

Roadmap Conference
May 15-17, Portland, OR



Planning for EV Charging in SW Idaho

Whitaker Jamieson, April 12th, 2023





Forth's mission is to electrify transportation by bringing people together to create solutions that reduce pollution and barriers to access.

OUR FOCUS AREAS

Access to Electric Cars

Forth builds programs for drivers who have traditionally faced the most barriers to electrification.

Access to Charging

Forth is working to make it as easy to charge a car as it is to park a car.



Progressive EV Policy

We build influence and knowledge at the national, state and local levels.

Events & Partnerships

Forth convenes diverse stakeholders to collaborate and advance equitable transportation systems.

Access to Emerging Modes

We're increasing access to micromobility, electrifying farm equipment, school buses, and supporting e-mobility in lower-income countries worldwide.

Agenda

- Basics of EVs (15 min)
- Charging (15 min)
- Q/A (10 min)
- Break (10 min)
- ID NEVI Plan Presentation (15 min)
- Table Breakout: Stakeholders (35 min)
- Break (10 min)
- ID Power presentation (15 min)
- Table breakouts around Specific Locations (30)
- Final Q/A



Electric Vehicle Types

- **Battery Electric Vehicle**

- 100% electric
- Plug-in to recharge
- Ex: Chevy **Bolt**, Ford Mustang Mach-E, all Teslas (pictured)



- **Plug-in Hybrid Vehicle**

- Both electric and gasoline powered
- Most have an “Electric only” mode
- Plug-in to recharge, fill tank when needed
- Ex: RAV4 Prime (pictured), Kia Niro PHEV, Chevy **Volt**, BMW i3 w/ Range extender



Some More BEVs



2023 Kia EV6



2022 Hyundai Ioniq



2023 Blazer EV



2023 Ford Mustang Mach-E



2023 Nissan Ariya



2024 Polestar 3

Even if the vehicles aren't particularly easy to find in ID, they will be here sooner than you think

Trucks/SUVs here or coming soon



Ford 150 Lightning



2023-24 Chevrolet
Silverado EV



2025 RAM 1500 REV



Rivian R1S SUV



2024 GMC Hummer EV SUV



2024 Kia EV9

Some Vehicle Cost Trends

1. Small Battery Entry model vs Longer range (Larger pack) models only available in a higher trim. **Don't trust the "Starting at" phrase**
2. Usually AWD option adds \$2500-5000+ and reduces range by 5-10%
3. Range, Size, and AWD basically determine price with few exceptions
4. Demand > Supply for most vehicles models right now

If you have questions about Vehicle cost trends, write them down!

EV tax incentives

EV Federal tax credit - for new vehicles



Clean Vehicle Credit

- \$7,500 non refundable tax credit
 - \$3750 domestic battery assembly
 - \$3750 domestic critical minerals

- Types of restrictions
 - Income restrictions
 - \$150,000 - individual
 - \$300,000 - household

 - MSRP caps
 - SUV, pickup truck, van \$80k
 - Sedan/Hatchbacks \$55k

8936 Qualified Plug-in Electric Drive Motor Vehicle Credit
 (Including Qualified Two-Wheeled Plug-in Electric Vehicles and New Clean Vehicles)
 Form 8936 (Rev. January 2022) Department of the Treasury Internal Revenue Service
 Attach to your tax return. Go to www.irs.gov/Form8936 for instructions and the latest information.
 OMB No. 1545-2137 Attachment Sequence No. 69

Name(s) shown on return: _____ Identifying number: _____

Note: This credit is for qualified plug-in electric drive motor vehicles placed in service before 2023, qualified two-wheeled plug-in electric vehicles acquired before but placed in service in 2022, and new clean vehicles placed in service after 2022. See separate instructions for vehicle definitions and other requirements.

Part I Tentative Credit
 Use a separate column for each vehicle. If you need more columns, use additional Forms 8936 and include the totals on lines 12 and 19.

	(a) Vehicle 1	(b) Vehicle 2
1 Year, make, and model of vehicle	1	
2 Vehicle identification number (see instructions)	2	
3 Enter date vehicle was placed in service (MM/DD/YYYY)	3	
4a If the vehicle is a two-wheeled vehicle, enter the cost of the vehicle. If the vehicle has at least four wheels, see instructions	4a	
b Phase-out percentage (see instructions)	4b	%
c Tentative credit. Multiply line 4a by line 4b	4c	

Next: If you did NOT use your vehicle for business or investment purposes and did not have a credit from a partnership or S corporation, skip Part II and go to Part III. All others, go to Part II.

Part II Credit for Business/Investment Use Part of Vehicle

5 Business/investment use percentage (see instructions)	5	%	%
6 Multiply line 4c by line 5. If the vehicle has at least four wheels, leave lines 7 through 10 blank and go to line 11	6		
7 Section 179 expense deduction (see instructions)	7		
8 Subtract line 7 from line 6	8		
9 Multiply line 8 by 10% (0.10)	9		
10 Maximum credit per vehicle	10	2,500	2,500
11 For vehicles with four or more wheels, enter the amount from line 9. If the vehicle is a two-wheeled vehicle, enter the smaller of line 9 or line 10	11		
12 Add columns (a) and (b) on line 11	12		
13 Qualified plug-in electric drive motor vehicle credit from partnerships and S corporations (see instructions)	13		
14 Business/investment use part of credit. Add lines 12 and 13. Partnerships and S corporations, stop here and report this amount on Schedule K. All others, report this amount on Form 3800, Part III, line 1y	14		

Note: Complete Part III to figure any credit for the personal use part of the vehicle.

For Paperwork Reduction Act Notice, see separate instructions. Cat. No. 3751E 10 Form 8936 (Rev. 1-2022)

EV Federal tax credit - for used vehicles



Previously Owned Clean Vehicles

- \$4,000 or 30% of the vehicle sale price (whichever is lower)
- Types of restrictions
 - Income restrictions 75k Filing Single | 150k Married
 - Vehicle type
 - 2+ yrs old
 - <14,000 lbs (Class 1-3)
 - <\$25,000
 - Not have previously used the credit (check by VIN)
 - Sold by a dealership
 - Credit can be claimed once every 3 yrs

8936 **Qualified Plug-in Electric Drive Motor Vehicle Credit** (Including Qualified Two-Wheeled Plug-in Electric Vehicles and New Clean Vehicles)

Form 8936 (Rev. January 2022) Department of the Treasury Internal Revenue Service

OMB No. 1545-2137 Attachment Sequence No. 69

Go to www.irs.gov/Form8936 for instructions and the latest information.

Name(s) shown on return: _____ Identifying number: _____

Note: This credit is for qualified plug-in electric drive motor vehicles placed in service before 2023, qualified two-wheeled plug-in electric vehicles acquired before but placed in service in 2022, and new clean vehicles placed in service after 2022. See separate instructions for vehicle definitions and other requirements.

Part I Tentative Credit

Use a separate column for each vehicle. If you need more columns, use additional Forms 8936 and include the totals on lines 12 and 19.

	(a) Vehicle 1	(b) Vehicle 2
1 Year, make, and model of vehicle	1	
2 Vehicle identification number (see instructions)	2	
3 Enter date vehicle was placed in service (MM/DD/YYYY)	3	
4a If the vehicle is a two-wheeled vehicle, enter the cost of the vehicle. If the vehicle has at least four wheels, see instructions	4a	
b Phase-out percentage (see instructions)	4b	%
c Tentative credit. Multiply line 4a by line 4b	4c	

Next: If you did NOT use your vehicle for business or investment purposes and did not have a credit from a partnership or S corporation, skip Part II and go to Part III. All others, go to Part II.

Part II Credit for Business/Investment Use Part of Vehicle

5 Business/investment use percentage (see instructions)	5	%	%
6 Multiply line 4c by line 5. If the vehicle has at least four wheels, leave lines 7 through 10 blank and go to line 11	6		
7 Section 179 expense deduction (see instructions)	7		
8 Subtract line 7 from line 6	8		
9 Multiply line 8 by 10% (0.10)	9		
10 Maximum credit per vehicle	10	2,500	2,500
11 For vehicles with four or more wheels, enter the amount from line 9. If the vehicle is a two-wheeled vehicle, enter the smaller of line 9 or line 10	11		
12 Add columns (a) and (b) on line 11	12		
13 Qualified plug-in electric drive motor vehicle credit from partnerships and S corporations (see instructions)	13		
14 Business/investment use part of credit. Add lines 12 and 13. Partnerships and S corporations, stop here and report this amount on Schedule K. All others, report this amount on Form 3800, Part III, line 1y	14		

Note: Complete Part III to figure any credit for the personal use part of the vehicle.

