



# *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

---

- **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



# How Minnesota Can Lead on Transportation Electrification in 2022: Jan 28, 2022 10-11 am

**10:00: Welcome**

Rep. Jamie Long, Minnesota House

**10:06: Global EV Opportunity**

Corey Cantor, Bloomberg New Energy  
Finance

**10:12: Future Fuels Act**

Jeremy Martin, Union of Concerned  
Scientists

**10:20: Utility TE Role Bill**

Deb Erwin, Xcel Energy

**10:28: MN Funds to Match DOT \$**

Brendan Jordan, Drive Electric Minnesota

**10:36: Road Fee Study**

Rick Tempchin, Alliance for Transportation  
Electrification

**10:44: Other TE Legislation**

Amber Backhaus, Minnesota Auto Dealer  
Association

**10:50: Q&A**

**10:55: Closing by Sen. David Senjem, MN Senate**

## 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.

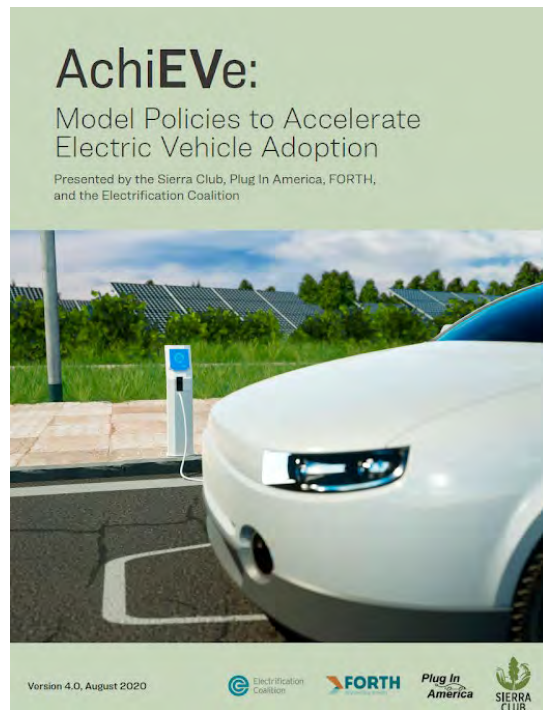
## Speaker Bios

- **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.

- Collaboration between PIA, Sierra Club, Electrification Coalition, Forth Mobility
- <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

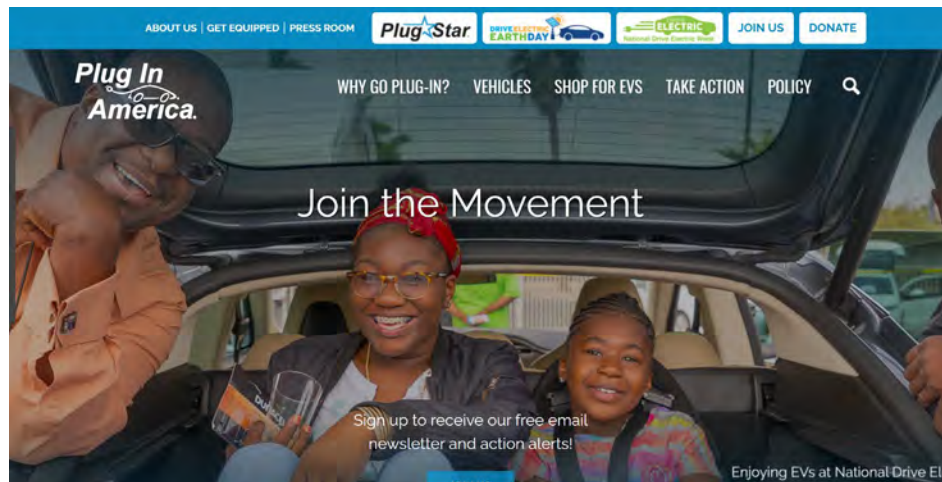
Dean Taylor Senior Policy Advisor

[PChipman@pluginamerica.org](mailto:PChipman@pluginamerica.org)

[Dtaylor@pluginamerica.org](mailto:Dtaylor@pluginamerica.org)

[www.pluginamerica.org](http://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

# Clean Fuels for the Midwest

### Expanding the Use of Clean Fuels Will Deliver Economic and Climate Benefits

The Midwest leads the United States in producing biofuels and wind energy, yet petroleum-based fuels brought in from other states and countries meet more than 90 percent of the region's transportation energy needs. Gasoline and diesel

**HIGHLIGHTS**  
Increasing the use of cleaner transportation fuels, including biofuels and electricity, is a smart way to help address climate change and reduce air pollution while also spending less on oil and providing more supports to local economies. Midwestern states produce a most of the country's ethanol and biomass, both of which can get cleaner through improved processes at production facilities and more sustainable practices on farms producing biomass crops. At the same time, the Midwest leads the country in wind power generation, and electricity will play an important role in the future of clean transportation, and electric vehicles are getting cleaner as more renewable power reaches out on the grid. Clean fuels standards would promote the widespread use of biofuels and electric vehicles and encourage oil fuel producers to reduce the global warming pollution that comes from making transportation fuels.

