

ISSUE BRIEF: EV CHARGING IN ARIZONA

EV charging gets connected in the Copper State

By Stephen Naimoli and Katherine Shok

October 2024



CHARGE

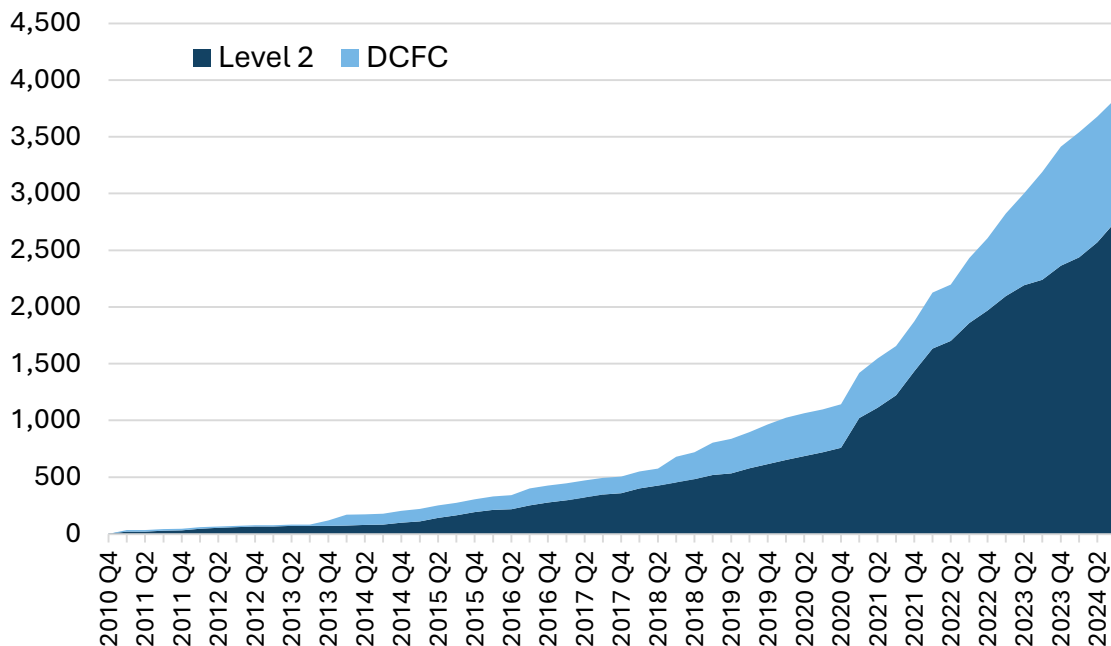


Introduction

Electric vehicle (EV) ownership has increased in Arizona in recent years. In 2023, [nine percent of all light-duty vehicle sales](#) in the state were electric. Those sales chip away at the [40 percent of greenhouse gas emissions](#) that transportation contributes in the state—more than any other sector. Sales have steadily increased over time, contributing to [cleaner air](#), especially along major traffic corridors. This brief will focus primarily on passenger EVs with some limited discussion of bus charging included with funding for bus purchases.

Increased EV deployment requires more EV charging. While most drivers charge their EV at home or at their workplace, public EV charging is critical for drivers who lack those options, and to ensure that drivers feel confident that there is charging when and where they need it. Arizona has more than 3,800 public charging ports available at 1,310 locations as of September 2024 (Figure 1). Of these, 1,082 are DC fast charger (DCFC) ports, while 2,757 are Level 2 ports. Since Q4 of 2020, there has been a marked increase in the rate of charging deployment; 70 percent of chargers in the state were installed since then. Several federal and other incentives will be key to ensure that charging quantity and quality continue to grow.

Figure 1: Cumulative charging port deployment in Arizona



Data includes public Level 2 and direct current fast charger ports in the state of Arizona.

Source: [Atlas EV Hub, EV Charging Deployment Dashboard](#) (accessed October 11, 2024)

Federal Funding Supports EV Charging in Arizona

Through Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA) funds, the federal government has awarded and allocated \$89 million for EV charging infrastructure and another \$116 million for electric bus purchases that also support charging in Arizona (summarized in Table 1). This funding enables greater EV deployment in the state as drivers become more confident that they can charge EVs whenever and wherever they need. The National Electric Vehicle Infrastructure (NEVI) program allocates funding to states to install EV charging along key highways. The Arizona Department of Transportation (ADOT) must [identify and update these key highways annually as part of its NEVI plan](#). Arizona will invest \$76 million over [five years](#) through the program in EV infrastructure. In early 2024, ADOT [solicited proposals](#) for companies to build up to a total of 21 projects along interstate highways in the state.

