The Role of Cities and Counties in the Shift to Transportation Electrification

December 1, 2020
11:00am - 12:30pm CT

Drive Electric MINNESOTA

Plug In America

Xcel Energy

SUSTAINABLE GROWTH COALITION

Technology Reminders:

- This is a zoom meeting, with different functions than a zoom webinar.
- Please type any questions into the chat - questions are welcome!
- All attendees will be muted and have their videos turned off until the breakout session.
- The presentations and recordings will be available on the Plug In America website.

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Minnesotans Going Electric

A Free Six-Part Webinar Series

December 1-4, 2020

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/

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MINNESOTA SUSTAINABLE GROWTH COALITION

Plug In America

- **<u>The voice of the EV consumer</u>** – 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

Our Speakers:

Dean Taylor
Senior Policy Advisor
Plug In America

Hon. Charlie Zelle
Chair
Metropolitan Council

Brian Ross
Senior Program Director
Great Plains Institute

Diana McKeown
Director
Metro Clean Energy Resource Team

Katherine Stainken
Policy Director
Plug In America

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Speaker bios:

- **Dean Taylor** is a senior policy advisor for **Plug in America**. 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 and for his own consulting practice since March 2019). 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.
- **Charlie Zelle** has served as **Chair of the Metropolitan Council** since January of 2010. He has over 30 years of experience in economic development, transportation policy and operations, including serving as Commissioner of the Minnesota Department of Transportation and CEO of Jefferson Lines, an intercity bus company in 14 heartland states.
- **Brian Ross**, AICP, Senior Program Director at the **Great Plains Institute**, has 25 years of experience working with local, regional, and state governments on climate and energy planning, policy and regulation. He currently works with local and state governments on climate planning, EV readiness and local initiatives, and state and local renewable energy market transformation.
- **Diana McKeown** is the **Metro CERT** (Clean Energy Resource Team) Director. Diana has led the metro region of CERTs since October 2007, during which time she has coordinated and participated in a number of clean energy initiatives including Cities Charging Ahead (CCA), CCA 2.0 and Powering Ahead with Vehicle Electrification (PAVE) and is an EV owner.
- **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.

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Agenda:

11:00	Welcome	Dean Taylor	Plug In America
11:03	Opportunity for 2021	Hon. Charlie Zelle	Metropolitan Council
11:13	EV Readiness	Brian Ross	Great Plains Institute
11:28	City Actions	Diana McKeown	Metro Clean Energy Resource Teams
11:43	Model EV policies	Katherine Stainken	Plug In America
11:49	Q&A		
11:58	Breakout Session		
12:13	Recap of Breakouts	Dean Taylor	Plug In America
12:23	Closing	Dean Taylor	Plug In America

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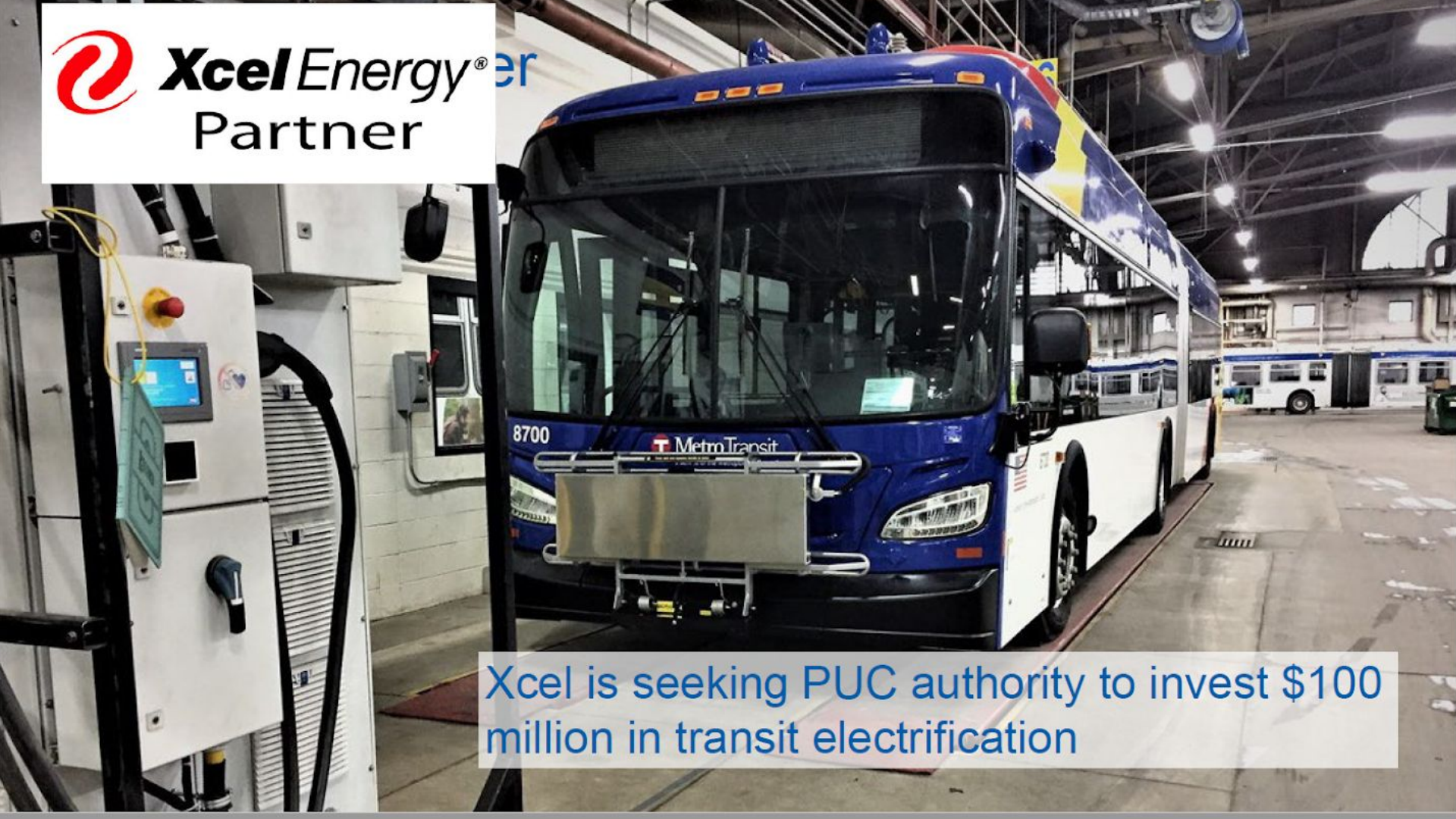
METROPOLITAN
COUNCIL

Sustainability

- Met Council - $15 million annual energy costs
- 10% reduction in carbon emissions since 2015

- Goal –100% of energy from carbon free sources by 2040

- Renewables now 3 to 6 cents per kilowatt
- Coal from 5 to 17 cents per kilowatt



Xcel is seeking PUC authority to invest $100 million in transit electrification

Planning

- Job Growth
- Startups & Innovation
- Talent Migration
- Racial Inclusion
- Skills & Workforce
- Regional Brand & Image
- Housing Affordability
- Transportation & Mobility
- New Climate Economy

Innovation


Drive Electric
MINNESOTA
Elk River
Municipal Utilities
DEPARTMENT OF
TRANSPORTATION
American
Lung Association.
Clean Air Choice.
ZEF ENERGY
Building a Zero Emissions Future
SUSTAINABLE
GROWTH
COALITION
Alliance for
Transportation
Electrification
SHIFT 2
ELECTRIC
Union of
Concerned
Scientists
MCEA
Fresh Energy
Plug In
America
SIERRA
CLUB
MINNESOTA POLLUTION
CONTROL AGENCY
Xcel Energy
OTTER TAIL
POWER COMPANY
CONNEXUS
ENERGY
MMUA
greenlots
A Member of the Shell Group
COMMERCE
DEPARTMENT
Southern Minnesota
Municipal Power Agency
GREAT
RIVER
ENERGY
DAKOTA
ELECTRIC
ASSOCIATION
Your Touchstone Energy® Cooperative
minnesota power
AN ALLETE COMPANY
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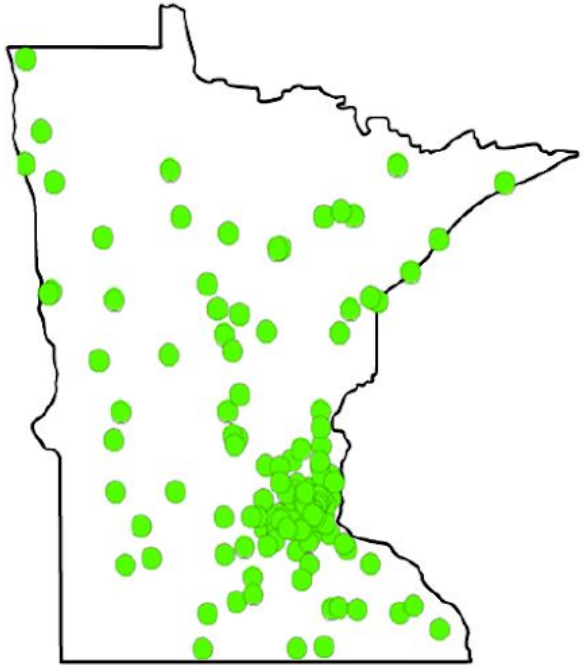
Minnesota
GreenStep Cities
NREL
Transforming ENERGY
SOLSMART
NATIONALLY DISTINGUISHED. LOCALLY POWERED.

