

Current Status of Electric Vehicles in Minnesota

Fran Crotty RMAD Division
MN Pollution Control Agency
March 3, 2014



Electric Vehicles in Minnesota



Chevy Volt



Tesla S



Nissan Leaf



Mitsubishi i



Makes/Models Available in Minnesota

Nissan Leaf

Chevy Volt

Mitsubishi I

Toyota Prius Plug-in

Ford Focus EV

Ford C-max Energi

Cadillac ELR

BMW i3

Smart for Two

Tesla S

Ford Fusion Energi



What is an Electric Vehicle?

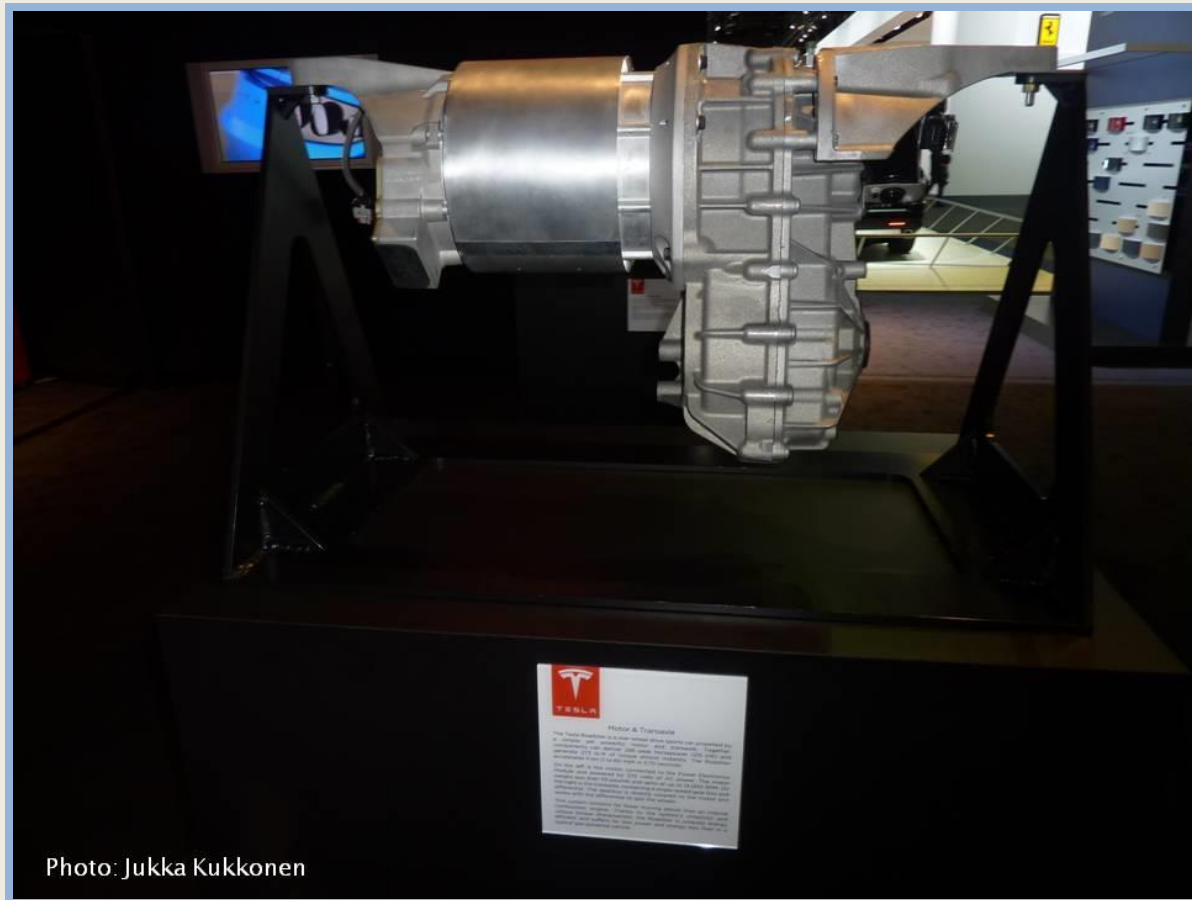


Photo: Jukka Kukkonen



Plug-in to Charge Batteries



Why Electric Vehicles?

