



SWITCHING GEARS

***Workplace Charging - Benefits for
Employees, Employers and our Community***





SWITCHING GEARS

Part of our Switching Gears series

The **Switching Gears Webinar Series** aims to provide an opportunity for vehicle owners, operators and influencers of all shapes and sizes to build knowledge on transportation electrification topics and build community with others on the same path.

Webinar topics include:

- What's New in Electrified Fleets? Recap & Takeaways from ACT Expo
 - Workplace Charging – Benefits for Employees, Employers and our Community
 - Focusing on Equity and Electrification
 - Managed Charging – The Secret to our Electrified Success
 - Enabling Daytime Charging - We are charging wrong, how do we fix it?
 - More to come!
-

<https://www.electrifyarizona.org/switchinggears>

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Our Goals for today

- Our Mission is to accelerate the effective and beneficial transition to electrified transportation across AZ
 - Enabling affordable electrification that makes sense Arizonans through cost effective policies and programs.
 - Electrifying with clean energy in a manner that shapes and shifts load demand growth.
 - Building a charging infrastructure that supports public needs, enables innovation and maximizes effectiveness.
 - Engaging communities to ensure that equity is kept in focus.
 - Enabling economic growth and workforce opportunities.
- We want to provide resources and build community

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Agenda & Speakers

- Welcome and Introduction
- The Role of Workplace Charging
- Managing & Scaling Workplace Charging with Salt River Project
- Implementing Workplace Charging with City of Phoenix
- Charge@Work program with EV Noire
- Q&A

Workplace Charging Panelists



Rori Kirkpatrick

Clean Energy Strategy and Implementation Lead, EV Noire



Karen Apple

Electric Vehicle Program Manager, City of Phoenix



City of Phoenix



Sarah Fitzgerald

Senior Analyst, Sustainability Policy & Programs



Delivering water and power™

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Why Workplace Charging?

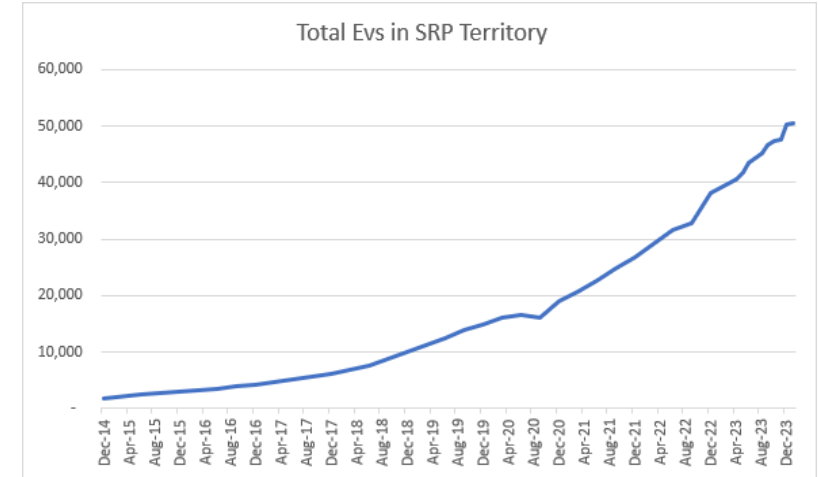
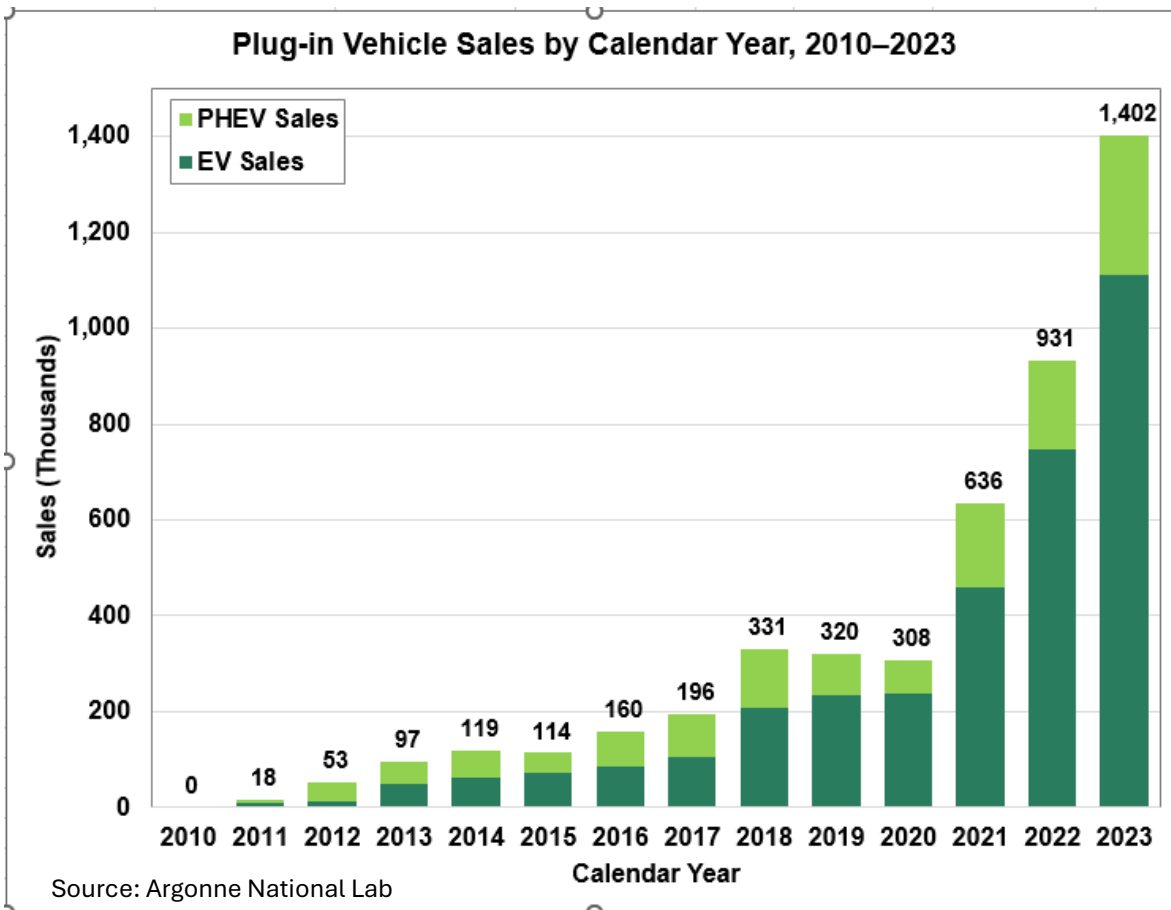


