Plug In America

WE DRIVE ELECTRIC. YOU CAN TOO.

Electrifying Transportation in Minnesota
January 28, 2022
Dean Taylor, Sr Policy Advisor and Pete Chipman, Policy Director
Who we are

- **The voice of the EV consumer** – in Minnesota and nationwide
- 501c3 nonprofit founded in 2008
- Our members represent the world’s deepest pool of experienced EV drivers
- Two core areas:
  1. Policy and Advocacy
  2. Education and Outreach
     - PlugStar: dealers, consumers, utilities
     - National Drive Electric Week and Drive Electric Earth Day

www.pluginamerica.org
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00</td>
<td>Welcome</td>
<td>Rep. Jamie Long, Minnesota House</td>
</tr>
<tr>
<td>10:06</td>
<td>Global EV Opportunity</td>
<td>Corey Cantor, Bloomberg New Energy Finance</td>
</tr>
<tr>
<td>10:12</td>
<td>Future Fuels Act</td>
<td>Jeremy Martin, Union of Concerned Scientists</td>
</tr>
<tr>
<td>10:20</td>
<td>Utility TE Role Bill</td>
<td>Deb Erwin, Xcel Energy</td>
</tr>
<tr>
<td>10:28</td>
<td>MN Funds to Match DOT $</td>
<td>Brendan Jordan, Drive Electric Minnesota</td>
</tr>
<tr>
<td>10:36</td>
<td>Road Fee Study</td>
<td>Rick Tempchin, Alliance for Transportation Electrification</td>
</tr>
<tr>
<td>10:44</td>
<td>Other TE Legislation</td>
<td>Amber Backhaus, Minnesota Auto Dealer Association</td>
</tr>
<tr>
<td>10:50</td>
<td>Q&amp;A</td>
<td></td>
</tr>
<tr>
<td>10:55</td>
<td>Closing by Sen. David Senjem, MN Senate</td>
<td></td>
</tr>
</tbody>
</table>
How Minnesota Can Prepare for Federal EV Funds in 2022 - TBD date in March or April Two Hours

- Topics include update on federal funds for Charging Stations, Transit, School Buses and Batteries.
- Panel discussions
Speaker Bios

• **Representative Jamie Long** was elected in 2018 and 2020 to the *Minnesota House of Representatives* representing District 61B. He is Chair of the Climate and Energy Committee and is Assistant Majority Leader. Prior to holding this office, he was an attorney.

• **Corey Cantor**, Transport Analyst, **BloombergNEF**, who is also part of Bloomberg’s electrified transport team. His background spans policy, economics, and technology and he understands how they impact the electrification of mass transportation in the North American market. Prior to completing his master’s degree in Environmental Management from Yale’s School of the Environment, Corey worked for U.S. Senator Cory Booker on his economic team covering policy around banking, taxes, and the federal budget.

• **Jeremy Martin**, Senior Scientist for the **Union of Concerned Scientists** evaluates the impact of biofuels and fuel policy. Dr. Martin is the author of more than 15 technical publications and 13 patents on topics ranging from biofuels lifecycle accounting to semiconductor manufacturing and polymer physics. His recent report describes how transportation fuels are changing, and what can be done to reduce emissions from their production. He has testified before Congress and State Legislatures and served on several expert panels.
Speaker Bios

• **Deb Erwin** is Director, Policy and Program Planning for Clean Transportation at [Xcel Energy](#). Before joining the Clean Transportation team in 2021, Deb was Manager, Regulatory Policy for Wisconsin and Michigan, working on a wide variety of electric and natural gas regulatory and legislative matters including customer program development, renewable energy, electric vehicles, energy storage, rate design, integrated resource planning, and grid modernization. Prior to joining Xcel Energy in 2014, Deb worked at the Public Service Commission of Wisconsin and before 2008 practiced renewable energy law in Minnesota.

• **Brendan Jordan** is the VP of Transportation and Fuels programs at [Great Plains Institute](#), and the lead facilitator for [Drive Electric MN](#).