- 3 times more efficient than gas powered vehicles
 - Lower GHG, NO_x, VOCs, particulates (PM 2.5, PM 10)
 - zero emissions from the tailpipe
- Much lower maintenance
 - No motor oil changes
 - Fewer moving parts
- 75% lower cost to power at 2 to 3 cents per mile



Drive Electric Minnesota



First Responder Training
 Biofuels & Biofuel Vehicles • Gaswood Pools & Gaswood Fuel Vehicles
 Electric Drive Vehicles • Hydrogen

**Tuesday, June 18th -
 Wednesday, June 19th, 2013**

American Lung Association in Minnesota
 490 Concordia Avenue • Saint Paul

Agenda
 June 18: 8:30 am - 4:30 pm
 Electric Drive Vehicles & Hydrogen
 June 19: 8:30 am - 4:00 pm
 Natural Gas, Propane, Biofuel & Ethanol

With a growing number of alternative fuels & advanced technology vehicles on the road today it is critical that first responders are properly trained to ensure the safety of both the first responder and the occupant.

This 2-day course will provide classroom and hands-on training with vehicles present. Learning targets include:

- Key fuel properties and characteristics
- Vehicle components
- Vehicle identification
- First responder standard operating procedures (SOP)
- Safety equipment and apparatus use

Registration is free for first responders. **Only 25 seats are available.** Lunch will be provided. Continuing Education Units (CEUs) are available.

To register or for more information, please contact Mike at 612-222-1788 or Mike.Thurmond@mnpc.org

This training is sponsored by the Twin Cities Clean Cities Coalition (TCCC) and the American Lung Association in Minnesota. The sponsoring organizations for Minnesota (MPC) continue and this training are made possible through the U.S. Department of Energy award number 41500001.



Clearing the Air
 Next Generation
 Vehicle Solutions

Welcome!

to the alternative fuel vehicle
 symposium for Twin Cities local
 government leaders



Ramsey County – Maplewood Library



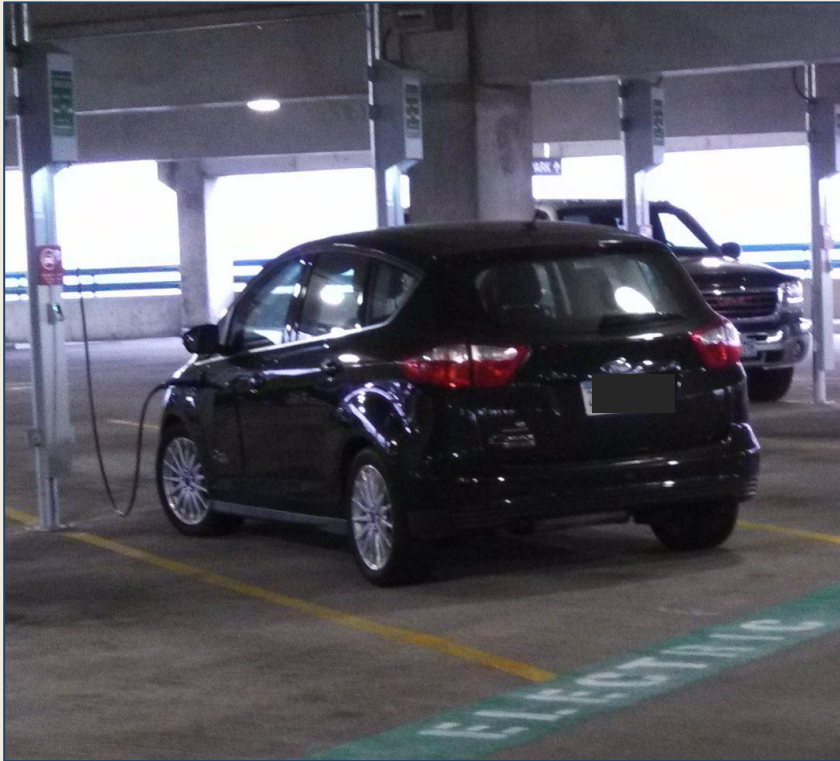
Albert Lea – Riverland Community College