John Heckman

Director, TE Activator &
Electrify Arizona

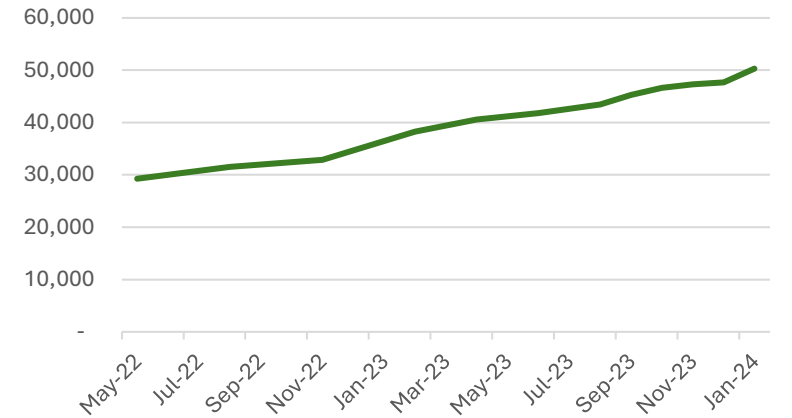
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EV Sales are Taking Off



39% growth rate over nine years

Total EV's in SRP Territory



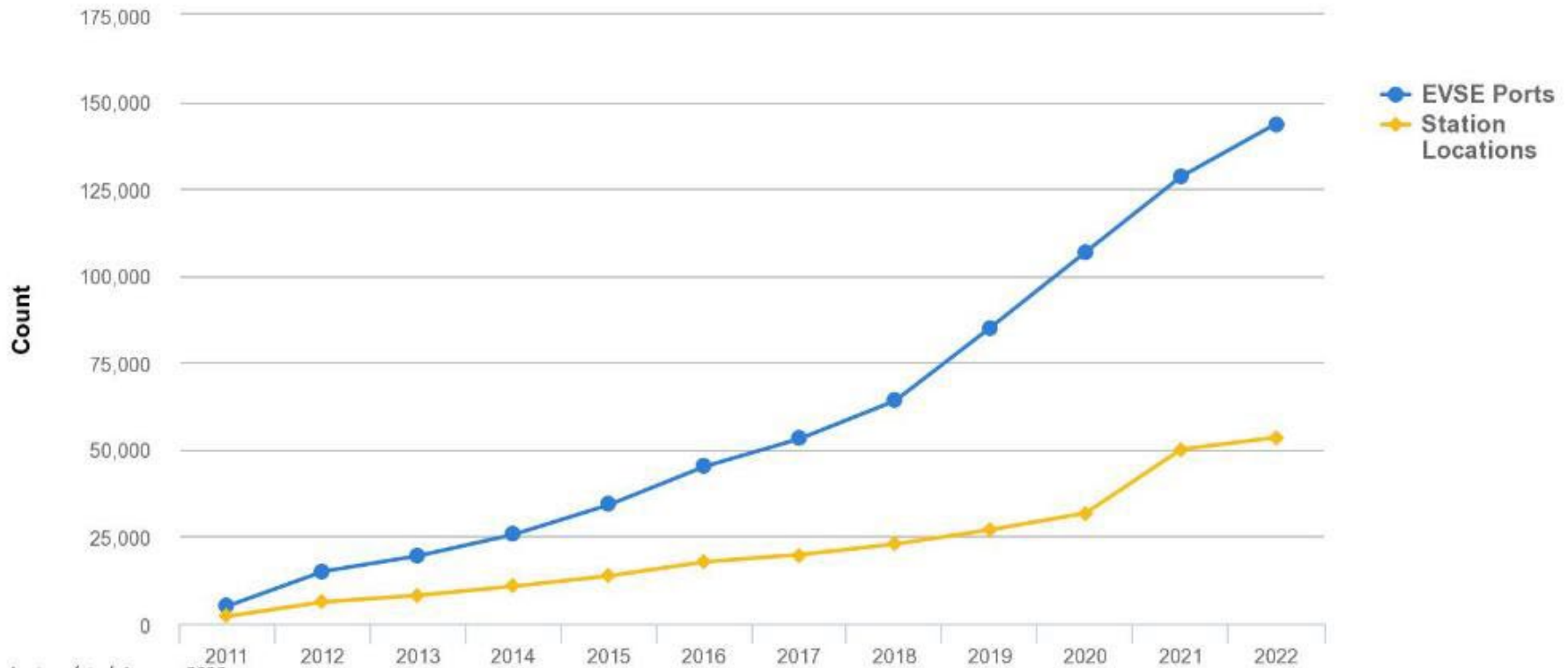
71% growth rate over the last 19 months

Source: Arizona Department of Transportation/EPRI

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Charging Infrastructure is Slowly Increasing

U.S. Public and Private Electric Vehicle Charging Infrastructure



Last updated: January 2023
Printed on: July 13

Source: U.S. Department of Energy

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Unprecedented Investments



PUBLIC FUNDING

\$12 BILLION
AWARDED



VOLKSWAGEN SETTLEMENT

\$2.9 BILLION
AVAILABLE*



BIPARTISAN INFRASTRUCTURE LAW (IIJA)

\$50.3 BILLION
APPROPRIATED*



UTILITIES

\$4.9 BILLION
APPROVED



INDUSTRY

\$223 BILLION
COMMITTED*



INFLATION REDUCTION ACT

\$105 BILLION
APPROPRIATED*

Each data point tracks different types of funding (e.g., deployment, manufacturing, or job training).
This summary provides a sense of scale and the range of funding sources.

Source: [Atlas EV Hub](#)

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Headwinds are real, but we're still on the right path

The New York Times

Ford Slows Its Push Into Electric Vehicles

The automaker said it would delay new battery-powered models and shift its focus to hybrid cars, sales of which are rising fast.

