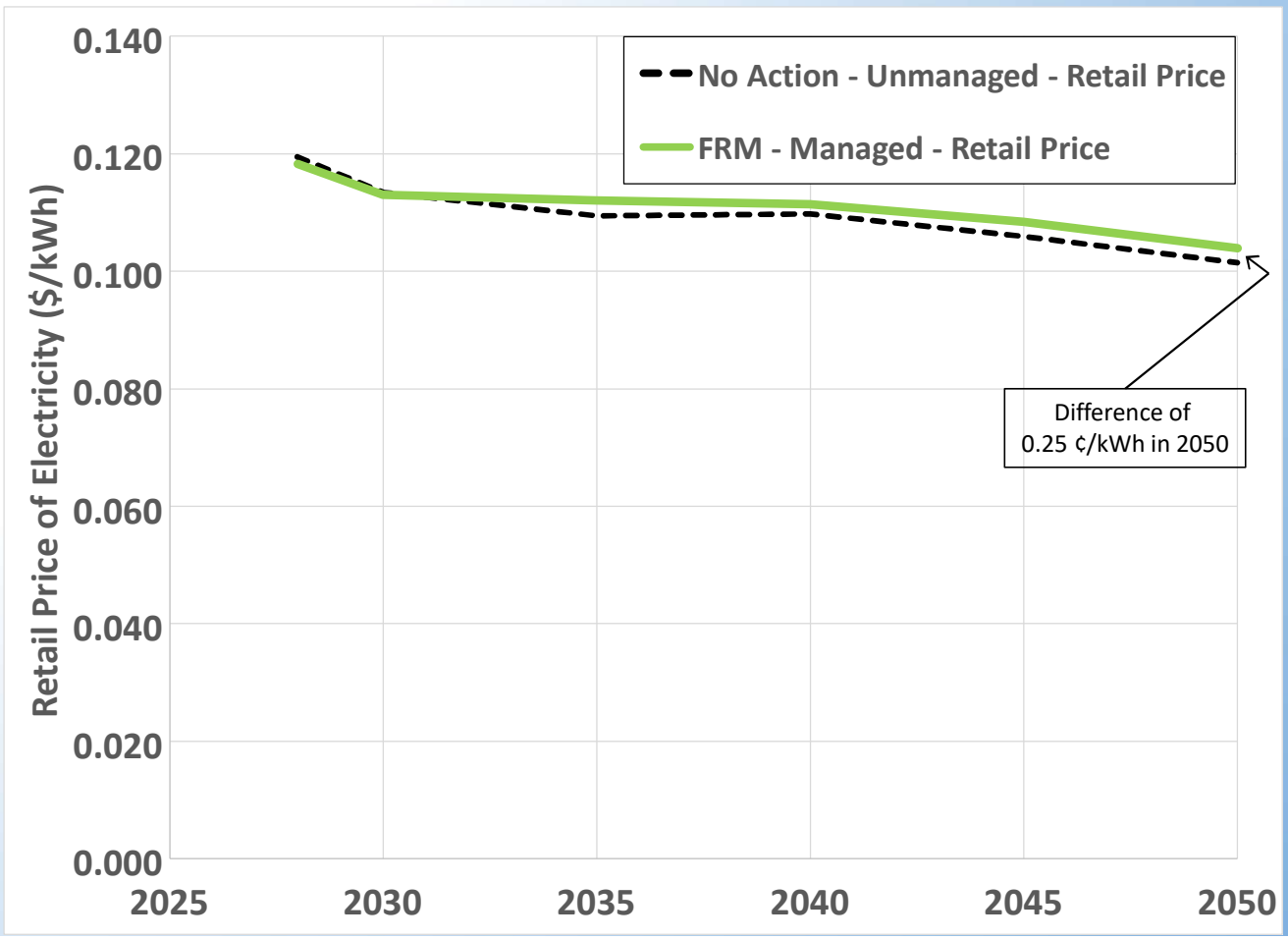
Power Sector CO_2 Annual Emissions



Power Sector NO_x Annual Emissions



Retail Price impacts on national average retail price of electricity



Transportation Electrification Impact Study (TEIS)

- Jointly-funded through EPA and DOE IA and DOE internal funding
  - NREL (contractor): Project management
    - LBNL (subcontractor): Heavy-duty charging
    - Kevala (subcontractor): Grid data analytics
- First-ever analysis of distribution-level costs for light, medium-, and heavy-duty vehicle electrification
- Helps to resolve "*Chicken and Egg*" Problem
  - PSC/PUCs only allow utilities to recover investment costs if they are shown to be "*Used and Useful*"
  - TEIS helps to establish this value proposition
- Distribution system costs incorporated into IPM
  - First-time EPA considers distribution-level costs
  - Not in previous CAA § 111 rules

TEIS Results

- Consumer benefits far-outweigh distribution infrastructure costs
- Modest impacts
  - 3% increase of annual distribution infrastructure spending
- Benefits of Deferral
  - Financial (time value of money)
  - Temporal (provides 1 - 5-year planning buffer)
- Managed charging can decrease distribution grid spending by 30%
- Likely significantly underestimates actual benefits
  - Deferred investments in transformers, substations and other upgrades were not included in the analysis

Power Sector Resource Adequacy Analysis

- Resource Adequacy (RA) metric used by electric power sector to help ensure sufficient generation capacity/reserves
- EPA assesses RA for CAA § 111 (power sector) rules
- Unable to explicitly model RA of CAA § 111 not finalized at that time
  - New RA assessment examines authoritative studies of vehicle electrification/ renewable penetration scenarios bracketing plausible FRM outcomes
- Assessment finds that "*implementation of these rules can be achieved without undermining resource adequacy*"

Conclusion and Next Steps (Post-FRM)

- Expand TEIS to remaining 50 states
- Co-author journal paper with DOE/National Lab partners on LMDV/HDP3/TEIS power sector analysis
- Update IPM power sector analysis to include recent changes incorporated into IPM 2023
  - Closely coordinate work with OAP/CAPD
  - Include impacts from CAA 111 FRMs finalized on April 25, 2024 (after LMDV and HDP3 FRMs)
- Continue collaboration with DOE/OP on NEMS, GREET and IPM

Thank you

Contact Information:
Zoltan Jung
Power Sector SME
EPA/OTAQ/ASD
E-mail: jung.zoltan@epa.gov
Voice: via Teams

Questions?

