The 101 on Electric Vehicles in Minnesota

December 1, 2020
1:00pm - 2:00pm CT
Technology Reminders:

- Please type any questions into the chat - questions are welcome!
- All attendees will be muted and have their videos turned off.
- The presentations and recordings will be available on the Plug In America website.
1. **The Role of Cities and Counties in the Shift to Transportation Electrification**
   - December 1, 2020  11:00am - 12:30pm CT

2. **The 101 on Electric Vehicles in Minnesota**
   - December 1, 2020  1:00pm - 2:00pm CT

3. **Experience Electric Vehicles in a Virtual Test Drive**
   - December 1, 2020  2:15pm - 3:00pm CT

4. **How Minnesota Can Lead on Transportation Electrification in 2021**
   - December 3, 2020  10:00am - 12:00pm CT

5. **Economic Development Opportunities for MN from the Transportation Electrification Sector**
   - December 3, 2020  1:00 - 2:30pm CT

6. **Expanding Charging for MN Fleets, Workplaces, Multi-Unit Dwellings and Public Locations**
   - December 4, 2020  10:00am - 12:00pm CT
Minnesotans Going Electric
Thank you to our partners!
Minnesotans Going Electric
Thank you to our partners!
Minnesotans Going Electric
A Free Six-part Webinar Series
December 1-4, 2020

Register at
https://www.driveelectricmn.org/webinar-series-minnesotans-going-electric/
Our Speakers:

- **Brendan Jordan**
  Lead Facilitator
  Drive Electric Minnesota

- **Katherine Stainken**
  Policy Director
  Plug In America

- **Jukka Kukkonen**
  Chief EV Educator
  Shift2Electric

- **Kevin Schwain**
  Director of Program Strategy & Development
  Xcel Energy

- **Lisa Thurstin**
  Coordinator
  Twin Cities Clean Cities Coalition & Senior Manager, American Lung Association
Speaker Bios

- **Brendan Jordan** is the VP of Transportation and Fuels programs at **Great Plains Institute**, and the lead facilitator for **Drive Electric MN**.
- **Katherine Stainken** is Policy Director for **Plug In America**. Prior to her work at Plug In America, Katherine was a Director of Government Affairs at the Solar Energy Industries Association (SEIA), focused on policies to promote solar on the federal level as well as southeast and northeast regions, along with regulatory work at federal agencies. Katherine was also the chief liaison to the solar heating and cooling and EH&S groups at SEIA. She is former Fulbright and Thinkswiss scholar.
- **Jukka Kukkonen** is Chief EV Educator for **Shift2Electric** and teaches EV Market and Technologies at the University of St Thomas. He is also EV Expert for Fresh Energy and coordinates the Minnesota EV Owners group.
- **Kevin Schwain** is the Director of Program Strategy & Development at **Xcel Energy**. In this role, Kevin develops pilots and programs that help customers save money and reduce the impact of their energy usage. Kevin has been with Xcel Energy since 2008 and previously held leadership positions with Target Corporation, Advanced Technology Materials, and Hewlett Packard.
- **Lisa Thurstin** is **Twin Cities Clean Cities Coalition** coordinator and senior manager of the **American Lung Association** in Minnesota Clean Air Choice program. Lisa, has served as the TC4 coordinator since 2007 and worked on alternative fuel and advanced technology development activities in Minnesota and across the upper Midwest since 2001. She has managed a variety of large DOE funded projects with EV focus including Midwest EVOLVE, Twin Cities EV Community and the COOL EVs project.
## Agenda:

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00</td>
<td>Welcome</td>
<td>Brendan Jordan</td>
<td>Drive Electric MN</td>
</tr>
<tr>
<td>1:03</td>
<td>EV basics</td>
<td>Katherine Stainken</td>
<td>Plug In America</td>
</tr>
<tr>
<td>1:13</td>
<td>MN Experience</td>
<td>Jukka Kukkonen</td>
<td>Shift2Electric</td>
</tr>
<tr>
<td>1:23</td>
<td>Charging EVs &amp; Utilities</td>
<td>Kevin Schwain</td>
<td>Xcel Energy</td>
</tr>
<tr>
<td>1:33</td>
<td>Engagement</td>
<td>Lisa Thurstin</td>
<td>EV Driver, Twin Cities</td>
</tr>
<tr>
<td>1:39</td>
<td>Virtual Test Drive</td>
<td>Katherine Stainken</td>
<td>Cities Coalition</td>
</tr>
<tr>
<td>1:43</td>
<td>Q&amp;A</td>
<td></td>
<td>Plug In America</td>
</tr>
<tr>
<td>1:58</td>
<td>Closing</td>
<td>Brendan Jordan</td>
<td>Drive Electric MN</td>
</tr>
</tbody>
</table>

---

*Logos for Drive Electric MN, Plug In America, Xcel Energy, and Sustainable Growth Coalition.*
Plug In America
WE DRIVE ELECTRIC. YOU CAN TOO.

101 on EVs in Minnesota
December 1, 2020
Katherine Stainken, 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

[Image of a car and a group of people]
## Makes and Models of EVs available TODAY

### All Electric Vehicles

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tesla Model S</td>
<td>$76,000</td>
<td>310 miles</td>
</tr>
<tr>
<td>Tesla Model X</td>
<td>$88,000</td>
<td>270 miles</td>
</tr>
<tr>
<td>Tesla Model Y</td>
<td>$42,000</td>
<td>264 miles</td>
</tr>
<tr>
<td>Chevrolet Bolt EV</td>
<td>$36,820</td>
<td>238 miles</td>
</tr>
<tr>
<td>Jaguar I-PACE</td>
<td>$69,900</td>
<td>334 miles</td>
</tr>
<tr>
<td>BMW iX3</td>
<td>$64,490</td>
<td>153 miles</td>
</tr>
<tr>
<td>Nissan LEAF</td>
<td>$36,000</td>
<td>150 miles</td>
</tr>
<tr>
<td>Volkswagen e-Golf</td>
<td>$34,995</td>
<td>125 miles</td>
</tr>
<tr>
<td>Hyundai Ioniq Electric</td>
<td>$39,310</td>
<td>124 miles</td>
</tr>
<tr>
<td>Ford Focus Electric</td>
<td>$29,120</td>
<td>115 miles</td>
</tr>
<tr>
<td>Kia Soul EV</td>
<td>$33,450</td>
<td>111 miles</td>
</tr>
<tr>
<td>Honda Clarity Electric</td>
<td>$359/mo, lease only</td>
<td>89 miles</td>
</tr>
<tr>
<td>Fiat 500e</td>
<td>$34,995</td>
<td>84 miles</td>
</tr>
<tr>
<td>Smart EQ fortwo</td>
<td>$13,900</td>
<td>58 miles</td>
</tr>
</tbody>
</table>

### Plug-In Hybrid Vehicles

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMW 330e</td>
<td>$45,800</td>
<td>14 / 350</td>
</tr>
<tr>
<td>BMW 740e</td>
<td>$71,200</td>
<td>12 / 280</td>
</tr>
<tr>
<td>Mini Cooper SE Plug</td>
<td>$31,800</td>
<td>10 / 460</td>
</tr>
<tr>
<td>Mercedes GLE 500e</td>
<td>$66,700</td>
<td>9 / 410</td>
</tr>
<tr>
<td>Mercedes C 350e</td>
<td>$47,000</td>
<td>10 / 460</td>
</tr>
</tbody>
</table>

www.pluginamerica.org
### Level 1: Standard Outlet
- Plug into a standard 120V wall outlet
- Connector provided with every EV
- Great for overnight or workplace charging
- Ideal for typical commutes (up to 40 miles)

### Level 2: 240 Volt Outlet
- Faster charging for longer drives
- Provides a full charge for most EVs in:
  - 4-8 hours to reach full charge
  - 1-2 hours to reach full charge