For Paperwork Reduction Act Notice, see separate instructions. Cat. No. 3751E 11 Form 8936 (Rev. 1-2022)

Used BEVs under \$30k



Chevy Bolt EV
238 mile range 2017-2019



Nissan Leaf
150 mile range 2018-19



Hyundai Kona EV
258 mile range 2018-19



Kia Niro EV
238 mile range 2018-19



Hyundai Ioniq EV
125 mile range 2018-19
170 miles 2020

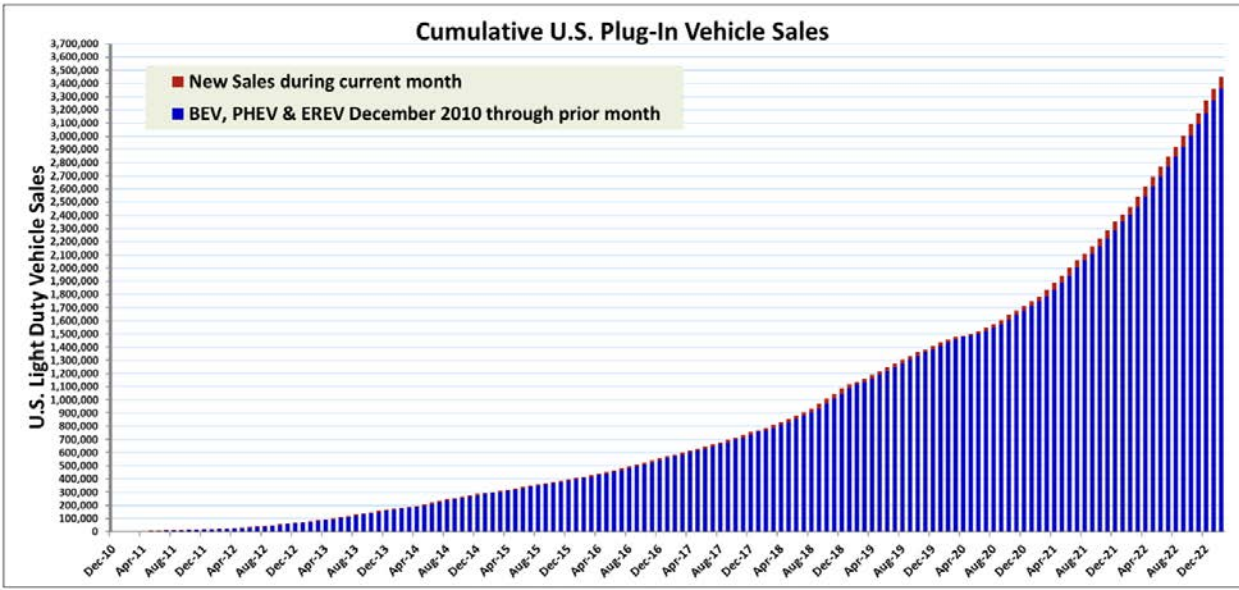


2019 Tesla Model 3*
240 mile range 2019

Almost 3.5 Million Electric Cars sold since 2010!



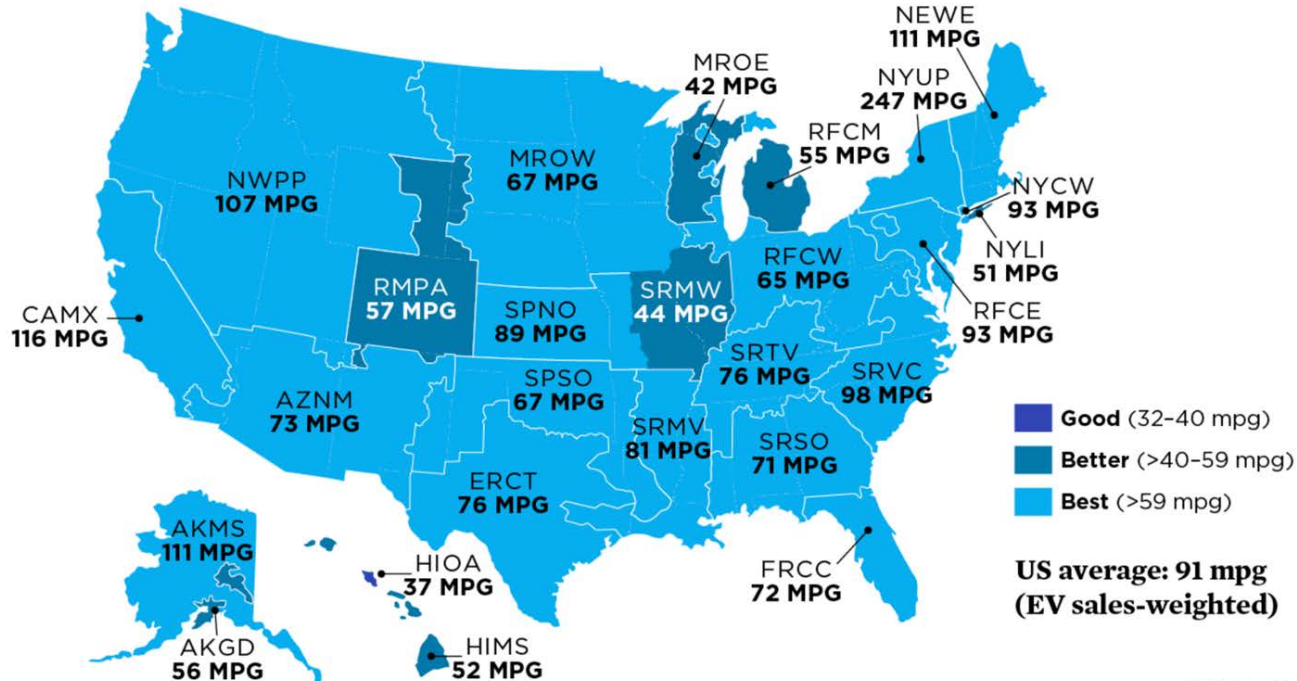
PHEVs and BEVs



Cumulative U.S. Plug-In Vehicle Sales

EVs are getting even Cleaner

Comparing Emissions: Driving the Average EV as a Gasoline MPG Equivalent, 2020



EVs are fun to drive!

- Instant acceleration and torque
- Lower center of gravity for tight handling
- Quiet
- Regenerative braking



Nothing is Perfect

EVs are still expensive

**Public charging experience can be rough
(Especially in Rural locations)**

Affordable Long Range AWD vehicles

Weather can dramatically impact range

Trends

- 200-250 miles of range standard for short-range vehicles
- 300+ miles of range standard for longer range
- Towing still a conundrum due to battery size/range/weight/aerodynamics
- Costs of many new vehicles types will remain high for a few more years
- Utilities understanding how EVs integrate into their existing systems





Level Setting for EV Charging

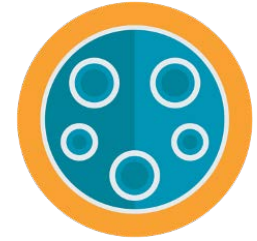
(Pun intended)

Electric vehicle charging - Level 1

- Cable almost always included w/ car even used
- 2-5 miles gained per hour of charge (light-duty vehicles)
- Best for
 - Plug-in hybrids
 - Short commutes
 - People that don't drive every day
- Nationally Recognized Testing Laboratory Listed (**Intertek or UL Listed**)
- Costs \$0 unless you need to buy a cord or run a dedicated outlet to where your car parks



120 Volt outlet



Standard Port

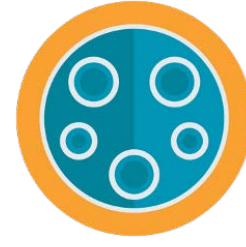


Electric vehicle charging - Level 2

- 12-40 miles gained per hour of charge
- Ideal for installation in homes, apartments, or workplace
- Home chargers to install usually cost between \$500-\$5000
- Public chargers cost \$2000-\$20,000+ per charger installed



240 Volt Outlet
or Hardwired



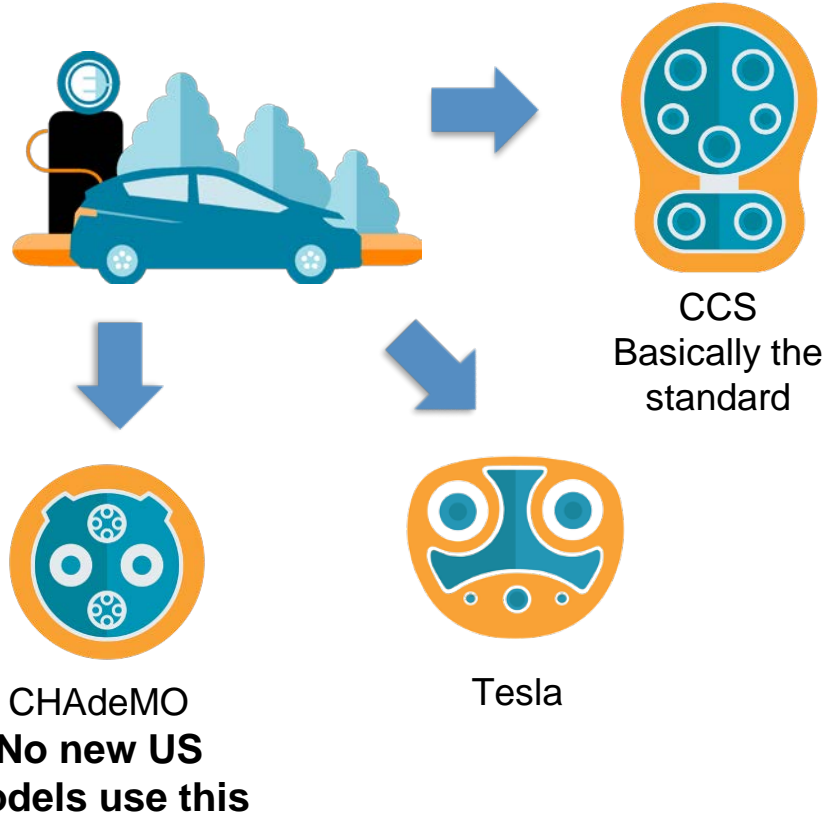
Standard Port











DC Fast charging (Level 3)

10->80% in 15-60 minutes depending on

- Charger's Max charging speed
- Vehicles Max charging speed
- Battery management System factors
 - Temperature of battery
 - Ambient Temperature
- State of charge start/stop
- Costs >\$100,000 per charger