NESCAUM

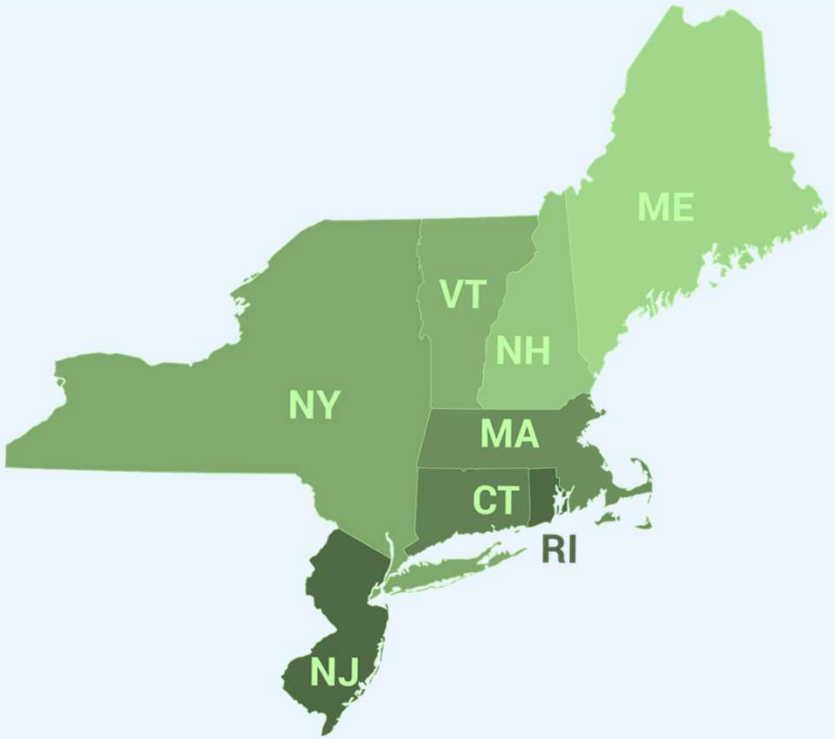
Introduction to State Zero Emission Vehicle Regulations

NARUC-EVSWG Webinar

August 27, 2024

Northeast States for Coordinated Air Use Management (NESCAUM)

- Non-profit association of state air quality agencies in the Northeast U.S. (est. 1967)
- Provides scientific, technical, and policy support on a wide range of air quality and climate issues
- Collaborates with other states, federal agencies, the automobile industry, and other key partners and stakeholders to promote zero-emission vehicles (ZEVs)
- Develops and leads multi-state initiatives, e.g.,
  - "Section 177 States" Mobile Sources Committee
  - Multi-State ZEV Task Force
    - 2013 Multi-State ZEV MOU
    - 2020 Multi-State Medium- and Heavy-Duty ZEV MOU



Key Clean Air Act Provisions

CAA §209(a): Preempts states from setting their own motor vehicle emission standards.

CAA §209(b): Provides California with broad discretion to set more stringent motor vehicle emission standards than EPA; authorizes California to apply for a "waiver of preemption" from EPA.

CAA §177: Authorizes states to adopt California's motor vehicle emission standards provided the standards are identical, do not create a "third-vehicle," and are adopted at least two-model years in advance.

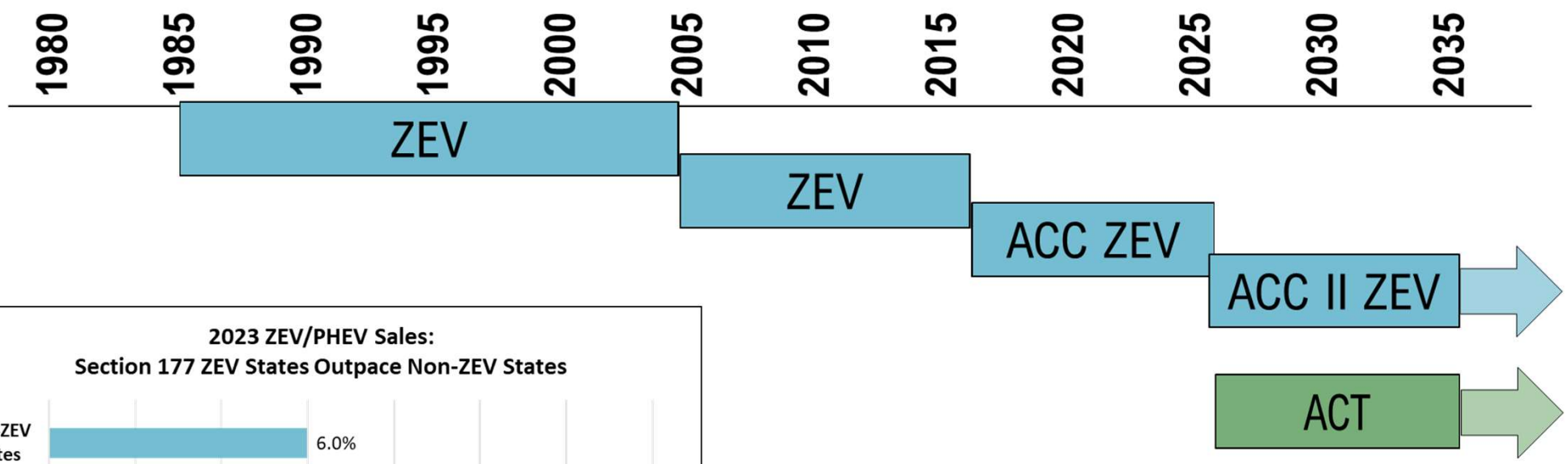
What are Zero Emission Vehicle (ZEV) Sales Requirements?

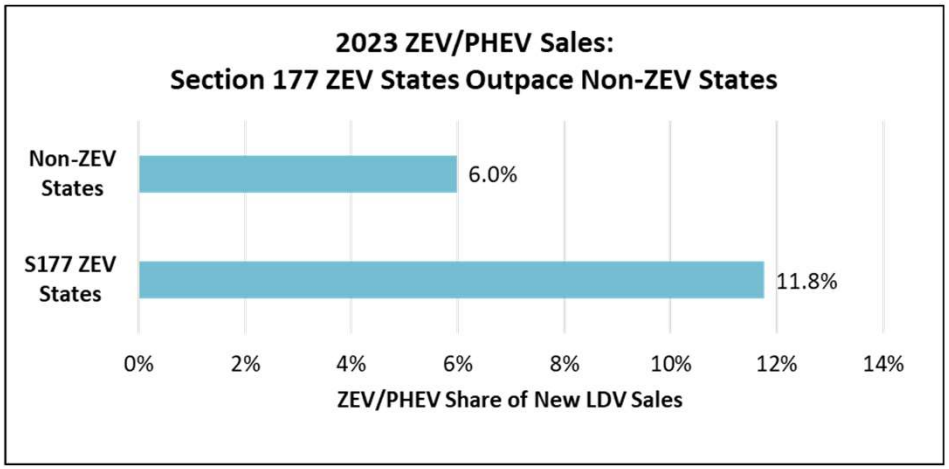
- California and the “Section 177” states adopt regulatory requirements that drive technology shifts in transportation and mobility
- Annual increase in percentage of ZEVs that are delivered to each state
- Vehicle supply requirements - Automakers are the regulated entities
- States implement complementary policies to drive demand to meet the increasing supply of ZEVs

Why ZEV Sales Requirements?

