NARUC Electric Vehicles State Working Group

JANUARY MEETING - DRIVING FORCES ACCELERATING TRANSPORTATION ELECTRIFICATION

JANUARY 31, 2023
Welcome

EV SWG Chair
Commissioner Katherine Peretick, Michigan Public Service Commission

EV SWG Vice-Chair
Chair Jason Stanek, Maryland Public Service Commission

NARUC Staff
• Danielle Sass Byrnett, Jeff Loiter, Jessica Diaz
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>3:00 PM</td>
<td>Welcome and Announcements (4 minutes) – Danielle Sass Byrnett, NARUC</td>
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<tr>
<td></td>
<td>• Agenda review</td>
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<td>• Announcements: Resources, Winter Policy Summit, 2023 Plans</td>
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<tr>
<td>3:04 PM</td>
<td>Webinar: Driving Forces Accelerating Transportation Electrification</td>
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<td>Moderated by Commissioner Peretick of the Michigan Public Service Commission, EV SWG Chair</td>
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<td></td>
<td>Speaker introductions</td>
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<tr>
<td>3:08 PM</td>
<td>Presentation: Morgan Ellis, DOE (10 minutes)</td>
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<td>Overview of the National Blueprint for Transportation</td>
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<td>3:18 PM</td>
<td>Presentations: Bridget Gilmore and Kara Podkaminer, DOE (20 minutes)</td>
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<td>IIJA/IRA/NEVI Funding Update</td>
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<td>Tax Incentives: Commercial and Residential</td>
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<td>EV Grid Assist Activities</td>
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<td>3:38 PM</td>
<td>Presentation: Alex Keros, General Motors (15-20 minutes)</td>
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<td>OEM Commitments</td>
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<td>3:55 PM</td>
<td>Q&amp;A</td>
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<td>• Speakers will take questions from working group members</td>
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<td>4:05 PM</td>
<td>Closed Door Discussion &amp; Peer Sharing (20 minutes)</td>
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<td>• Introductions: name, state, role, and the make/model of the first EV you ever drove or rode in</td>
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<td>• Working group members will discuss their own views and the actions their states have taken to date.</td>
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<td>4:30 PM</td>
<td>Adjourn</td>
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Announcements - Resources

- **DOE’s EV Grid Assist webinar series** (June – November) recordings are posted at: [www.energy.gov/eere/evgrid-assist-accelerating-transition](http://www.energy.gov/eere/evgrid-assist-accelerating-transition)

- **Presentations and recordings of past EVSWG events** are available on the NARUC website: [www.naruc.org/cpi-1/energy-infrastructure-modernization/electric-vehicles/](http://www.naruc.org/cpi-1/energy-infrastructure-modernization/electric-vehicles/)

- **EVSWG Listserv**: NARUC-EVSWG@lists.naruc.org

- **ICYMI – 4 NEW NARUC EV publications** released late 2022:
  - Models for Incorporating Equity in Transportation Electrification
  - Electric Vehicle Interoperability: Considerations for Public Utility Regulators
  - Considering Interoperability for Electric Vehicle Charging: A Commission Case Study
  - Transportation Electrification: State Level Roles and Collaboration among Public Utility Commissions, State Energy Offices, and Departments of Transportation
Announcements – NARUC Winter Policy Summit

EV Sessions & Opportunities

- **Mon, Feb 13 at 3:15pm**: ERE Committee Business Meeting: NASEO and AASHTO EV leaders will discuss the NASEO-AASHTO-DOE-DOT MOU and their work with state energy offices and state departments of transportation.

- **Tues, Feb 14 at 11am**: Joint ERE-Electricity Committee: First Do No Harm: Siting EV Charging Infrastructure.

- **Weds, Feb 15 at ~8:30am**: NARUC members-only coffee & meetup with Gabriel Klein, U.S. Energy and Transportation Joint Office Executive Director.

- **Weds, Feb 15 at 9:30am**: General Session featuring Gabriel Klein.