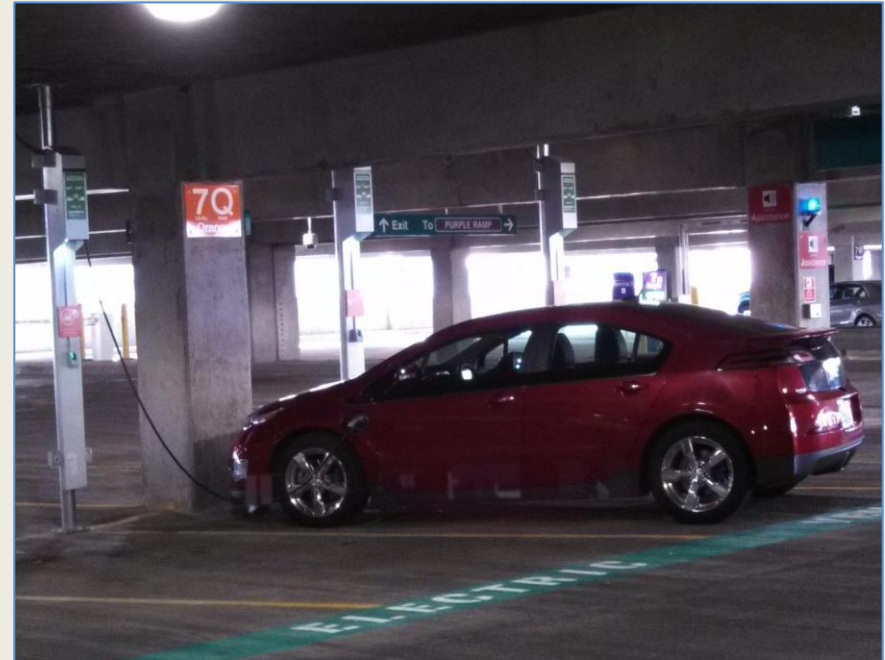
City of Duluth – Depot



MSP Airport Charging Stations



T1 - Red Ramp



T2 - Orange Ramp







Macalester College



Minnesota Pollution Control Agency

MN Public Charging Opportunities

- ❑ 139 Level 2 and Level 1 charging stations
- ❑ Level 3 or fast charging needed