To complement the NEVI program, the federal government awarded [\\$13 million](#) to local governments and tribal nations in Arizona in fiscal year 2022 and 2023 through the Charging and Fueling Infrastructure (CFI) grant program (out of [\\$311 million](#) allocated nationwide). Of this, nearly \$12 million went to [Mesa](#) to build 48 new EV charging ports for cars, e-bikes, and e-scooters along with solar installations to provide supplemental power to these charging sites. Another \$500,000 went to Cochise County in the southeast of the state to build six Level 2, solar-powered charging sites in the disadvantaged communities of Bisbee, Sierra Vista, and Wilcox. The remaining \$500,000 went to the San Carlos Apache Tribal Council to install five EV charging sites.

The federal government has also awarded funding for medium- and heavy-duty vehicle charging through several different programs. The Clean School Bus Program has announced [\\$74 million](#) in awards for clean school buses for fiscal years 2022 and 2023, which include funding to buy electric buses and install associated charging stations in several school districts across Arizona. This will mean cleaner air for kids getting to school.

Under the Low- and No-Emission Grant Program, public transit agencies in Phoenix, Tempe, and Tucson received [\\$42 million](#) in fiscal years 2022-2023, which included funding to buy electric buses and build associated charging stations. This will enable cleaner, quieter buses to enhance the quality of life in the communities they serve.

Table 1: IJJA Funding Awarded and Allocated for EV Charging in Arizona, FY2022-2026

Program	Funding	Jurisdiction	Funding Type	Focus
<u>National Electric Vehicle Infrastructure Program, FY 2022-2026</u>	\$76.5 million	Arizona	Formula Funding	Passenger EV charging
<u>Clean School Bus Program, FY 2022-2023</u>	\$74.1 million	Various school districts	Competitive Grant & Rebate	Bus purchases and charging
<u>Low or No Emission (Bus) Grants, FY 2022-2023</u>	\$41.8 million	City of Phoenix, City of Tucson, Valley Metro	Competitive Grant	Bus purchases and charging
<u>Charging and Fueling Infrastructure Grant Program, FY 2022-2023</u>	\$12.9 million	City of Mesa, Cochise County, and San Carlos Apache Tribal Council	Competitive Grant	Passenger EV charging

This table shows EV charging and vehicle deployment only; any government support for equipment manufacturing is not shown. The Clean School Bus Awards refers to awards for electric buses only. Other awards will support EVs but may also support other clean energy technologies.

Source: [Climate Program Portal](#) (accessed October 9, 2024), [Columbia-Willamette Cities](#) (accessed May 9, 2024), [U.S. Environmental Protection Agency](#) (accessed October 11, 2024).

The federal government also makes funding available for EV charging through the [Alternative Fuel Refueling Property Tax Credit \(30C\)](#). This credit allows individuals or businesses to claim tax credits to offset the costs of installing EV charging at their homes or businesses (among other alternative fueling technologies). Although this credit was first established in 2005 and most recently expired in 2022, the IRA made it available again, in an expanded form, from 2023 to 2032. The new version will cover 30 percent of installation costs (up to \$1,000 per port) for individuals and six to 30 percent of installation costs (up to \$100,000 per port) for businesses, depending on whether the installation meets the U.S. Department of Labor’s [prevailing wage and apprenticeship standards](#)—a significant boost in funding over the original credit. This credit is eligible for [elective pay](#), meaning that rather than claim the credit to reduce taxable income, tax-exempt entities can treat the credit as a tax

payment to the Internal Revenue Service. To be eligible for the tax credit, charging infrastructure must be installed in a federally-designated [low-income community](#) or a non-urban area; qualifying census tracts are [mapped](#) by the U.S. Department of Energy.