- **Weds, Feb 15 at 1:00 – 4:15pm**: Bonus Add-On Workshop: “Demystifying Virtual Power Plants”
  - What is a VPP? How are VPPs deployed today? What are the opportunities and challenges for regulators, utilities, and other stakeholders? This workshop will describe the fundamentals of virtual power plants (VPPs), including applications in vehicle-to-grid, solar+storage, DERs, and demand response. Register in advance. (NARUC Summit registration is NOT required to attend.)
Announcements – 2023 Tentative Plans

More details to come

1. Resume monthly EV SWG virtual events last Tuesday each month, 3:00-4:30pm ET
   - Virtual EV Cybersecurity workshop TBC

2. Collaborate at in-person events
   - Striving for some add-on EV workshops at NARUC or industry conferences

3. New Publications
   - Options: How will IIJA/NEVI impact PUCs; Getting started with Transportation Electrification; Questions PUCs can ask utilities about T.E. investments; Case studies

Next EV SWG session:
February 28, 2023
3:00 to 4:30pm ET
Welcome

Moderator: Commissioner Katherine Peretick, Michigan Public Service Commission

Panelists

- **Morgan Ellis**, Senior Advisor, Sustainable Transportation and Fuels, DOE Office of Energy Efficiency and Renewable Energy (EERE)
- **Bridget Gilmore**, EV Charging Fellow, Joint Office of Energy and Transportation
- **Kara Podkaminer**, Senior Advisor, Sustainable Transportation and Fuels, DOE EERE
- **Alex Keros**, Director, EV Infrastructure Development at General Motors
THE U.S. NATIONAL BLUEPRINT FOR
TRANSPORTATION DECARBONIZATION
A Joint Strategy to Transform Transportation
January 2023

PRE-DECISIONAL: DO NOT CITE OR CIRCULATE
The Long-Term Strategy of the United States establishes a goal of net-zero greenhouse gas emissions by no later than 2050 and a 50-52% reduction by 2030 (from 2005 levels) in economy-wide net greenhouse gas emissions.

Addressing the climate crisis is critical for the United States and will require rapid, widespread, and major transformation of many complex systems that are closely intertwined with our economy and way of life.

The sense of urgency is high, and the time to act is now to produce effects by 2030 and net-zero by 2050.

Achieving net-zero by 2050 involves aggressive curbing emissions from all sectors, including transportation – the largest source of US greenhouse gas emissions today.
A Coordinated Approach

Close coordination accelerates transportation decarbonization:
- Consistent and expanded stakeholder outreach
- Clear signals to industry
- Coordination at all staff levels:
  - RDD&D planning and execution
  - Infrastructure deployment
  - Policy & regulation development
  - Data, tools, education and training

Underpinned by a singular aligned transportation decarbonization vision/blueprint
Focus on the Entire Transportation Sector

• The goal is **complete decarbonization** of the transportation sector

The Blueprint

• Covers every mode and sets up realistic, achievable pathways based on innovation and science

• Builds on existing federal commitments

• Focuses on achieving a clean, safe, accessible and equitable transportation system to deliver benefits all communities.
Strategies to achieve decarbonization:

**Convenient**
- Improve Community Design and Land-use Planning

**Efficient**
- Increase Options to Travel More Efficiently
- Expanding options to enable shifts in more efficient vehicles and transport modes

**Clean**
- Transition to Zero Emission Vehicles and Fuels
- Deployment of zero-emission vehicles, fuels and associated infrastructure

Prioritizing land-use decisions and community design solutions that prioritize access
## Call to Action: Milestones and Timeline

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<th>Timeframe</th>
<th>Actions</th>
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<tr>
<td><strong>Before 2030</strong></td>
<td>Turning the Tide on Transportation GHGs: Research Investments to Support Deployment</td>
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<td><strong>2030 - 2040</strong></td>
<td>Accelerating Change: Scaling Up Deployment of Clean Solutions</td>
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<tr>
<td><strong>2040 - 2050</strong></td>
<td>Completing the Transition: A Sustainable and Equitable Future</td>
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Thank you!
Federal Funding Updates

Bridget Gilmore, EV Charging Fellow
NARUC EV State Working Group
1/31/2023

driveelectric.gov
Agenda

Brief Joint Office Overview

Program Updates

Technical Assistance with State DOTs and Energy Offices

Connecting with the Joint Office
Joint Office Purpose

Established by the Bipartisan Infrastructure Law to address areas of joint interest to the U.S. Departments of Energy and Transportation

$300M
in Fiscal Year 2022 funds to DOT with transfer authority to DOE

9 major areas of emphasis

Areas of emphasis:

1) Technical assistance for EV charging and refueling infrastructure
2) Data sharing
3) National and regionalized study vehicle of infrastructure needs
4) Training and certification programs
5) Program to promote renewable energy generation, storage, and grid integration
6) Transmission pilots in interstate rights-of-way
7) Research, strategies, and actions to mitigate effects of climate change
8) Develop streamlined utility accommodations policy for transmission in transportation right-of-way
9) Any other issues the Secretary of Transportation and Secretary of Energy identify as issues of joint interest
Mission and Vision

Mission
To accelerate an electrified transportation system that is affordable, convenient, equitable, reliable, and safe.