### DC Fast Charge
- Much faster charging at public locations
- 3 different connectors depending on vehicle:
  - CCS Combo: 65 miles in 20 minutes
  - CHAdeMO: 67 miles in 30 minutes
  - Tesla Supercharger: 130+ miles in 20 minutes

*Can be much faster depending on if 50kW or 350kW station*
Charging Apps

- Plugshare
- Chargepoint
- EVgo
- Blink
- Greenlots
- Volta
- Electrify America
- Tesla
- ...and more!

www.pluginamerica.org
Benefits for Consumers

Average maintenance / repair costs over vehicle lifetime:
- BEV: $0.03/mile
- PHEV: $0.03/mile
- ICE: $0.06/mile

*Consumer Reports*

*Courtesy of ICCT*
Benefits for Consumers

Performance

www.pluginamerica.org
Benefits for Consumers

Environmental Stewardship

Air Quality

National Security

www.pluginamerica.org
Battery Prices are Falling

Lithium-ion battery price outlook

Lithium-ion battery pack price (real 2018 $/kWh)

- Observed prices
- 18% learning rate

2024 implied price $94/kWh
2030 implied price $62/kWh

Source: BloombergNEF
AchiEVe: Transition to EVs Model Policy Toolkit

- Collaboration between PIA, Sierra Club, Electrification Coalition, Forth Mobility
- 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!
Other ways to get involved...

- National Drive Electric Week
  - Sept. 25 – Oct. 3, 2021
  - driveelectricweek.org
- Drive Electric Earth Day
  - April 2021
  - driveelectricearthday.org

<table>
<thead>
<tr>
<th>United States National Online Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event</td>
</tr>
<tr>
<td>New EVs - First Look</td>
</tr>
<tr>
<td>Home EV Charging Station Installation Walk Through</td>
</tr>
<tr>
<td>EV Battery Recycling/Reuse</td>
</tr>
<tr>
<td>NDEW Kick-Off Event</td>
</tr>
<tr>
<td>EV Batteries: Straight Talk Edition</td>
</tr>
<tr>
<td>Find Your Perfect Match: EV Speed Dating</td>
</tr>
<tr>
<td>EV Trivia Happy Hour</td>
</tr>
<tr>
<td>The Policies Driving EV Adoption Forward</td>
</tr>
<tr>
<td>An Evening of Electrified Classic Cars</td>
</tr>
<tr>
<td>Electrify Your Ride to School</td>
</tr>
<tr>
<td>EVs and Solar: Driving on Sunshine</td>
</tr>
<tr>
<td>EV Myth Busting: Fact vs Fiction</td>
</tr>
<tr>
<td>Electric Cars and Vehicle to Grid Technology</td>
</tr>
<tr>
<td>EVs and Charging at the Workplace</td>
</tr>
<tr>
<td>EVs for All: Making EV Ownership More Inclusive</td>
</tr>
</tbody>
</table>

15 Events
Thank you!

Katherine Stainken
Policy Director

kstainken@pluginamerica.org
www.pluginamerica.org
Electric Vehicles in Minnesota

Jukka Kukkonen
Shift2Electric
jukka@Shift2Electric.com
# Electric Vehicle Dashboard

## Charging stations

<table>
<thead>
<tr>
<th></th>
<th>Level 2 charger</th>
<th>DC fast charger</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>824</td>
<td>187</td>
<td>1,011</td>
</tr>
</tbody>
</table>

## Total vehicles per Level 2 charger

<table>
<thead>
<tr>
<th></th>
<th>Total vehicles per DC fast charger</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>77</td>
</tr>
</tbody>
</table>

## Vehicles

<table>
<thead>
<tr>
<th></th>
<th>Battery electric vehicles (BEV)</th>
<th>Plug-in hybrid electric vehicles (PHEV)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7,808</td>
<td>6,676</td>
<td>14,484</td>
</tr>
</tbody>
</table>