ZERO
EMISSIONS
CHARGING
Challenge

EVs + Solar or Wind



Photo Credit: Anne Hunt



Charging with Solar Electricity
Como Park in Saint Paul



Utility Wind Electricity



Electric Vehicle Projections

Annual Increase in MN Electric Vehicles

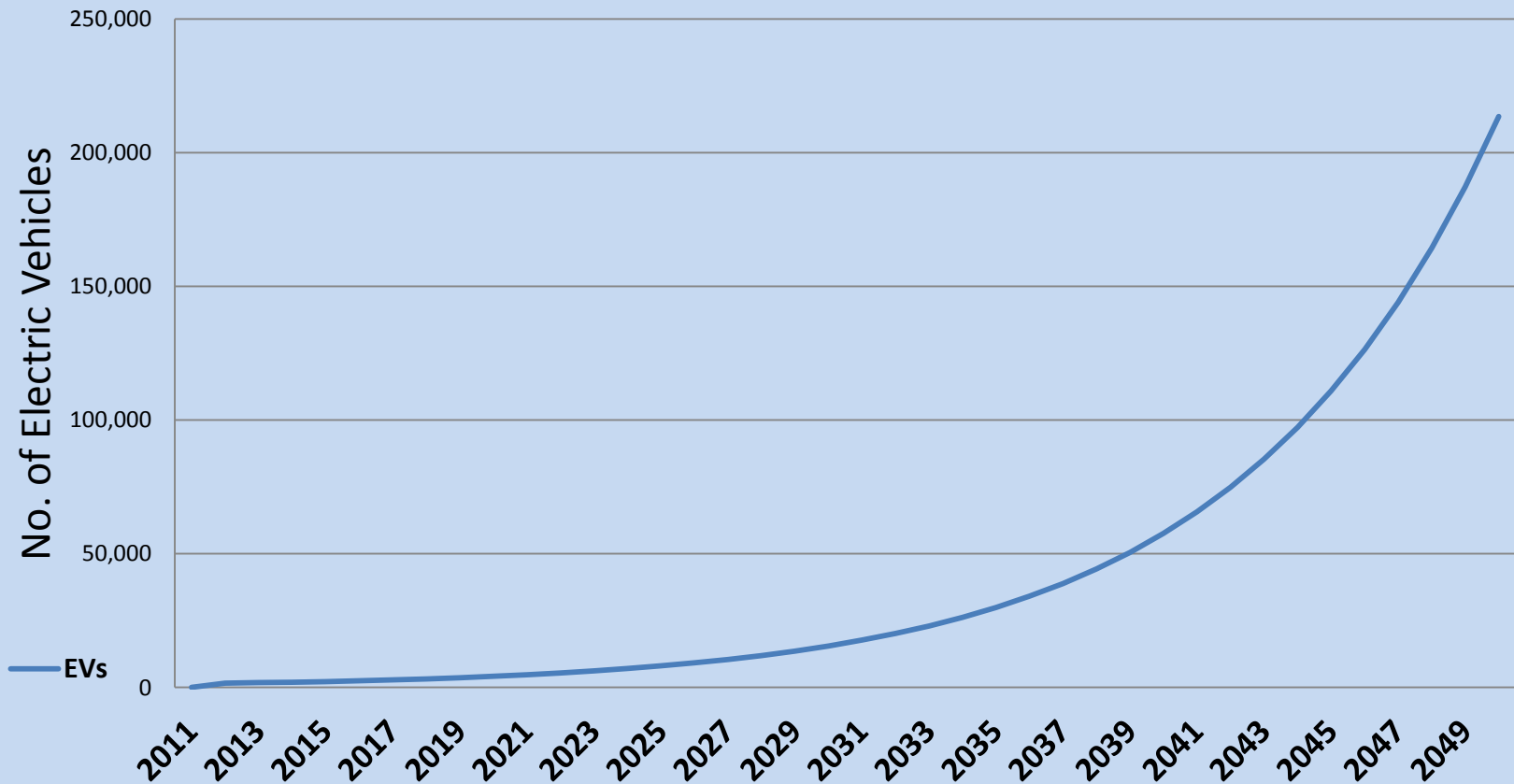




Photo by Jukka Kukkonen

4th Quarter 2013 there were 1,891 EV drivers in Minnesota



Minnesota Pollution Control Agency

Source: RL Polk Automotive Data, ChargePoint

Electric Vehicles in Public Fleets



City Fleets



Full Electric Nissan Leafs



Hennepin County



City of Edina



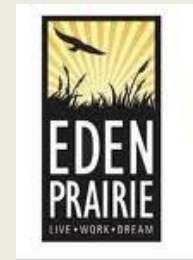
City Fleets



City of Eden Prairie Chevy Volt



City Fleets

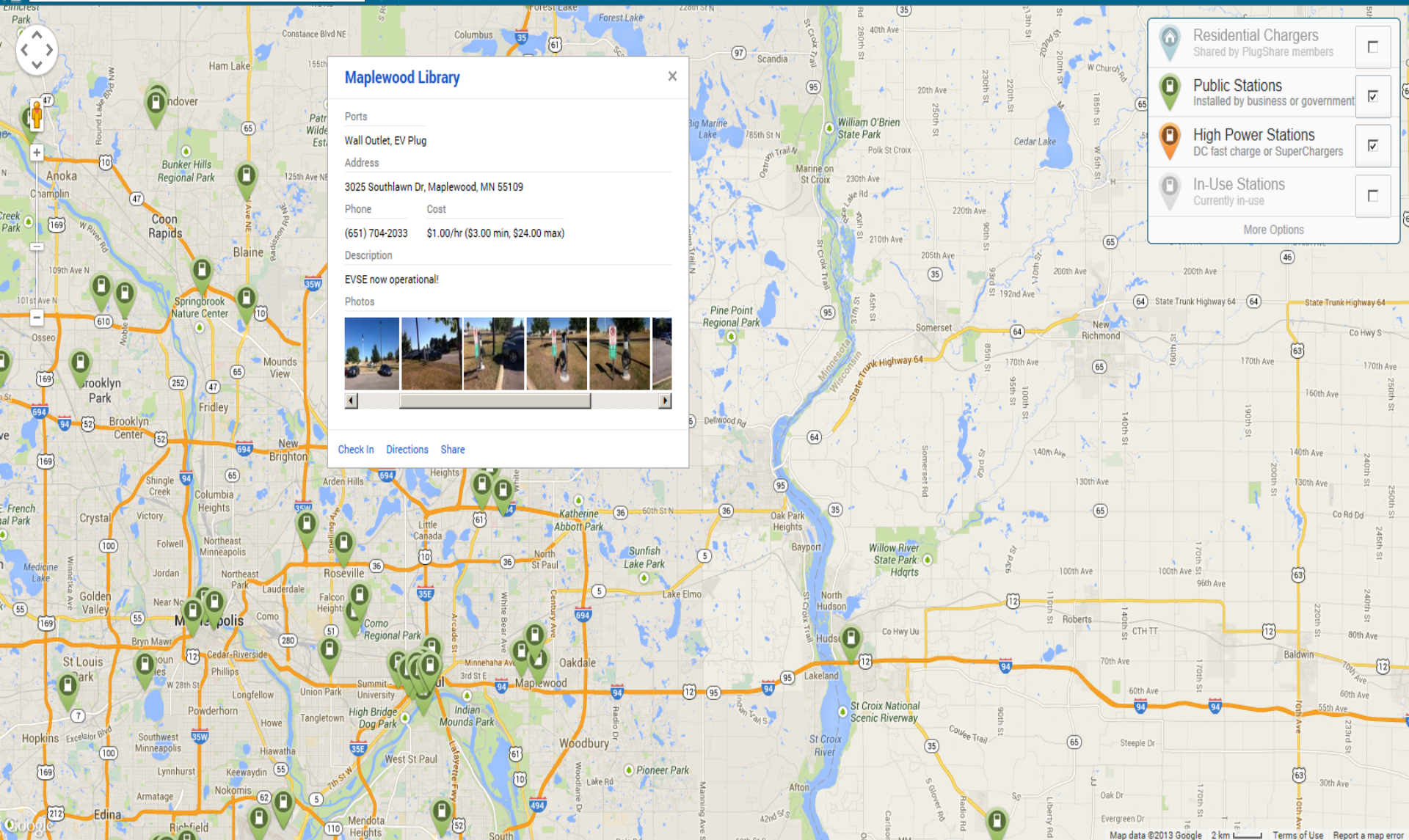


City of Eden Prairie Chevy Volt



Dakota County





Maplewood Library

Ports

Wall Outlet, EV Plug

Address

3025 Southlawn Dr, Maplewood, MN 55109

Phone Cost

(651) 704-2033 \$1.00/hr (\$3.00 min, \$24.00 max)

Description

EVSE now operational!

Photos

[Check In](#) [Directions](#) [Share](#)

Residential Chargers
Shared by PlugShare members

Public Stations
Installed by business or government

High Power Stations
DC fast charge or SuperChargers

In-Use Stations
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Electricity Basics

Benefits & Considerations