Vision
A future where everyone can ride and drive electric.
The Joint Office will provide unifying guidance, technical assistance, and analysis to support the following programs:

**National Electric Vehicle Infrastructure (NEVI) Formula Program (U.S. DOT)**
$5 billion for states to build a national electric vehicle (EV) charging network along corridors

**Charging & Fueling Infrastructure Discretionary Grant Program (U.S. DOT)**
$2.5 billion in community and corridor grants for EV charging, as well as hydrogen, natural gas, and propane fueling infrastructure

**Low-No Emissions Grants Program for Transit (U.S. DOT)**
$5.6 billion in support of low- and no-emission transit bus deployments

**Clean School Bus Program (U.S. EPA)**
$5 billion in support of electric school bus deployments
Program Updates
• $5.0B for **EV charging along** designated alternative fuel corridors

• **80/20 Federal Cost Share**

• **All 50 state plans plus DC and Puerto Rico are approved by FHWA, unlocking $1.5 B in funding**

• Kentucky, Pennsylvania, New Jersey, Texas, and Ohio all have open RFPs, RFIs, or draft versions that are publicly available.
NEVI Charging Station Design

At least 4 ports capable of providing at least 150kW to every vehicle

Every 50 Miles Along Alternative Fuel Corridors
What NEVI investments may be relevant for commission approval?

Generally, NEVI funds can be used for:

- **Acquisition and installation** of EV charging infrastructure
  - May include on-site **distributed energy resources**
- **Upgrades** to existing public charging stations to meet program requirements
- **Maintenance and Operating Assistance**
- **Other costs specified in NEVI program guidance**

May see topics related to:

- Rate proposals to mitigate demand charges
- Utilities using funds to contribute to 20% match
- **Major grid upgrade needs to accommodate NEVI stations**
Discretionary Grant Program for Charging and Fueling Infrastructure – Coming Soon!

- EV charging, hydrogen, propane, and natural gas fueling infrastructure
- 80/20 Federal Cost Share

Divided into two distinct $1.25 billion grant programs:

**Corridor Charging Grant Program**
- Strategically deploy publicly accessible EV charging infrastructure and alternative fueling infrastructure along designated *Alternative Fuel Corridors*

**Community Charging Grant Program**
- Strategically deploy publicly accessible EV charging infrastructure and alternative fueling infrastructure in *communities*
Technical Assistance with State DOTs and Energy Offices
Status and coordination with state DOTs and SEOs

Joint Office signed an MOU between NASEO/AASHTO in February 2022

Goal: Support NEVI implementation and the JO with technical assistance, enabling peer-to-peer learning

Activities:

– Holding in-person regional meetings
  • Western region and Northeast meetings took place in the last few weeks
– Hosting monthly regional calls
  • Last month’s call pertaining to utility coordination
– Will be hosting a national meeting this summer
Addressing TA Needs

Use TA Channels

To Spread Awareness of New and Existing Resources

- State 1:1 Meetings
- Regional Office Hours (Joint Office and NASEO/AASHTO hosted)
- Technical Assistance Inbox
- Webinars
- Newsletter
- Highlight Existing Tools
- Create/Update Tools
- Develop Web Content
- Create New Materials (One-Pagers, Checklists, etc.)
- Final Rule
What’s Next for the Joint Office

**NEVI Notice of Proposed Rulemaking (NPRM)**

NPRM Closed on August 22\(^{nd}\) with **380+ comments**

**Buy America**

Proposed Waiver Issued for Comment on August 31\(^{st}\)

**Discretionary Charging and Fueling Infrastructure Grants**

$2.5B for corridor and community charging grants via BIL

**NEVI “gap-filling” grants**

10% of NEVI funds are set-aside annually to fund strategic deployment of EV chargers.