# Clean Fuel Standards

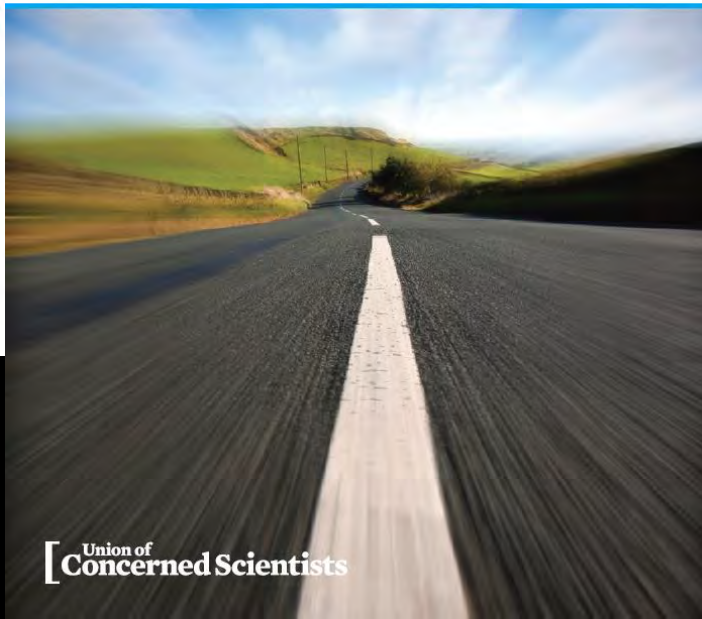
### A Proven Approach to Fuel a Low-Carbon Future

Grappling with climate change requires transforming how we power our economy, and no sector requires more fundamental change than transportation, which accounts for the largest share of US global warming pollution. Most of the

**HIGHLIGHTS**  
Replacing petroleum with renewable electricity and other clean transportation fuels is among the most critical steps to stave off the worst impacts of climate change. Clean fuel standards are a proven part of the solution, holding the oil industry accountable for its actions while steadily driving down emissions. By connecting a fuel's value to its pollution, well-designed standards make clean fuels less expensive and dirty fuels more expensive. This supports the lowest-carbon fuels and drives down emissions from all fuels from electricity to biofuels and even gasoline and diesel. As we scale up clean fuels and transportation electrification, it's essential that costs are shared equitably and that all communities benefit, especially those disproportionately burdened by transportation pollution.

# Fueling a Clean Transportation Future

### Smart Fuel Choices for a Warming World



## Washington State Tackles Transportation Emissions

March 7, 2019



The climate of immediate res fronts, and wh DC the Trump attempting to progress of th legislators are

The largest so transportation petroleum-ba emissions fro vehicles and t

## Five Reasons Midwestern States Need a Clean Fuel Standard

January 7, 2020



**Jeremy Martin**  
Senior Scientist and Director of Fuels Policy



This week I joined the Coalition for Ethanol and for Midwestern states t transportation emission intensive gasoline and c transportation fuels, in biofuels. Clean fuel star California, Oregon and

## California's Low Carbon Fuel Standard Accelerating Transportation Electrification

December 3, 2020



VANREX/WIKIMEDIA

Last month California electric utilities launched the California Clean Fuel Rewards Program, a statewide point-of-sale electric vehicle rebate program worth up to \$1,500 per vehicle (depending upon battery size). This program is funded by credits from California's Low Carbon Fuel Standard (LCFS), which are quickly becoming a major source of support for transportation electrification, complementing other state climate and clean air programs.