More funding for EV charging will flow from the federal government to Arizona as transportation electrification grant funds from IIJA and IRA will continue to be made available. In addition, tax credits will be available through 2032 and make up the bulk of the potential climate impact from the Inflation Reduction Act. In comparison to the rest of the nation, Arizona has received 1.3 percent of total awarded and allocated funding relating to policies driving EV uptake, including funding for charging in addition to other EV-related dollars, making it the state that has received the 20th most funding. Between 2019 and the second quarter of 2024, Arizona comprised 2.3 percent of the total EV market share, at 97,758 vehicles sold out of 4,288,952 national EV sales; in the same period, EVs reached a market share of 4.9 percent within the state of Arizona.

One of these future funding streams for EV charging could be through the Carbon Reduction Program (CRP) administered by the Federal Highway Administration. The federal government has allocated [about \\$69 million](#) for fiscal years 2022-2024 to ADOT to implement a [Carbon Reduction Strategy](#). Total funding awarded to Arizona will amount to \$114 million, distributed by ADOT over [fiscal years 2023-2027](#) and awards will span fiscal years 2024-2028. ADOT plans to award about \$74 million to six Arizona metropolitan planning organizations and its two transportation management areas in that period. The [resulting strategy](#) allows for these entities to use the funding for a [variety of carbon reduction measures that can include building EV charging infrastructure](#).¹ The Maricopa Association of Governments is [directing 60 percent of its CRP funding](#) toward EV charging infrastructure, but as of October 2024, ADOT is not directing any of its CRP funding to EVs (per communication with ADOT officials).

Phoenix Plans for the Future

Phoenix, the capital and largest city in Arizona, has seen a flurry of activity to plan for increased EV deployment in recent years. In June 2022, following [extensive input](#) from the community as well as key stakeholders, the Phoenix City Council unanimously passed a [Transportation Electrification Action Plan](#). The Plan included a goal to reach 280,000 EVs in

¹ The state's CRP strategy directs action along five pathways: truck parking; transportation alternatives; electric vehicles, alternative fuels, and energy efficiency for light-, medium-, and heavy-duty vehicles; sustainable pavements and construction materials; and technology solutions.

the city and 500 public and workplace charging sites citywide by 2030. According to an interview with Karen Apple, EV Program Manager for the City of Phoenix, as of May 2024, the city has deployed 300 public chargers, 15 fleet chargers, and 100 workplace chargers, and the city expects to meet its goal ahead of 2030. The city, the largest in Arizona, has also electrified 70 vehicles in the public fleet.

The city made equity a focus throughout the process, holding 16 outreach meetings with low-income neighborhoods to understand a variety of concerns including access to electric mobility. Across all income groups, Apple emphasized in an interview that “education and outreach have been the biggest [initiative], in my opinion. We have in the last couple years done more ride and drives, webinars, events, tabling... news campaigns, Twitter [posts], trying to get the benefits of driving electric out there.” City of Phoenix staff have also worked with staff from other cities across the nation through groups such as the U.S. Climate Alliance.

Through the beginning of 2024, planning has been largely ad hoc—when an entity requests EV chargers, the city works with its staff and the utilities to deploy the infrastructure. However, the city’s EV Program Manager is developing more proactive planning processes to help meet the city’s EV goals. She expects more federal funding will lead to better planning outcomes and more chargers for the city to install.

State Policy and Utility Investments

The Arizona state government has implemented few policies to support EVs and has [not kept up](#) with other state leaders on EV-supportive policies. Arizona is a [Home Rule state](#), meaning that municipalities are able to independently budget the funds collected from taxes and other local sources. As a result, the local government can determine what local services, rules, and regulations it prefers to implement. Several cities in Arizona—including [Tucson](#), [Sedona](#), and [Scottsdale](#)—have building codes that require commercial or multi-family buildings to ensure a certain share of their parking spaces have the wiring necessary to put in EV charging stations. Additionally, [state incentives](#) for EVs include allowing EV drivers to park in areas designated for carpool operators, use high-occupancy vehicle lanes, pay a reduced license tax, and avoid required automotive emissions tests.