• **Rick Tempchin** formed a transportation and energy efficiency consulting practice in 2020 and is Senior Fellow Emeritus at the Alliance to Save Energy after a 31-year career at the Edison Electric Institute. Rick joined EEI in 1987 and rose to lead the Customer Solutions Division as Executive Director, where he worked in nearly every sector of the industry, including microgrids, grid modernization, state regulatory policy, rate design, electric transportation, demand-side management, building codes, appliance standards, sustainable technology commercialization, national key accounts, and consumer affairs.
Speaker Bios

• **Amber Backhaus**, Vice President of Public Affairs, **MN Automobile Dealers Association (MADA)** She has over 20 years working as a government relations professional, representing clients before the Minnesota Legislature and state agencies. Currently, she leads the advocacy efforts for MADA, a trade group representing Minnesota’s 370 franchised new car and truck dealers. Prior to joining MADA, Amber worked in the government relations practice of Leonard, Street & Deinard. She also served as the Director of Public Affairs for the Minnesota Trucking Association.

• **Senator David Senjem** was reelected to the **Minnesota Senate** in 2020. He served as majority leader from 2011 to 2013 and minority leader from 2007 to 2011 and is currently chair of the Energy and Utilities Committee. A Republican, Senjem represents District 25, which includes portions of Dodge and Olmsted counties in the southeastern part of the state.

• **Dean Taylor** is a senior policy advisor for **Plug in America** and has other clients in his consulting practice since 2019. He has 30 years of transportation electrification (TE) experience with a focus on regulatory and legislative affairs, external engagement, business planning, strategy development and utility program design (mostly for Southern California Edison). He has chaired many regulatory and TE coalitions (e.g., over 14 years with California’s Low Carbon Fuel Standard, the 2008 federal EV tax credit coalition), and designed and project managed dozens of technical, environmental and business planning TE studies.
AchiEVe: Transition to EVs Model Policy Toolkit

- Collaboration between PIA, Sierra Club, Electrification Coalition, Forth Mobility
- [https://pluginamerica.org/policy/achieve-policy-toolkit/](https://pluginamerica.org/policy/achieve-policy-toolkit/)
- Designed for 6 key stakeholder groups:
  - Legislators; Governor’s offices / state agencies; transit agencies; cities and local government, businesses; regulators & utilities
- Various categories of policies
  - Enable vehicle purchase
  - Increase charging infrastructure
  - Prioritize equity and expand access
  - Electrify fleets
  - And more!
Thank you!

Pete Chipman Policy Director
Dean Taylor Senior Policy Advisor
PChipman@pluginamerica.org
Dtaylor@pluginamerica.org
www.pluginamerica.org

- Recording of the webinar is posted [here](#) and includes presentations from BloombergNEF, Drive Electric MN, and MN Auto Dealers Association.
Transportation electrification and the Future Fuels Act

Jeremy Martin, Ph.D.
Director of Fuels Policy, Senior Scientist
Union of Concerned Scientists
Future Fuels Act

Representatives Lippert, Long, Stephenson, and Elkins

Senator Senjem

Supporters

Alliance for Automotive Innovation
American Coalition for Ethanol
Amp Americas
Audi of America
Biomass Solution
Center for Energy and Environment
ChargePoint
Christianson, PLLP
Conservation Minnesota
Farmers Business Network
Fresh Energy
General Motors
Low Carbon Fuels Coalition
Minnesota Bio-Fuels Association
Partnership on Waste and Energy
Plug In America
Rivian
Sustainable Farming Corporation
Tesla
The Coalition for Renewable Natural Gas
The Nature Conservancy
The Renewable Fuels Association
Union of Concerned Scientists
Universal Renewable Products, LLC
Xcel Energy
Graph showing Carbon Intensity (grams CO2e/MJ) for MW Gasoline, Ethanol, MW grid average, Leading MW utility, and 80% renewable grid.