Share full article 441



The production line of the Ford Lightning F-150 electric pickup truck in Dearborn, Mich. The company said it would delay the introduction of new electric vehicle models. Sylvia Jarrus for The New York Times

<https://www.nytimes.com/2024/04/04/business/ford-delays-electric-vehicles.html>

CNBC MARKETS BUSINESS INVESTING TECH POLITICS CNBC TV INVESTING CLUB PRO

AUTOS

EV euphoria is dead. Automakers are scaling back or delaying their electric vehicle plans

PUBLISHED WED, MAR 13 2024 7:00 AM EDT | UPDATED WED, MAR 13 2024 1:58 PM EDT

<https://www.cnbc.com/2024/03/13/ev-euphoria-is-dead-automakers-trumpet-consumer-choice-in-us.html>

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Green Greener Living

The Slowdown in US Electric Vehicle Sales Looks More Like a Blip

EV sales are still booming for most automakers — even if Tesla is in a rut.

By Tom Randall
May 28, 2024 at 5:30 AM MDT

Gift this article Listen 6:28 Save

In this Article

- General Motors Co 42.78 ▼ -0.54%
- Tesla Inc 204.70 ▲ +3.65%

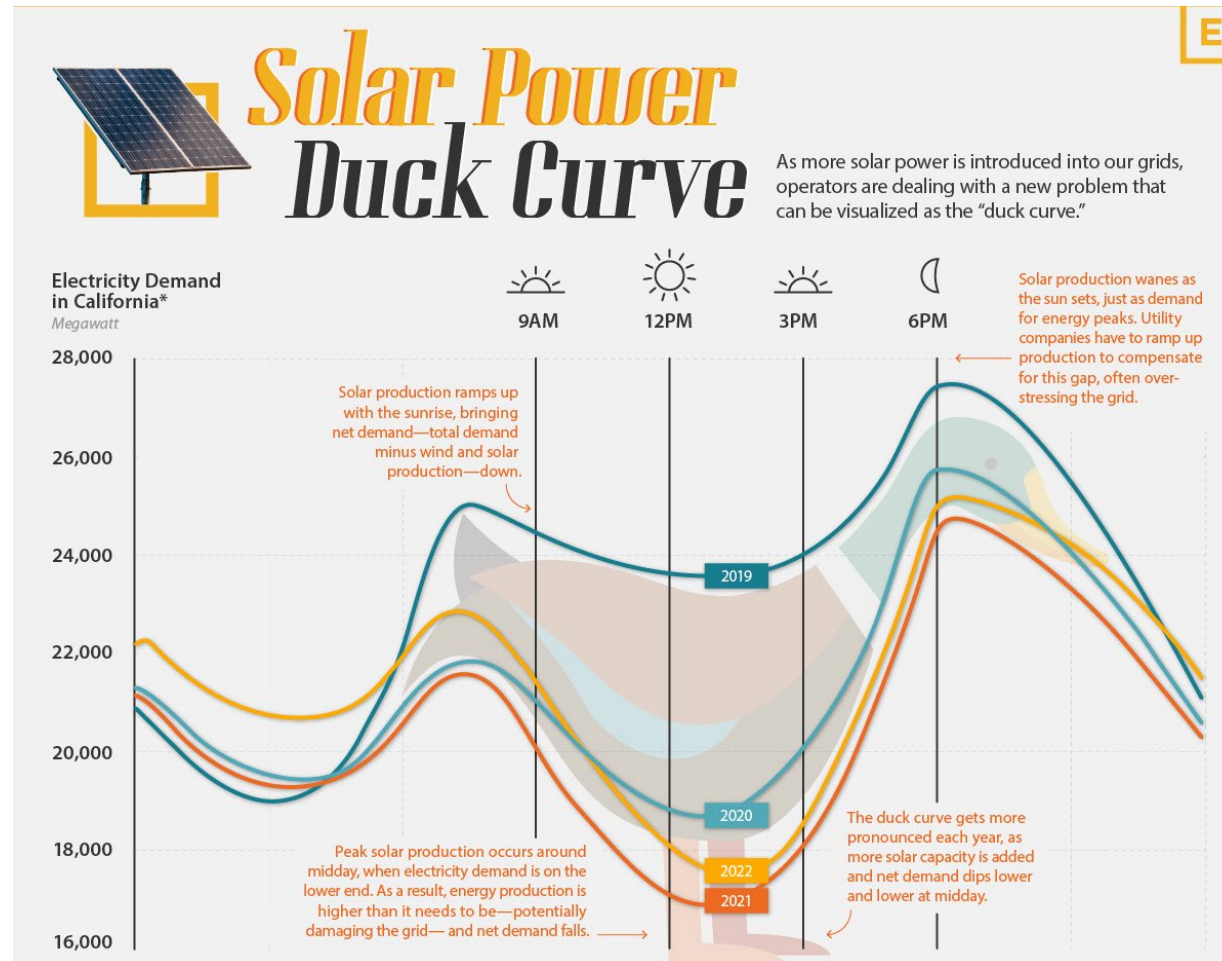
After an underwhelming start to the year for US electric-vehicle sales, it might seem easy to conclude that the boom times are over. Sales were flat in the first quarter, Ford dramatically scaled back expansion plans and Tesla laid off 10% of its global workforce. But these dismal indicators only tell part of the story.