- **Improve air quality:** Major source of smog-forming pollutants, particulate matter, and air toxics that harm public health
- **Promote equity and justice:** Helps to address historical and current public health, economic, and social inequities
- **Mitigate climate change:** Transportation is the largest source of greenhouse gas (GHG) emissions in the U.S.
- **Provide regulatory certainty:** Create a regulatory floor and market certainty that is critical for industry, fleets, utilities, and state and local governments to effectively plan and manage the transition to ZEVs and infrastructure build out
- **Generate economic growth:** Transitioning to ZEV attracts public and private investments and creates high-quality jobs
- **Enhance energy security and resilience:** Reduces reliance on foreign oil and insulates consumers from global market fluctuations

History and Timeline of the ZEV regulations





S177 ZEV states include CO, CT, DC, DE, MA, MD, ME, MN, NJ, NM, NV, NY, OR, RI, VA, VT, and WA

Ensuring the Success of ZEV regulations

Adopters

State Environmental Agency (Air Quality Program/Mobile Sources Program) - Typically has jurisdiction over controlling emissions from mobile sources; Sets standards for automakers, administers compliance assistance and enforcement

Implementing Partners

State Regulated Utility Commissions – Make Ready programs, Rate Design, Future-proofing, Infrastructure

State Transportation Agency – Incentive Programs, Capital Investments, Charging Infrastructure planning, Fleet Advisory Services

State Energy Office – Data Collection, Target Setting, Ratepayer advocacy

State Commerce Agency – Workplace Incentives, Integrated Funding Opportunities

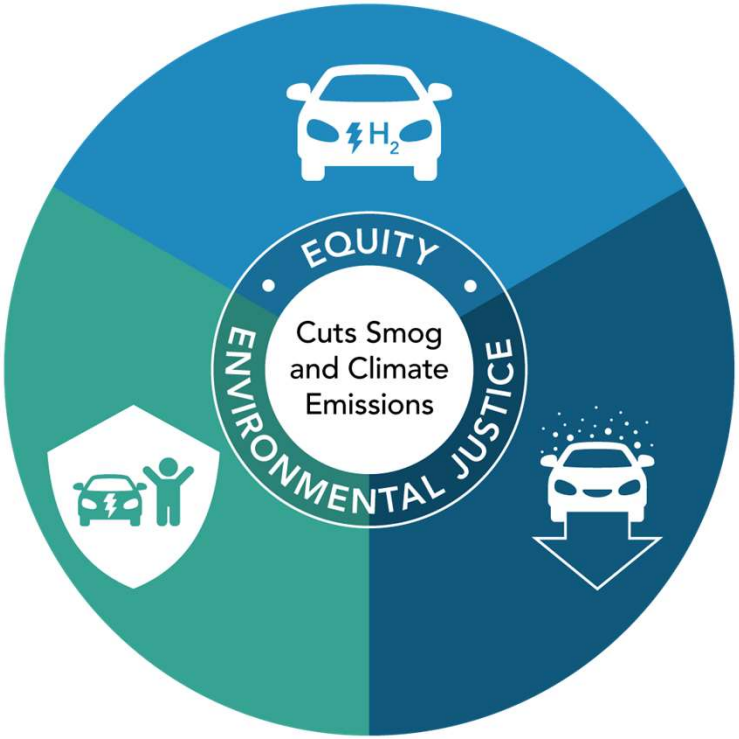
State Weights and Measures Program – Consumer protection for fueling infrastructure

State Health Agency – Identifying disproportionately impacted communities, assessing public health impacts of emission reduction

Advanced Clean Cars II (ACC II) Regulation

Advanced Clean Cars II

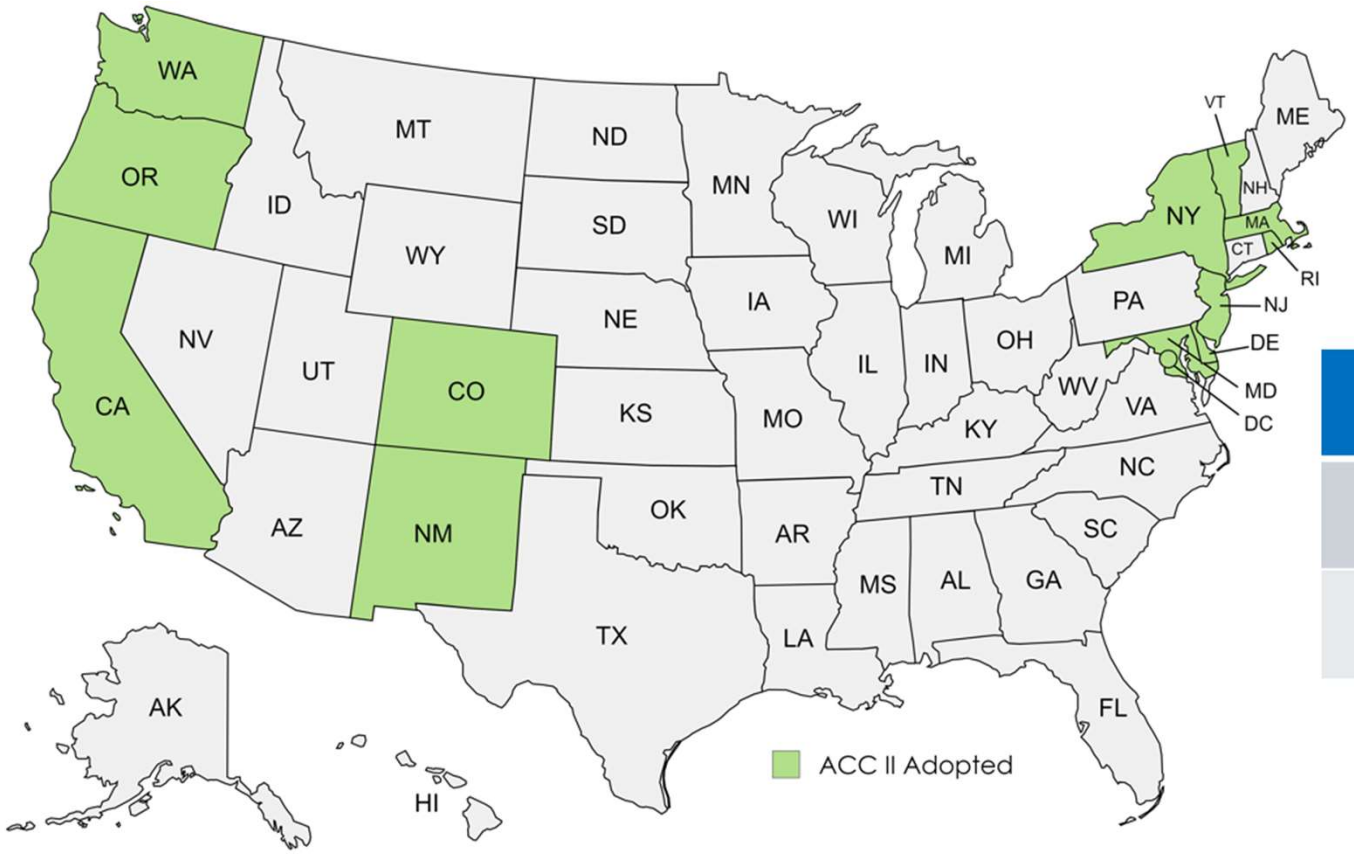
ZEV Regulation



ZEV Assurance Measures

LEV Regulation

Status of ACC II Adoption Across the U.S.