Partners in Planning – Local Governments

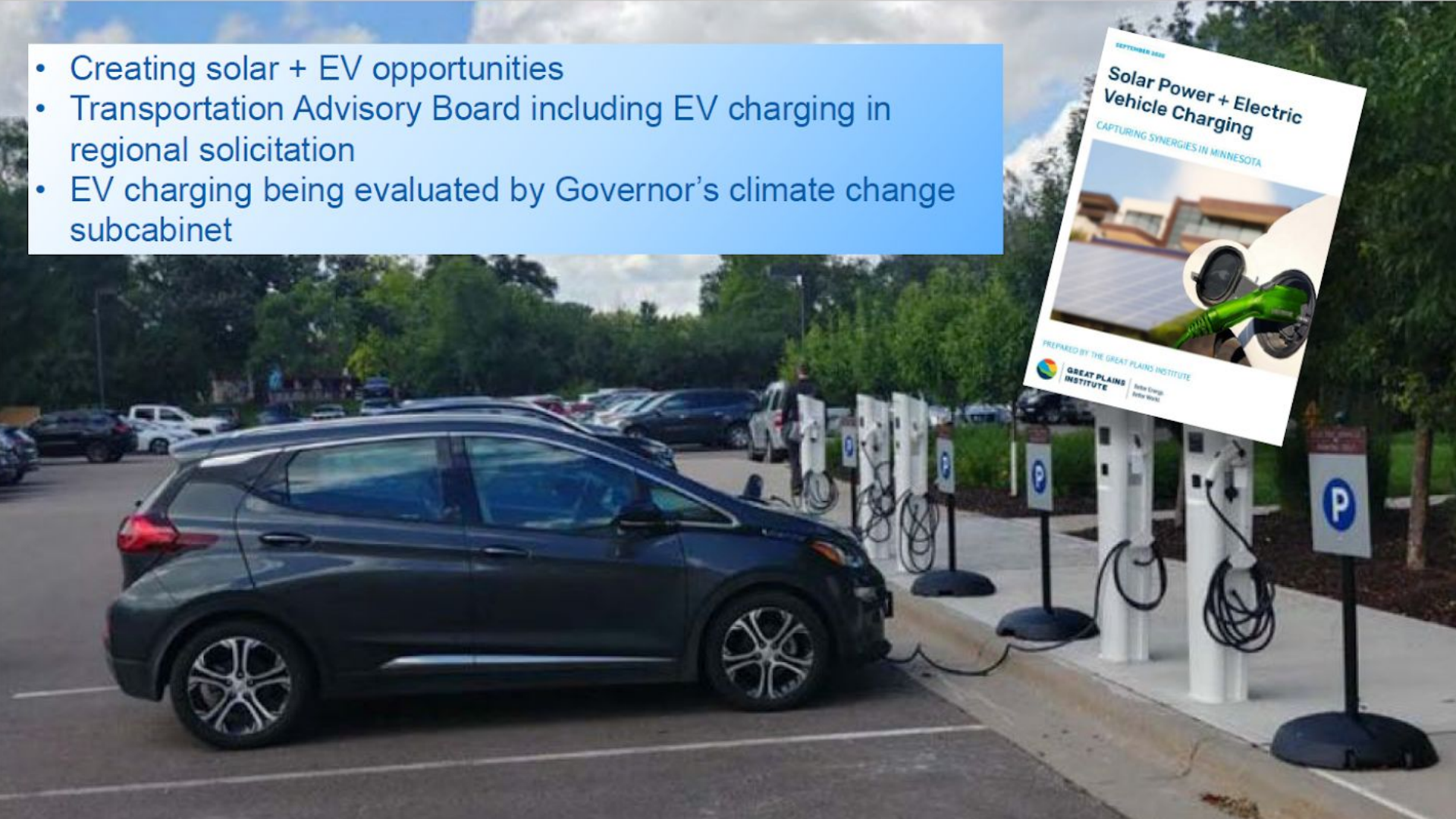


Aitkin, Albert Lea Apple Valley, Arden Hills, Arlington, Austin, Barnum, Belle Plaine, Bemidji, Big Lake, Bloomington, Brainerd, Brooklyn Center, Brooklyn Park, Burnsville, Carver, Chanhassen, Chisholm, Circle Pines, Cologne, Columbia Heights, Coon Rapids, Cottage Grove, Crookston, Crosslake, Crystal, Delano, Detroit Lakes, Dilworth, Dodge Center, Duluth, Eagan, East Grand Forks, Eden Prairie, Edina, Elk River, Elko New Market, Ely, Falcon Heights, Faribault, Farmington, Fergus Falls, Fond du Lac Band of Lake Superior Chippewa, Forest Lake, Fridley, Gilbert, Golden Valley, Grand Marais, Grand Rapids, Granite Falls, Hackensack, Hallock, Hastings, Hermantown, Hewitt, Hoffman, Hopkins, Hutchinson, Inver Grove Heights, Isanti, Jordan, Kasson, La Crescent, La Prairie, Lake City, Lake Crystal, Lake Elmo, Lakeville, Lauderdale, Leech Lake Band of Ojibwe, Lewiston, Lexington, Mahnomen, Mahtomedi, Mankato, Maple Grove, Maplewood, Marine on Saint Croix, Marshall, Mayer, Milan, Minnetonka, Moorhead, Morris, Mounds View, Mountain Iron, New Brighton, New Germany, New Hope, Newport, Nisswa, North Branch, North Saint Paul, Northfield, Oakdale, Pierz, Pine City, Pine River, Prairie Island Indian Community, Red Lake, Band of Chippewa, Red Wing, Richfield, Robbinsdale, Rochester, Rogers, Rosemount, Roseville, Royalton, Rush City, Saint Anthony, Saint Cloud, Saint Francis, Saint James, Saint Louis Park, Saint Paul, Saint Paul Park,, Saint Peter, Sartell, Sauk Rapids, Savage, Scandia, Shakopee, Sherburn, Shoreview, Shorewood, Silver Bay, South Saint Paul, Stacy, Stillwater, Sunfish Lake, Two Harbors, Vesta,Victoria, Warren, West Saint Paul, White Bear Lake, Willmar, Winona, Winthrop, Woodbury, Wyoming

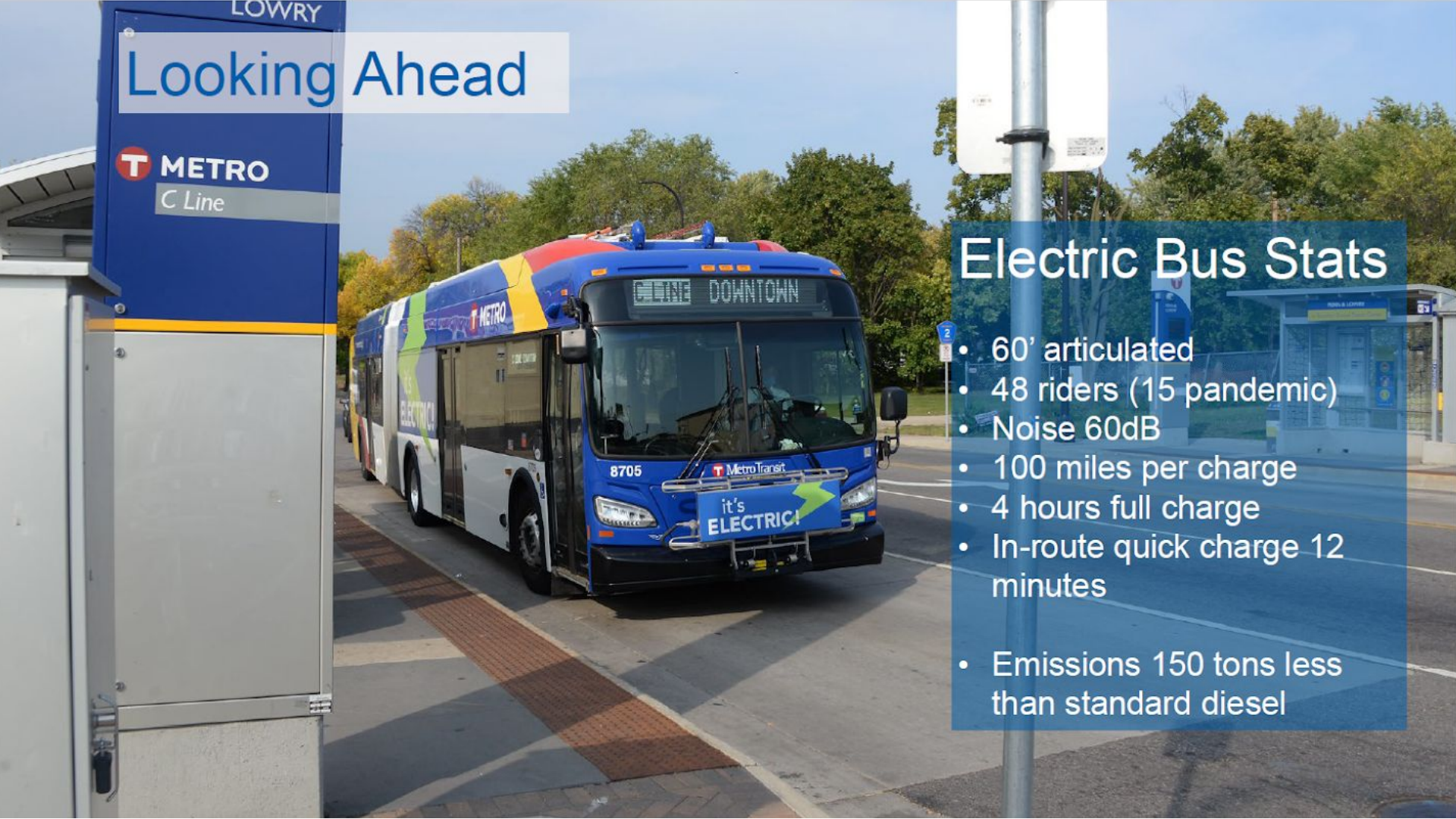
Minnesota GreenStep Cities

METROPOLITAN COUNCIL

- Creating solar + EV opportunities
- Transportation Advisory Board including EV charging in regional solicitation
- EV charging being evaluated by Governor's climate change subcabinet



Looking Ahead



Electric Bus Stats

- 60’ articulated
- 48 riders (15 pandemic)
- Noise 60dB
- 100 miles per charge
- 4 hours full charge
- In-route quick charge 12 minutes

- Emissions 150 tons less than standard diesel

Looking Forward – a measured approach

Guiding principles

- Environmental responsibility
- Service excellence
- Financial responsibility

METROPOLITAN COUNCIL


METROPOLITAN
COUNCIL

MAKING CITIES AND COUNTIES " EV READY"

EV-Ready Pilot Discussion

December 1, 2020

Brian Ross, AICP, LEED GA
Senior Program Director

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Better World.