<https://www.bloomberg.com/news/articles/2024-05-28/the-slowdown-in-us-electric-vehicle-sales-looks-more-like-a-blip>

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Electrification and Clean Energy Must be Navigated Together

As large amounts of solar and wind are added to the system, the "net load" dips substantially in the middle of the day



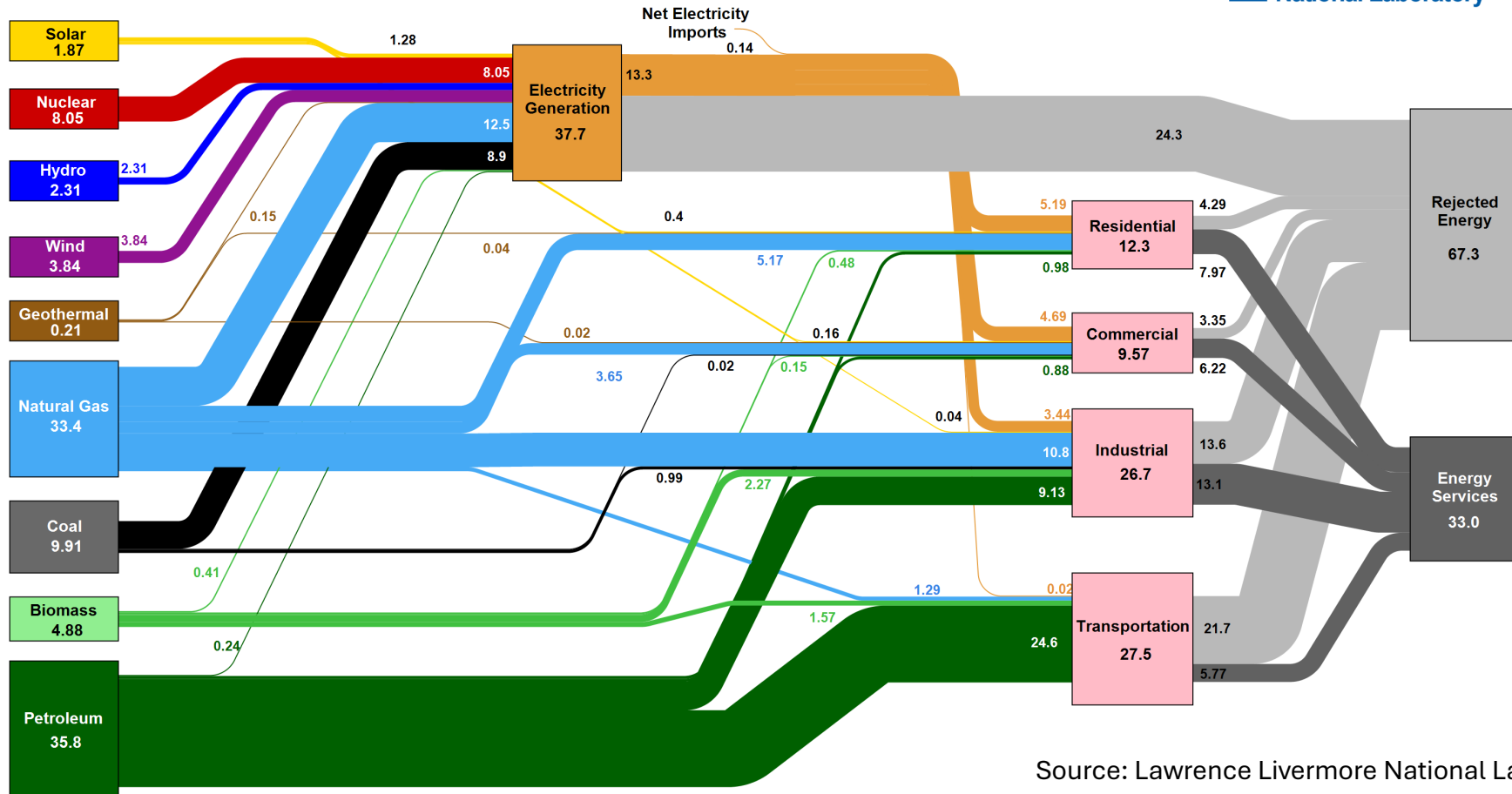
.... thus, we can shift load to the middle of the day we make better use of cheaper and cleaner electricity!

Source: CAISO; [elements.VisualCapitalist.com](https://elements.visualcapitalist.com)

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Be confident electricity is the future!

Estimated U.S. Energy Consumption in 2022: 100.3 Quads



Source: Lawrence Livermore National Lab, 2022

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Back to *Why Workplace Charging?*

WHERE ARE YOU IN YOUR

WORKPLACE JOURNEY?



<https://hga.com/plan-a-confident-inspiring-return-to-the-office/>

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Additional Perspectives from EV Noire

The need - American drivers want EVs

- Cleaner air and a healthier environment
- Greater local energy independence
- Lower fuel and maintenance costs for owners
- A stronger, more technically advanced, competitive economy



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EV charging benefits workplaces

- Employee retention and satisfaction
 - Lower fueling and maintenance costs
 - Range confidence for employees with longer commutes
 - Equal access to charging for employees who are unable to charge at home
- Alignment with sustainability goals and company values
- Smart, community-driven leadership
- Healthier air and communities
- Reduces barriers to owning an EV



chargeatwork.org



Why workplace charging?

74%

Of current EV owners have strong interest in workplace charging
Source: Drive Clean

60%

Of EV drivers need chargers at work
Source: Plug In America



chargeatwork.org



The need – EVs are on the rise

40-50 +%

By 2030, EVs will represent 40 to 50+% of total passenger car sales.
Source: Various

52%

EV registrations in the US rose 52% in 2023 compared to 2022.
Source: S&P Global Mobility Data

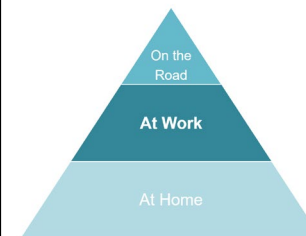


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Besides Home, Charging at Work is the Preferred Option

WORKPLACES ARE THE SECOND MOST LIKELY LOCATION FOR EV OWNERS TO CHARGE



20% of Americans, and an even higher percentage of low-and moderate-income drivers, live in buildings that do not have access to off-street parking to charge an EV



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Questions to Ponder

- What is your need for workplace charging now, and what will it become?
- How can workplace charging help create the workplace culture we are striving for?
- How could workplace charging deliver measurable benefits for my company?
- When is the right time to implement a workplace charging program?
- What does it cost to implement and operate workplace charging?
What are the options to consider?