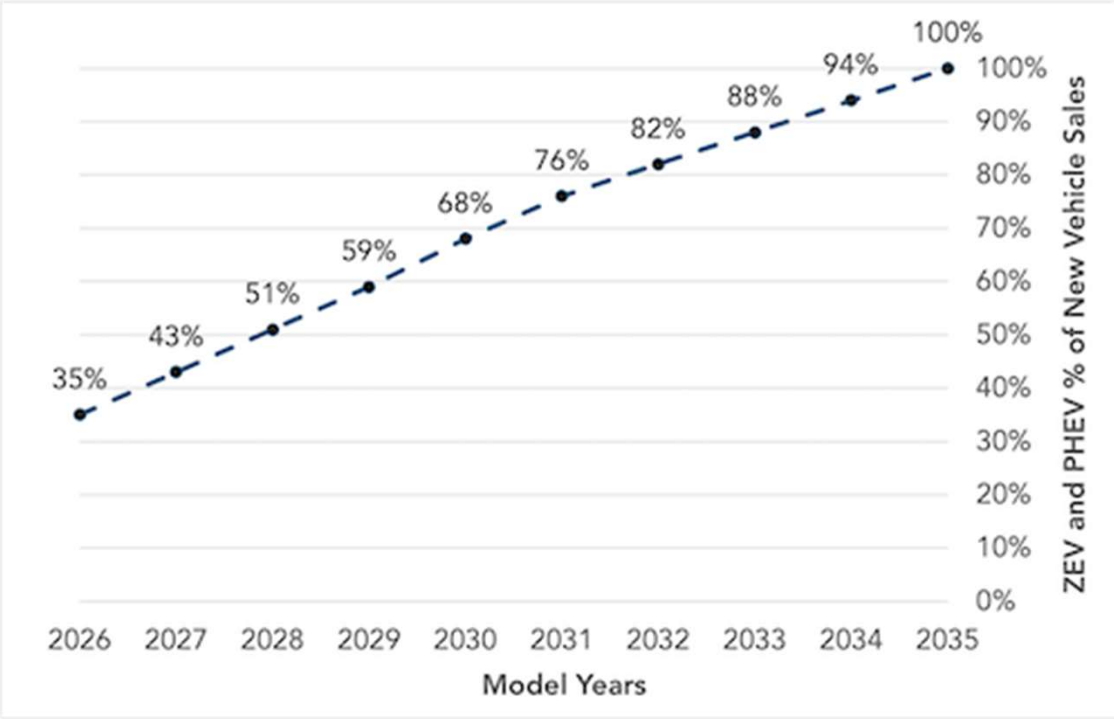
Implementation Model Year	States
2026	CA, MA, NY, OR, VT, WA
2027	CO, DC, DE, MD, NJ, NM, RI

Source: NADA Data 2022, National Automobile Dealers Association, https://www.nada.org/media/4695/download?inline.

ACC II – ZEV Regulation

How do manufacturers meet their ZEV requirement?

1. Produce and deliver for sale ZEVs and PHEVs (one value per vehicle)
2. Take advantage of regulatory flexibilities
3. Smooth out compliance with banking, trading, and averaging



Complementary State Policies for Accelerating Light-Duty EV Adoption

EV Purchase Incentive Programs

E.g., Oregon's Clean Vehicle and Charge Ahead Rebate offers all Oregonians up to $2,500 off their EV purchase, and low- to moderate-income Oregonians get an additional $5,000

EV Charging Infrastructure Programs

E.g., Charge Ahead Colorado provides grant funding to businesses, multiunit housing, and public entities for community-based Level 2 and DC fast-charging infrastructure

Utility Programs and PUC Proceedings

E.g., Act 55 in Vermont directs distribution utilities to develop EV time of use rates that manage loads for greater cost containment, while supporting greater customer participation and promoting the adoption of EVs

Consumer Education and Dealer Support

E.g., Drive Green New Jersey supports vehicle consumers in the EV buying process, and works with participating dealers to support incentive programs

Advanced Clean Trucks (ACT) Regulation

What is the Advanced Clean Trucks (ACT) Rule?

Manufacturer sales requirement – not a purchase requirement

Guarantees a minimum supply of ZEVs in participating states

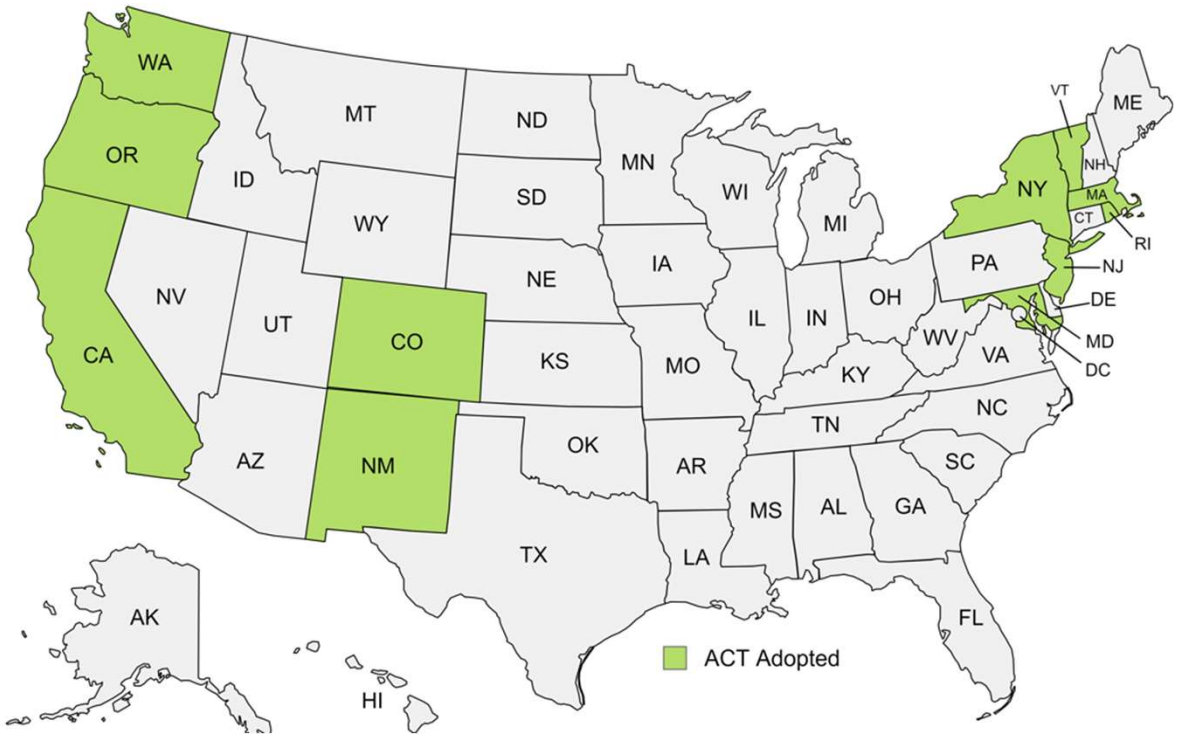
Credit/deficit system for compliance flexibility