**Jeremy Martin**  
Senior Scientist and Director of Fuels Policy

# Future Fuels Act

Office of the Revisor of Statutes

**HF 2083** Status in the **House** for the 92nd Legislature (2021 - 2022)

**SF 2027** Status in the **Senate** for the 92nd Legislature (2021 - 2022)

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

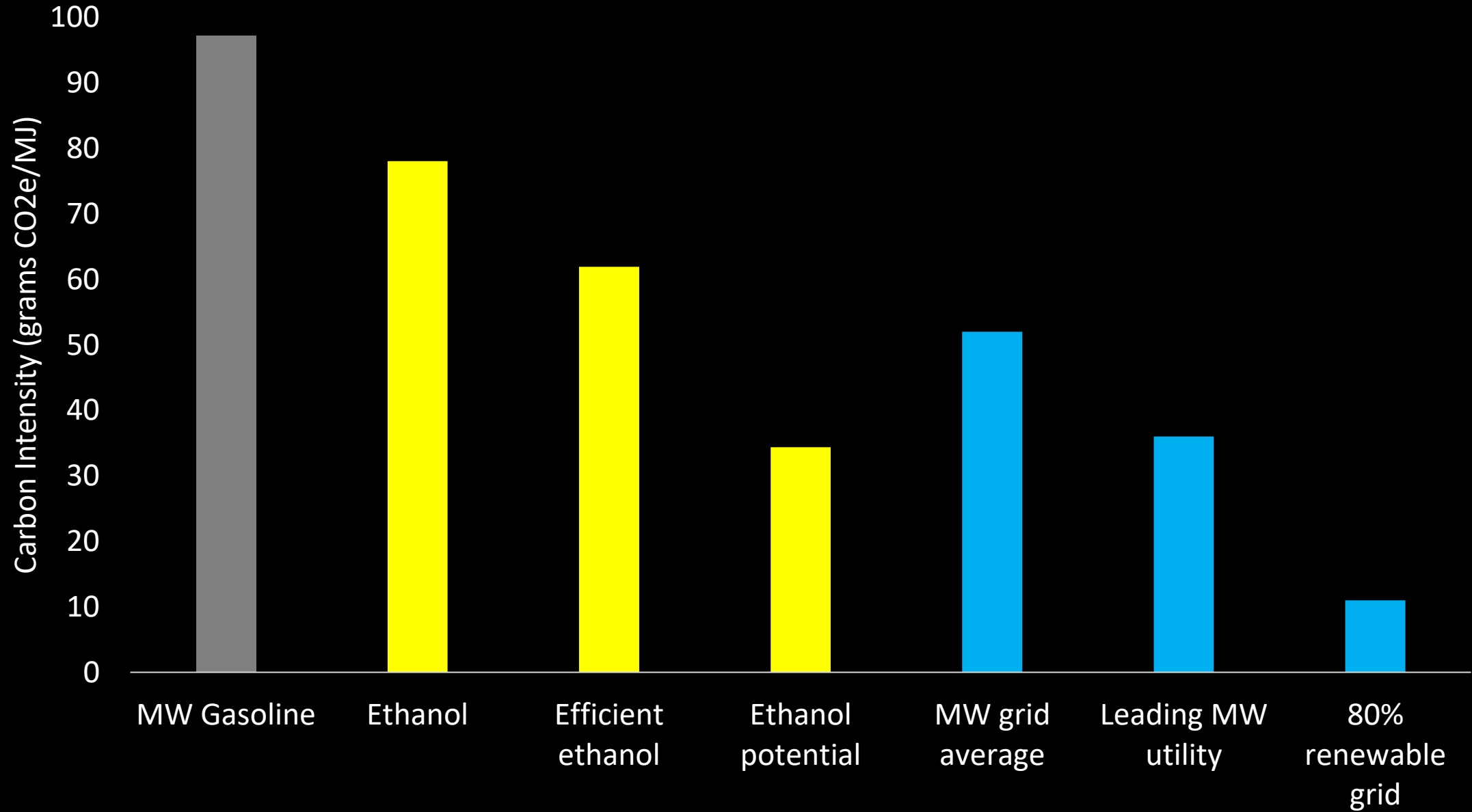
Farmers Business Network  
Fresh Energy  
General Motors  
Low Carbon Fuels Coalition  
Minnesota Bio-Fuels Association  
Partnership on Waste and Energy  
Plug In America  
Rivian  
Sustainable Farming Corporation

Tesla  
The Coalition for Renewable Natural Gas  
The Nature Conservancy  
The Renewable Fuels Association  
Union of Concerned Scientists  
Universal Renewable Products, LLC  
Xcel Energy