**Designation of Freight Corridors**

Federal Highway Administration (FHWA) will initiate the designation of **freight EV corridors**
Connecting with the Joint Office
We are looking to hire a **Senior Advisor for Electric Utility Policy and Programs**

- Visit DriveElectric.Gov
- Apply through to Clean Energy Corps
- Select “EV Charging” as an area of interest
- Email resume to jointofficejobs@ee.doe.gov
• Request assistance via online form

• Initial response within 48 hours

• General questions and feedback welcome!
Thank You!
BIL & IRA Funding for Transportation Electrification and Upcoming EVGrid Assist Activities

Kara Podkaminer, Senior Advisor Sustainable Transportation, EERE

1/31/23
Government Action Propelling Transportation Electrification

Historic measures that will transform the market, over $25B in direct investments

**Bipartisan Infrastructure Law (BIL)**
- NEVI Formula Program (DOT, $5B)
- Charging and Fueling Infrastructure, Community and Corridor Grants (DOT, $2.5B)
- Clean School Bus Program (EPA, $5B)
- Low or No Emission (Bus) Grants (DOT, $5.6B)
- Smart Grid Grants (DOE, $3B)
- Utility EV Promotion Measures Amends 111(d) PURPA, transportation electrification

**Inflation Reduction Act (IRA) Non-tax Provisions**
- Clean Heavy-Duty Vehicles (EPA, $1B)
- Grants to Reduce Air Pollution at Ports (EPA, $3B)
- Diesel Emissions Reduction (EPA, $60M)
- US Postal Service Clean Fleets (USPS, $3B)

**Inflation Reduction Act (IRA) Tax Credits**
- 30D – Clean Vehicle Credit up to $7,500
- 45W – Commercial Vehicle Credit up to $7,500
- 25E – Previously Owned Vehicle Credit, up to $4,000
- 30C – Alternative Fuel Refueling Property Tax Credit Up to 30%, $1,000 (residential), $100,000 (commercial) per item
Vehicle Grid Integration for Electric Mobility

Interactions and Enablers

- Renewable Resources
- Reliable Charging
- Sufficient Capacity
- Driver Behavior

- Communications & Controls
- Technical Standards
- Cyber Security
- Retail Rates
- Grid Services Markets
- Actionable Data
- Policy
- Transparency & Oversight
- Investment

ENABLED BY

Decarbonized | Reliable | Resilient | Cost-effective
EVGrid Assist: Accelerating the Transition
Comprehensive VGI Technical Assistance Initiative

Building Momentum and Capabilities

- VGI Vision and DOE Road Map
- Educational Webinar Series and Resource Library
- Stakeholder Processes to Resolve Challenges
- EV Rate Design Considerations
- Vehicle to Everything (V2X) MOU
- State-Specific Tool Demonstration Reports
- Direct Technical Assistance

Goals
- Activate community
- Educate stakeholders
- Resolve barriers
- Drive coordination among stakeholders
- Identify emerging needs and challenges
- Work together on solutions
EVGrid Assist Website

www.energy.gov/EVGridAssist

- Sign up for announcements
- Register for upcoming webinars
- Links to recordings and webinar highlights
- Resource library
  - National lab tools
  - Relevant reports

Upcoming Events

VGI Educational Webinar Series

Register for EVGrid Assist Webinars at www.EVGridAssist.net will be linked in the list below, as they become available.

- The Importance of VGI: WATCH
- EV Basics: WATCH. Webinar highlights (PDF)
- DCFC Charging for Light, Medium, and Heavy-duty Vehicles
- Grid Aware Site Selection: WATCH
- Charging Station Site Design: WATCH
- Load Forecasting: WATCH
- Rates and Incentives: WATCH
- Planning for the Future: WATCH

Resource Library

Numerous resources exist that can assist stakeholders in implementing VGI and EV charging infrastructure.
Thank you!
EV Infrastructure & Charging

Alex Keros, Director, EV Infrastructure, EV Growth Operations
January 2023
Pioneer and grow innovative energy solutions to empower every person

HOW WILL WE ACHIEVE THIS MISSION?

By delivering a full suite of charging, energy products & services + Adding meaningful value to our customers
EV Infrastructure
Home Charging

~90% of charging happens here
47K charging events daily
Only company to cover home install for eligible customers

Urban & Highway Charging

Over 5,000 DC fast chargers
350kW, reservations, discounts, connected, & reliable
Ultium everywhere, open to all, differentiated for GM customers

Community Charging

40K Level 2 chargers in collaboration with Dealers
Investment in electrifying local dealer communities
Remove customer barriers to drive EV adoption & growth

$750M Investment in EV Charging Ecosystem
Home Charging Solutions

Remove barriers to EV adoption by addressing customer charge anxiety

Providing our customers with charging solutions that fit their lifestyle through partnerships with Qmerit and EVgo

**CHEVROLET**

**BOLT EUV/EV**

Free 240V outlet installation or $500 EVgo public charging credit valid for 3 years

**GMC**

**HUMMER EV**

Complimentary 11.5kW/48A L2 charger and referral to self pay EV Concierge service