Slowest		Fastest	
Level	Level 1	Level 2	DC Fast Charging
Use Case	Home	Home/Work/Public	Public
Power	<2 kW <i>(Usually 1.2 kW)</i>	2.4 - 19.2 kW <i>(Usually 6.7 kW)</i>	25 - 350 kW <i>(Usually 150, 50, or 250 kW respectively)</i>
Plug Shape (Into Vehicle)	 J1772	 J1772	 CCS  CHAdeMO  Tesla
Outlet Shape	 120 V	 240 V	Electric Vehicle Supply Equipment (EVSE) 
Cost	\$	\$\$	\$\$\$\$

Alternative Fuel Vehicle Refueling Property Credit



For Individuals:

- Beginning January 1, 2023
- Purchase qualified equipment may receive a tax credit of up to \$1,000
- Non refundable
- You must file your taxes to claim the credit

Talk with a Tax expert to learn more

Form 8911		Alternative Fuel Vehicle Refueling Property Credit		OMB No. 1545-0123
(Rev. January 2023) Department of the Treasury Internal Revenue Service		Go to www.irs.gov/Form8911 for instructions and the latest information.		Attachment Sequence No. 151
Name(s) shown on return			Identifying number	
Part I Total Cost of Refueling Property				
1	Total cost of qualified alternative fuel vehicle refueling property placed in service during the tax year (see <i>What's New</i> in the instructions)			1
Part II Credit for Business/Investment Use Part of Refueling Property				
2	Business/investment use part (see instructions)		2	
3	Section 179 expense deduction (see instructions)		3	
4a	Subtract line 3 from line 2		4a	
b	Enter any amount included on line 4a attributable to property placed in service after 2022 as part of a project subject to project requirements that were not met (see instructions)		4b	
c	Subtract line 4b from line 4a		4c	
5a	Multiply line 4b by 6% (0.06)		5a	
b	Multiply line 4c by 30% (0.30)		5b	
c	Add lines 5a and 5b		5c	
6	Maximum business/investment use part of credit (see instructions)		6	
7	Enter the smaller of line 5c or line 6		7	
8	Alternative fuel vehicle refueling property credit from partnerships and S corporations (see instructions)		8	
9	Business/investment use part of credit. Add lines 7 and 8. Partnerships and S corporations, stop here and report this amount on Schedule K. All others, report this amount on Form 3800, Part III, line 15		9	
Part III Credit for Personal Use Part of Refueling Property				
10	Subtract line 2 from line 1. If zero, stop here; do not file this form unless you are claiming a credit on line 9		10	
11	Multiply line 10 by 30% (0.30)		11	
12	Maximum personal use part of credit (see instructions)		12	
13	Enter the smaller of line 11 or line 12		13	
14	Regular tax before credits: • Individuals. Enter the sum of the amounts from Form 1040, 1040-SR, or 1040-NR, line 16, and Schedule 2 (Form 1040), line 2. • Other filers. Enter the regular tax before credits from your return.		14	
15	Credits that reduce regular tax before the alternative fuel vehicle refueling property credit: a Foreign tax credit b Certain allowable credits (see instructions) c Add lines 15a and 15b	15a 15b	15c	
16	Net regular tax. Subtract line 15c from line 14. If zero or less, enter -0- and stop here; do not file this form unless you are claiming a credit on line 9		16	
17	Tentative minimum tax (see instructions): • Individuals. Enter the amount from Form 6251, line 9. • Other filers. Enter the tentative minimum tax from your alternative minimum tax form or schedule.		17	
18	Subtract line 17 from line 16. If zero or less, stop here; do not file this form unless you are claiming a credit on line 9		18	
19	Personal use part of credit. Enter the smaller of line 13 or line 18 here and on Schedule 3 (Form 1040), line 6j; or the appropriate line of your return. If line 18 is smaller than line 13, see instructions		19	3

Alt Fuel Refueling Property Credit—Businesses (+ other orgs)



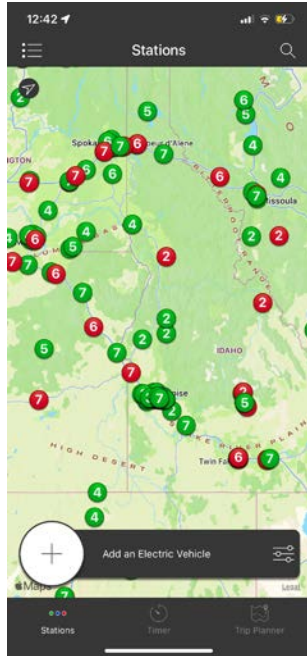
- Beginning January 1, 2023
- Nonrefundable
- Non taxable entities (\$ delivery method unconfirmed)
- Eligible for a tax credit
 - 6% or up to \$100,000 per port so long as:
 - Property subject to depreciation
 - 30% (or up to \$100,000) if:
 - Prevailing Wages
 - % of work done by apprentices
 - Location specific
 - Not an urban area
 - Poverty rate is at least 20%
 - median family income is less than 80% of the state median family income level

Talk with a Tax expert to learn more

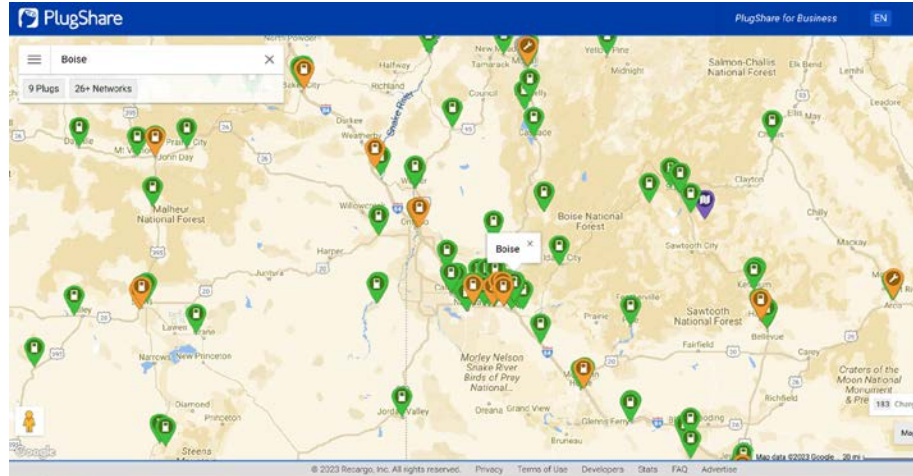
Form 8911 (Rev. January 2023) Department of the Treasury Internal Revenue Service		Alternative Fuel Vehicle Refueling Property Credit		OMB No. 1545-0123
Name(s) shown on return		Go to www.irs.gov/Form8911 for instructions and the latest information.		Attachment Sequence No. 151
			Identifying number	
Part I Total Cost of Refueling Property				
1	Total cost of qualified alternative fuel vehicle refueling property placed in service during the tax year (see <i>What's New</i> in the instructions)		1	
Part II Credit for Business/Investment Use Part of Refueling Property				
2	Business/investment use part (see instructions)		2	
3	Section 179 expense deduction (see instructions)		3	
4a	Subtract line 3 from line 2		4a	
b	Enter any amount included on line 4a attributable to property placed in service after 2022 as part of a project subject to project requirements that were not met (see instructions)		4b	
c	Subtract line 4b from line 4a		4c	
5a	Multiply line 4c by 6% (0.06)		5a	
b	Multiply line 4c by 30% (0.30)		5b	
c	Add lines 5a and 5b		5c	
6	Maximum business/investment use part of credit (see instructions)		6	
7	Enter the smaller of line 5c or line 6		7	
8	Alternative fuel vehicle refueling property credit from partnerships and S corporations (see instructions)		8	
9	Business/investment use part of credit. Add lines 7 and 8. Partnerships and S corporations, stop here and report this amount on Schedule K. All others, report this amount on Form 3800, Part III, line 1s		9	
Part III Credit for Personal Use Part of Refueling Property				
10	Subtract line 2 from line 1. If zero, stop here; do not file this form unless you are claiming a credit on line 9		10	
11	Multiply line 10 by 30% (0.30)		11	
12	Maximum personal use part of credit (see instructions)		12	
13	Enter the smaller of line 11 or line 12		13	
14	Regular tax before credits: • Individuals. Enter the sum of the amounts from Form 1040, 1040-SR, or 1040-NR, line 16, and Schedule 2 (Form 1040), line 2. • Other filers. Enter the regular tax before credits from your return.		14	
15	Credits that reduce regular tax before the alternative fuel vehicle refueling property credit:			
a	Foreign tax credit	15a		
b	Certain allowable credits (see instructions)	15b		
c	Add lines 15a and 15b		15c	
16	Net regular tax. Subtract line 15c from line 14. If zero or less, enter -0- and stop here; do not file this form unless you are claiming a credit on line 9		16	
17	Tentative minimum tax (see instructions): • Individuals. Enter the amount from Form 6251, line 9. • Other filers. Enter the tentative minimum tax from your alternative minimum tax form or schedule.		17	
18	Subtract line 17 from line 16. If zero or less, stop here; do not file this form unless you are claiming a credit on line 9		18	
19	Personal use part of credit. Enter the smaller of line 13 or line 18 here and on Schedule 3 (Form 1040), line 6j; or the appropriate line of your return. If line 18 is smaller than line 13, see instructions		19	4

How to Find and Use EV chargers!