## Gasoline

## Ethanol

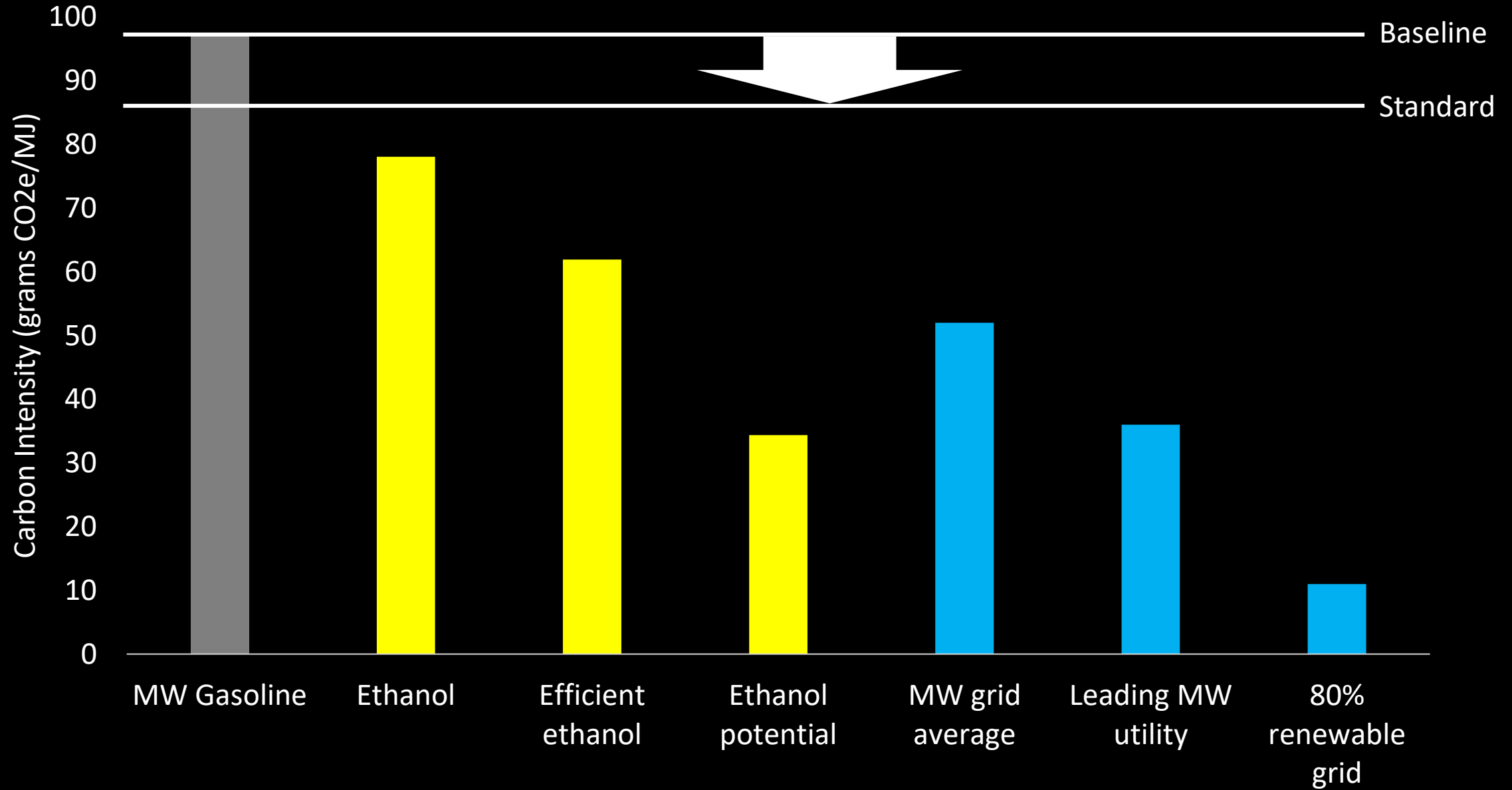
## Electricity



# Gasoline

# Ethanol

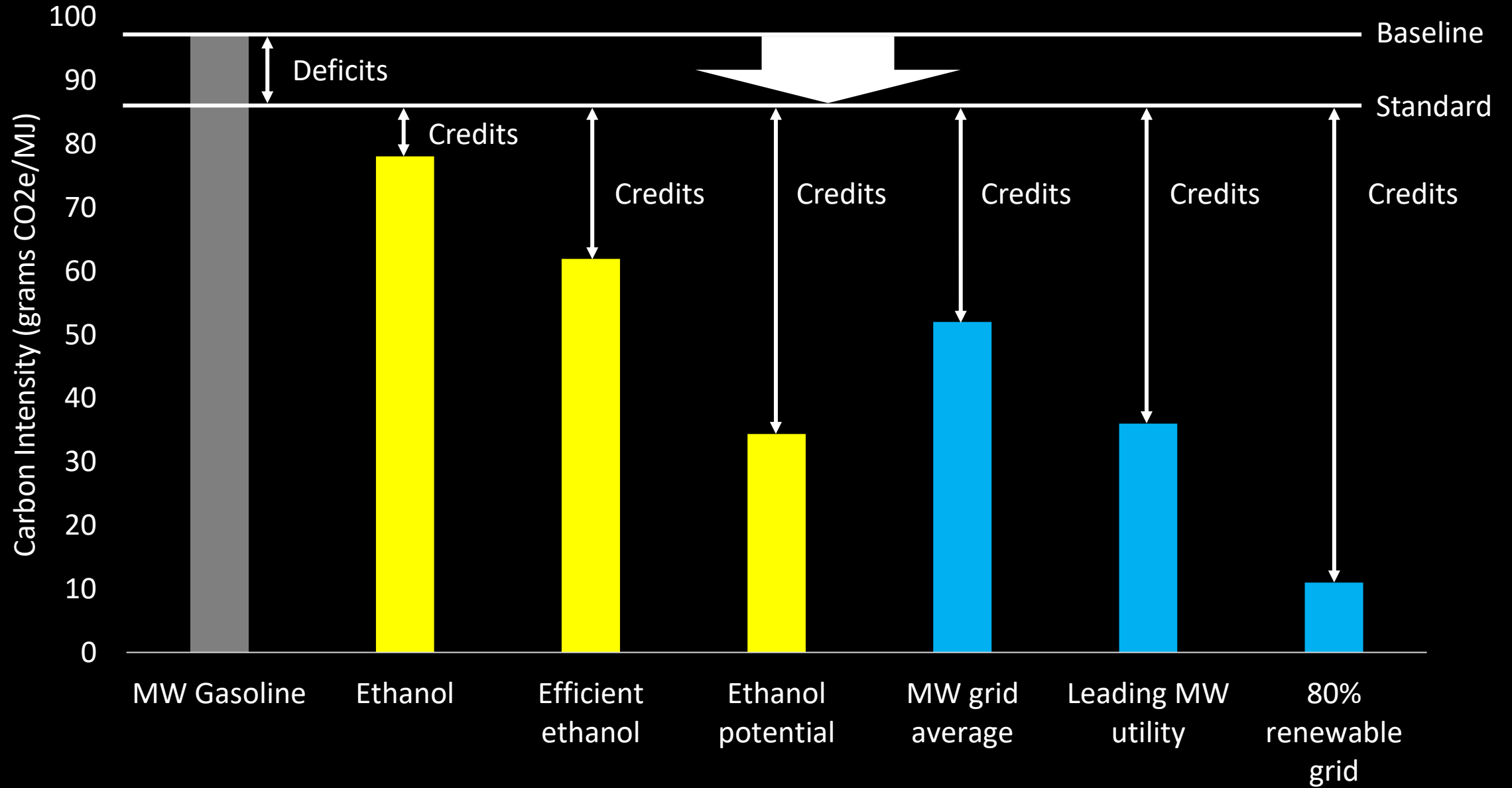