Vehicles covered in ACT

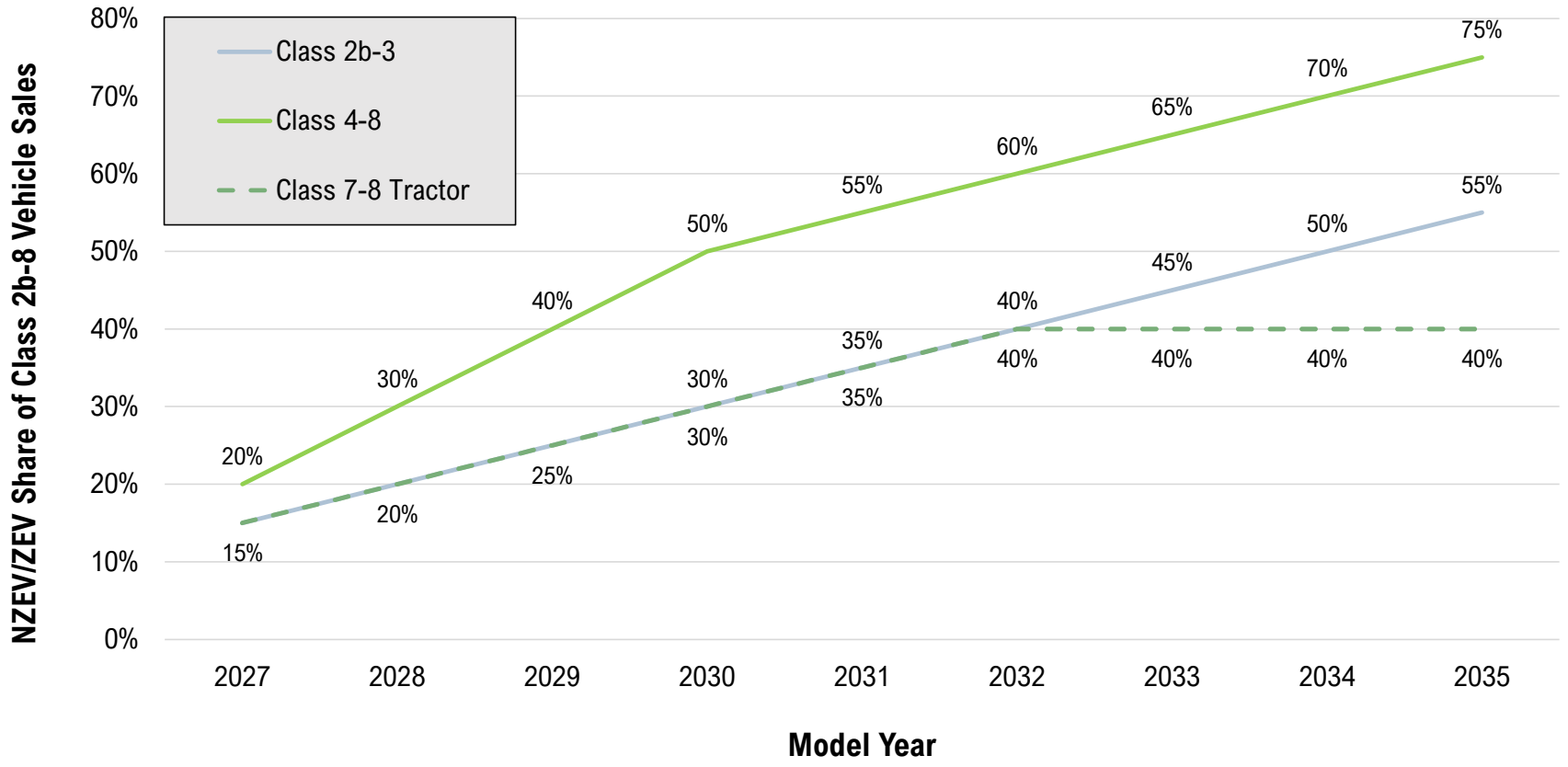
Class 2b-3	Class 4-8	Class 7-8 Tractors
   	     	  

Advanced Clean Truck (ACT) Adoption

Implementation Model Year			
2024	2025	2026	2027
CA	MA NJ NY OR WA	VT	CO MD NM RI



ACT – Annual ZEV Requirements



Complementary Programs to Support Acceleration of MHD ZEV Adoption

MHD ZEV purchase incentive programs

E.g., California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) – provides vouchers for zero-emission trucks, transit buses, school buses, drayage trucks, small fleets

MHD ZEV charging incentives

E.g., Oregon Zero-Emission Fueling (OZEF) Infrastructure Grant Program - supports installation of MHD EVSE stations, including charger costs and utility improvements

Utility programs and PUC proceedings

E.g., NYS PSC Case 18-E-0138, Order for Statewide Make Ready Program and NYS PSC Case 23-E-0070, Proceeding to Address Barriers to MHD EV Charging Initiative

Fleet and technical advisory services

E.g., Mass Fleet Advisor – offers free assistance for commercial vehicle fleets to prepare for electrification

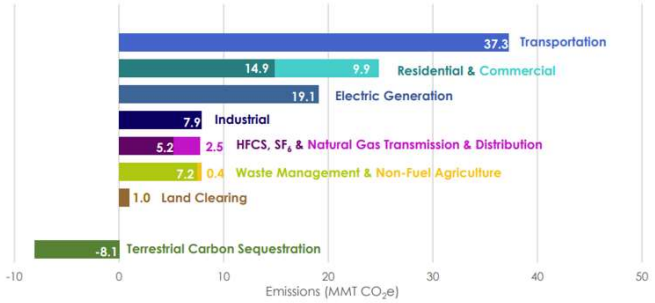
Thank you!

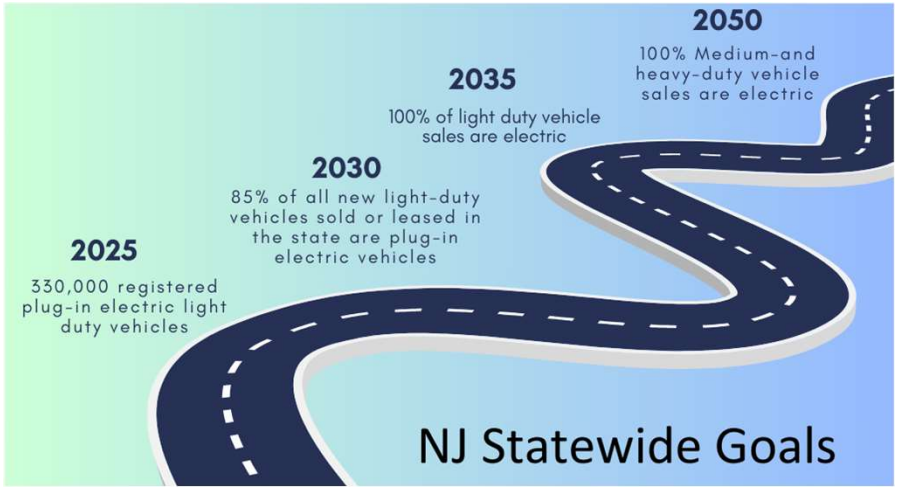
NESCAUM

Driving towards clean transportation

NARUC EV Working Group
August 27, 2024
Peg Hanna, NJDEP
Director, Division of Climate Change Mitigation and Monitoring