Find Public Charging Stations

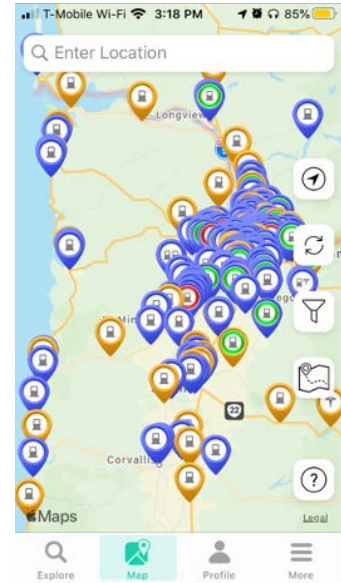


Chargeway
(App only)



PlugShare (Website & App)

Public EV Charging Companies have **phone apps** that can be used to find chargers and start charging sessions

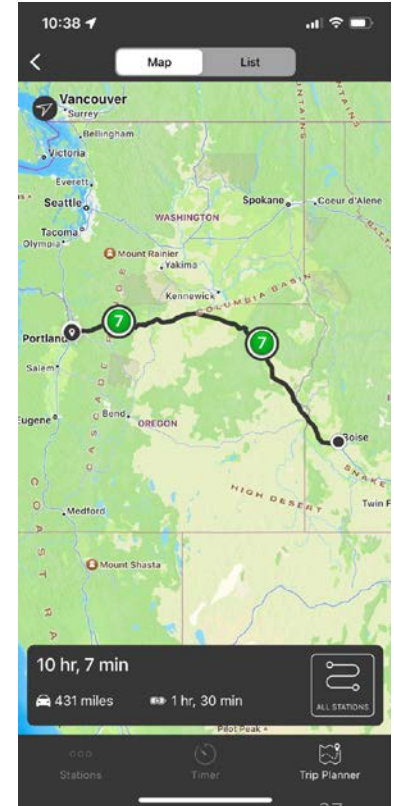
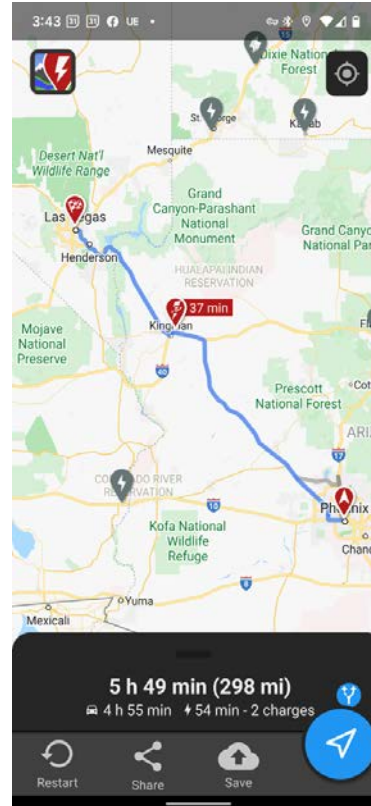


ChargeHub
(Website & App)

Travel longer distances

Apps like A Better Route Planner or Chargeway

- Plan longer trips and see charging times
- How long to expect to be charging



How to use a charger?

1. Read instructions at site
2. Using Phone apps
 - a. Download app
 - b. create an account and card details
3. When in doubt, plug in charger and start the charge through the phone app
4. Swipe/tap credit card should also be available at DC chargers
5. Check that you're starting the charge on the right charger (find charger ID to help with this)
6. Sometimes chargers will need rebooting, in which case a phone call may be required
 - a. Check charger for phone number



Plug and Charge Protocols (Like what Tesla already has)

**Simply plug in and charging will start quickly and
account associated with the car will be billed**

Charging Use Cases

Charging use cases put simply

Single Family Homes-L1/L2

Multi-Family Homes- L2 but it can depend on electrical configuration

Public charging-L2/DC

Destination- L2

Workplace- L1/L2 (very unusual cases DC)

Corridor charging-DC

Fleet (depends on fleet vehicles/use profile)



It is all about how long the car is parked for

Light/Medium Duty VS Heavy Duty Charging

Key differences are

- More space needed
- Turning Radiuses
- Charging speeds
- Utility infrastructure
- Battery storage
- Faster Charging speeds (MegaWatt Charging Standard-MCS)



Multi-Family Charging



- Many barriers such as:
 - Parking constraints
 - Electrical access
 - Electrical Capacity
 - Internet signal
 - Billing
 - Appropriately allocating costs
 - HOAs, where applicable
- Hard to want to buy an EV if you don't know where you're going to charge it
- People want to charge where they park

Workplace Charging

- Workplace charging implementation
 - Employee amenity
 - Can double for Fleet charging when not used by employees
 - Customers
 - ROI possible
- Resources on planning, organizing, and executing successful and educational workplace charging events in the [Clean Cities Workplace Charging Toolkit](#).



Public Charging Overview

- Level 2 or DC fast charging
 - Should be deployed based on community needs
 - At destinations like business or neighborhood parks
 - Along highway corridors or at urban charging hubs
- Builds range security (as opposed to range anxiety)
- Destination charging can sometimes be public charging



Corridor Charging

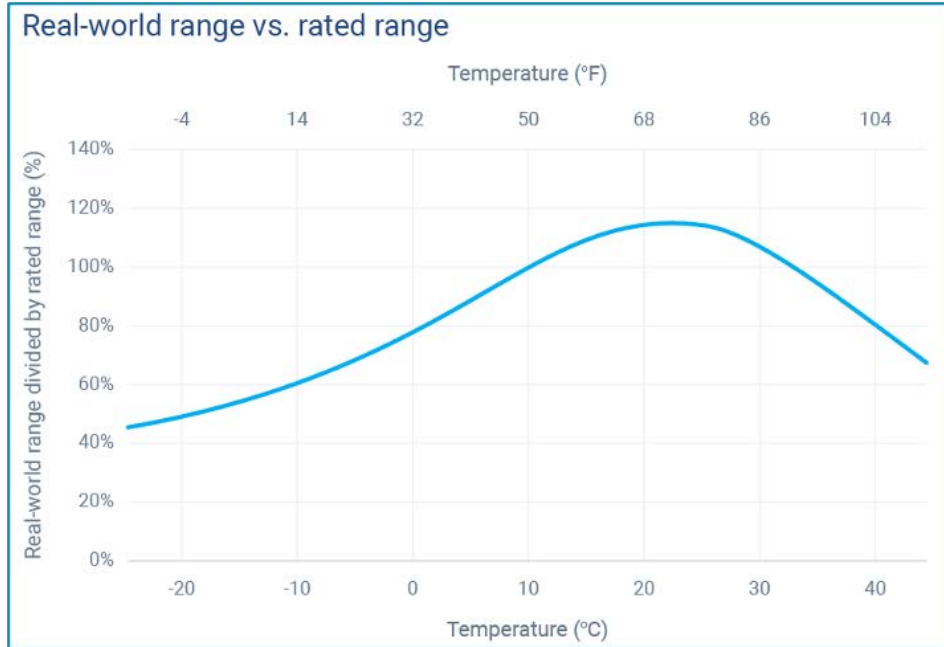
Primarily DC chargers

Best for:

- Long distance trips
- Regular mid-distance trips
- If you live nearby, backup for a lack of access to chargers at SF or MF homes



EV Range and EV charging planning



[Multi-Model Study on EV Range done by GeoTab](#)

Reason for deviation from Rated Range

- Speed
- Use of A/C or heater
- Steep terrain
- Outside temperature

Plan Smarter

- Chargers may need to be closer together in hilly areas
- Amenities, especially somewhere temperature controlled becomes critical in rural areas
- Winter vs. Summer Travel patterns

Ownership Models

Public EV Charger Ownership Models

Primary Stakeholders:

1. Charging service provider
2. Host site
3. Funder, if applicable

Two Primary methods of Charger ownership:

1. Host site owned/maintained with charging service provider agreement/contract
2. Charging service provider owned/maintained with host site agreement/contract



EV Charger Ownership Model Details

1. Host site owned with charging service provider agreement
 - a. Host site controls cost to charge, accessibility, pays CSP for features like notifications/reservation systems, internet connectivity, and financial transaction fees
 - b. Sometimes revenue sharing agreements

2. Charging service provider owned with host site agreement
 - a. CSP controls cost to charge
 - b. Revenue sharing agreement
 - c. Specific timeframe for services offered

Questions on EVs and EV Charging? Q/A + Mini Break

**Up Next: Presentation on Idaho's NEVI Plan from
Emily with ID OEMR**

Idaho NEVI Plan With Emily Her!



WHAT IS THE NEVI FORMULA PROGRAM?

The National Electric Vehicle Infrastructure (NEVI) Program was enabled through the Bipartisan Infrastructure Law (BIL) and established by the Federal Highway Administration (FHWA) to provide states with federal funding to strategically deploy EV charging infrastructure and establish an interconnected network of EV charging stations across the United States.

HOW MUCH FUNDING IS AVAILABLE?

The State of Idaho will receive just under \$30 million dollars throughout FY22-26. Federal cost-share for the NEVI Formula Program is 80%. Stations will be funded through public-private partnership. The State will not own or operate NEVI-funded charging stations.

WHEN WILL APPLICATIONS OPEN?

Throughout October 2022 - August 2023, the State of Idaho will conduct a study to provide a detailed analysis of fast charging deployment. After the study is complete, the State will create an action plan for the solicitation of applications.

Idaho Alternative Fuel Corridors - Electric Vehicles - 2022



ARE THERE REQUIREMENTS FOR NEVI STATIONS?

Yes. Direct current fast charging (DCFC) stations built with NEVI Formula Program Funds must have at least four CCS ports capable of 150 kW output each, for a combined station total output of at least 600 kW. Each year, states nominate major roadways for Alternative Fuel Corridor (AFC) designation. NEVI Formula Funding must be used to install DCFC less than one mile from and at 50-mile intervals along designated AFCs.