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Perspectives & Experience on Workplace Charging at Salt River Project



Sarah Fitzgerald

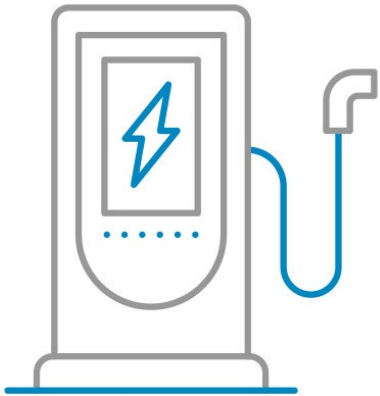
Senior Analyst,
Sustainability Policy &
Programs



Delivering water
and power™

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SRP's 2035 Sustainability Goals



Transportation Electrification Goal

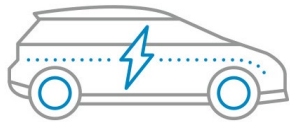
Support adoption of **1 million*** electric vehicles (EVs) in SRP's service territory and manage 90% of EV charging

*As forecasted by third-party industry consultants

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SRP's Workplace Charging Program

Began in 2011



- Free charging. First come, first-serve
- Typically, prime parking locations
- **380** employees own EV's
- **479** charging stations across 19 facilities
 - Employee Chargers: Level 1 and 2
 - Fleet Chargers: Level 2 and DC
- Electrifying fleet vehicles, service trucks, forklifts, etc.



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Rapid Adoption Hurdles



Growing Pains

- More EV's than chargers at select facilities
- EV growth outpacing infrastructure
- Reducing facility portfolio
- Employee charging behavior
- Charger limitations
- Cost



Solutions

- Updating infrastructure to support long-term growth
- No longer placing chargers in prime spots
- Repurposing chargers
- Updating WPC policy/etiquette
- Portable charger pilots
- Smart chargers

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savewithsrpbiz.com/ev

SRP Business Electric Vehicle Rebates

LEVEL 2 EV CHARGER

SRP Customer Segment	Rebate	*Disadvantaged Community Rebates	Preapproval Required?
General Business	\$2,500 per port (Up to 75% Project Cost)	\$3,500 per port (Up to 100% Project Cost)	Yes for rebates above \$15,000
Government, Tribal, Schools, Nonprofit, Multifamily	\$4,000 per port (Up to 100% Project Cost)	\$5,000 per port (Up to 100% Project Cost)	Yes for rebates above \$15,000
New Construction Pre-Wire	\$300 per outlet	N/A	N/A

DC FAST EV CHARGER

SRP Customer Segment	Rebate		Preapproval Required?
	1-4 Station(s)	5+ Stations	
General Business	Maximum \$20,000 per location (Up to 75% Project Cost)	Maximum \$40,000 per location (Up to 75% Project Cost)	Yes
Government, Tribal, Schools, Nonprofit, Multifamily	Maximum \$25,000 per location (Up to 100% Project Cost)	Maximum \$45,000 per location (Up to 100% Project Cost)	Yes

Looking to electrify your fleet?

- 1 Contact us to connect with a fleet electrification expert.
- 2 Review your current fleet with a trusted adviser to develop your EV conversion roadmap.
- 3 Get a customized analysis with estimated cost savings, incentives and greenhouse gas reductions.
- 4 Discuss personalized recommendations on EVs to improve your bottom line, the community and the environment.
- 5 Get rebates from SRP to reduce electrification costs.

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Perspectives & Experience on Workplace Charging at the City of Phoenix



Karen Apple

Electric Vehicle
Program Manager,
City of Phoenix

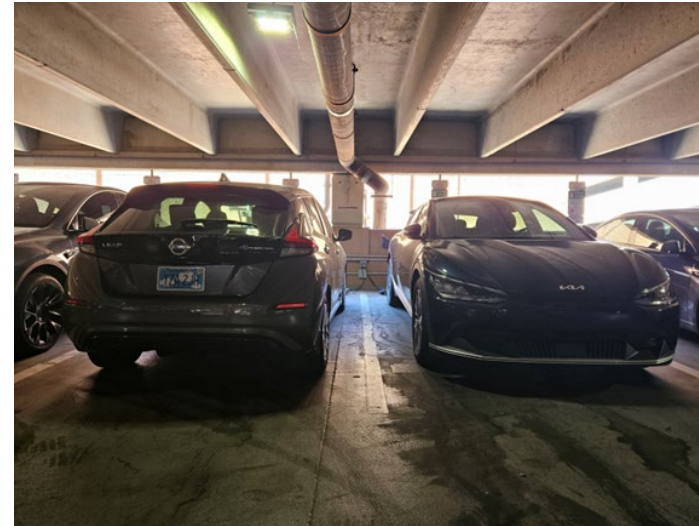


City of Phoenix

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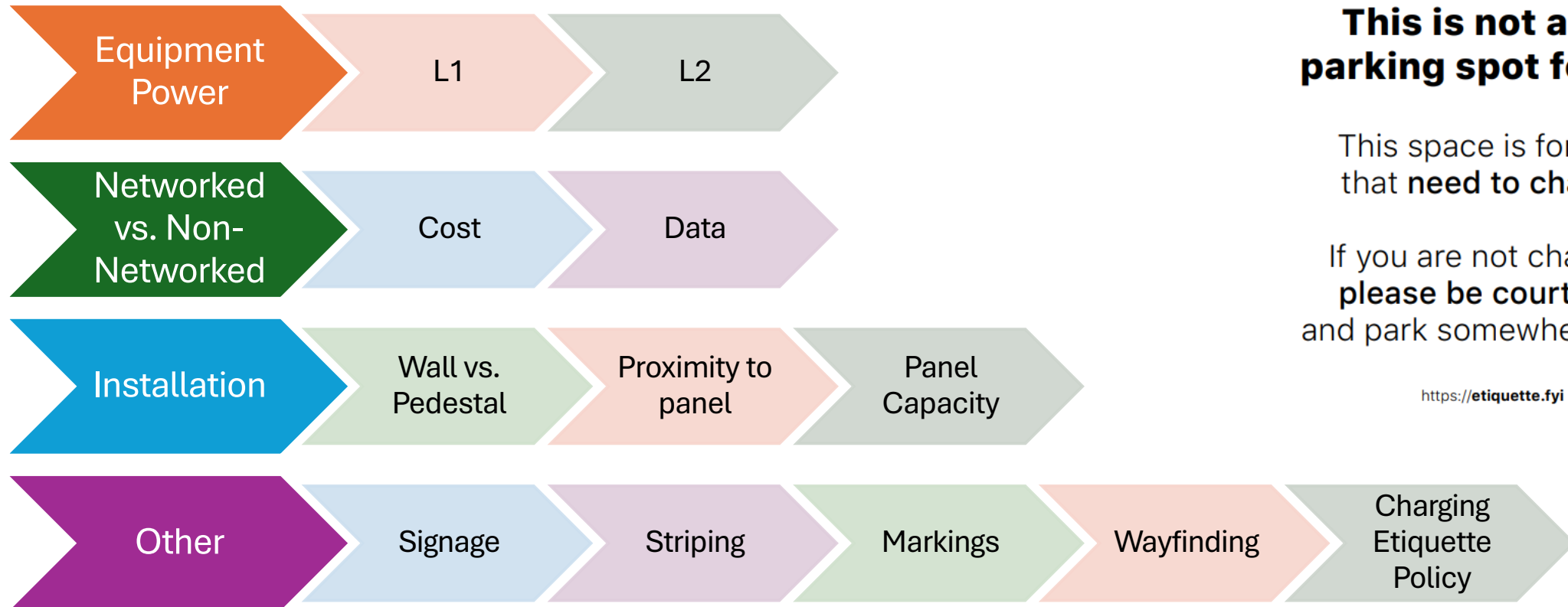
City of Phoenix Workplace Charging Stats