TRANSFORMING THE ENERGY SYSTEM TO BENEFIT THE ECONOMY AND ENVIRONMENT.

- INCREASE ENERGY EFFICIENCY AND PRODUCTIVITY
- DECARBONIZE ELECTRICITY PRODUCTION
- ELECTRIFY THE ECONOMY AND ADOPT ZERO- AND LOW-CARBON FUELS
- CAPTURE CARBON FOR BENEFICIAL USE AND PERMANENT STORAGE

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Why EV-Ready Communities?

Local governments are essential partners in creating a self-sustaining electric vehicle market

- ✔ EV market transformation requires that public and private development accommodates EV charging infrastructure
- ✔ Local governments can and do shape how public and private development occurs
- ✔ Local governments can use existing, familiar tools to foster the community's transition to EVs

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Barriers to EV Adoption

Common EV Myths

- ✔ EVs are not cost efficient
- ✔ EVs are “coal cars” regarding emissions
- ✔ EVs are small, slow, boring
- ✔ EVs don’t allow people freedom

✔ Source: Drive Electric Minnesota, https://www.driveelectricmn.org/electric-vehicles/

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Barriers to EV Adoption

Market Transformation Targets

1. Upfront costs (and lack of attention to lifecycle costs)
2. Actual or perceived vehicle range
3. Perceived or actual lack of charging infrastructure

✔ Source: Green Car Reports
https://www.greencarreports.com/news/1126706_cost-remains-the-biggest-barrier-against-ev-adoption-study-finds

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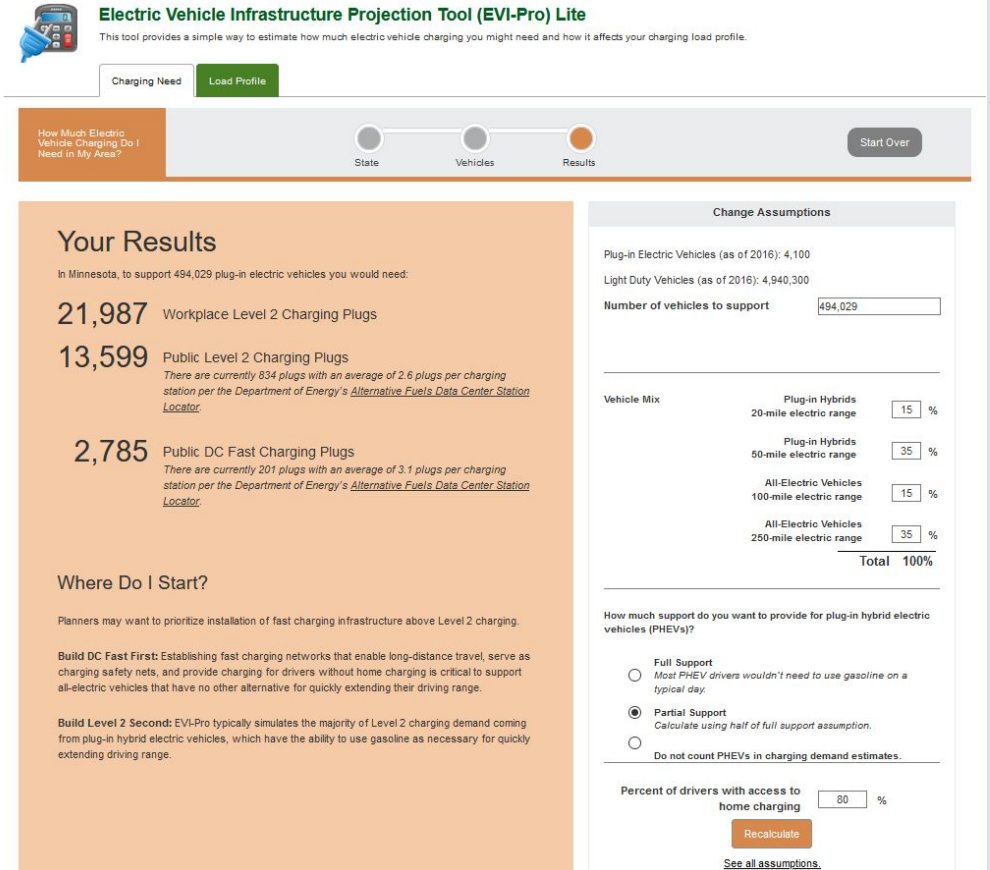
Planning for New Infrastructure



U.S. DEPARTMENT OF ENERGY

Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

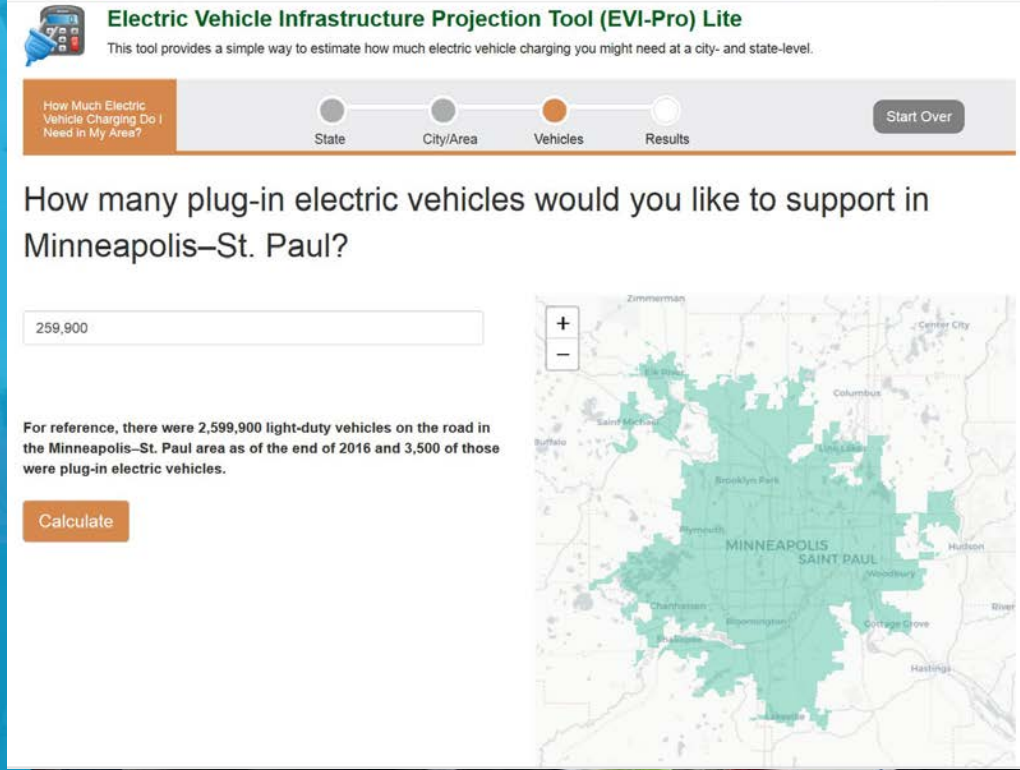
National Plug-In Electric Vehicle Infrastructure Analysis

September 2017

Planning for New Infrastructure

NREL's EVI-Pro Lite Tool

- ✔ 10% EV market share in the **metro area** requires 9,000 workplace or public Level 2 chargers (if EV owners can charge at home).
- ✔ If 25 percent of EV owners cannot charge the vehicle at home, the need for non-home Level 2 chargers increases to almost 19,000.
- ✔ Minnesota's 2030 goal of 20% EVs would require over 35,000 chargers.
- ✔ The Minneapolis-Saint Paul metro area currently has about 500 workplace and public Level 2 chargers.



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Planning for New Infrastructure

NREL's EVI-Pro Lite Tool

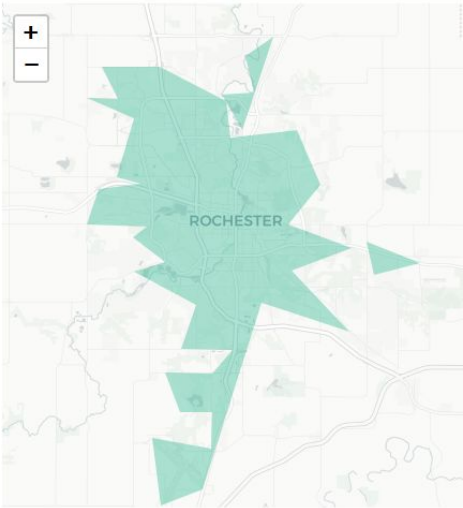
- ✔ Duluth – 2,130
- ✔ Fargo – 2,500
- ✔ Grand Forks - 800
- ✔ LaCrosse – 1,470
- ✔ Mankato - 710
- ✔ Rochester - 2,000
- ✔ St. Cloud – 1,800

How many plug-in electric vehicles would you like to support in Rochester?

12269

For reference, there were 122,700 light-duty vehicles on the road in the Rochester area as of the end of 2016 and 110 of those were plug-in electric vehicles.