Source: MN DOT

Redirect to: Shift2Electric.com
MN EV Owners

- Started 2012
- Over 2000 members
- Meetings, events, experience sharing

www.MNEVOOwners.org

Facebook.com/groups/mnevowners

MN Electric Vehicle Owners (MNEVO) provides a forum for Minnesota plug-in vehicle (BEV and PHEV) owners to connect, share their experiences and learn more about EV related topics. We meet every second month in various locations. Our membership and meetings are free and open to anyone who owns or is interested in shifting to drive electric. MN EV Owners is a chapter of the National Electric Auto Association.
<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Photo</th>
<th>Seating</th>
<th>EV Type</th>
<th>FWD/ FWD/ AWD</th>
<th>Base MSRP</th>
<th>Federal tax credit</th>
<th>Price after federal tax credit</th>
<th>Battery size (kWh)</th>
<th>Electric Range (miles)</th>
<th>Total Range (miles)</th>
<th>Charging rates (kWh)</th>
<th>Top Speed (mph)</th>
<th>0-60 mph (sec)</th>
<th>Towing capacity (lbs)</th>
<th>Crash Ratings</th>
<th>Tread width (in)/Tread depth (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audi</td>
<td>e-tron</td>
<td><img src="https://example.com/image1" alt="Image" /></td>
<td>5</td>
<td>BEV/ AWD</td>
<td>$79,080</td>
<td>$7,500</td>
<td>$47,480</td>
<td>95</td>
<td>204</td>
<td>186</td>
<td>24</td>
<td>228</td>
<td>74</td>
<td>155</td>
<td>155</td>
<td>Top Safety Pick / Not rated</td>
<td></td>
</tr>
<tr>
<td>Audi</td>
<td>Q3 e</td>
<td><img src="https://example.com/image2" alt="Image" /></td>
<td>5</td>
<td>PHEV</td>
<td>$53,900</td>
<td>$6,713</td>
<td>$46,188</td>
<td>14</td>
<td>70</td>
<td>390</td>
<td>7</td>
<td>14</td>
<td>N/A</td>
<td>130</td>
<td>5</td>
<td>4</td>
<td>Good/ Not rated</td>
</tr>
<tr>
<td>Audi</td>
<td>A8L PHEV</td>
<td><img src="https://example.com/image3" alt="Image" /></td>
<td>5</td>
<td>PHEV</td>
<td>$94,000</td>
<td>$7,195</td>
<td>$86,805</td>
<td>14</td>
<td>70</td>
<td>420</td>
<td>7</td>
<td>12</td>
<td>N/A</td>
<td>130</td>
<td>5</td>
<td>4</td>
<td>Good/ Not rated</td>
</tr>
<tr>
<td>BMW</td>
<td>i8</td>
<td><img src="https://example.com/image4" alt="Image" /></td>
<td>4</td>
<td>BEV</td>
<td>$44,450</td>
<td>5,700</td>
<td>$36,950</td>
<td>42</td>
<td>133</td>
<td>153 (390)</td>
<td>7,4/80</td>
<td>4</td>
<td>27</td>
<td>187</td>
<td>124 (390)</td>
<td>93</td>
<td>6.9</td>
</tr>
<tr>
<td>BMW</td>
<td>i8</td>
<td><img src="https://example.com/image5" alt="Image" /></td>
<td>4</td>
<td>PHEV</td>
<td>$147,500</td>
<td>5,700</td>
<td>$143,707</td>
<td>7,2</td>
<td>153</td>
<td>330</td>
<td>3</td>
<td>7</td>
<td>N/A</td>
<td>155</td>
<td>155</td>