# Electricity



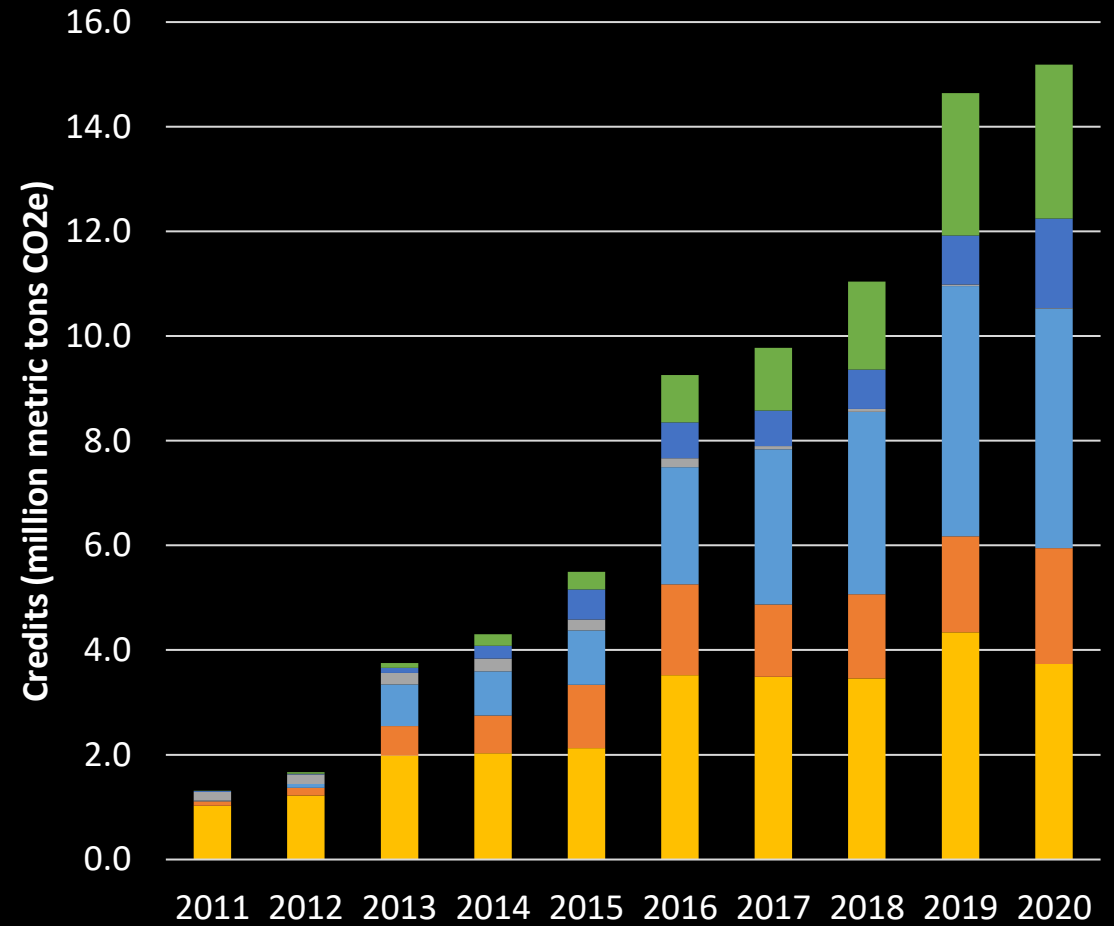
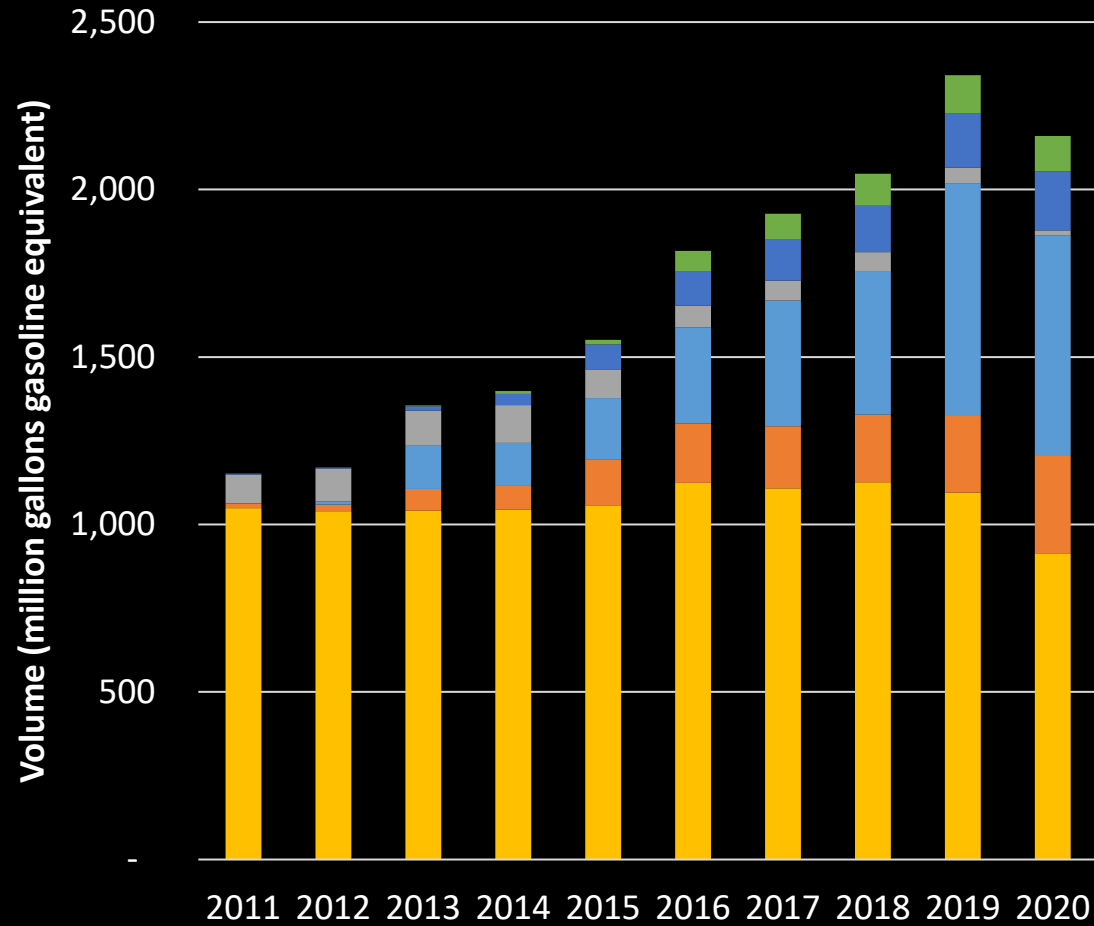
# Gasoline