Calculate



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Five Principles for EV Ready Communities…

1. **Policies and Plans** that support electrification of transportation and acknowledge EV benefits
2. **Ordinances** that enable public and private sector EV use
3. **Administrative Processes** for installing EV charging infrastructure that are predictable, transparent, and documented
4. **Local Market Transformation Programs** to reduce or overcome market barriers to EV use and installation of EVSE
5. **Public Sector Investment** in EVs and charging infrastructure to demonstrate EV viability and capture operational and environmental savings

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EV-Ready Action Categories

1. Policy
2. Regulation
3. Administration
4. Public Programs
5. Leadership

Equity

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Policy	Regulation	Administration	Public Programs	Leadership
P-1 Address EVs and EVSE in Comprehensive Plan	R-1 Enable EVSE as an accessory land use	A-1 Clarify and streamline EVSE permitting	PP-1 Financial incentives for EV purchase	L-1 Electrify public fleet
P-2 Address EVs and EVSE in Specific-area Plan	R-2 Protect EV Charging Access	A-2 Streamline preferred EVSE design standards	PP-2 Financial incentives for EVSE installation	L-2 Provide public chargers
P-3 Address EVs and EVSE in functional plan	R-3 Require EV-ready in parking standards	A-3 Develop permit for public ROW charging	PP-3 Joint programs with utility on marketing	L-3 ROW charging deployment
	R-4 Require EVSE in parking standards	A-4 Develop EVSE design guidelines for accessibility	PP-4 EV/EVSE education of commercial property owners	L-4 Deploy electric transit buses, para-transit vehicles
	R-5 Permit DCFC installations in selected districts	A-5 Educate permit and inspection staff on EVSE applications	PP-5 Create EV webpage for programs, standards	L-5 Deploy electric school buses
	R-6 Incorporate EV-readiness in Building Code		PP-6 Host public education events and campaigns	L-6 Install Employee-reserved EVSE

Program Design

Leadership	
L-1	Electrify public fleet
L-2	Provide public chargers
L-3	ROW charging deployment
L-4	Deploy electric transit buses, para-transit vehicles
L-5	Deploy electric school buses
L-6	Install Employee-reserved EVSE

- ✔ **Complete assessment** of EV conversion opportunities (FleetKarma, etc)
- ✔ **Adopt EV conversion goals** for public fleets with timelines
- ✔ **Purchase EVs** for fleet use to meet adopted goals

Strategies for EV-Ready Communities

Market Transformation Actions

ENCOURAGEMENT

- Provide educational materials on lifecycle costs, public charging options, and purchasing options to cities and businesses
- Publicly recognize car dealerships that stock and promote EVs, or businesses that provide EV charging for employees.

REGULATION

- Require EV-ready parking within parking standards
- Require EV infrastructure within PUD ordinance or other optional zoning path
- Allow EV-only parking stalls to count toward parking minimums

INCENTIVES

- EVES as an optional amenity within PUD (or flexible zoning) ordinances
- Participate in an EV or EVSE“bulk-buy”, aimed at city residents or businesses
- Work with municipal utility to create EV charging rates, financing, other incentives

PUBLIC DEMONSTRATION, LEADERSHIP

- Purchase EVs for the public fleet
- Install EV charging at public facilities
- Require new public parking areas to have EV charging options
- Consider EV charging in the public ROW

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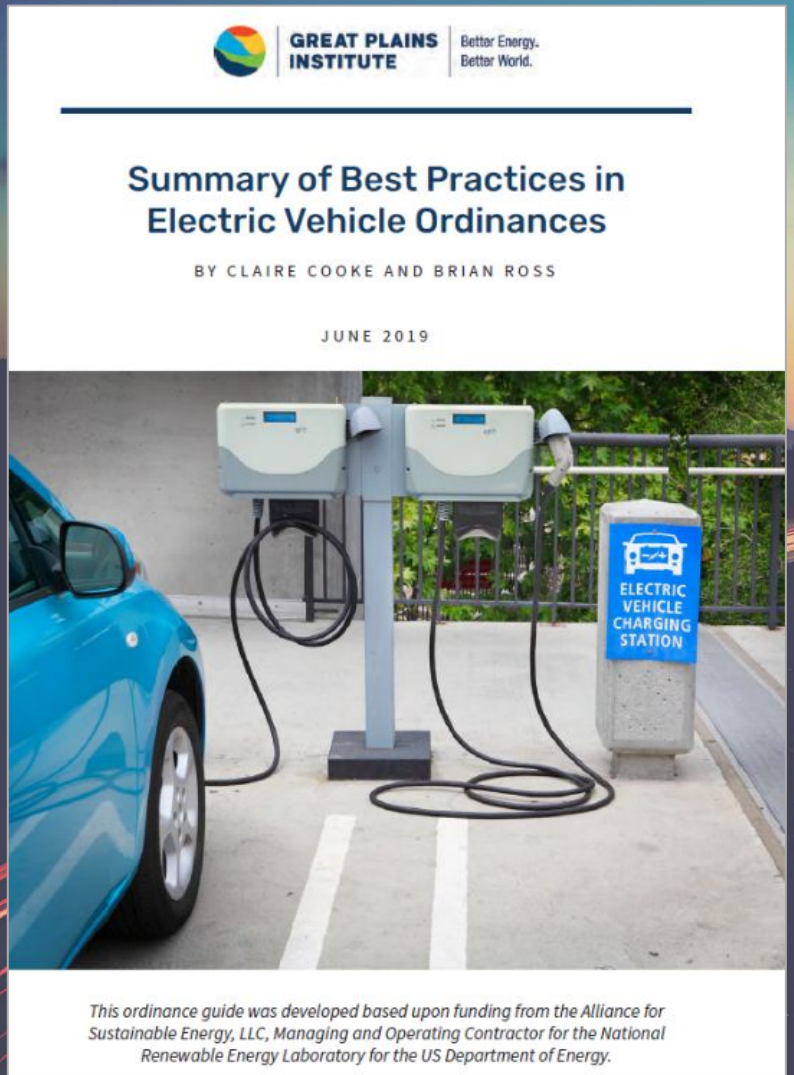
Transforming Minnesota's Electric Vehicle Market:

Comprehensive Plan Best Practices for Local EV Action

City Tools for EV Transformation

Comprehensive Plan Best Practices for Local EV Action

1. Support Electric Vehicles in Zoning Code
2. Electric Vehicles in City's Fleet
3. Support Deployment of Charging Infrastructure
4. Support for Charging Infrastructure in Public Areas
5. Prioritize Benefits of Electric Vehicles



City Tools for EV Transformation

Summary of Best Practices in Electric Vehicle Ordinances

1. Electric Vehicle Charging Stations as Permitted Land Uses
2. Electric Vehicle Make-Ready Standard
3. Electric Vehicle Supply Equipment Standards
4. Electric Vehicle Parking Space Design and Location
5. Required EV Parking Capacity & Minimum Parking Requirements
6. Electric-Vehicle-Designed Parking Use Standards and Protections
7. Signage, Safety, and other standards

THANK YOU!

Brian Ross, AICP, LEED GA
Senior Program Director
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Cities Charging Ahead!

Diana McKeown

Metro CERT Director, Great Plains Institute

December 1, 2020

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Overview

- Quick CERTs overview
- Local Government growing interest in EVs
- What is Cities Charging Ahead?
- Resources for your EV journey

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Clean Energy Resource Teams (CERTs)

Helping Minnesotans build clean energy

MISSION

We connect individuals and their communities to the resources they need to identify and implement community-based clean energy projects

How we help cities & counties

- Assistance in understanding options
- Support for advancing your goals
- Tools you need to get projects done

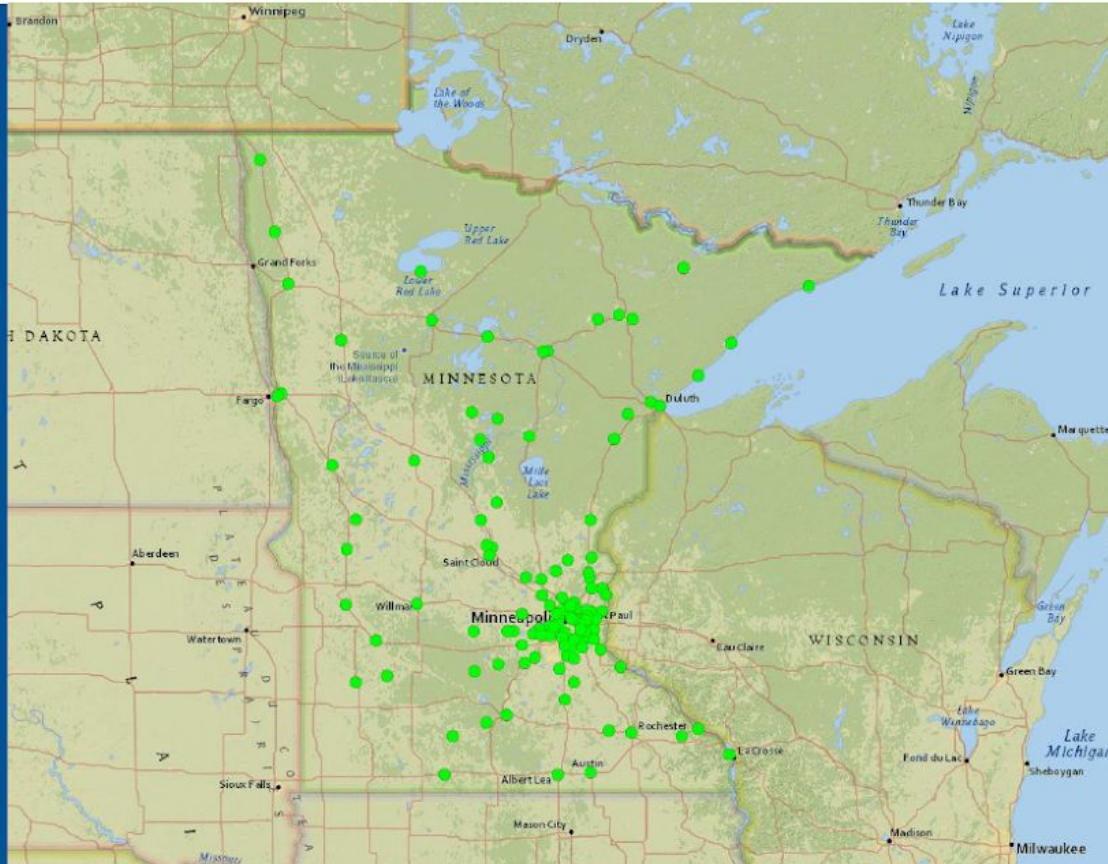
PHOTO
Electric vehicle charger ribbon cutting in Red Wing

Minnesota GreenStep

Cities & Tribal Nations

Action-oriented and voluntary program offering a cost-effective, free, peer-focused path to sustainability work.