2021 Greenhouse Gas Inventory





Areas of Coordination

- Utility LD/MD make ready programs
- BPU & DEP grant programs
- Data sharing
- Utility readiness review
- Public facing communication

LD Utility Programs

- $215 million committed
- Make Ready funding for
  - Public chargers (DCFC and L2)
  - Residential (L2)
  - Workplace (L2)
  - MUD(L2)
- Demand Charge Solution for public fast chargers

MD Utility Programs

- Utilities provide incentives for charging for public and publicly serving transportation.
- Utilities provide incentives for charging for fleets in or serving Overburdened Municipalities.
- Utilities provide technical planning services for fleets and public chargers over 500kW.
- Managed charging programs.

NOTE - Framework has not been finalized yet; above is from draft framework 2023.

EV Incentives

NJDEP

- ZEV sales tax exemption
- It Pay$ to Plug In –corridors, communities, MUD, workplace, fleet
- Diesel fleet modernization program – Class 2b-8 electric vehicles and charging stations
- Emobility grants
- Drive Change. Drive Electric (consumer awareness)
- Ride & Drives (consumer experience)
- PlugStar (dealer education)

NJEDA

- NJZIP – Class 2b-8 electric vehicles

BPU

- Charge Up NJ (cash on the hood)
- EV charging at MUDs
- EV charging at tourist attractions
- Clean Fleet program (LD EVs and charging for govt)
- Utility EV charging and make ready programs

Federal tax credits

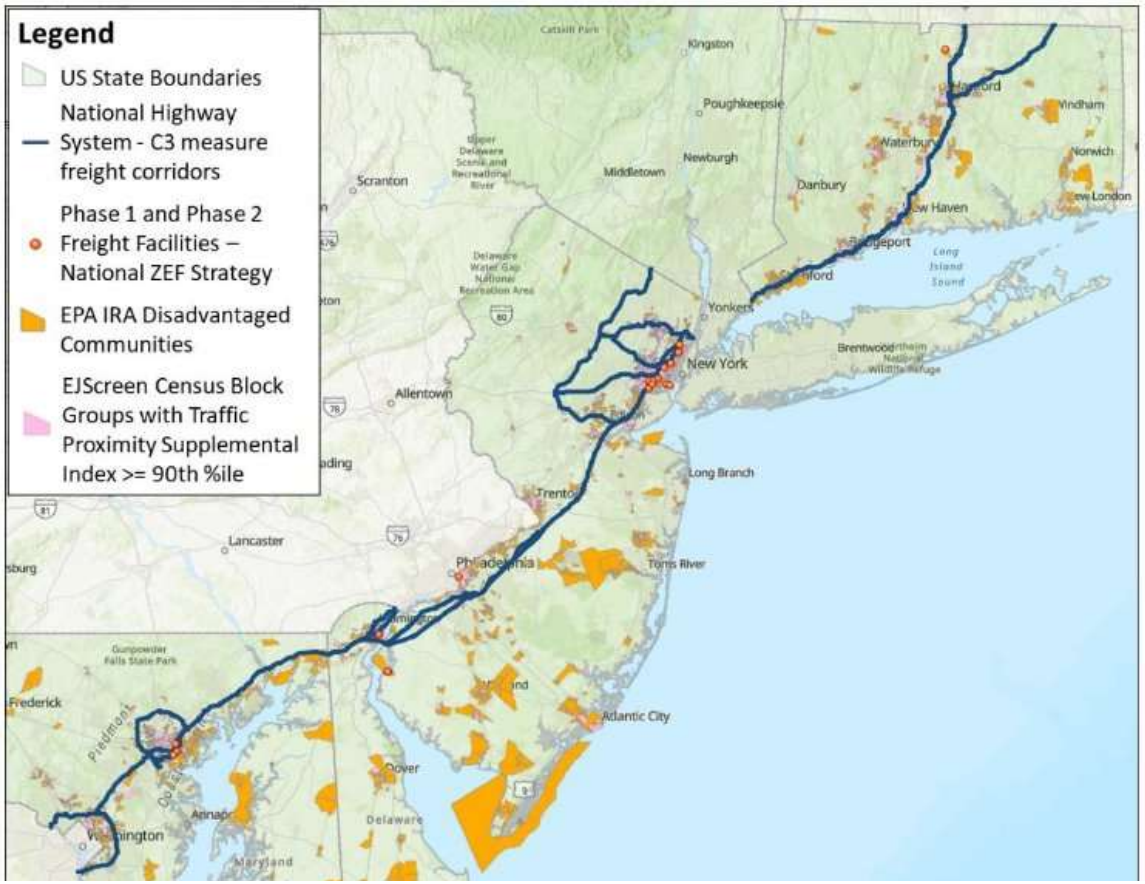
- Up to $7500 for light duty
- Up to $40,000 for medium & heavy duty

CPRG Award for Clean Corridor Coalition

$249 million for public freight truck charging infrastructure at approximately 24 sites

Maryland Department of the Environment

MARYLAND DEPARTMENT OF TRANSPORTATION



Data sharing

ELECTRIC VEHICLE CHARGING DATA REQUIREMENTS & AGREEMENT

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND NEW JERSEY BOARD OF PUBLIC UTILITIES

INTRODUCTION

This data specification defines the minimum requirements for a Company's inclusion in the list of Pre-Qualified Network Service Providers (the "Program") for electric vehicle charging grants funded through the New Jersey Department of Environmental Protection ("NJDEP") or the New Jersey Board of Public Utilities ("NJBPU"). In the future, grantees receiving NJBPU or NJDEP grant funds for electric vehicle supply equipment ("EVSE") subject to data reporting requirements will be required to procure appropriate network services from one of the Companies on the list of Pre-Qualified Network Service Providers.

These specifications are intended to closely align with the specifications required by utility EVSE incentive programs.

Companies that meet the requirements described herein ("Requirements") will be eligible for inclusion in the Program. NJDEP will publish and update from time to time a list of participating Companies on its website[1].

ELIGIBILITY

To be added provisionally to the Program a Company must certify that it will meet the Requirements and agree to provide the data for the Participating Data Sources to the Program Manager at no cost. The

Electric Vehicle Supply Equipment
Compliant Network Service Providers

Grantees receiving New Jersey Department of Environmental Protection or New Jersey Board of Public Utilities grant funds for electric vehicle supply equipment subject to data reporting requirements are required to procure appropriate network services from one of the Companies on the list of Compliant Network Service Providers below.

While many of the Companies listed here can also provide EV chargers, this list only shows that their network service software is compliant. Grantees may select any EV charger hardware that is able to interface with software from one of the companies listed here, and that meets the technical specifications for the relevant grant program.