WHERE WILL NEVI STATIONS BE INSTALLED?

Stations will be installed along federally-designated AFCs. As of 2022, Idaho's AFCs are: I-15, I-84, I-86, I-90, SH-1, US-95, US-93, US-12, US-20, US-30. Additional corridors may be designated in future years.

WHERE CAN I GET MORE INFORMATION?

Get updates on the State of Idaho's NEVI Program and other electric vehicle opportunities by visiting: <https://oemr.idaho.gov/programs/national-electric-vehicle-infrastructure-program/>





NATIONAL ELECTRIC VEHICLE INFRASTRUCTURE (NEVI) FORMULA PROGRAM

IDAHO



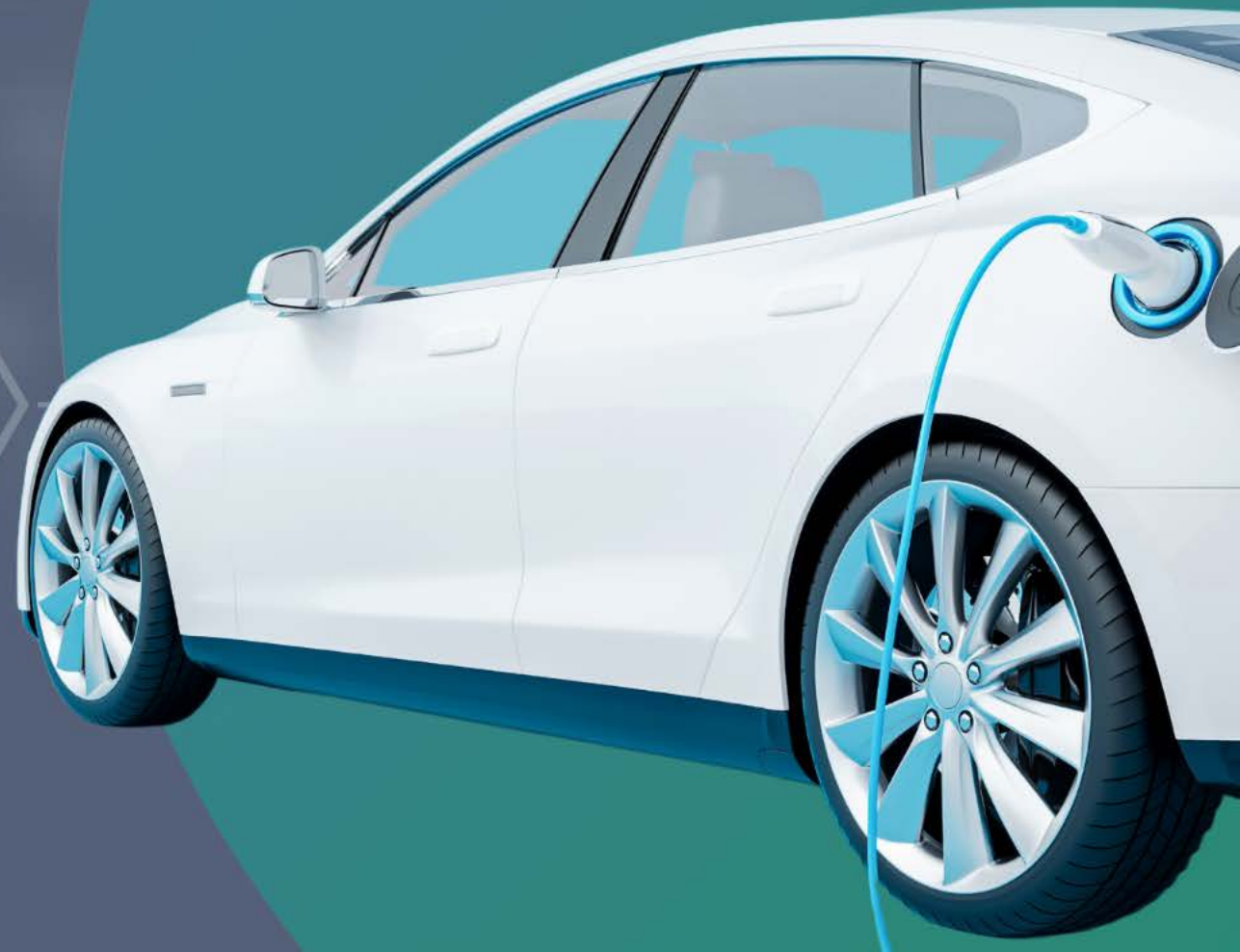


BACKGROUND

NEVI PROGRAM AND EVS IN IDAHO

OVERVIEW

- The National Electric Vehicle Infrastructure (NEVI) Formula Program was established through the Bipartisan Infrastructure Law passed in 2021
- Funds electric vehicle (EV) charging infrastructure in each state
- In 2022, ITD, OEMR and DEQ collected feedback from stakeholders across the state
- This feedback was used to develop Idaho's NEVI Plan
- Idaho's plan was approved by the FHWA in September 2022



NEVI CHARGING STATION REQUIREMENTS



Locations for DCFC NEVI charging stations will need to meet the following requirements:

- 50 miles apart and less than 1 mile from an EV Alternative Fuel Corridor
- Power grid capacity
- Provide public restrooms, lighting, shelter and ADA access
- Available on rural corridors and to underserved communities
- Assure long-term operation and maintenance
- Foster public-private investment in EV infrastructure

EVS IN IDAHO

Between 2020-2022, Idaho saw a **270% increase** in EV and Hybrid ownership.

YEAR	ELECTRIC	HYBRID PLUGIN	TOTAL
2020	1871	137	2,008
2021	3250	1014	4,264
2022	5,394	2,031	7,426



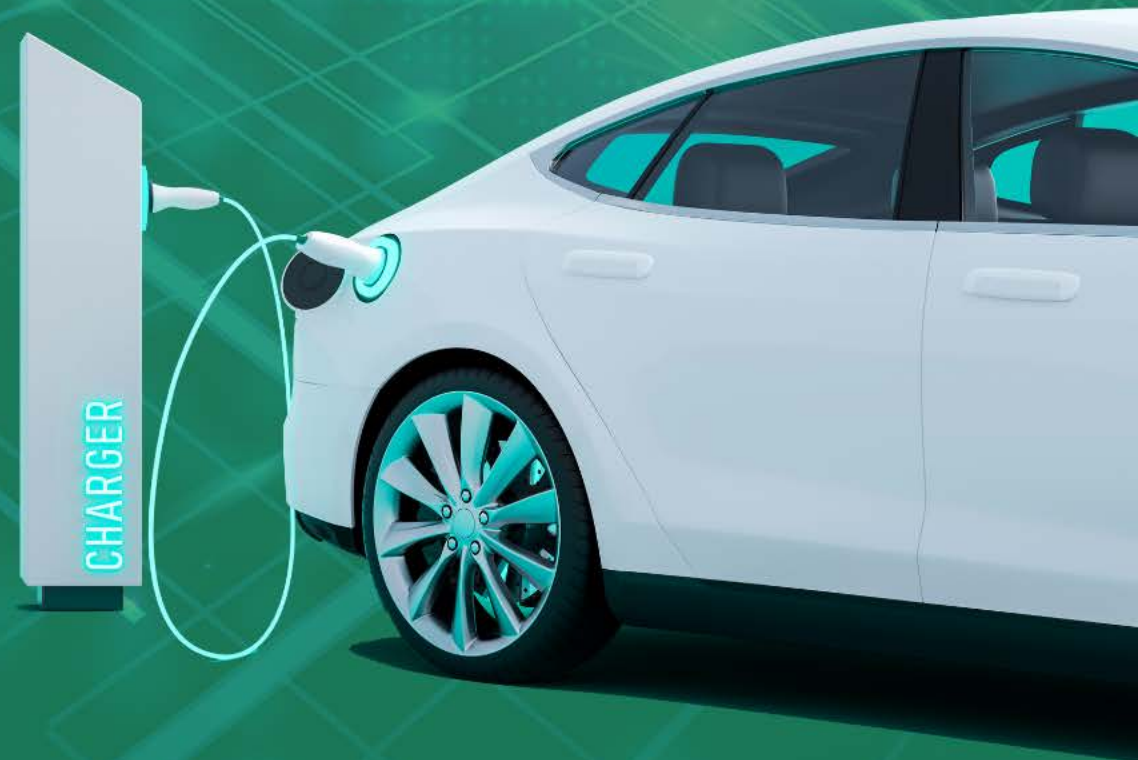
PHASE I

2022 OUTREACH AND PUBLIC INVOLVEMENT

PHASE I PUBLIC OUTREACH

ITD, OEMR, and DEQ coordinated through an interagency partnership to gather feedback from representative groups to ensure equity in planning efforts. These groups included:

- Minority / Underrepresented Groups
- Industry & Industry Associations
 - Chambers of Commerce
 - Large employers
 - Trucking
 - Vehicle Manufacturing
 - Auto dealers
 - Utilities
 - Labor
 - Economic Development
- Education
- Environmental Groups
- Municipalities
- Government Agencies



CHARGING STATION FEEDBACK

The areas of concentration on the map shows potential locations of Level III charging stations along Alternative Fuel Corridors based on feedback from stakeholders from specific industries and the public at-large.