<td>Top Safety Pick / Not rated</td>
<td></td>
</tr>
<tr>
<td>BMW</td>
<td>X3 xDrive30i</td>
<td><img src="https://example.com/image6" alt="Image" /></td>
<td>3</td>
<td>Top Safety Pick / 5 star</td>
<td>$59,550</td>
<td>$5,436</td>
<td>$84,114</td>
<td>12</td>
<td>16</td>
<td>250</td>
<td>3,7</td>
<td>2</td>
<td>6</td>
<td>N/A</td>
<td>155</td>
<td>4.9</td>
<td>0</td>
</tr>
<tr>
<td>BMW</td>
<td>5i</td>
<td><img src="https://example.com/image7" alt="Image" /></td>
<td>3</td>
<td>Top Safety Pick / 5 star</td>
<td>$56,620</td>
<td>$5,735</td>
<td>$50,885</td>
<td>16</td>
<td>33</td>
<td>245</td>
<td>4</td>
<td>15</td>
<td>210</td>
<td>155</td>
<td>4.9</td>
<td>0</td>
<td>Not rated / Not rated</td>
</tr>
<tr>
<td>Chevrolet</td>
<td>Bolt EV</td>
<td><img src="https://example.com/image8" alt="Image" /></td>
<td>5</td>
<td>BEV</td>
<td>$36,620</td>
<td>$5,735</td>
<td>$30,885</td>
<td>16</td>
<td>33</td>
<td>259</td>
<td>6</td>
<td>16</td>
<td>210</td>
<td>155</td>
<td>4.9</td>
<td>0</td>
<td>Not rated / Not rated</td>
</tr>
<tr>
<td>Chrysler</td>
<td>Pacifica Hybrid (PHEV)</td>
<td><img src="https://example.com/image9" alt="Image" /></td>
<td>7</td>
<td>PHEV</td>
<td>$39,995</td>
<td>$7,500</td>
<td>$32,495</td>
<td>16</td>
<td>33</td>
<td>570</td>
<td>6</td>
<td>16</td>
<td>N/A</td>
<td>155</td>
<td>4.9</td>
<td>0</td>
<td>Not rated / Not rated</td>
</tr>
<tr>
<td>Ford</td>
<td>Fusion Energi</td>
<td><img src="https://example.com/image10" alt="Image" /></td>
<td>5</td>
<td>PHEV</td>
<td>$35,000</td>
<td>$4,609</td>
<td>$30,391</td>
<td>9</td>
<td>26</td>
<td>650</td>
<td>3,3</td>
<td>9</td>
<td>N/A</td>
<td>155</td>
<td>4.9</td>
<td>0</td>
<td>Not rated / Not rated</td>
</tr>
<tr>
<td>Honda</td>
<td>Clarity PHEV</td>
<td><img src="https://example.com/image11" alt="Image" /></td>
<td>5</td>
<td>PHEV</td>
<td>$31,400</td>
<td>$7,500</td>
<td>$23,900</td>
<td>17</td>
<td>48</td>
<td>340</td>
<td>6</td>
<td>4</td>
<td>22</td>
<td>N/A</td>
<td>150</td>
<td>4.9</td>
<td>0</td>
</tr>
<tr>
<td>Jaguar</td>
<td>I-PACE</td>
<td><img src="https://example.com/image12" alt="Image" /></td>
<td>5</td>
<td>BEV</td>
<td>$69,850</td>
<td>5,700</td>
<td>$62,350</td>
<td>90</td>
<td>246</td>
<td>246</td>
<td>7</td>
<td>0</td>
<td>15</td>
<td>N/A</td>
<td>155</td>
<td>4.9</td>
<td>0</td>
</tr>
<tr>
<td>Kia</td>
<td>Niro PHEV</td>
<td><img src="https://example.com/image13" alt="Image" /></td>
<td>5</td>
<td>PHEV</td>
<td>$26,500</td>
<td>$5,700</td>
<td>$21,800</td>
<td>17</td>
<td>48</td>
<td>340</td>
<td>6</td>
<td>4</td>
<td>22</td>
<td>N/A</td>
<td>150</td>
<td>4.9</td>
<td>0</td>
</tr>
</tbody>
</table>
Vehicle availability