Stations

Locations

Infrastructure Development

Vehicles

Laws & Incentives

Electric Vehicle Charging Station Locations

Find electric vehicle charging stations near an address or ZIP code or along a route in the United States. For more alternative fueling stations, use the [Alternative Fueling Station Locator](#).

Find Stations
Plan a Route
Embed
Add a Station

Go

Electric

[more search options](#)

139

electric stations in Minnesota

Excluding private stations

[Download spreadsheet of matching stations](#)

Location details are subject to change. We recommend calling the stations to verify location, hours of operation, and access.

[ABOUT THE DATA](#)

Data Download Developer Tools



Multimodal Transportation

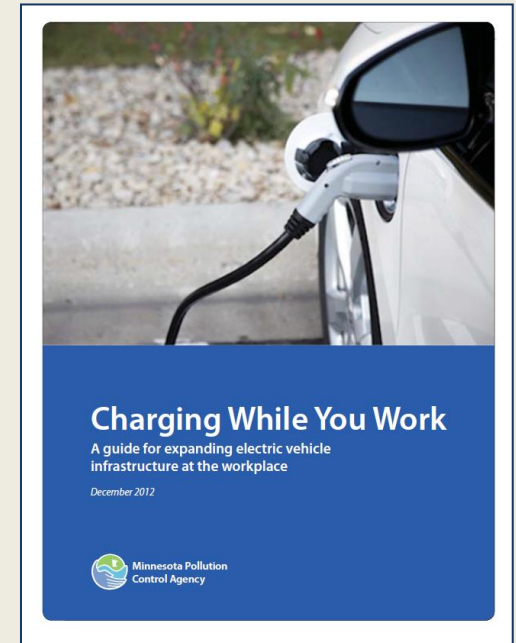


Plug-in Near Light Rail



MN Electric Vehicle Needs

- ❑ Install Level 3 fast charging
- ❑ More electric vehicles
- ❑ Expand use of solar or wind for charging EVs
- ❑ Support for workplace charging



Federal Electric Vehicle Incentives

Plug-In Electric Drive Vehicle Credit (IRC 30D)

- Total federal tax credit allowed is \$7,500 per vehicle.
- It begins to phase out when at least 200,000 qualifying vehicles have been sold.



For Additional Information

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