Some common areas of focus were along the following highways:

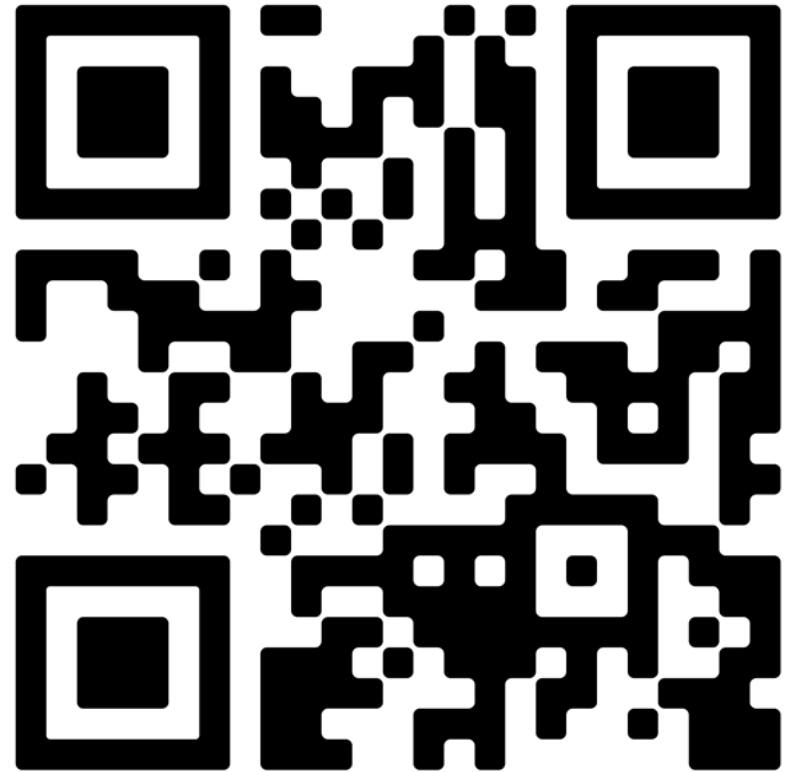
- SH 55
- US 95
- I 90
- I 84
- I 86
- I 15



IDAHO'S APPROVED PLAN

After compiling feedback through public involvement efforts, ITD, OEMR and DEQ submitted their plan to the FHWA in August 2022. FHWA sent their approval of the plan in September 2022.

SCAN QR CODE TO SEE FULL PLAN





PHASE II

PLAN AND NEXT STEPS

RANGE FOR SALE
TRAPPING HOLE & LAKE
390 ACRES
BETTY JOHNSON
708.244.2000

PHASE II: SITING, FEASIBILITY & ACCESS STUDY

The Siting, Access, and Feasibility Study will help prioritize EV charging station locations by considering:

- Greatest number of drivers served
- Greatest need (considerations related to rural areas, and FHWA rule exceptions related to distance between stations)
- Greatest economic benefit to host and/ or community
- Physical attributes of potential EV charging station locations
- Future growth/ continuity
- Equity of potential/proposed site locations and features, specifically as they pertain to Idaho's tribal and minority populations
- Terrain, weather and access to potential locations



PHASE II: SITING, FEASIBILITY & ACCESS STUDY

- GIS mapping of network data and electrical supply
- Prioritization process, propose NEVI compliant station locations
- Economic cost modeling
- Exception documentation
- Policy and research
- Design and access recommendations
- Site construction
- Resilience, emergency evacuation, seasonal needs
- Procurement, evaluation and contracting
- Operations and maintenance
- Equity and workforce development considerations



NEXT STEPS: PUBLIC OUTREACH



ITD, OEMR, and DEQ will also be providing opportunities for the public to review the current plan, ask questions and provide feedback. These will include:

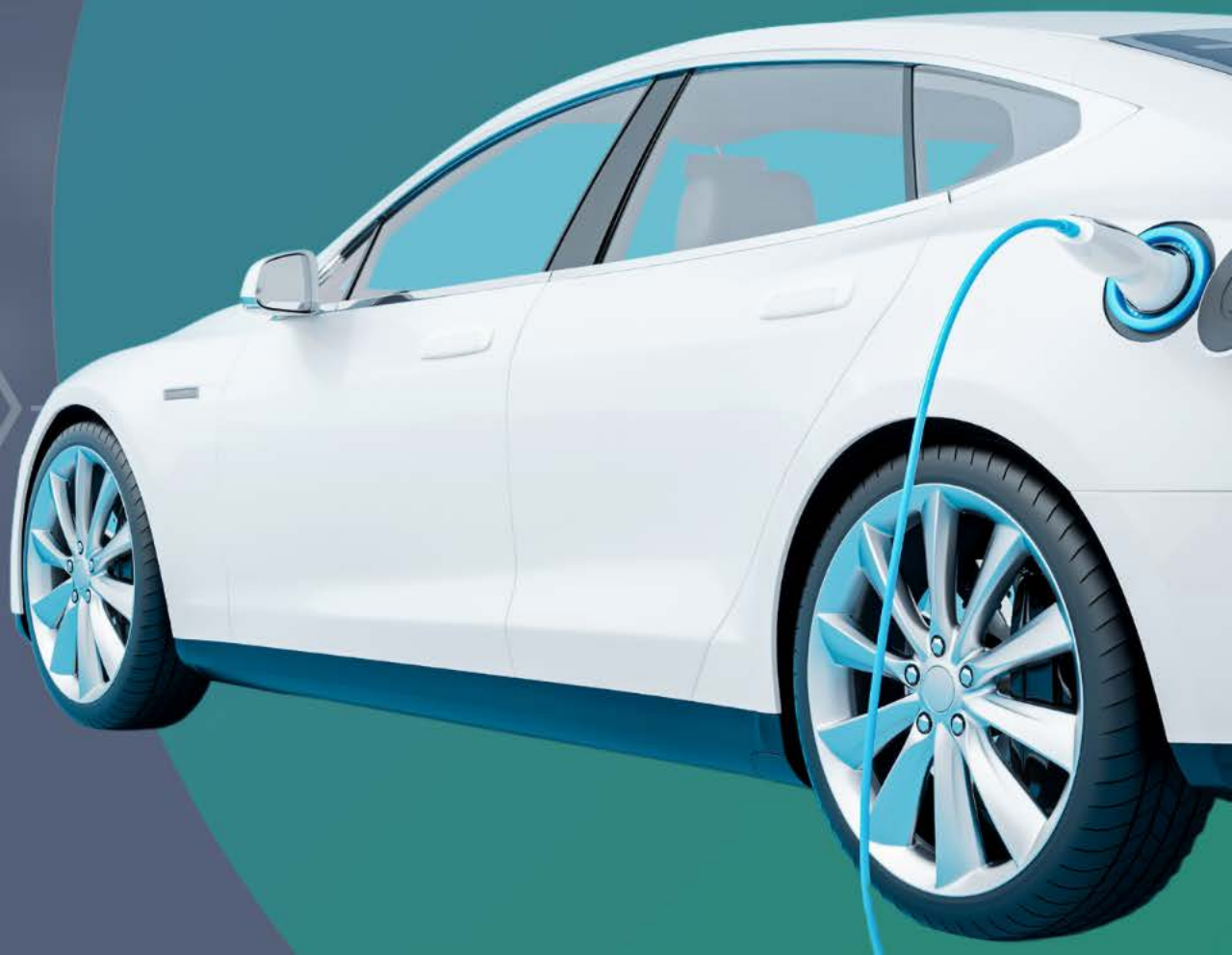
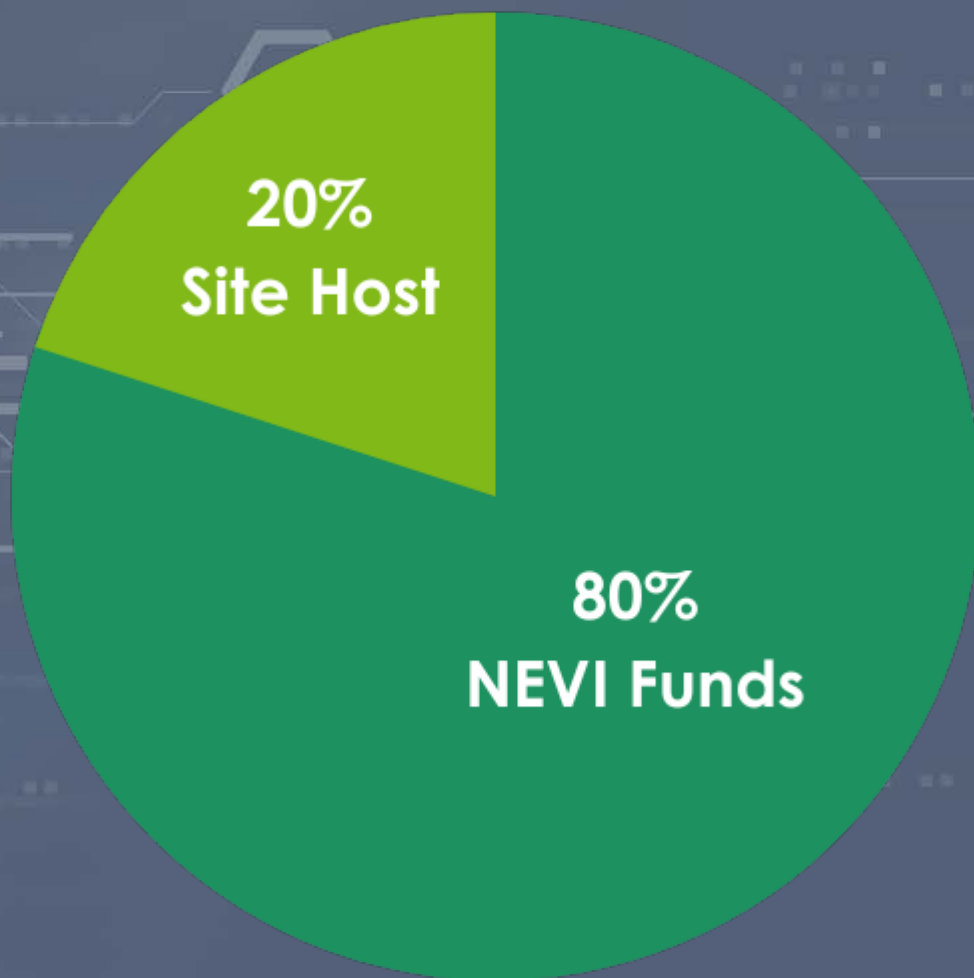
- Public meetings hosted across the state
- Utilize expertise from advisory groups
- Online survey
- Email updates from project team