- EV availability at dealers is generally very poor
- 1 Ford Fusion Energi (PHEV) vs. 278 Fusion ICE or hybrid
- 5 Toyota Prius Prime vs. 136 Toyota Prius

<table>
<thead>
<tr>
<th>Make and Model</th>
<th>Number of dealers in MN</th>
<th>New vehicles at dealers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audi e-tron</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Audi Q5 e</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Audi A8L PHEV</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>BMW i3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>BMW X5 xDrive40e</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>BMW 330e</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>BMW 530e</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>BMW 745e</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Chevrolet Bolt EV</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>Chrysler Pacifica Hybrid (PHEV)</td>
<td>64</td>
<td>28</td>
</tr>
<tr>
<td>Ford Fusion Energi</td>
<td>82</td>
<td>1</td>
</tr>
<tr>
<td>Honda Clarity PHEV</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Jaguar I-PACE</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Kia Niro PHEV</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Mercedes- Benz GLC350e</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Mini Cooper S E</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Mitsubishi Outlander PHEV</td>
<td>4</td>
<td>82</td>
</tr>
<tr>
<td>Nissan Leaf</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Porsche Panamera S E-hybrid</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Porsche Cayenne S E-hybrid</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Porsche Taycan</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Tesla Model 3</td>
<td>Well available</td>
<td></td>
</tr>
<tr>
<td>Tesla Model S</td>
<td>Well available</td>
<td></td>
</tr>
<tr>
<td>Tesla Model Y</td>
<td>Well available</td>
<td></td>
</tr>
<tr>
<td>Tesla Model X</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Toyota Prius Prime</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Volvo S60 T8</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Volvo S90 T8</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Volvo XC60 T8</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Volvo XC90 T8</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>320</td>
<td>296</td>
</tr>
<tr>
<td>All light duty vehicles at MN dealers</td>
<td></td>
<td>43069</td>
</tr>
</tbody>
</table>

Data: Cars.com

Shift2Electric.com
<table>
<thead>
<tr>
<th>2020 Fusion Plug-in Hybrid Titanium</th>
<th>2020 Fusion Titanium</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4609 Tax Credit!</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2021 Toyota Prius Prime LE</th>
<th>2021 Toyota Prius</th>
<th>2021 Toyota Corolla Hatchback</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8L 4-Cyl. ECVT Hybrid</td>
<td>133 (BEST)</td>
<td>52</td>
<td>35</td>
</tr>
<tr>
<td>MSRP</td>
<td>$28,220</td>
<td>$25,735</td>
<td>$21,665</td>
</tr>
<tr>
<td>Federal tax credit</td>
<td>$4,502</td>
<td>$23,718</td>
<td></td>
</tr>
</tbody>
</table>

Shift2Electric.com
Info for EV buyers in Minnesota.

- All about charging
- Economics
- Connect with your utility company

This site is brought to you by Fresh Energy and Shift2Electric.com
Electric Vehicles
Our EV Plan

Focus on 3 Market Segments:

- Home Charging
- Charging for Fleet Operators
- Public Fast Charging

Key Barriers to Address:

- Lack of Awareness and Information
- Initial upfront costs
- Suboptimal incentives to charge when energy costs are lowest

Paving the way for electric transportation

The way we move should support a healthy, efficient, and secure future for our communities. Electric vehicles (EVs) offer a promising solution to meet the challenges of transportation demand.

New technologies are changing the industry, offering customers increased options and the potential to reduce costs and carbon footprints. Xcel Energy is committed to supporting the adoption of EVs by providing accessible and informed choices for customers.

With the rise of EVs, there is a growing awareness of the benefits of electric vehicles. However, not everyone is ready to make the switch.

In many areas, the lack of charging infrastructure continues to be a barrier. This is where Xcel Energy aims to help. By investing in charging stations across the state, we are making it easier for customers to adopt EVs.

Our plan includes three key market segments:

1. **Home Charging**: Offering convenient charging options for individuals at home.
2. **Charging for Fleet Operators**: Supporting businesses with charging solutions for their fleets.
3. **Public Fast Charging**: Providing quick-charging stations for people on the go.

Barriers to Address:

- **Lack of Awareness and Information**: Many customers may not be aware of the benefits of EVs or how to use them effectively.
- **Initial Upfront Costs**: High purchase costs can be a significant barrier for many families.
- **Suboptimal Incentives to Charge**: In some cases, incentives for charging when energy costs are lowest may not be sufficient to encourage adoption.