**LYRIQ**

$1500 credit to EV concierge installation or 2 years unlimited public charging with EVgo
Ultium Charge 360 | Expanding Access & Improving Experience

- EVgo 3,250 DCFC Stalls
- Pilot Flying J 2,000 DCFC Stalls
- Dealer Community (40,000 L2)

Amenities, Discounts, Plug & Charge, Uptime, Pull-through, Speed, Reservations, Canopies
Overview

• Turnkey charging solutions that address today and future goals.
• GM & depot provider enabled tools that reduce cost, like managed charging & grid services.
Digital | Enabling Charging Experience

**FIND**
- Network Aggregation: Locate over 100,000 chargers
- Plan route and receive real-time updates
- Direct integration includes dynamic data

**CHARGE**
- Ultium network integration across roaming partners
- Enable features like Plug & Charge, ISO-15118

**PAY**
- Single payment system managed through GM Ultium Charge 360
- Link accounts via back office integration
- Persona-based filters (e.g. speed, type, discount)
EV Education and Engagement
**Education & Engagement**

**EV Academy**

- **In-Person Training**
- **EV Live**
- **myBrand Explore EV**
- **EV Showroom**
- **Micro-Learning (Trivie)**
- **Center of Learning**
- **Readiness Guides**

**myBrand: Explore EV**

**WHAT**
Invites ICE owners to see benefits of EV ownership, including cost of ownership calculators, charging solutions, etc.

**WHO**
Available to all myBrand app users

**WHEN**
myChevy US experience available now, (82k monthly users visit Explore EV myChevy US) and MyGMC US and MyChevy Canada rolling out

**EV Showroom**

**WHAT**
Adaptive web-app featuring interactive tools like fuel savings and charging calculators

**WHO**
Customer-facing Dealer personnel; GM employees

**WHEN**
Cadillac launched; Canada, Chevy, GMC in Q4; global in 2023

**Trivie**

**WHAT**
Gamified micro-learning app to enhance EV proficiency

**WHO**
Customer-facing Dealer personnel; GM employees

**WHEN**
App is live for Dealers in US (10,000 users enrolled); open enrollment open; Canada and GM employees to follow in Q4
GM Energy
• Significant EV Growth - Charging, Infrastructure & Experience Matters
• Accelerating Partnerships & Flawless Launches in 2023
• Expansion of Ultium Cell & Energy Management – Beyond the vehicle
Questions?

Raise your hand to ask a question or type a question into the question box
1. Have commissions developed relationships/multiagency transportation task forces with sister agencies? How is that working? Are there state-wide blueprints or master plans in place or under development?

- **Michigan**: Two different groups
  - Council for Electrification and Future Mobility
  - A smaller group working on NEVI that includes the Dept. of Transportation; Dept. Office of Labor and Economic Opportunity; and Dept. of Environment, Great Lakes, and Energy
  - There have been several meetings, communications, and at least one memorandum. They feel like they are making a lot of progress.

- **Maryland**
  - Commission has also appointed a working group that is externally facing with broad participation. Membership overlaps with the Council to some extent. PSC Staff Joey Chen is available to answer questions: joey.chen@maryland.gov

- **Washington**
  - Initiated by legislation in 2022, the Interagency EV Coordinating Council is co-lead by the Departments of Commerce and Transportation. Other members include the State Efficiency and Environmental Performance Office, Office of Financial Management, Office of Superintendent for Public Instruction, Utilities and Transportation Commission, and the Departments of Agriculture, Ecology, Enterprise Services, and Health.
  - Has responsibility for developing an electrification strategy and a strategy to reach the 2030 100% zero-emission vehicle goal.
  - The Commission has also organized an EV working group

- **Oregon**
  - There is a longstanding Zero Emission Vehicle Interagency Working Group (ZEVWG) that drives significant cross-agency coordination. It is led by the Dept. of Transportation.
2. How involved is your commission in planning for or dealing with the influx of federal funding?

There was limited time for this question

- Illinois
  - The Climate and Equitable Jobs Act (CEJA) passed in 2021 resulted in a number of activities by the Illinois Commerce Commission, including the approval of innovative performance metrics for the two large IOUs.
  - ICC proceedings seeking alignment between federal legislation and CEJA are summarized here: Federal legislation completely changed the energy landscape. How do states take advantage of it? | Utility Dive
Next EV SWG meeting: Tues, Feb. 28 at 3pm ET

OR SEE YOU AT THE NARUC WINTER POLICY SUMMIT IN DC