NEVI GRANTS

FUNDING & OPPORTUNITIES

FUNDING FOR SITES

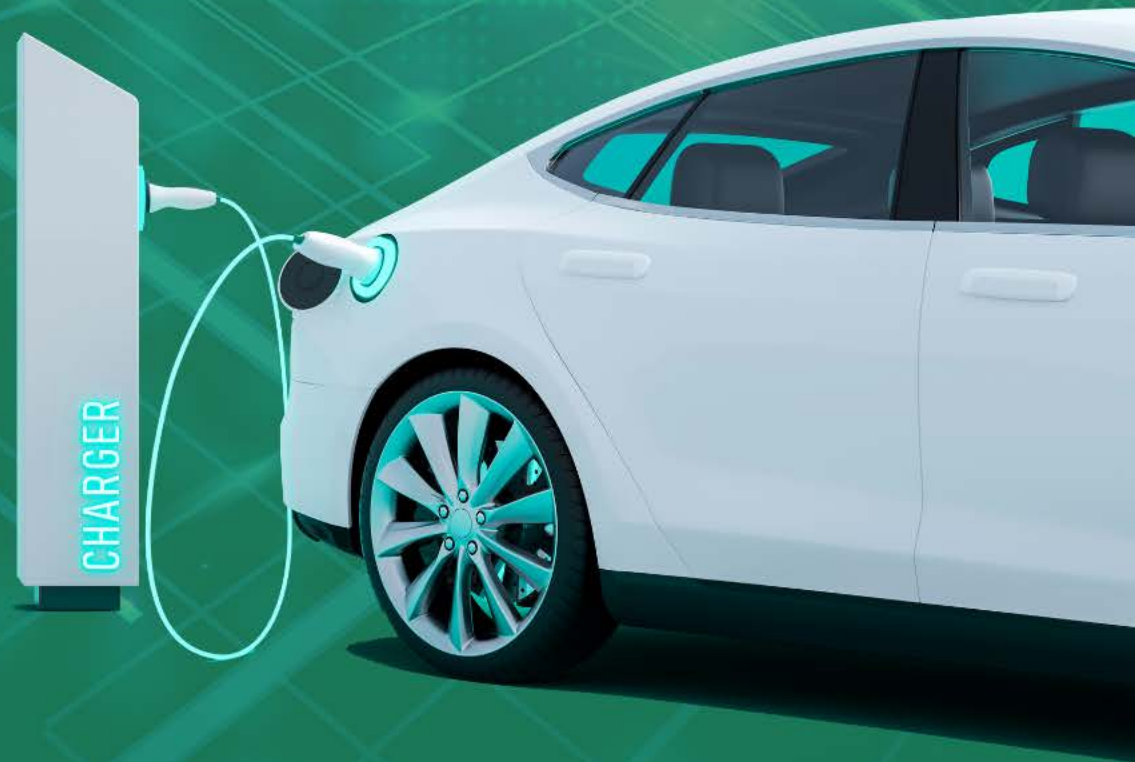


NEVI GRANT INFORMATION

An outcome of Phase II will be to launch two beta charging station locations.

If you are interested in being considered as one of those potential beta locations, you can contact the project team at info@evidaho.com.

Additional grants and opportunities for DCFC stations will be available after the study is complete and site criteria has been determined.





OTHER GRANT PROGRAMS

FUNDING FOR EV INFRASTRUCTURE FOR COUNTIES AND MUNICIPALITIES

GRANTS FOR CITIES & COUNTIES

NEVI funding is only available to areas along Alternative Fuel Corridors.

Other federal grants are available to cities and counties interested in building EV charging stations.

These additional charging stations will be vital in bringing tourism and economic development to rural communities across Idaho.



APPLICATION

Counties and municipalities can apply for grants to support the building of EV charging infrastructure in areas that don't qualify for NEVI funding.

To find out if your community qualifies and to apply for a grant, scan the QR code.





THANK YOU



CONTACT US

info@evidaho.com



Up Next: Table Breakouts on Stakeholders

What are the city's goals?

How do we plan for these goals?

Keep these questions in mind

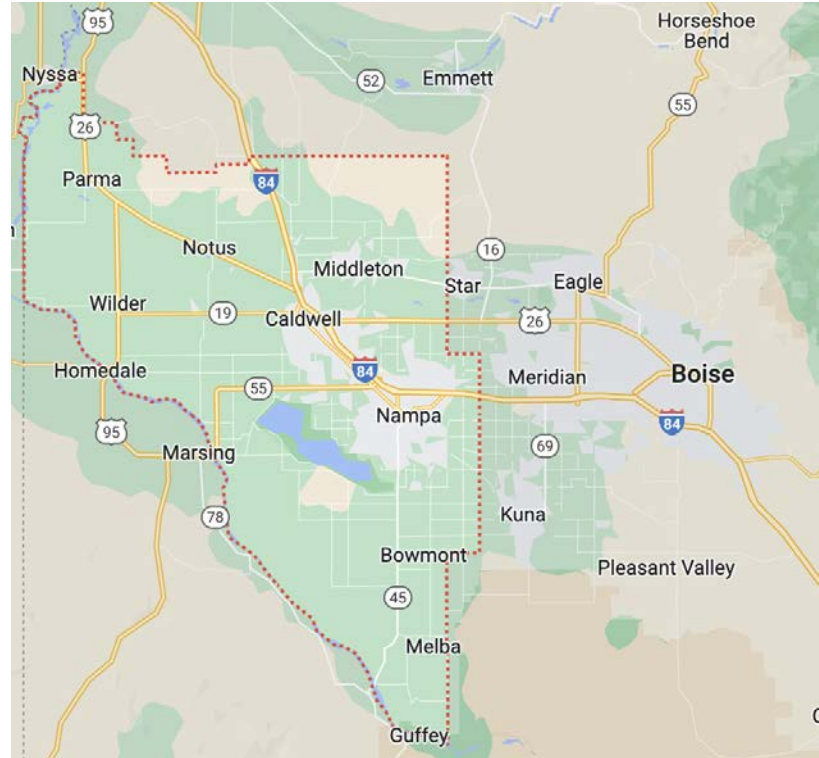


Table Breakout around Stakeholders

Get into groups of 4, ideally with at least one representative from a City in each group

If you do not have a City representative in your group, please raise your hand

Note take will be needed for each group



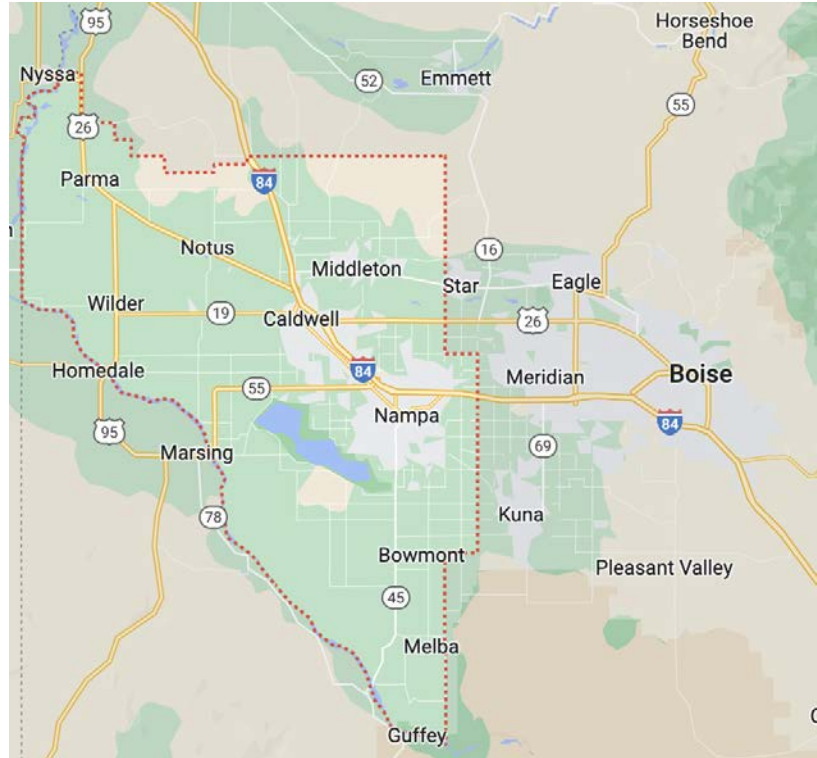
Map of Canyon County Idaho

First: Let's make a list & check it twice (5 min)

Table 1 states their stakeholder groups

Table 2 states any stakeholders that Table 1 didn't have

Table 3 states any stakeholders that Table 1 and 2 don't have... Until there are no more stakeholders on anyone's pages



Map of Canyon County Idaho

Second: Reflection (10 min)