The same may be said for the investor-owned utilities (IOUs) in the state. IOUs have historically offered some incentives to customers related to EV charging but have scaled them back in recent years. The Arizona Corporation Commission [approved a plan](#) in December 2021 requiring IOUs in the state to file EV deployment proposals every three years, beginning in June 2022. The plan identified insufficient charging infrastructure as a barrier for the

state—a barrier programs like NEVI and CFI can help to address. Looking ahead, Arizona Public Service (APS) and Tucson Electric Power (TEP) [committed](#) to achieving 550,000 EVs on the road in Arizona by 2030. APS offers a one-time \$25 bill credit to customers who allow the company to monitor their EV driving behavior and collect data on charging behavior, with an additional \$5 in monthly rewards for continuing participation. The program—[APS SmartCharge](#)—has reached its enrollment cap, but waitlist spots are available. Additionally, residential customers are eligible for a [\\$250 rebate](#) for the installation of Level 2 charging sites. Formerly, from 2021-2022, APS installed up to four charging ports at businesses, government agencies, non-profits, and multifamily dwellings for free. Funding was exhausted for this program, Take Charge Arizona, in [January 2022](#).

TEP offers rebates to install Level 2 chargers (\$4,000 per port for businesses and \$5,400 per port for multifamily or nonprofits) or DCFC (\$20,500 per port for businesses). TEP also offers \$500 per charger for residential customers.

Public and municipal utilities also offer some support. Salt River Project, a public utility, offers residential customers a [\\$250 rebate](#) for installing a Level 2 charger. The utility provides commercial customers with [rebates](#) to install Level 2 chargers (\$2,500 per port for businesses, \$4,000 for government, tribal, multifamily, nonprofit, and school customers) or DC fast chargers (\$20,000 per site for businesses and \$25,000 for government, tribal, multifamily, nonprofit, and school customers). Customers in Justice40 disadvantaged communities receive an additional \$1,000 per Level 2 port. Finally, customers of [Mohave Electric Cooperative](#) are eligible for up to \$1,000 for residential customers and \$2,750 for commercial customers for either Level 2 or DCFC charging sites.

TEP received state [approval](#) for its three-year Transportation Electrification Implementation Plan (TEIP), which integrates previously approved budgets and programs, with a total budget of \$34.6 million for fiscal years 2022-2025. Additionally, the company pledges to work with local governments and rideshare services beginning in 2025 to “develop public charging hubs for multiple users.” The primary mechanism by which the utility will encourage EV charging deployment is by offering rebates for installing Level 2 or DCFC ports. Approval of the plan is [delayed](#) while the company waits on its regulator, the Arizona Corporation Commission, to approve its previous year’s plan.

Of the nine barrier categories highlighted in the TEIP, eight include identified equity issues: lack of collaboration, inequity in transportation electrification planning, education and outreach, model availability and technology readiness, upfront cost, access for underserved communities, insufficient charging infrastructure, and electricity rate design. The TEIP includes near- and medium-term recommended actions for electric utilities as well as state and local governments, all of which will enforce equity and meet Justice40 goals as

delineated by the Biden-Harris Administration, in planning and implementation efforts of Arizona's charging network.

Arizona Needs EV Leadership

Arizona has installed over 3,800 chargers and federal funding will ensure more chargers come in the next few years. Arizona cities like Phoenix have worked to grow the availability of charging in their jurisdictions. Utilities have been involved in the planning processes for charging deployment, and the largest utilities have pledged to help put over 550,000 EVs on the road by 2030, although their EV charging incentives have dwindled as program budgets have been exhausted. The utilities are required to report to the Arizona Corporation Commission on their plans every three years but that process, unfortunately, has been significantly delayed. Additionally, federal funding opportunities offer Arizona the potential to maximize capacity to help the state transition to EVs, including on EV uptake and charging deployment. For instance, NEVI funding is ensuring that more chargers are built along Arizona's highways, but more leadership on EVs is needed in the state to take advantage of federal funding opportunities.

To ensure that Arizona has the charging it needs in the future, we recommend:

- Arizona should look to maximize the impact of federal funding to implement EV charging through the funding opportunities outlined in this brief, particularly the Carbon Reduction Program.
- With few EV supportive policies in place, the Arizona state government could do more to support the transition by looking to peer states for effective policy interventions.

Across Arizona, governments can do more to keep their residents informed of how federal funds are being used to allow Arizonans to buy and charge their EVs. State and local governments should institute regular public reporting to be more transparent and to aid planning efforts between federal, state, and local governments, the auto industry, and utilities. As Arizona embraces EVs and takes full advantage of the funds available from the federal government, it will see reductions in carbon emissions and improved air quality across the state.



ATLAS
PUBLIC POLICY

WWW.ATLASPOLICY.COM