Network Service Providers offer software that operates smart EV charging stations. This software typically offers an online portal for owners of networked charging stations to manage their equipment. Typically, the portal allows for remote diagnostics, turning equipment on and off, managing access, and reporting data on usage, among other functions. Many Network Service Providers offer systems for setting user fees and collecting payments.

Typically, Network Service Providers charge fees for access to their software and may offer tiered service plans. Certain Network Service Providers may be capable of managing only certain makes and models of charging station hardware. The grantee is responsible for verifying that they are purchasing an appropriate and compatible network service plan for their charging station.

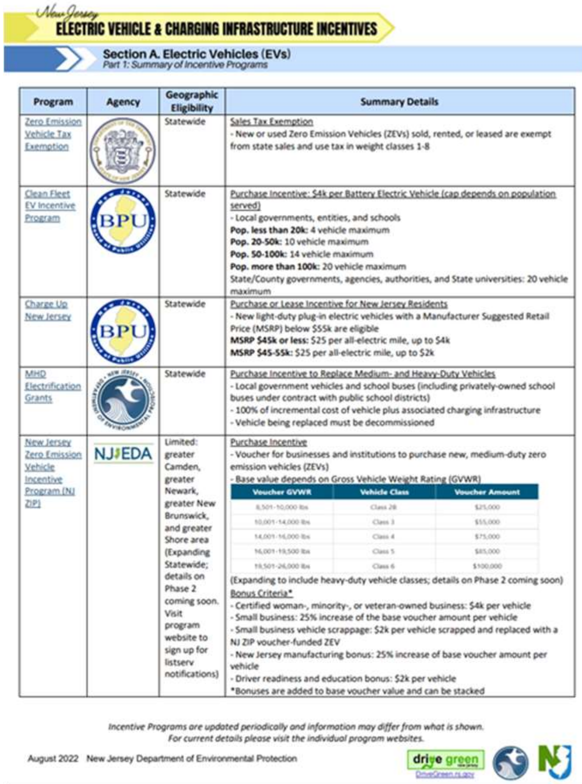
Compliant Network Service Providers have demonstrated that they are willing and able to report certain detailed, anonymized charging session data to the Program.

NJDEP, NJBPU, and the Program do not endorse any Network Service Provider. Inclusion on the Compliant Network Service Provider List is not a guarantee of quality of service.

NEVI Pre-Screening Process – Utility Readiness Review

- Many customers and/or developers want to vet potential properties simultaneously, with multiple factors that might impact feasibility and cost, such as:
  - Environmental conditions
  - Permitting
  - Leasing/purchasing options
  - Utility cost and schedule
  - Site size and egress
  - Available amenities, etc.
- Utilities are often asked if there is ample capacity at the site for the requested load
- There are several key screening factors beyond available capacity
- 5 key questions used by utility engineers to determine a high-level conceptual US-MR cost estimate for "green light" sites – OR – determine that a site would require a full engineering assessment to determine the US-MR cost and schedule ("red light" sites).
- All 5 answers must be No to receive a "green light" (which is meant for pre-screening only) Any single Yes answer yields a "red light", meaning the site requires a full detailed

Q #	Is the Project…	Y / N	Red Light / Green Light
1.	A load request that is expected to exceed available circuit capacity?	No	
2.	In a Network area?	Yes	Complete Engineering Study Required
3.	In a Buried Underground Distribution (BUD) area?	No	
4.	More than 100' away from 3-Phase power?	No	
5.	A requested service size >1,000 Amps?	No	



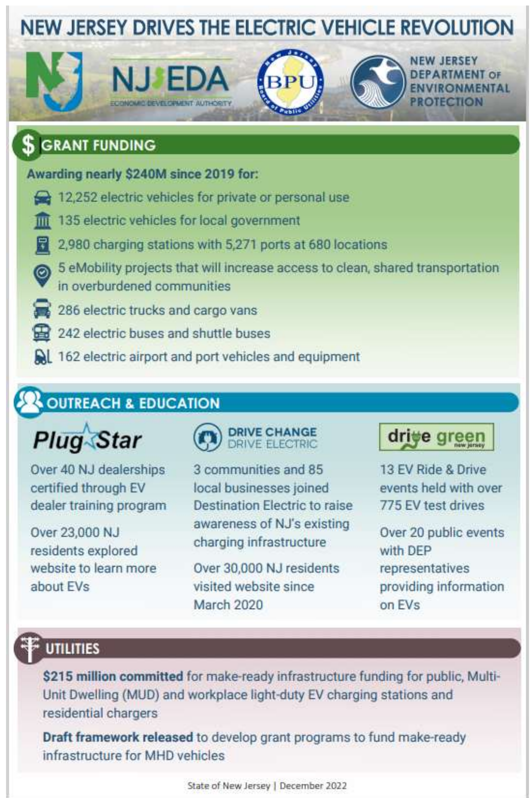
New Jersey
ELECTRIC VEHICLE & CHARGING INFRASTRUCTURE INCENTIVES

Section A. Electric Vehicles (EVs)
Part 1: Summary of Incentive Programs

Program	Agency	Geographic Eligibility	Summary Details
Zero Emission Vehicle Tax Exemption		Statewide	Sales Tax Exemption - New or used Zero Emission Vehicles (ZEVs) sold, rented, or leased are exempt from state sales and use tax in weight classes 1-8
Clean Fleet EV Incentive Program	BPU	Statewide	Purchase Incentive: $4k per Battery Electric Vehicle (cap depends on population served) - Local governments, entities, and schools **Pop. less than 20k:** 4 vehicle maximum **Pop. 20-50k:** 10 vehicle maximum **Pop. 50-100k:** 14 vehicle maximum **Pop. more than 100k:** 20 vehicle maximum State/County governments, agencies, authorities, and State universities: 20 vehicle maximum
Charge Up New Jersey	BPU	Statewide	Purchase or Lease Incentive for New Jersey Residents - New light-duty plug-in electric vehicles with a Manufacturer Suggested Retail Price (MSRP) below $55k are eligible **MSRP $45k or less:** $25 per all-electric mile, up to $4k **MSRP $45-55k:** $25 per all-electric mile, up to $2k
MHD Electrification Grants		Statewide	Purchase Incentive to Replace Medium- and Heavy-Duty Vehicles - Local government vehicles and school buses (including privately-owned school buses under contract with public school districts) - 100% of incremental cost of vehicle plus associated charging infrastructure - Vehicle being replaced must be decommissioned
New Jersey Zero Emission Vehicle Incentive Program (NJ ZIP)	NJEDA	Limited: greater Camden, greater Newark, greater New Brunswick, and greater Shore area (Expanding Statewide; details on Phase 2 coming soon. Visit program website to sign up for listserv notifications)	Purchase Incentive - Voucher for businesses and institutions to purchase new, medium-duty zero emission vehicles (ZEVs) - Base value depends on Gross Vehicle Weight Rating (GVWR) (Expanding to include heavy-duty vehicle classes; details on Phase 2 coming soon) Bonus Criteria* - Certified woman-, minority-, or veteran-owned business: $4k per vehicle - Small business: 25% increase of the base voucher amount per vehicle - Small business vehicle scrappage: $2k per vehicle scrapped and replaced with a NJ ZIP voucher-funded ZEV - New Jersey manufacturing bonus: 25% increase of base voucher amount per vehicle - Driver readiness and education bonus: $2k per vehicle *Bonuses are added to base voucher value and can be stacked

Incentive Programs are updated periodically and information may differ from what is shown. For current details please visit the individual program websites.