**Take two minutes and write down 1 question
and 2 thoughts**

Compile group's questions into a list

Large Group share out

5 Minute Break (10 min)
Up Next: Idaho Power Presentation with Patti Best

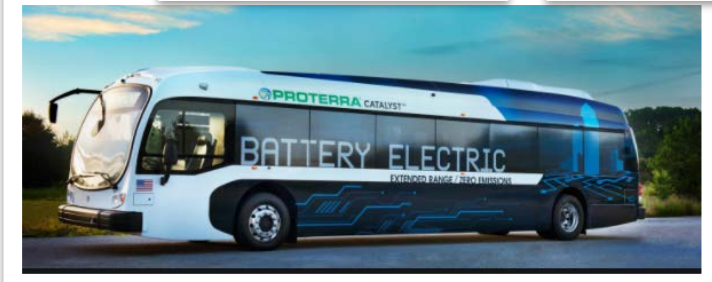


EVs and the Grid

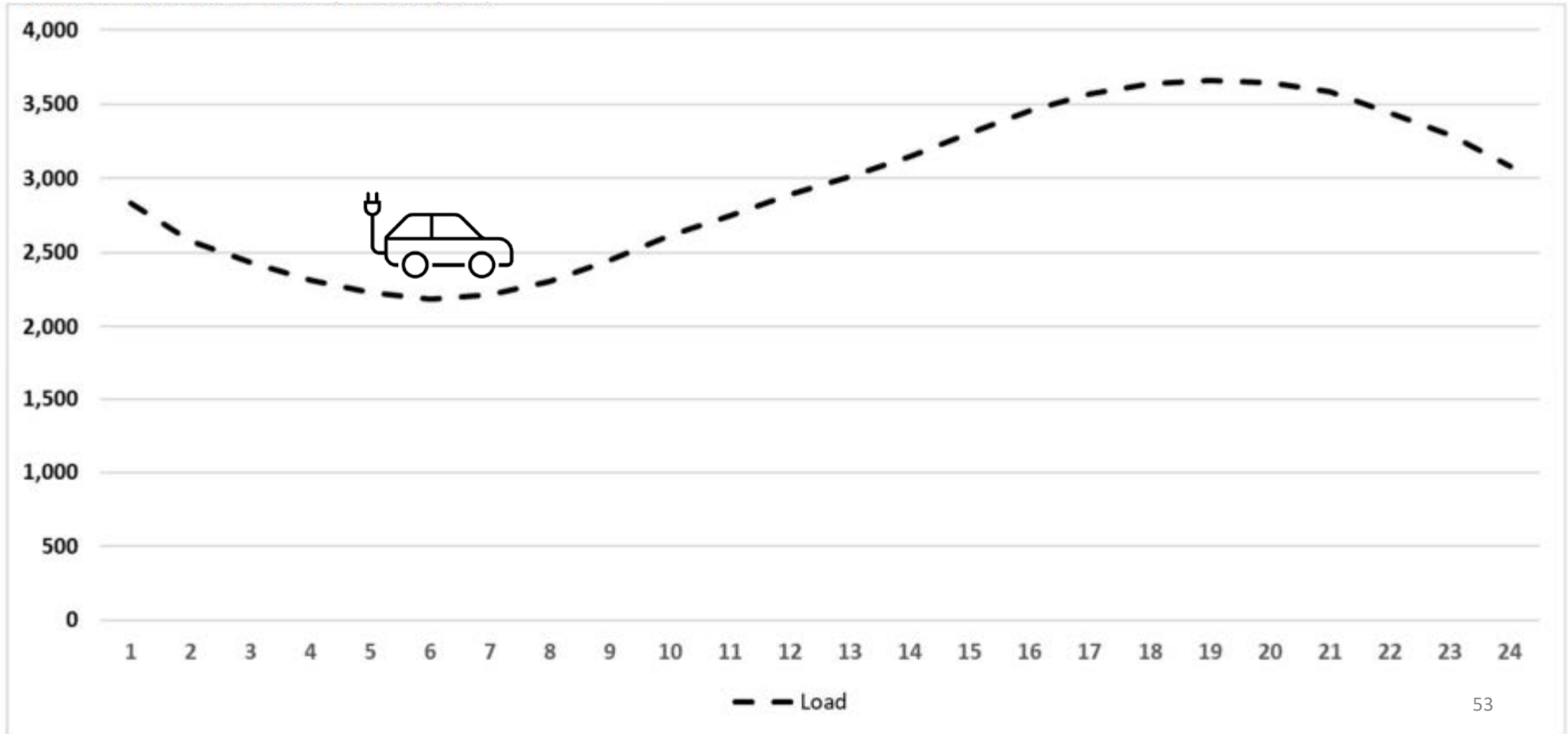
Patti Best

Senior Program Specialist-Transportation Electrification

Electric Vehicles



Typical System Load





DECEMBER • 2021

IRP
INTEGRATED RESOURCE PLAN

A VIEW
FROM ABOVE

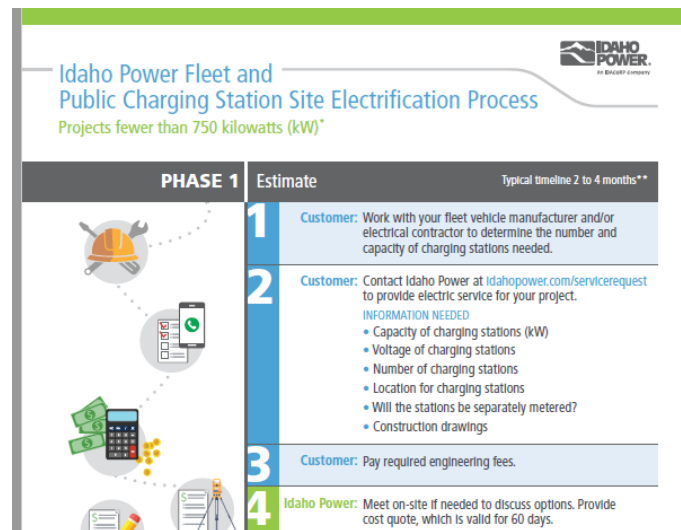
Best Practices

- Right size
- Managed charging
- Get with utility early!



Services and Site Design

- General Education/Participate in Stakeholder Groups
- Site Evaluations
 - Estimates: Assess capacity at a high level and needed upgrades.
 - Free but not binding
 - Formal Cost Quotes
 - Good for 60 days
 - May require engineering fees paid upfront
- Billing Evaluations
- Letters of Support



We are electrifying too!



In 2020, we re-affirmed our commitment to continue electrifying our fleet by setting the following 2030 goals:

75% Passenger Cars

75% electric and 100% of new purchases will be electric

35% Other Vehicles

Including SUVs under 8,600 pounds: 35% will be electric

75% Forklifts

75% electric and 100% of new purchases will be electric

Questions?

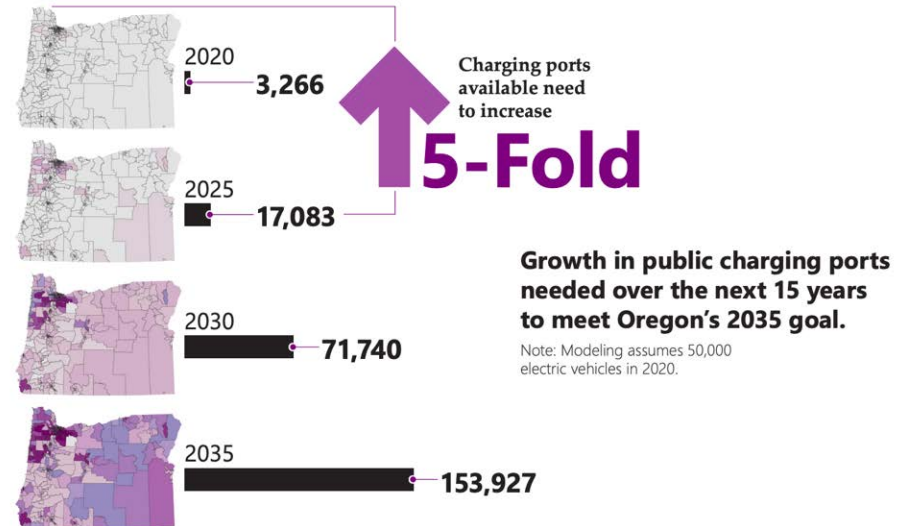


idahopower.com/ev

Up next: Breakout on Specific Cities

But First: Oregon for Example

- Currently 80-90% of charging takes place at home.
- Moving to an all-electric future requires convenient and accessible charging for all – especially those who face the most barriers
 - Drivers in apartment complexes
 - Low-income drivers
 - Predominantly BIPOC communities



Let's discuss specific locations!

What types of destinations are in your city?

Where do people travel? Where do they park?

Which stakeholders are involved in different places people park?

What do you need to justify charging in a location?

Do you have good data?

What data would be useful?

**How are communities involved? EV owners?
Underserved communities?**

How often do we need to reevaluate?

**Take two minutes and write down 2 questions
and 1 thought**

Compile group's questions into a list

ENABLING COMMUNITY ACCESS TO CHARGING FUNDS

- Forth workshop to help communities win federal TE funding May 15:
<https://www.roadmapforth.org/rm23/workshop>
- Make sure the money is spent efficiently and in ways that center equity
- Matchmaking partners and funding sources
- Educating local governments excited about applying
- If the groups with the most barriers receive public investments, everyone benefits



A close-up of a silver car's body panel. A "Zero Emission" badge is affixed to the surface. The badge features a blue circular icon with a white plug symbol inside, followed by the words "Zero Emission" in a metallic, 3D-style font. The car's surface is highly reflective, mirroring a vibrant sunset sky with orange, red, and purple hues.

QUESTIONS?

WhitakerJ@ForthMobility.org



THANK YOU