Currently 141 Participants including four Tribal Nations



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Growing interest in EVs

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EVosity

Growing interest and demand

- EV registrations (nearly 15k now!)
- Ride and Drives
- Utilities in action
- Cities and counties asking for help (over 50 GreenStep Cities!)
- Large attendence at several EV related webinars
- Comprehensive plans

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EVs in Comp Plans

- Apple Valley
- Arden Hills
- Belle Plaine
- Bloomington
- Burnsville
- Champlin
- Coon Rapids
- Eden Prairie
- Falcon Heights
- Fridley
- Golden Valley
- Hastings
- Jordan
- Lakeville
- Maple Grove
- Marine on St. Croix
- Minneapolis
- North St. Paul
- Oak Grove
- Oakdale
- Richfield
- Rogers
- Rosemount
- Shakopee
- Shoreview
- St. Anthony
- St. Louis Park
- St. Paul
- Stillwater
- Vadnais Heights
- Victoria
- Wayzata
- West St. Paul
- Woodbury

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Cities Charging Ahead!

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Cities Charging Ahead! (CCA)

Peer cohort of 28 cities working together across Minnesota exploring electric vehicle readiness.

Led by Clean Energy Resource Teams (CERTs) and Great Plains Institute (GPI)

Based on the GreenStep Cities program EV related best practices

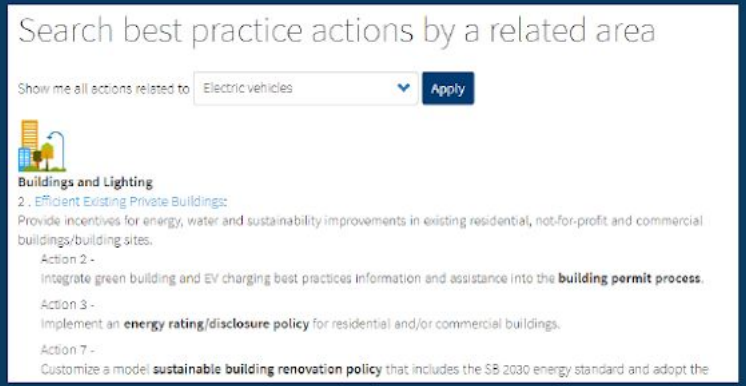
Convened Spring 2018 until Summer of 2019

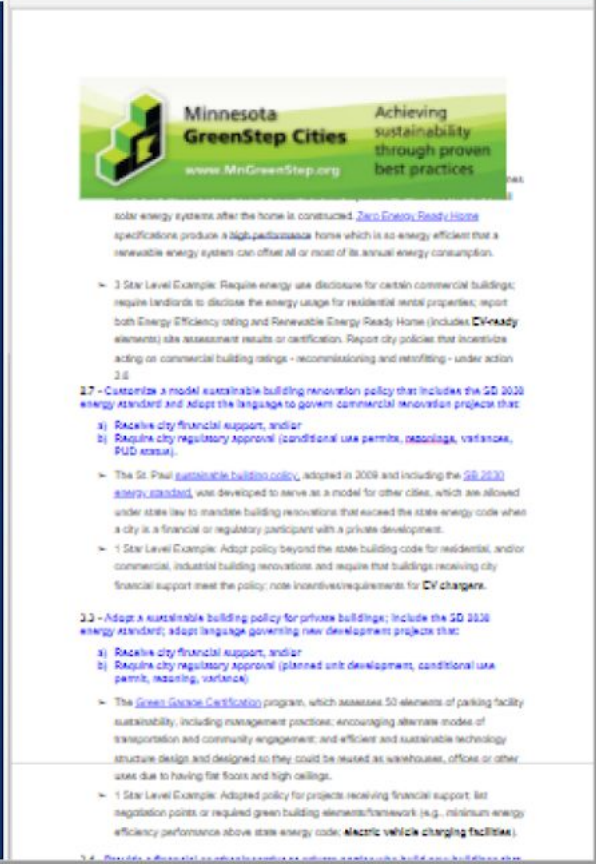
Funded by Energy Foundation, Carolyn Foundation and Xcel Energy

GreenStep Cities EV Best Practices

We used the best practices related to EVs, charging etc. From the GreenStep Cities program as the basis for Cities Charging Ahead!

https://greenstep.pca.state.mn.us/





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Participants

28 City Participants

- Metro Cohort:
  - Bloomington, Burnsville, Coon Rapids, Eagan, Edina, Elk River, Falcon Heights, Fridley, Hastings, Inver Grove Heights, Maplewood, Marine on St. Croix, Richfield, St. Louis Park, White Bear Lake, Woodbury
- Southeast Cohort:
  - Rochester, Red Wing, Winona, Faribault
- Northeast Cohort:
  - Virginia, Duluth, Fond du Lac Band of ChippewaTribe
- Greater Minnesota Cohort:
  - Albert Lea, Grand Marais, Hackensack, Morris, Warren

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Actions Completed in CCA 1.0

51 Best Practice Actions (BPAs) in total

16 cities completing BPAs while in CCA

Cities completing the most:

- Red Wing (7 BPAs)
- St. Louis Park (6 BPAs)
- Falcon Heights (5 BPAs)

Most popular BPAs:

- 23.5 Charging Stations (10 cities)
- 13.3 Fleets (10 cities)
- 6.5 Comp Planning (9 cities)

Minnesota GreenStep Cities

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CCA 2.0

- Launched September 2020
- 28 Cities and 1 Tribal Nation
- 14 Cities returning from CCA 1.0
- Next up
  - Jan. 2021 Fleet sessions
  - Feb. 2021 EV Standards/EV Ready Cities
- Led by CERTs/GPI
- Funded by McKnight Foundation

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CCA 2.0 Participants

29 Participants

Apple Valley	Hackensack	Rochester
Eagan	Hutchinson	St. Louis Park
Eden Prairie	Inver Grove Heights	St. Paul
Edina	Leech Lake Band of Ojibwe	Shakopee
Falcon Heights	Marine on the St. Croix	Shoreview
Faribault	Minnetonka	Shorewood
Fridley	Northfield	Victoria
Golden Valley	Oakdale	White Bear Lake
Grand Marais	Red Lake	Winona
		Woodbury

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Adding EVs to fleets

15 Cities and 1 Tribal Nation (participants in CCA 1.0 or 2.0) added over 30 EVs to their fleets 2018-2020

Common vehicles

- Chevy Volt (PHEV)
- Chevy Bolt (BEV)
- Nissan Leaf (BEV)
- Mitsubishi Outlander (PHEV)

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Adding EV Chargers

20 Cities and 1 Tribal Nation (participants of CCA 1.0 or 2.0) added over 40 EV Chargers to their communities between 2018-2020

- Many added them to City Hall or a Community Center
- Almost exclusively Level 2 chargers
- Mostly dual head (2 plugs on on charger)
- Many don't charge for the electricity, or have a few hours free of charge (may charge in the future)

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Resources for your City or County

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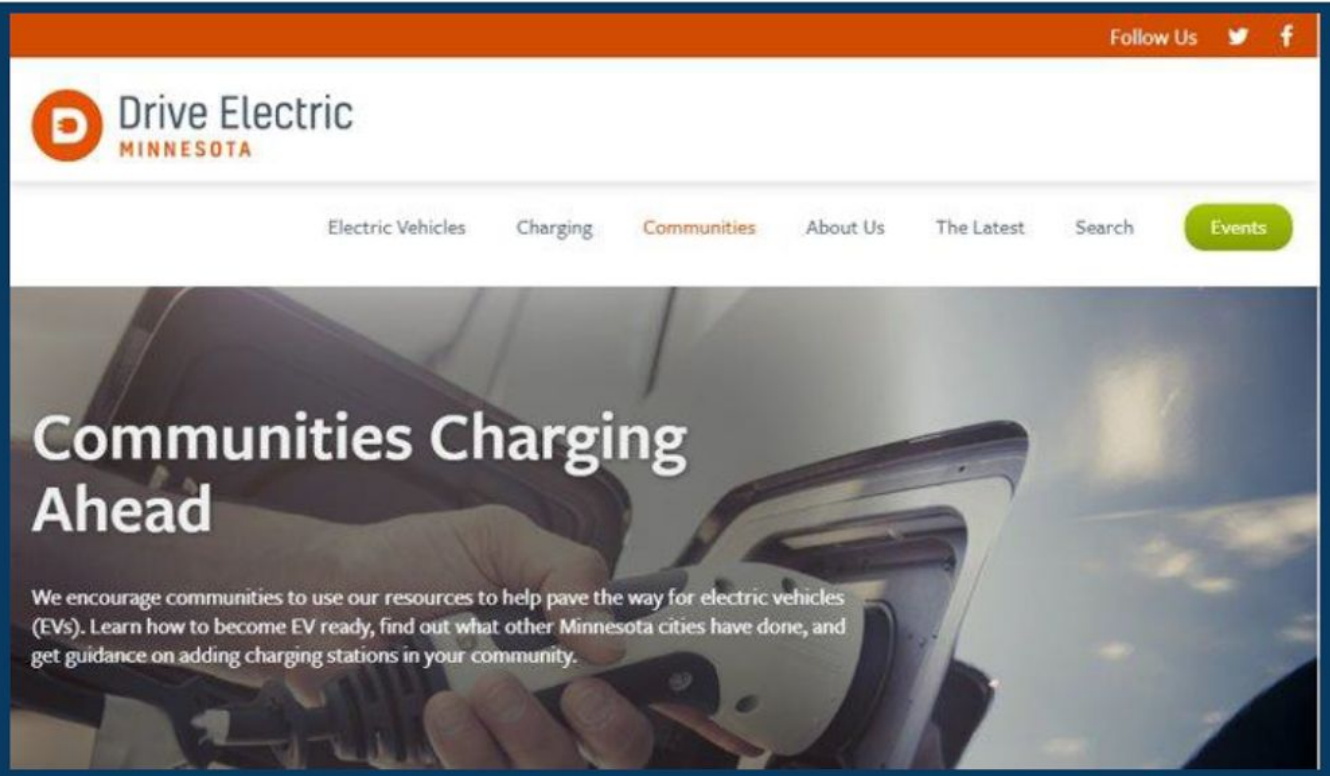
Drive Electric Minnesota



https://www.driveelectricmn.org/communities/

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Communities Charging Ahead

Communities Tab

- Becoming EV Ready
- Cities Charging Ahead!
- EV Charging Guidance (NEW guide to purchasing an EV charging station!)
- Resources