# Ethanol

# Electricity



# CA LCFS Fuel Volume and Credits by Fuel Type

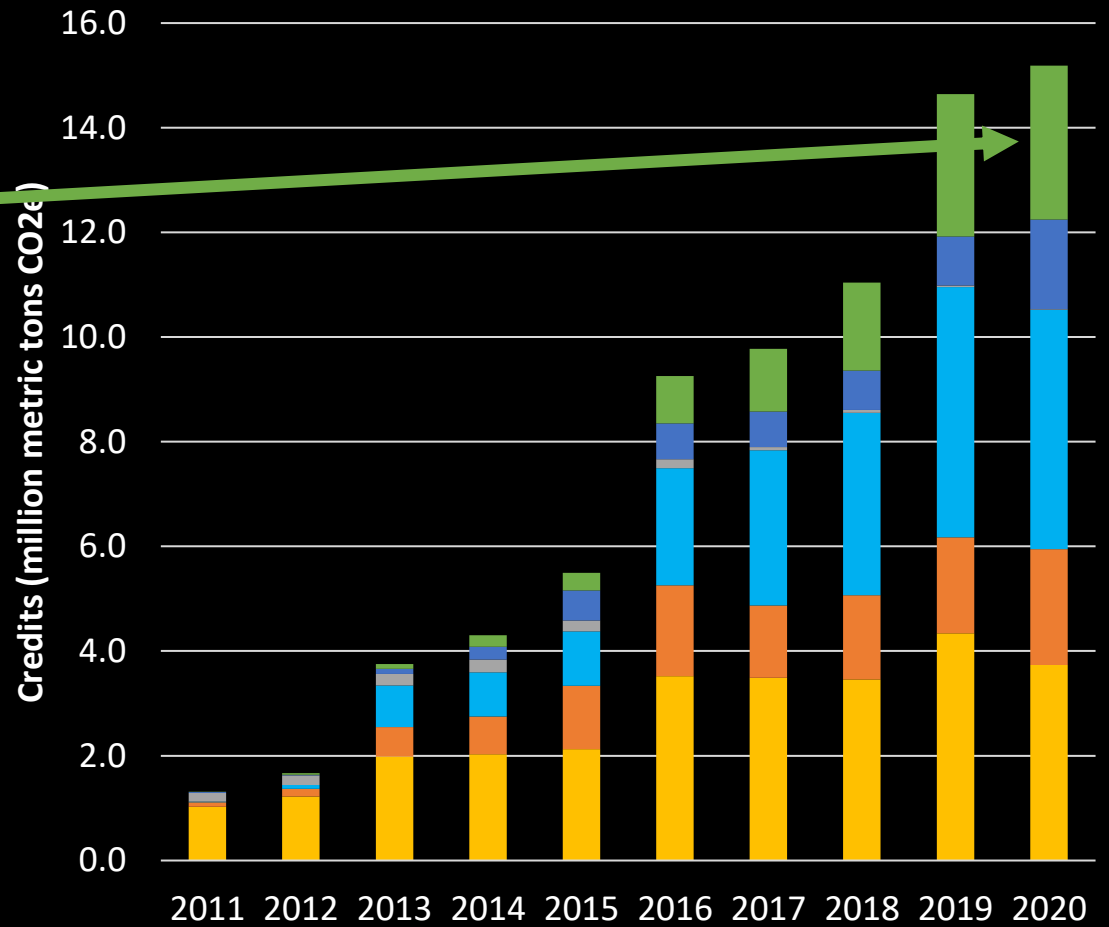


www3.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm

Ethanol
  Biodiesel
  Renewable diesel
  Biomethane
  Natural gas
  Electricity



2.9 million credits  
x \$198 per credit  
= \$580 million



[www3.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm](http://www3.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm)

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

{ 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

The screenshot shows the homepage of the California Clean Fuel Reward program. At the top left is the logo, which consists of a green circle containing a white car silhouette with a plug, followed by the text "CALIFORNIA CLEAN FUEL REWARD™". To the right of the logo are icons for chat and a mobile phone, and a language selection menu with buttons for "EN", "ES", and "中". Below the logo is a dark blue navigation bar with white text links: "HOME", "PROGRAM INFO", "FIND YOUR EV", "EV OWNERSHIP", "FAQ", "FOR RETAILERS", "REPORTING", and "LOGIN". The main content area features a large banner with the headline "MAKE YOUR BEST DEAL. THEN SAVE UP TO \$750 MORE." in white text against a background of a road at sunset. Below the headline is a video player. The video player has a dark grey background with white text on the left: "The California Air Resources Board and your electric utility are teaming up to offer the California Clean Fuel Reward. Save up to \$750 on the purchase or lease of an eligible new Battery Electric (BEV) or Plug-in Hybrid (PHEV) vehicle." To the right of the text is a video player interface showing the California Clean Fuel Reward logo, a play button, a progress bar at 01:04, and a heart icon in the top right corner.