- MW Gasoline: High intensity
- Ethanol: Lower intensity than gasoline
- Efficient ethanol: Lower intensity than Ethanol
- Ethanol potential: Lower intensity than Efficient ethanol
- MW grid average: Moderate intensity
- Leading MW utility: Moderate intensity
- 80% renewable grid: Lowest intensity
CA LCFS Fuel Volume and Credits by Fuel Type

Volume (million gallons gasoline equivalent)

Credits (million metric tons CO2e)

- Ethanol
- Biodiesel
- Renewable diesel
- Biomethane
- Natural gas
- Electricity

www3.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm
2.9 million credits x $198 per credit = $580 million
EV fleets generate credits. A transit bus can generate credits worth more than $10K/year per bus.
States are taking different approaches to credit value from residential EV charging
In California utilities pool credits to fund a cash on the hood EV incentive with additional funds designated to support transportation electrification for disadvantaged communities.
In Oregon utilities are using Clean Fuel Program funds to run a variety of programs.
UCS Clean Fuel Resources

- Clean Fuels for the Midwest
  - ucsusa.org/resources/clean-fuels-midwest
- Clean Fuel Standards
  - ucsusa.org/resources/clean-fuel-standards
- Fueling a Clean Transportation Future
  - ucsusa.org/FuelingaCleanFuture
- Blogs
  - blog.ucsusa.org/author/jeremy-martin/
- Or just reach out
  - Jeremy Martin
  - jmartin@ucsusa.org
  - 202 331 6946
How Minnesota Can Lead on Transportation Electrification in 2022

Road Fee Study
Minnesota’s Highway Funding Gap

Rick Tempchin
Rick@evtransportaionalliance.org
01-28-2022
Key Finding: Fuel Economy Improvements Drive Minnesota’s Gap in Highway Funding

• Cumulative motor fuel tax revenue will decline by $91 million from 2019-2030
• Revenue losses are driven by significant improvements to fuel economy
• Recently announced federal CAFE standards will further erode revenue
Key Finding: Inflation Will Contribute to Losses in Purchasing Power

- Construction and maintenance costs will rise
- Minnesota is set to lose $171 million to inflation through 2030
Electric Vehicles Currently Pay Their Fair Share of Transportation Costs

• The current $75 registration tax is fair, equitable, equivalent, comparable
• EVs average over 100 MPG equivalent
• Higher EV taxes penalize fuel efficiency
$ Fuel Efficiency Saves Voters Money $

- **2010 Ford F-150 truck**
  - 12,000 miles/17 MPG x $.036 = $216/year
- **2020 Ford F-150 truck**
  - 12,000 miles/22 MPG x $.036 = $167/year
- **2022 Ford F-150 electric Lightning truck**
  - 12,000 miles/85 MPG x $.036 = $43/year
Key Finding:
Increasing the EV Tax Will Have a Negligible Impact on Revenues

• Percentage of EVs on the road will be small
• Exceeding equivalent vehicle taxes are punitive
• Flat annual taxes are counter to user-pays principle
Increasing the EV Tax Will Have a Negligible Impact on Revenues
Key Finding: Minnesota Needs to Fill the Gap in Highway Funding

• Increase use of general funds, general obligation or highway bonds
• Public-private partnerships
• Raise motor fuel tax
• Index motor fuel tax to inflation
• Road User Charges
ACCELERATING EV ADOPTION

AMBER BACKHAUS
VP OF PUBLIC AFFAIRS
MINNESOTA AUTOMOBILE DEALERS ASSOCIATION
350 franchised new car dealers. In 2020:

- Employed over 20,000 Minnesotans with an average salary of $58,149
- Generated $14.8 billion in sales
- Contributed nearly $1 billion in sales taxes to Minnesota’s roads & transit infrastructure

Network of 16,000+ dealerships nationwide; expected to spend $2 to $3 billion to be EV ready

Provide access to EV sales and service in communities across the nation, not just major metropolitan areas

Accelerate development of the charging network

Assist with consumer outreach and education

- 2021 Twin Cities Auto Show: over 2,000 EV ride and drives in 10 days
Currently, there is a lack of customer demand for them in Minnesota:

- Significant upfront cost difference compared to similar gas burning vehicles; no consumer rebate program
- Lack of models and features Minnesotans buy (trucks, AWD, 3rd row, towing capacity)
- Range and charging concerns
SUPPLY MANDATES DON’T SELL MORE EVs – INCENTIVES DO

Vehicle purchase programs are the most effective way to sell more EVs. – National Association of State Energy Officials (2018)

Incentives are “the most important factor in EV adoption.” – Minnesota Pollution Control Agency (2019)

Since 2013, California has spent $770 million on consumer rebates for ZEV vehicles, with another $525 million allocated in 2021.