- **9** – City Facilities
 - PHX
 - PCC
 - PTD
 - PD
 - WSD
 - PCH
- **146** ports (126 – L1 // 20 – L2)
- **127** BEVs in downtown employee parking
- **No cost** to employees
- **Save** GHG emissions and fuel costs



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City of Phoenix Workplace Charging Considerations



This is not a VIP parking spot for EVs

This space is for cars that **need to charge**.

If you are not charging **please be courteous** and park somewhere else.

<https://etiquette.fyi>

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Resources to make the most of Workplace Charging:



CHARGE@WORK

POWERING WORKPLACE CHARGING

&



Rori Kirkpatrick

Clean Energy Strategy
and Implementation
Lead, EV Noire



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What is **CHARGE@WORK** & how can it help?

- A DOE-funded national workplace charging program with a focus on education, outreach, and technical assistance
- Helping employers go from idea to implementation
- Objectives:
 1. **Spur greater EV adoption** by enhancing driver confidence in charger accessibility
 2. **Expand access** to electric mobility in underserved communities
 3. **Create a self-sustaining market** for workplace charging

CHARGE@WORK
POWERING WORKPLACE CHARGING

PLEDGE RESOURCES GET UPDATES NEWS & EVENTS ABOUT BUILD YOUR PROJECT

Charge@Work is your workplace charging concierge.

Charge@Work helps workplaces, workers, public officials, and community leaders plan and implement workplace electric vehicle (EV) charging programs. Learn more about EV workplace charging by exploring our [Charging Resource Center](#).

Ready to get charging? Use our free Charge@Work Project Builder to design a custom EV charging site. The virtual tool guides you through choosing chargers, working with your utility and local contractors, estimating costs, and much more.

[Project Builder](#) [Get Updates](#)

40%
of Americans (137 million people) live in communities where the air is unhealthy to breathe.
Source: American Lung Association estimate

74%
of EV owners express strong interest in workplace charging.
Source: Drive Clean

60%
of EV drivers need chargers at work, either because of long commutes or no access to at-home charging.
Source: Plug in America

[Sign the Pledge](#) [Get a Free Site Assessment](#) [Preview Example Project](#) [Build your Project](#) [Explore Resources](#)

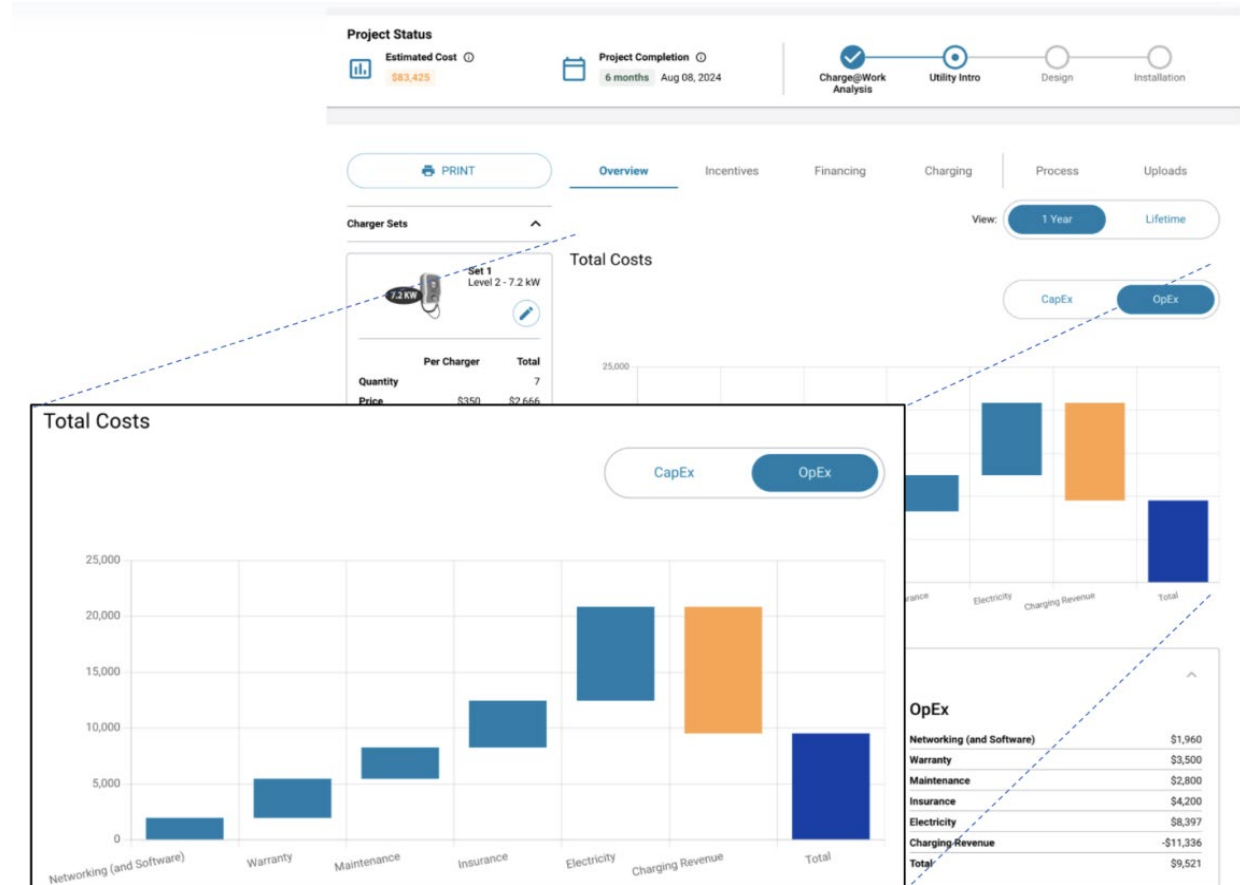
chargeatwork.org

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C@W Resource Center & Project Builder