August 2022 New Jersey Department of Environmental Protection



NEW JERSEY DRIVES THE ELECTRIC VEHICLE REVOLUTION

NJEDA · BPU · NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

GRANT FUNDING

Awarding nearly $240M since 2019 for:

- 12,252 electric vehicles for private or personal use
- 135 electric vehicles for local government
- 2,980 charging stations with 5,271 ports at 680 locations
- 5 eMobility projects that will increase access to clean, shared transportation in overburdened communities
- 286 electric trucks and cargo vans
- 242 electric buses and shuttle buses
- 162 electric airport and port vehicles and equipment

OUTREACH & EDUCATION

Plug Star: Over 40 NJ dealerships certified through EV dealer training program. Over 23,000 NJ residents explored website to learn more about EVs

DRIVE CHANGE DRIVE ELECTRIC: 3 communities and 85 local businesses joined Destination Electric to raise awareness of NJ's existing charging infrastructure. Over 30,000 NJ residents visited website since March 2020

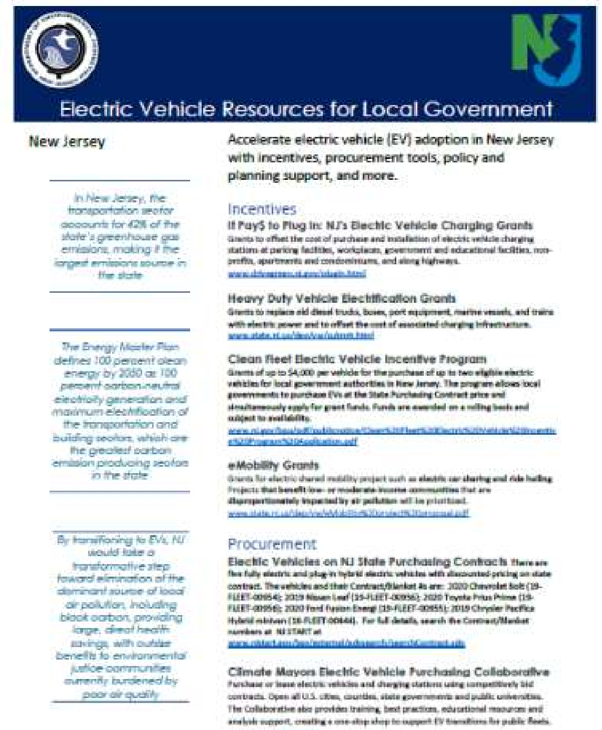
drive green: 13 EV Ride & Drive events held with over 775 EV test drives. Over 20 public events with DEP representatives providing information on EVs

UTILITIES

$215 million committed for make-ready infrastructure funding for public, Multi-Unit Dwelling (MUD) and workplace light-duty EV charging stations and residential chargers

Draft framework released to develop grant programs to fund make-ready infrastructure for MHD vehicles

State of New Jersey | December 2022



Electric Vehicle Resources for Local Government

New Jersey

Accelerate electric vehicle (EV) adoption in New Jersey with incentives, procurement tools, policy and planning support, and more.

In New Jersey, the transportation sector accounts for 42% of the state's greenhouse gas emissions, making it the largest emissions source in the state

The Energy Master Plan defines 100 percent clean energy by 2050 as 100 percent carbon-neutral electricity generation and maximum electrification of the transportation and building sectors, which are the greatest carbon emission producing sectors in the state

By transitioning to EVs, NJ would take a transformative step toward elimination of the dominant source of local air pollution, including black carbon, providing large, direct health savings, with outsize benefits to environmental justice communities currently burdened by poor air quality

Incentives

It Pay$ to Plug In: NJ's Electric Vehicle Charging Grants

Heavy Duty Vehicle Electrification Grants

Clean Fleet Electric Vehicle Incentive Program

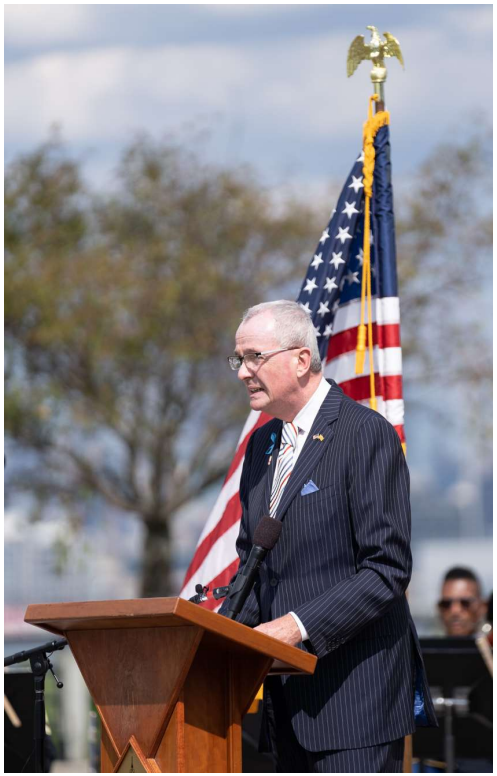
eMobility Grants

Procurement

Electric Vehicles on NJ State Purchasing Contracts

Climate Mayors Electric Vehicle Purchasing Collaborative

Thank you!



NEW JERSEY • DEPARTMENT OF ENVIRONMENTAL PROTECTION •

Questions and Answers

Moderator: Commissioner Katherine Peretick, Michigan Public Service Commission

Guest Speaker

- **Zoltan Jung, U.S. Environmental Protection Agency (EPA)**
- **Megan O'Toole, Northeast States for Coordinated Air Use Management (NESCAUM)**
- **Peg Hanna, New Jersey Department of Environmental Protection (NJ DEP)**

Member EV Roundtable

Please share the situation from your perspective:

1. Does your PUC have a relationship with the state's air quality agency? When do you collaborate these days? In what forums?
2. Do you have visibility into whether / how your utilities have modeled the new air quality vehicle regulations in their transportation electrification demand forecasts?
3. How can you foresee your PUC collaborating with your AQ agency in the future to support economically implementing these clean car / clean truck rules?

Upcoming 2024 EVSWG Topic

Date (Last Tues. of the month)	Future 2024 EV SWG Topics (Through June)
October 1, 2024	Energizing chargers faster
October 29, 2024	Vehicle to Grid (V2G)
December 10, 2024	Innovative Charging Solutions

Red = changes to the calendar.

Next EV SWG Meeting: **October 1**, 3:00-4:30 pm ET via Zoom

WWW.NARUC.ORG/CORE-SECTORS/ENERGY-RESOURCES-AND-THE-ENVIRONMENT/ELECTRIC-VEHICLES/