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CCA Resources

Categories

- Educate your Community
- Engage your Audience
- Promotional Tools
- Take Action

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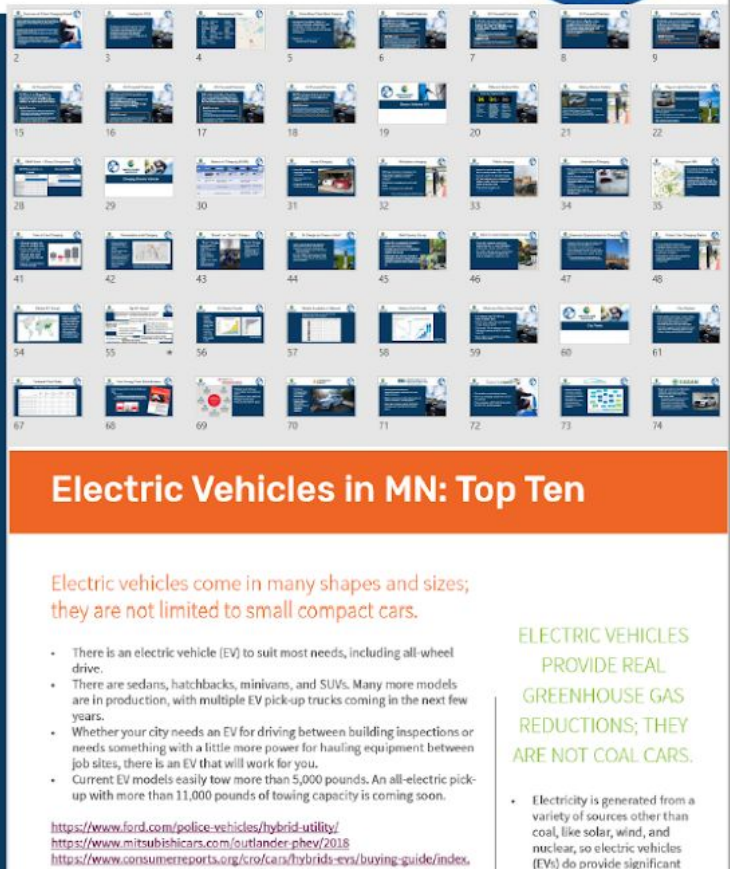
Educate your Community

- EV Top Ten
- Electric Vehicle Content Sharing Kit for Communities
- Slide deck



Electric Vehicles in MN: Top Ten

Electric vehicles come in many shapes and sizes; they are not limited to small compact cars.

- There is an electric vehicle (EV) to suit most needs, including all-wheel drive.
- There are sedans, hatchbacks, minivans, and SUVs. Many more models are in production, with multiple EV pick-up trucks coming in the next few years.
- Whether your city needs an EV for driving between building inspections or needs something with a little more power for hauling equipment between job sites, there is an EV that will work for you.
- Current EV models easily tow more than 5,000 pounds. An all-electric pick-up with more than 11,000 pounds of towing capacity is coming soon.

https://www.ford.com/police-vehicles/hybrid-utility/
https://www.mitsubishicars.com/outlander-phev/2018
https://www.consumerreports.org/cro/cars/hybrids-evs/buying-guide/index.

ELECTRIC VEHICLES PROVIDE REAL GREENHOUSE GAS REDUCTIONS; THEY ARE NOT COAL CARS.

- Electricity is generated from a variety of sources other than coal, like solar, wind, and nuclear, so electric vehicles (EVs) do provide significant

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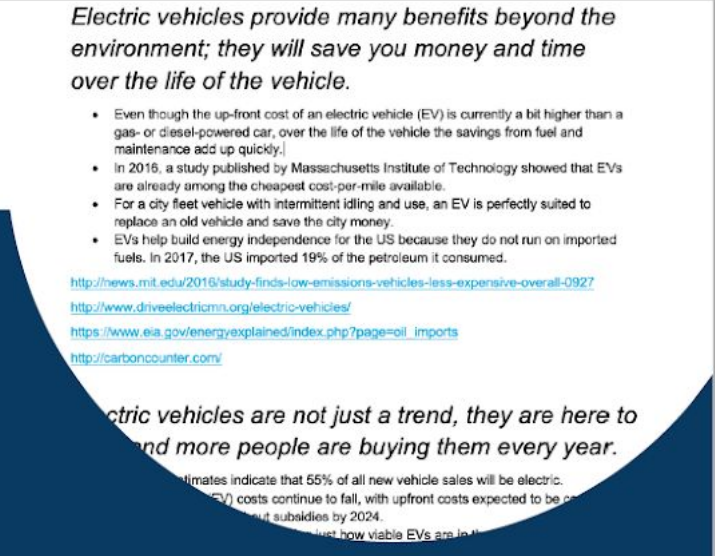
Top Ten EV Facts in MN

- Collection of ‘truths’ to common myths and misconceptions about EVs
- Easy to understand language
- Talking points contain links to source info and further resources
- Quick reference
- Digitally available



Electric vehicles provide many benefits beyond the environment; they will save you money and time over the life of the vehicle.

- Even though the up-front cost of an electric vehicle (EV) is currently a bit higher than a gas- or diesel-powered car, over the life of the vehicle the savings from fuel and maintenance add up quickly.
- In 2016, a study published by Massachusetts Institute of Technology showed that EVs are already among the cheapest cost-per-mile available.
- For a city fleet vehicle with intermittent idling and use, an EV is perfectly suited to replace an old vehicle and save the city money.
- EVs help build energy independence for the US because they do not run on imported fuels. In 2017, the US imported 19% of the petroleum it consumed.

http://news.mit.edu/2016/study-finds-low-emissions-vehicles-less-expensive-overall-0927

http://www.driveelectricmn.org/electric-vehicles/

https://www.eia.gov/energyexplained/index.php?page=oil_imports

http://carboncounter.com/

ctric vehicles are not just a trend, they are here to nd more people are buying them every year.

limates indicate that 55% of all new vehicle sales will be electric.
EV) costs continue to fall, with upfront costs expected to be c
ut subsidies by 2024.
st how viable EVs are in t

harging infrastructure is alre
nesota to support your driving needs,
e is being added every day.

less you drive more than 80 miles a day, you usually do not need to take time out of your day to charge your electric vehicle. You can charge at home while you sleep! DC fast chargers (DCFCs) can almost fully charge a car in about a half hour and a Level 2 charger (240-volts) can charge a car in two-to-four hours.

- If you need to recharge your electric vehicle during the day, the network of charging stations, including DCFC, around Minnesota is growing quickly.
- Finding a charging station is easy thanks to services like PlugShare and the Alternative Fuels Database’s fueling station map. As of March 2018, PlugShare shows there are more than 350 publicly available charging stations at Level 2 or higher in Minnesota.

https://www.plugshare.com/

https://www.energy.gov/eere/electricvehicles/vehicle-charging

https://afdc.energy.gov/fuels/electricity_locations.html#/analyze?fuel=ELEC

Electric vehicles can and do function in cold climates.

- The most bitter cold days might reduce the charge by 40%, and that is only in the rarest of circumstances. Bitter temperatures below -10 F only occur three-to-four days a year.

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Content Sharing Kit for Communities

- Easy templates to tweak
- Good for general EV education or about your city's initiatives
- Samples for website, newsletters, press releases etc.

Drive Electric MINNESOTA

Electric Vehicle Content Sharing Kit for Communities

This document includes content for your website, community newsletters, and sample press releases you can send to the media to promote your electric vehicle efforts.

WEBSITE CONTENT

Use the content below on your website to help inform people about electric vehicles (EVs), educate them on the many benefits of driving electric, and share how your community is making the transition to EVs!

Finding the Right Electric Vehicle

Want to purchase an electric vehicle (EV) but not sure where to start? There are many types of vehicles to choose from depending on your needs and driving habits.

What are Your Driving Patterns?
Gauge how far you travel each day and what your all-electric driving needs will be. This will help you decide if a plug-in hybrid or battery EV is right for you.