Free charging project management tool supports employers by providing:

- Equipment and Installation Cost Estimates
- Incentives Database
- Charger Catalog
- Project Planner
- Free Site Assessments



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Build Your Project

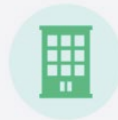


Let's understand your workplace charging needs

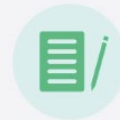
We need to understand your project so we can recommend the appropriate electric chargers, identify incentives, and estimate costs and timelines.

Get Started

Preview An Example Project



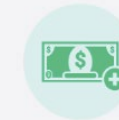
Tell us about your organization



Share your workplace details



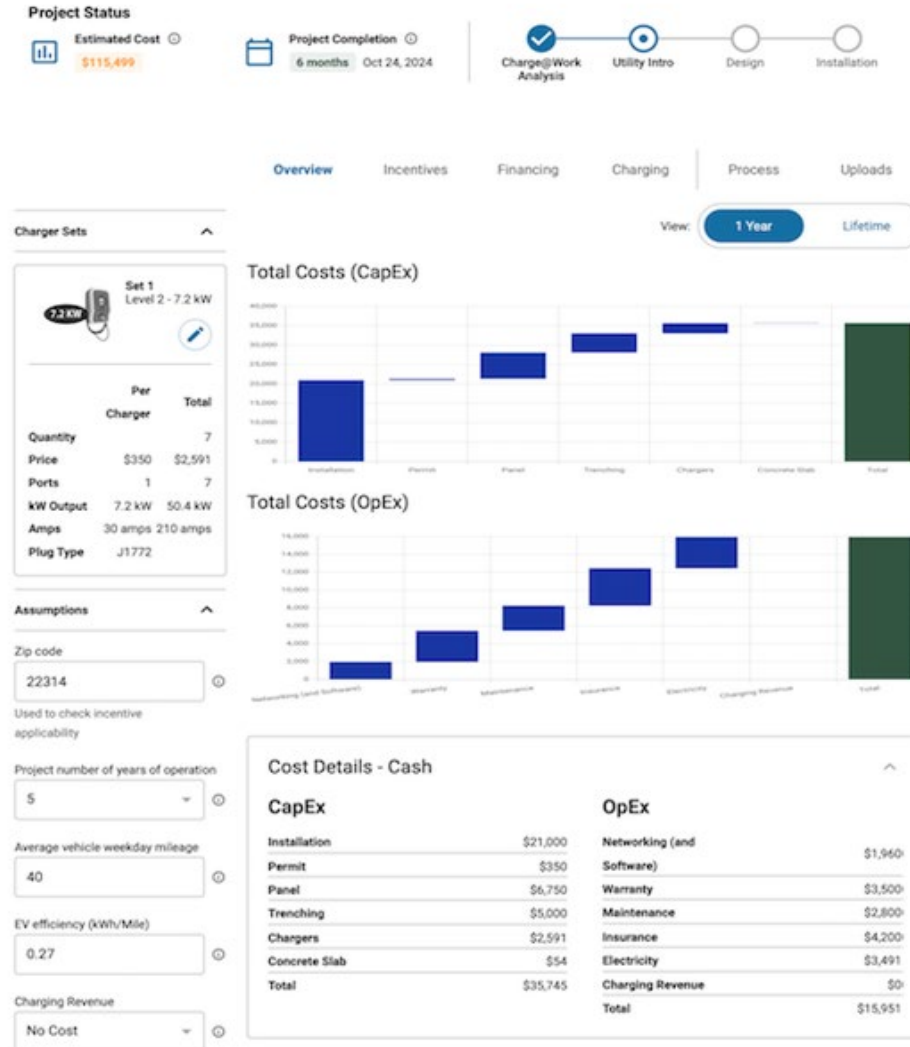
Choose your chargers



Plan your financing

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Dashboard



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Cost Worksheet

Charger Set: Set 1
Finance Type: Cash

Financing Cost Assumptions

Sales Tax (%): 5.75
5.75% sales tax would be \$141

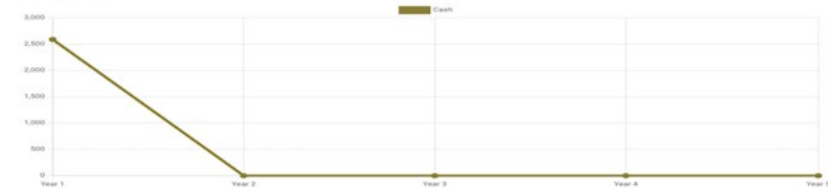
SIMPLE DETAILED

Financing Costs



Modeling total costs in present dollars, excluding consideration of discount rate. On chart hover labels, principal includes taxes and fees, less discount. The total includes the principal and interest amounts.

Cash Flow



Showcasing cash type based on your input.

Resale Value Assumptions

We use the following standard depreciation formula for calculating resale value:
 $\text{resale value} = \text{purchase cost} - (\text{purchase cost} * (1 - \text{annual depreciation rate} / 100)^{\text{project lifetime}})$

Charger Costs

Edit your charger set from the left panel to update these cost estimates.