By addressing these barriers, Xcel Energy aims to make EVs a more accessible and attractive option for everyone.
Our Company-Wide EV Vision

1.5 MILLION EVs
On the road in the areas we serve by 2030, replacing gas-powered models
That’s 20% of all vehicles, a 30-fold increase in EVs

$1 BILLION
In customer fuel savings annually by 2030
An EV would cost $700 less per year to fuel than a gas-powered car

5 MILLION TONS OF CARBON EMISSIONS
Eliminated annually by 2030 with our clean energy
That’s about 3 tons of carbon reduction per vehicle
Increasing awareness with advisory services

Awareness

Outreach

Education
Increasing access by lowering upfront costs

Transformer

Service

Meter

Panel

Conduit/Wiring

Charging Station

Electric Vehicles

EV Service Connection

EV Supply Infrastructure

Charging Equipment

Vehicles

“Make Ready”

Charger Only

Utility Own and Operate

Rebates
Reducing customer bills with optimization

**Smart Charging**

- Illustrative

**Time of Use Pricing**

- Illustrative

*Not included on weekends*
Why focus on fleets?

**Objective:**
Provide new services aimed at reducing total cost of ownership and system costs

**Rationale:**
- Size of fleets
- Focus on economics
- Opportunity to support first-movers
- Potential evolution in mobility services that will rely more on fleets
- Pilot approaches and establish key learnings that can be scaled to other market segments
Why focus on public fast charging?

Objective: Increasing fast charging infrastructure to reduce “range anxiety”

Rationale:
- Address range anxiety
- Support longer distance driving
- Provide a charging solution for those who can’t charge at home
- Make up for lack of infrastructure
- Standalone economics for fast charging have generally been insufficient to drive required investment
- Potential evolution in mobility services that will rely more on sharing
We are partnering with communities, charging network providers, and shared mobility companies to help customers:

• Access new, low-cost mobility services

• Provide sufficient network coverage for shared mobility, while also enabling public charging

• Lower upfront costs for building out network by providing Make Ready services

• Locate vehicles and charging infrastructure in diverse communities
The 101 on EVs for Minnesota: The Future of Transportation is Electric

Engagement in Community and Partners to Accelerate EVs

Lisa Thurstin | Senior Manager
651.223.9568 | lisa.Thurstin@lung.org
Engagement

Virtual, In-person & Hybrid Engagement
Resources

Consumer Vehicle Purchase Guidance Tool: EVolution-informing your choice for a smart purchase

How to provide EV charging for condominium and apartment buildings Guide/Worksheets

www.mudcharging.com

www.EVInfoList.com
Midwest EV Info List (Updated 10/2020)
US EV Info List (Updated 10/2020)

New Incentive to Promote Electric Vehicles in Minnesota

https://evolution.es.anl.gov

In an electric vehicle a smart consumer choice? Absolutely! But first you need the facts about EVs and how they relate to your driving needs. The EVolution consumer choice tool is here to help:

So, what are the benefits of owning an electric vehicle?

- Better Energy Efficiency
- Better for your wallet
- Better for the Environment

Electric Vehicles: What You Need to Know
Virtual Test Drive
Closing Reminders:

- **Plug In America**
  - [www.pluginamerica.org](http://www.pluginamerica.org)
  - Dean Taylor, Senior Policy Advisor: [dtaylor@pluginamerica.org](mailto:dtaylor@pluginamerica.org)

- **Drive Electric Minnesota**
  - [www.driveelectricmn.org](http://www.driveelectricmn.org)
  - [info@driveelectricmn.org](mailto:info@driveelectricmn.org)

- **Xcel Energy**
  - [www.xcelenergy.com](http://www.xcelenergy.com)

- **Sustainable Growth Coalition**
  - Amy Fredregill, Managing Director: [afredregill@en-in.org](mailto:afredregill@en-in.org)

**Recordings available here:**
[https://pluginamerica.org/policy/webinar-series-minnesotans-going-electric/](https://pluginamerica.org/policy/webinar-series-minnesotans-going-electric/)