	Battery Electric Vehicles (BEV)	Plug-in Hybrid Electric Vehicles (PHEV	Hybrid Electric Vehicles (HEV)
Powered by…	Battery that stores electric energy that powers the motor	Internal combustion engine *and* an electric motor using	Internal combustion engine; runs on conventional or

City Of Burnsville
100 Civic Center Parkway, Burnsville, MN 55337
Phone: 952-895-4400 Fax: 952-895-4404
www.burnsvillemn.gov

FOR IMMEDIATE RELEASE
July 5, 2019

Contact: Marty Doll
Communications Director
952-895-4402

ELECTRIC CAR CHARGING STATIONS NOW AVAILABLE IN HEART OF THE CITY

In response to the growing popularity of electric and hybrid vehicles, the City of Burnsville has installed

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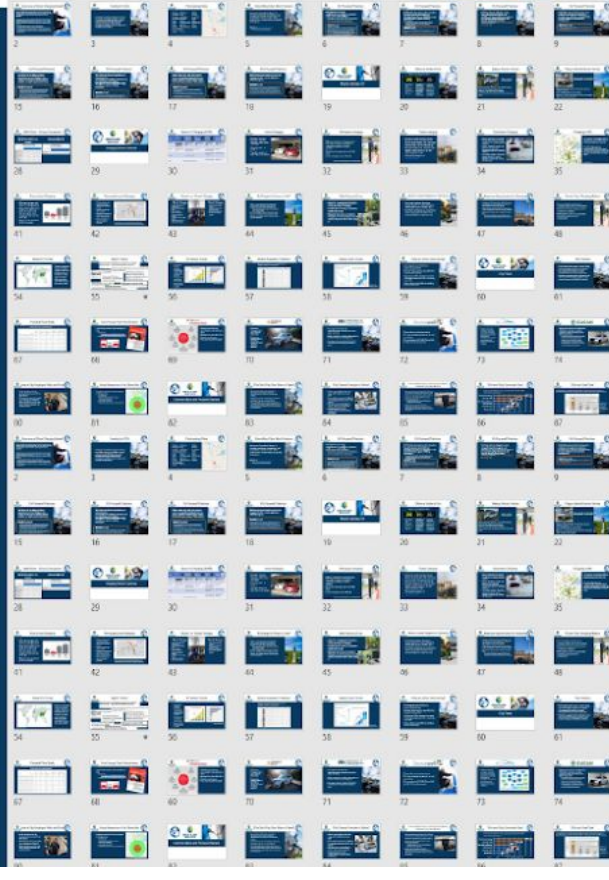
CCA Slide Deck

- 100 slides with EV information
- Pick and choose slides to create a custom slide show
- Topics: CCA Overview, EVs 101, EV Charging, Global EV Trends, City Fleets, Common Myths and Barriers, Tools and Resources



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Engage Your Audience

- EV Fast Facts
- EV quizzes
- Social media posts
- Ride and Drive Toolkit

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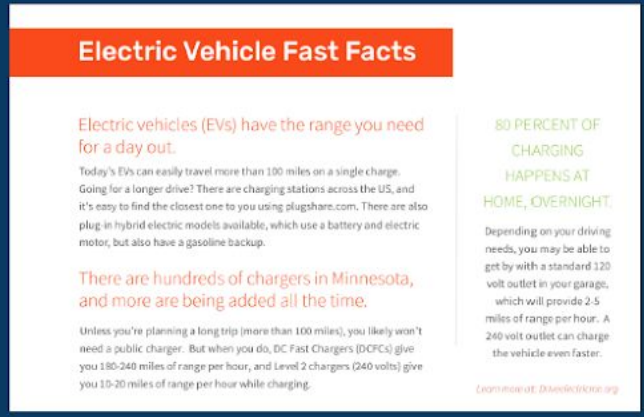
EV Fast Facts

Electric Vehicle Fast Facts

- GREAT as a handout for your next EVent!
- Covers the basics
- Addresses some of the more common myths and perceived barriers
- PDF so you can easily print two per sheet
- Digitally available



Electric Vehicle Fast Facts

Electric vehicles (EVs) have the range you need for a day out.

Today's EVs can easily travel more than 100 miles on a single charge. Going for a longer drive? There are charging stations across the US, and it's easy to find the closest one to you using plugshare.com. There are also plug-in hybrid electric models available, which use a battery and electric motor, but also have a gasoline backup.

There are hundreds of chargers in Minnesota, and more are being added all the time.

Unless you're planning a long trip (more than 100 miles), you likely won't need a public charger. But when you do, DC Fast Chargers (DCFCs) give you 180-240 miles of range per hour, and Level 2 chargers (240 volts) give you 10-20 miles of range per hour while charging.

80 PERCENT OF CHARGING HAPPENS AT HOME, OVERNIGHT.

Depending on your driving needs, you may be able to get by with a standard 120 volt outlet in your garage, which will provide 2-5 miles of range per hour. A 240 volt outlet can charge the vehicle even faster.

Learn more at: DriveElectricMN.org

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EV Quizzes

Fun way to test your audiences EV IQ

- Use on website or at an event
- Create a quiz to use on a survey
- Fun twist? Combine with a giveaway (Level 2 charging station or week in an EV?)

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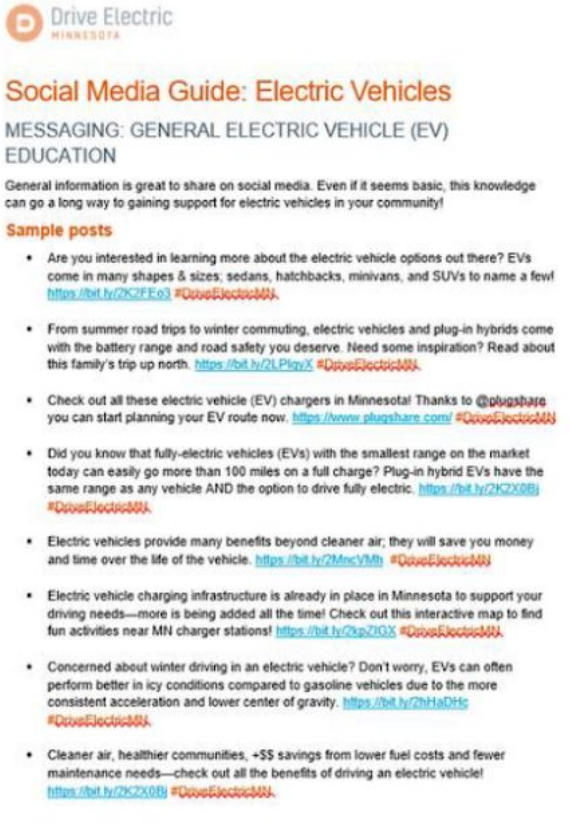
Promotional Tools

- Social Media Guide
- Stock Photos



Drive Electric MINNESOTA

Social Media Guide: Electric Vehicles

MESSAGING: GENERAL ELECTRIC VEHICLE (EV) EDUCATION

General information is great to share on social media. Even if it seems basic, this knowledge can go a long way to gaining support for electric vehicles in your community!

Sample posts

- Are you interested in learning more about the electric vehicle options out there? EVs come in many shapes & sizes, sedans, hatchbacks, minivans, and SUVs to name a few! https://bit.ly/2K2FEo3 #DriveElectricMN
- From summer road trips to winter commuting, electric vehicles and plug-in hybrids come with the battery range and road safety you deserve. Need some inspiration? Read about this family's trip up north. https://bit.ly/2LPlgyX #DriveElectricMN
- Check out all these electric vehicle (EV) chargers in Minnesota! Thanks to @plugshare you can start planning your EV route now. https://www.plugshare.com/ #DriveElectricMN
- Did you know that fully-electric vehicles (EVs) with the smallest range on the market today can easily go more than 100 miles on a full charge? Plug-in hybrid EVs have the same range as any vehicle AND the option to drive fully electric. https://bit.ly/2KZX0Bj #DriveElectricMN
- Electric vehicles provide many benefits beyond cleaner air; they will save you money and time over the life of the vehicle. https://bit.ly/2MncVMh #DriveElectricMN
- Electric vehicle charging infrastructure is already in place in Minnesota to support your driving needs—more is being added all the time! Check out this interactive map to find fun activities near MN charger stations! https://bit.ly/2kpZIOX #DriveElectricMN
- Concerned about winter driving in an electric vehicle? Don't worry, EVs can often perform better in icy conditions compared to gasoline vehicles due to the more consistent acceleration and lower center of gravity. https://bit.ly/2hHaDHc #DriveElectricMN
- Cleaner air, healthier communities, +$$ savings from lower fuel costs and fewer maintenance needs—check out all the benefits of driving an electric vehicle! https://bit.ly/2KZX0Bj #DriveElectricMN

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Promotional Tools

Ride and Drive Toolkit

- Checklists
- Event Worksheet template
- Dealer outreach tips
- Sample press release
- Sample Flyer
- Waiver forms
- Test drive tally sheets
- Sample surveys

#ButtsInSeats

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Take Action

Pick a best practice (13.2? 23.5?)

AND ACT!

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Growing Utility Programs

UTILITY INFORMATION:

A time-of-use rate is a rate offered by utilities to incentivize consumers to use electricity during specific times, generally overnight or low demand times (i.e. off-peak). Typically, this means that when there is higher electricity demand, the rate is higher, so when you use electricity becomes just as important as how much you use. This offers significant benefit to EV drivers as most EV charging is done overnight during the low-demand rate times.

The Minnesota Department of Commerce compiled *a list of time-of-use rates* that Minnesota utilities offer to customers that own an EV. It indicates what subscribers pay during off-peak and on-peak times of the day as well as contains information about available rebates and renewable energy programs.

Local Utility Resources:

Austin Public Utilities

Connexus Energy

Dakota Chargewise

Windsource

Dakota Electric Cooperative

Drive On (Otter Tail Power)

East Central Energy

Xcel Energy EV Programs

Write-Hennepin Cooperative Electric Association

Great River Energy

Minnesota Power

Revolt

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EV Charger Funding Available!

Rare funding opportunities for EV charging

VW Settlement funds for Level 2 chargers

https://www.pca.state.mn.us/air/volkswagen-settlement

MNDOT Funding for Clean Transportation

http://www.dot.state.mn.us/sustainability/clean-transportation.html

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Testimonial

"We learned a ton about the financial benefits of Fleet Studies in helping with purchasing, and about charging infrastructure and policy. All super helpful, and something to guide future decision making."

Anne Reich, Community Volunteer, Marine on the St. Croix

GREAT PLAINS INSTITUTE

Testimonial

"The broad scope of experiences and backgrounds of the participants brought a high level of information and professionalism to the problems of adaption and charger supply that we were trying to address. The depth and breadth of the technical knowledge was greatly appreciated."

Paul Drotos, Former Sustainability Coordinator, Red Wing

GREAT PLAINS INSTITUTE

Thank you!

Diana McKeown, Metro CERT Director
Great Plains Institute
612-278-7158
dmckeown@gpisd.net

Plug In America

WE DRIVE ELECTRIC. YOU CAN TOO.