Total estimated purchase costs
\$2,591

Average monthly electricity cost
\$291



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Project Planner

Project Status


 **Estimated Cost** ⓘ
\$115,499



 **Project Completion** ⓘ
6 months Oct 24, 2024



Charge@Work Analysis

1 ✓


 **Charge@Work Analysis**
Not started
On time



 **Projected Completion:** 05/13/24
  **Estimated 27 days until completion**

Upload
Complete

Utility Intro

2 ○


 **Interest Form**
In Progress
On time



 **Projected Completion:** 05/14/24
  **Estimated 28 days until completion**

A form to connect with your utility account manager, share your business and charging needs, and begin the planning process.

Upload
Complete

3 ○

 **Intro Call**
Not started
On time

 **Projected Completion:** 05/15/24
  **Estimated 29 days until completion**

In an introductory call for charging infrastructure installation, your utility will determine where you are at in your charging journey, what your goals are, and how the utility can help you achieve them. The utility may assess your location's electrical capacity and provide options for charging infrastructure based on their assessment. Early interaction can help the utility address load forecasting and ensure that EVs have a viable place to charge.

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What is EVAL?

Electric Vehicle Adoption Leadership (EVAL) is a certification program that provides technical assistance and recognition to organizations that support the adoption of clean transportation.

EVAL certification indicates the availability of clean transportation options and opportunities for staff at a workplace.

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Becoming a **Leader** in Electric Mobility is Great for Employers



Demonstrate sustainability leadership



Increase property value



Attract and retain talent

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What is EVAL?

EVAL certification **distinguishes** businesses for the sustainable actions they make.



15 - 39
points



40 - 54
points



55 - 69
points



70 - 100
points

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Easy Certification Process

1

Register your organization by completing key information

2

Apply for EVAL certification

3

Access digital resources and templates

4

Connect with Forth or community members for additional support

5

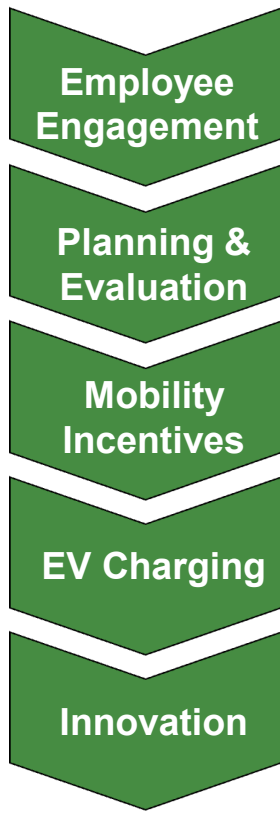
Submit your application

6

Receive your certification and get recognized!

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Certification Process Includes:



Understanding employee e-mobility needs

Initiating planning and evaluation for the workplace charging program

Incentivizing the adoption of e-mobility

Expanding access to EV charging stations

Showcasing sustainability leadership through innovative and regional programs

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Recognition & Resources

- Webinars
- Template surveys and forms
- Directory of local providers and installers
- Employee education resources
- Program Implementation Guide
- Best practices



CHARGING 101

So, you're thinking about going electric. Great! The number of charging stations keeps increasing, making getting from point A to point B as easy as 1, 2, 3! Plus, charging is becoming more convenient and faster – you can charge at home, on your road trip, and even at work!

Charging Levels

Level 1	Level 2	DC Fast Charging
<ul style="list-style-type: none">• Plug into a 120-volt grounded outlet• Adds 2-5 miles of range per hour• Fully charge in 12+ hours• Great for short commutes under 50 miles or infrequent car use	<ul style="list-style-type: none">• Plug in through a 240-volt outlet• Adds roughly 25 miles of range per hour depending on vehicle• Fully charge in 8+ hours• Ideal for charging at home or work	<ul style="list-style-type: none">• Public sites only due to electrical constraints• Adds up to 250 miles of range per hour• Fully charge within 1 hour• Ideal for charging on long road trips with quick stops, or when short on time

Quick Facts

- There are over **900 public charging stations & 2,200 charging ports** in Oregon
- Chargers range from simple plug-and-go to **smart chargers** that can be programmed to **start and stop when you choose**
- The **average commute** for Americans is 35 miles per day

Public Charging Networks

When charging at a public station, you'll likely use a charger that's serviced by a network. Many have membership programs or subscriptions (you can download the app on your phone) and you can also pay as you go.

Membership with these networks usually includes a member discount or if you're not a member you can call the 24-hour customer service line to pay on the spot.

Rates vary by network – some charge by session, per energy unit, by the hour, and some are free.

ChargePoint, Electrify America, Blink, Charging, Tesla, EVgo, Shell Recharge, and SemaConnect are the most common network providers in the U.S.

Finding Public Stations

Resources and apps like PlugShare, Chargeway, or the Alternative Fuels Data Center give real-time information on charging station locations, pricing, nearby amenities, and availability. Google Maps also now shows charging station locations.

Charging stations can be anywhere – at grocery stores and shopping centers, rest stops on the highway, and even at your workplace. You can run errands and grab a meal while you're charging up, plus some charging stations can communicate with your car and phone so you control when charging occurs.

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How Much Does It Cost?

- The EVAL Certification application is waived until October 2024.
- After November 1, 2024, a fee will be implemented to certify each location.
- EVAL does not require recertification.

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Join the Certified Sustainability Leaders



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What's Next?



CHARGE@WORK
POWERING WORKPLACE CHARGING

1. Sign up for updates –
www.chargeatwork.org
2. Start planning with our Project Builder
3. Sign up for a free site assessment
4. Take the CHARGE@WORK pledge



1. Review resource toolkit at
<https://www.evalcertification.org/>
2. Start the [EVAL Certification!](#)
3. Connect with us on [social media!](#)



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Connect with us!



CHARGE@WORK
POWERING WORKPLACE CHARGING



Brandon Smith
Program Manager
SmithB@EVNoire.com

&

Rori Kirkpatrick
EV Strategy Specialist
Rori@EVNoire.com

chargeatwork.org | evalcertification.org

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Questions to Ponder

- What is your need for workplace charging now, and what will it become?
- How can workplace charging help create the workplace culture we are striving for?
- How could workplace charging deliver measurable benefits for my company?
- When is the right time to implement a workplace charging program?
- What does it cost to implement and operate workplace charging? What are the options to consider?



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Questions from Participants?



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**Please register for our next
webinar!**

<https://www.electrifyarizona.org/switchinggears>

Have an idea for a webinar? Send us a note at info@electrifyarizona.org



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Thanks!