<table>
<thead>
<tr>
<th>ZEV State</th>
<th>2018 EV Market Share</th>
<th>State Purchase Incentive Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>7.92%</td>
<td>Yes</td>
</tr>
<tr>
<td>Washington</td>
<td>4.28%</td>
<td>Yes</td>
</tr>
<tr>
<td>Oregon</td>
<td>3.40%</td>
<td>Yes</td>
</tr>
<tr>
<td>Colorado</td>
<td>2.60%</td>
<td>Yes</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>2.52%</td>
<td>Yes</td>
</tr>
<tr>
<td>Connecticut</td>
<td>2.02%</td>
<td>Yes</td>
</tr>
<tr>
<td>Vermont</td>
<td>1.92%</td>
<td>No</td>
</tr>
<tr>
<td>Maryland</td>
<td>1.91%</td>
<td>Yes</td>
</tr>
<tr>
<td>New Jersey</td>
<td>1.59%</td>
<td>No</td>
</tr>
<tr>
<td>New York</td>
<td>1.56%</td>
<td>Yes</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>1.26%</td>
<td>No</td>
</tr>
<tr>
<td>Minnesota</td>
<td>1.14%</td>
<td>No</td>
</tr>
<tr>
<td>Maine</td>
<td>1.13%</td>
<td>No</td>
</tr>
</tbody>
</table>
SUPPLY MANDATES DON’T SELL MORE EVs – INCENTIVES DO

In 2019, Vermont, New Jersey & Maine enacted EV incentives, boosting their EV market share significantly from 2018 to 2020:

• Vermont: 1.92% to 3.05%; ↑1.13%
• New Jersey: 1.59% to 2.98%; ↑1.39%
• Maine: 1.13% to 1.91%; ↑0.78%

<table>
<thead>
<tr>
<th>State</th>
<th>2020 EV Market Share</th>
<th>State Purchase Incentive Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>8.35%</td>
<td>Yes</td>
</tr>
<tr>
<td>Washington</td>
<td>5.53%</td>
<td>Yes</td>
</tr>
<tr>
<td>Oregon</td>
<td>5.25%</td>
<td>Yes</td>
</tr>
<tr>
<td>Colorado</td>
<td>4.17% (NON ZEV until 2022)</td>
<td>Yes</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>3.13%</td>
<td>Yes</td>
</tr>
<tr>
<td>Vermont</td>
<td>3.05%</td>
<td>Yes</td>
</tr>
<tr>
<td>New Jersey</td>
<td>2.98%</td>
<td>Yes</td>
</tr>
<tr>
<td>Connecticut</td>
<td>2.47%</td>
<td>Yes</td>
</tr>
<tr>
<td>Maryland</td>
<td>2.85%</td>
<td>Yes</td>
</tr>
<tr>
<td>New York</td>
<td>2.17%</td>
<td>Yes</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>1.97%</td>
<td>No</td>
</tr>
<tr>
<td>Maine</td>
<td>1.91%</td>
<td>Yes</td>
</tr>
<tr>
<td>Minnesota</td>
<td>1.69% (NON ZEV until 2024)</td>
<td>No</td>
</tr>
</tbody>
</table>
NOW’S THE TIME FOR MN!

House File 1668/Senate File 1684 authorize consumer rebates for EVs and grants to dealerships to offset the costs of electrification.

With the state expecting a record $7.7 billion budget surplus, now’s the time to act.

Consumer rebates and dealer grants are a great use of one-time money to jump start the transition to EVs!