Policies for Cities and Local Government on EVs

December 1, 2020

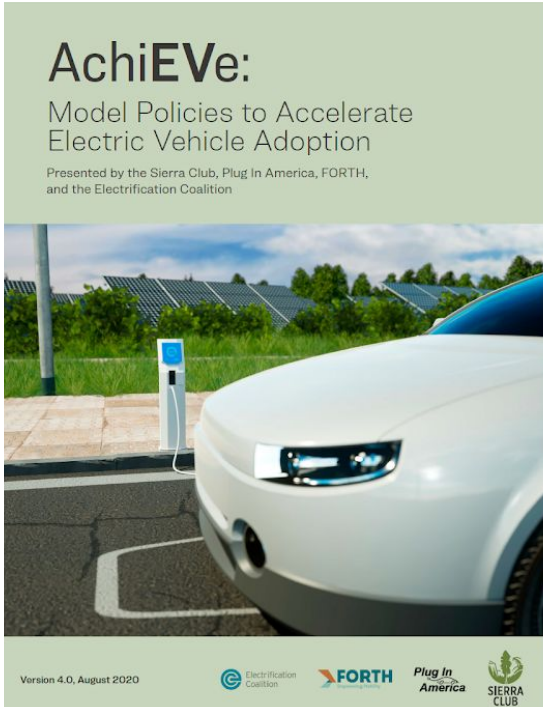
Katherine Stainken, Policy Director

Who we are

- **<u>The voice of the EV consumer</u>** – 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

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!



Cities and Local Gov. Policies and Programs

1. EV Ready Wiring Codes and Ordinances
2. Streetlight and Power Pole Charging Access
3. Ride and Drive Events
4. Solutions to the Barrier of Auto Dealers
5. Zero and Low-interest Loans for Consumers
6. Using VW Settlement Funds for Electrifying School Buses and Transit Buses
7. Using VW Settlement Funds to Grow EV Charging Networks
8. EV Infrastructure at Multi-Unit Dwellings
9. Right-of-Way Charging
10. EV Car Sharing Programs
11. Charging Access in Underserved Communities
12. Workplace Charging
13. School Bus Electrification Policies and Pilots
14. Financing of Infrastructure

Cities and Local Gov. Policies and Programs

Streetlight and power pole charging access:

Seattle: The city of Seattle, the Woodland Park Zoo, and ReachNow installed 20 Light & Charge systems at the Woodland Park Zoo. The Light & Charge system transforms existing streetlights and parking lot lights into host sites for EV charging stations.

Los Angeles: The city has installed EV chargers on 284 streetlights across the city and is installing chargers on utility poles as well.

Solutions to auto dealers selling EVs

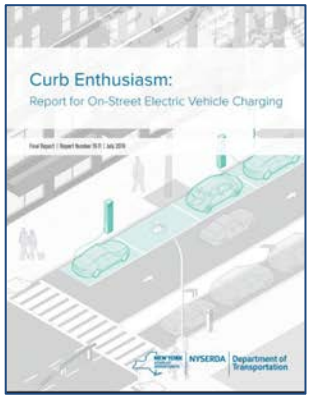
PlugStar: Qualified staff teach the auto dealers about the EV battery, how to charge and how to access charging stations, as well as review the answers to questions consumers might ask.

Madison Gas and Electric Dealer Program: The Dealership Rewards program offers a $50 gift card to each dealer who connects Madison Gas and Electric with customers in their service territory who are interested in purchasing an EV. The utility tracks dealership activity, including the greatest number of qualified leads, highest EV sales and event participation. The winning dealership receives a social media advertising campaign valued up to $1,500.

Cities and Local Gov. Policies and Programs

Zero and Low-interest loans

Washington: The EVs for EVERYONE program is offered to Washington residents through a partnership between Plug In America and the Express Credit Union. Loans to purchase a new EV are as low as 3.24 percent, while loans to purchase a used EV are as low as 3.49 percent.



Right-of-way charging

Sacramento, CA: Locating EVSE on the sidewalks through a partnership with the city and Evgo. The stations range from 150 kW to 50 kW.

New Orleans: The City Council unanimously voted to allow EV owners to apply for permits to install chargers for personal, noncommercial use next to the curb between their home and the street—a necessity in a city where many homes do not have driveways. Some of the requirements include how much space must remain on the sidewalk for pedestrians to pass and how close the devices can be to fire hydrants. A permit is $300 with a yearly renewal fee of $100.

Cities and Local Gov. Policies and Programs

Workplace Charging

- Install charging stations: L1, L2
- Offer free charging as employee benefit
- Partner with local utilities

Credit: FORTH

Why?

- Make it easy for employees to switch to electric: increase adoption 6x
- Attract and retain talent
- Build company reputation as a sustainability leader: Earn LEED points

Other ways to get involved….

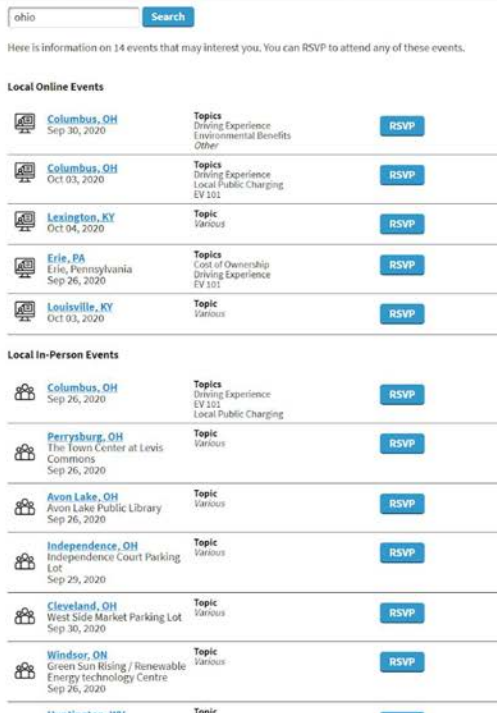
- National Drive Electric Week
  - Sept. 25 – Oct. 3, 2021
  - driveelectricweek.org
- Drive Electric Earth Day
  - April 2021
  - driveelectricearthday.org

DRIVE ELECTRIC
National Drive Electric Week™

DRIVE ELECTRIC EARTH DAY

United States National Online Events

Event	Day(s)
New EVs - First Look	Sep 29, 2020
Home EV Charging Station Installation Walk Through	Sep 27, 2020
EV Battery Recycling/Reuse	Oct 02, 2020
NDEW Kick-Off Event	Sep 24, 2020
EV Batteries: Straight Talk Edition	Sep 28, 2020
Find Your Perfect Match: EV Speed Dating	Sep 27, 2020
EV Trivia Happy Hour	Sep 29, 2020
The Policies Driving EV Adoption Forward	Oct 01, 2020
An EVening of Electrified Classic Cars	Sep 30, 2020
Electrify Your Ride to School	Oct 01, 2020
EVs and Solar: Driving on Sunshine	Sep 29, 2020
EV Myth Busting: Fact vs Fiction	Sep 28, 2020
Electric Cars and Vehicle to Grid Technology	Sep 28, 2020
EVs and Charging at the Workplace	Sep 30, 2020
EVs for All: Making EV Ownership More Inclusive	Oct 02, 2020
15 Events	



Thank you!

Katherine Stainken

Policy Director

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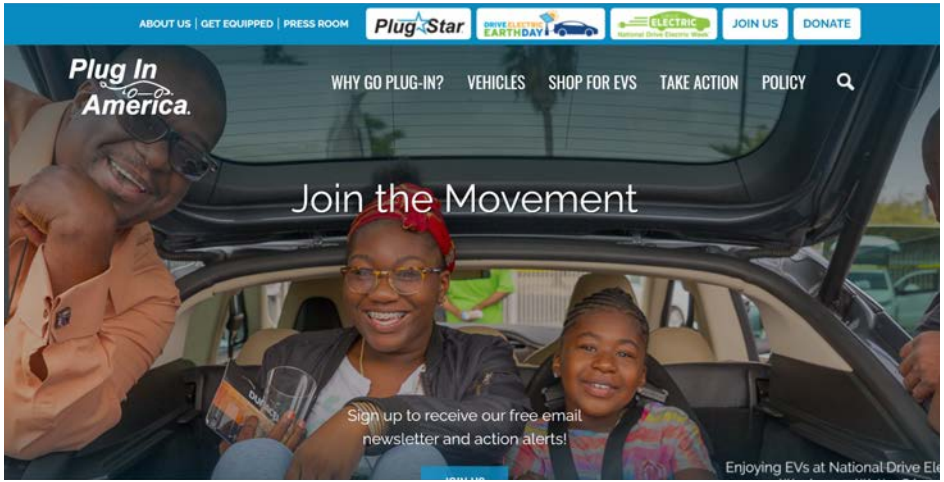
www.pluginamerica.org



Break out session questions

- What did the cities hear and what do they want to do as next steps?
- What are the barriers for your city?
- Do you have plans to add EVs, EVSE or EV standards/Ordinances?
- If not, what are the barriers and what do you feel like you need?
- Does your city have any legislative requests?
- How do you see EVs as an opportunity for your community?
- Are you aware of the utility programs to help you?

Facilitators:

Room 1: Hon. Charlie Zelle
Room 2: Dean Taylor
Room 3: Mathias Bell
Room 4: Amy Fredregill
Room 5: Brian Ross
Room 6: Diana McKeown
Room 7: Pete O'Connor
Room 8: Katelyn Bocklund

Closing Reminders:

Recordings available here:
https://pluginamerica.org/policy/webinar-series-minnesotans-going-electric/

- Plug In America
  - www.pluginamerica.org
  - Dean Taylor, Senior Policy Advisor: dtaylor@pluginamerica.org
- Drive Electric Minnesota
  - www.driveelectricmn.org
  - info@driveelectricmn.org
- Xcel Energy
  - www.xcelenergy.com
- Sustainable Growth Coalition
  - https://environmental-initiative.org/work/sustainable-growth-coalition/
  - Amy Fredregill, Managing Director: afredregill@en-in.org

Drive Electric MINNESOTA

Plug In America

Xcel Energy

SUSTAINABLE GROWTH COALITION