# In Oregon utilities are using Clean Fuel Program funds to run a variety of programs

Program	Est Program Cost	Portfolio %
<b>Grants and Infrastructure</b>	<b>\$5,510,000</b>	<b>79%</b>
Drive Change Fund	\$2,300,000	33%
Electric School Bus Fund	\$1,500,000	21%
Public Infrastructure	\$1,450,000	20%
Grant Matching	\$400,000	5%
<b>Education &amp; Outreach</b>	<b>\$540,000</b>	<b>8%</b>
Statewide Campaign	\$380,000	5%
Residential Outreach	\$110,000	2%
School Engagement	\$50,000	1%
<b>Emerging Technology</b>	<b>\$350,000</b>	<b>5%</b>
Vehicle to Grid	\$100,000	1%
ROW Charging	\$250,000	4%
Smart Charging Year 3	\$0	0%
Administrative Costs	\$600,000	8%
<b>PORTFOLIO TOTAL</b>	<b>\$ 7,000,000</b>	<b>100%</b>



2021 CFP Proposed Budget		
Budget Category	Estimated \$ Value	% of Total Budget
<b>A. E-Mobility Grant and Grant Matching Funds Total</b>	<b>\$1,880,000</b>	<b>76%</b>
Electric Mobility Grant Program	\$1,380,000	
Grant Matching	\$500,000	
<b>B. Outreach and Education</b>	<b>\$215,000</b>	<b>9%</b>
<b>C. Management and Administration</b>	<b>\$290,000</b>	<b>12%</b>
<b>D. Contingency</b>	<b>\$95,400</b>	<b>4%</b>
<b>Total Proposed Budget<sup>9</sup></b>	<b>\$2,480,400</b>	



# Clean Fuels for the Midwest

Expanding the Use of Clean Fuels Will Deliver Economic and Climate Benefits

# Clean Fuel Standards

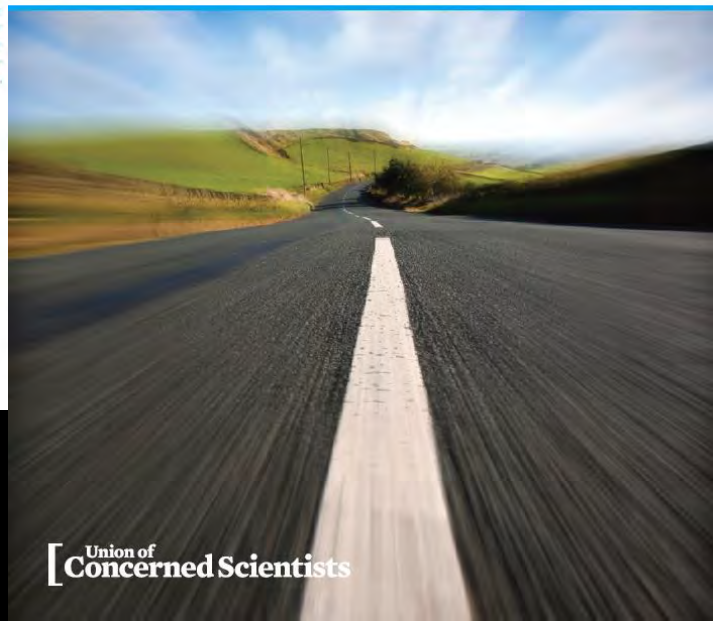
A Proven Approach to Fuel a Low-Carbon Future

HIGHLIGHTS

Replacing petroleum with renewable electricity and other clean transportation fuels is among the most critical steps to stave off the worst impacts of climate change. Clean fuel standards are a proven part of the solution, holding the oil industry accountable for its actions while steadily driving down emissions. By connecting a fuel's value to its pollution, well-designed standards make clean fuels less expensive and dirty fuels more expensive. This supports the lowest-carbon fuels and drives down emissions from all fuels from electricity to biofuels and even gasoline and diesel. As we scale up clean fuels and transportation electrification, it's essential that costs are shared equitably and that all communities benefit, especially those disproportionately burdened by transportation pollution.

# Fueling a Clean Transportation Future

Smart Fuel Choices for a Warming World



# UCS Clean Fuel Resources

- Clean Fuels for the Midwest
  - [ucsusa.org/resources/clean-fuels-midwest](https://ucsusa.org/resources/clean-fuels-midwest)
- Clean Fuel Standards
  - [ucsusa.org/resources/clean-fuel-standards](https://ucsusa.org/resources/clean-fuel-standards)
- Fueling a Clean Transportation Future
  - [ucsusa.org/FuelingaCleanFuture](https://ucsusa.org/FuelingaCleanFuture)
- Blogs
  - [blog.ucsusa.org/author/jeremy-martin/](https://blog.ucsusa.org/author/jeremy-martin/)
- Or just reach out
  - Jeremy Martin
  - [jmartin@ucsusa.org](mailto:jmartin@ucsusa.org)
  - 202 331 6946



Alliance for  
Transportation  
Electrification

How Minnesota Can Lead on  
Transportation Electrification in  
2022

# Road Fee Study Minnesota's Highway Funding Gap

Rick Tempchin

[Rick@evtransportationalliance.org](mailto:Rick@evtransportationalliance.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 \$

