

EVs2Scale2030



Objectives

EVs2Scale2030 is a three-year collaboration that seeks to:

- Enable the utility industry and its regulators to be in lockstep with vehicle manufacturers, fleet operators, and consumers to build confidence in achieving 2030 goals
- Enact systems and processes that support the pace of activity and investment required
- Develop and optimize the tools and technologies required to enable EVs at scale and capture the grid benefits of this large and flexible load

Background and New Learning

Transitioning the entire U.S. on-road transportation system of 270 million cars, buses, and trucks to run on a new “fuel” is unprecedented—it’s challenging for the auto and trucking industry and for the utility industry.

In the past few years, governments and industry have become increasingly aligned on vehicle electrification goals for 2030. The U.S. federal government, several states, and all the major U.S. automakers (plus many global ones) are now aiming for 50% EV market share by 2030 and have committed hundreds of billions of dollars to battery and EV manufacturing. In parallel, large national fleets (such as FedEx, Amazon, Lyft, and Uber) have announced similar, or even more aggressive, electrification goals.

But it’s not yet clear to the utility industry or to regulators what the pace of action and investment should be each year—and

- Leverages the scale of the industry to align stakeholders as electric vehicles (EVs) are deployed, targeting 50% market share by 2030
- A laser-sharp focus on the needs to support this rapid deployment while mitigating grid impacts and enabling critical customer and grid benefits
- Validated data, tools, and leading practices to share with regulators and better support EV drivers, fleet operators, and charging infrastructure projects
- Widespread collaboration across utilities, fleet operators, vehicle manufacturers, charging providers, trade associations, consumer groups, community-based organizations, and federal agencies and laboratories

year over year—to prepare the grid, support charger installations and grid interconnects for consumers and fleets, and provide the highest possible level of reliability and resilience in the resulting grid.

EVs2Scale2030 has been designed to address these challenges head on and in so doing contribute key new learning, such as: costs, lead times, and workforce requirements to support 2030 goals; electric transportation programs that are meaningful for underserved communities; requirements to operate and maintain highly reliable public EV chargers; and leading practices for EV evacuations and resilience during widespread power outages.

Benefits

Key benefits are expected to include:

- Validated data and best practices to share with regulators and other stakeholders to describe grid needs for EVs at scale and be better equipped to execute planning for wide-scale electrification with critical stakeholders.
- Better support for EV drivers, fleet operators, and underserved communities enabled by programs developed using the initiative’s research and knowledge.
- Ultimately, improved carbon reduction, air quality, and human health, while being cost-effective, equitable, and just in the transition.

Approach

EVs2Scale2030 features three key pillars:

Pillar 1: Coalitions and Roadmaps

The outcomes from this pillar frame the 2030 challenge by creating a definitive and multi-stakeholder 50-state roadmap that lays out year-over-year industry/government-driven vehicle electrification goals, charging infrastructure and grid needs, lead times, costs, and workforce requirements.

Pillar 2: Structural System Reforms

This pillar seeks to address the issues of scale by conducting work to strengthen the standards used to deploy, operate and maintain EV charging infrastructure, and establish (or streamline) processes to enable the pace of action required. Topics include grid interconnection, charger maintenance and reliability, affordability, equity, workforce development, and regulations.

Pillar 3: Unifying Tools and Pilots

This work delivers a set of tools and pilots critical to meeting large-scale electrification objectives, and includes establishing an online grid interconnect "exchange," driving the National Electric Highway Coalition (NEHC) project (in collaboration with EEl) to implementation and in coordination with US DOT's National EV Infrastructure Project (NEVI), and validating best practices for EV resilience/evacuation at scale during widespread outages.

Deliverables

- A multi-stakeholder, year-over-year national roadmap outlining EV loads, grid impacts, lead times, and costs through 2030.
- Quarterly OEM-Utility and Fleet-Utility convenings
- A Stakeholder Task Force and report assessing cost-benefit methodologies and options for achieving 2030 electrification goals.
- A National Electric Transportation Equity Blueprint
- A National Electric Transportation Workforce Development Blueprint
- A National EV Driver Research Board and ongoing documentation of consumer market research (EV and non-EV drivers).
- An on-line Approved Product List (APL) for EVSE that verifies system consistency with SAE open standards and NEVI's Made-in-America provisions.

- A reliability benchmarking analysis and facilitated industry forums to indicate how updated and improved industry standards can address EVSE interoperability and streamlined EVSE interconnect processes.
- An online grid-interconnect platform and data sharing exchange between fleet operators, utilities, and others.
- A lower-cost charging solutions whitepaper
- A managed charging roadmap
- A roadmap for NEHC/NEVI collaboration
- A report on leading practices for evacuation/resilience plans for EV charging at-scale during widespread power outages.

Price

Following is the annual price for EVs2Scale2030 based on annual transmission (T, peak MW) or distribution (D, GWh) output. A three-year commitment is required.

Tier*	Price per Year
Large: T > 10,000 or D > 44,000	\$325,000
Med: 10,000 ≥ T ≥ 5,000 or 44,000 ≥ D ≥ 15,000	\$ 225,000
Small: T < 5,000 or D < 15,000	\$ 100,000

* If a company's T and D metrics span two tiers, their price is the higher of the two.

Schedule

The initiative is expected to commence in Q4 2022 and last for three years.

Who Should Join

Utilities seeking to be ready for significant EV growth in their service territories by 2030 and beyond.

Contact Information

For more information, contact the EPRI Customer Assistance Center at 800.313.3774 (askepri@epri.com).

Technical Contact

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