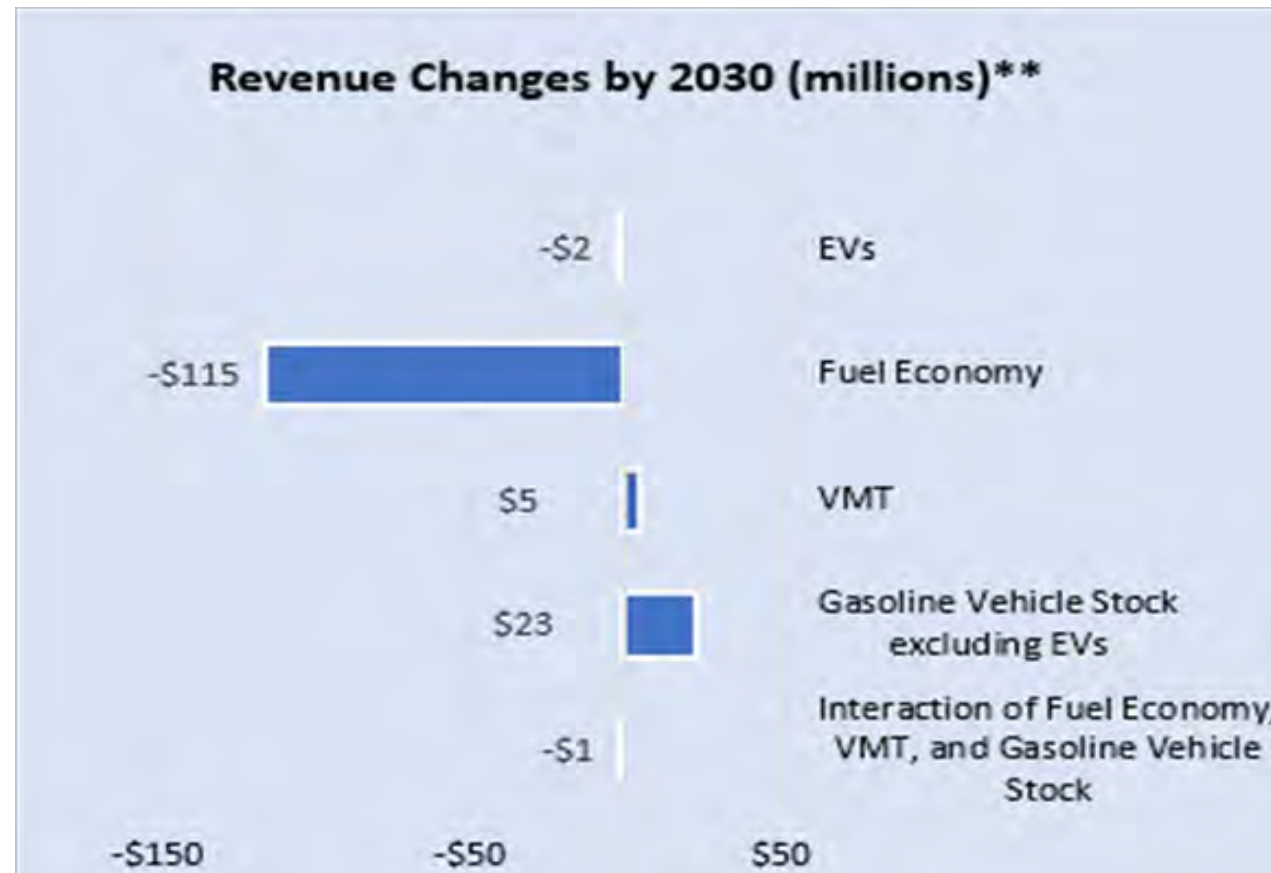
- **2010 Ford F-150 truck**
  - 12,000 miles/17 MPG x \$.036 = **\$216/year**
- **2020 Ford F-150 truck**
  - 12,000 miles/22 MPG x \$.036 = **\$167/year**
- **2022 Ford F-150 electric Lightning truck**
  - 12,000 miles/85 MPG x \$.036 = **\$43/year**

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



# ABOUT THE INDUSTRY

## MINNESOTA'S DEALERS



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



## ESSENTIAL TO EV SALES



# THE EV DEMAND CHALLENGE

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, 3<sup>rd</sup> 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.

ZEV State	2018 EV Market Share	State Purchase Incentive Program
California	7.92%	Yes
Washington	4.28%	Yes
Oregon	3.40%	Yes
Colorado <b>NON ZEV (until 2022)</b>	2.60%	Yes
Massachusetts	2.52%	Yes
Connecticut	2.02%	Yes
Vermont	1.92%	No
Maryland	1.91%	Yes
New Jersey	1.59%	No
New York	1.56%	Yes
Rhode Island	1.26%	No
Minnesota <b>NON ZEV (until 2024)</b>	1.14%	No
Maine	1.13%	No

# 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%to1.91%; ↑0.78%

State	2020 EV Market Share	State Purchase Incentive Program
California	8.35%	Yes
Washington	5.53%	Yes
Oregon	5.25%	Yes
Colorado	4.17%	Yes
<b>NON ZEV until 2022</b>		
Massachusetts	3.13%	Yes
Vermont	3.05%	Yes
New Jersey	2.98%	Yes
Connecticut	2.47%	Yes
Maryland	2.85%	Yes
New York	2.17%	Yes
Rhode Island	1.97%	No
Maine	1.91%	Yes
Minnesota	1.69%	No
<b>NON ZEV until 2024</b>		

# 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!

