



## CASE STUDY

*"I would like to thank Gridworks for your impressive efforts to bring the Vehicle-Grid Integration (VGI) Working Group to the finish line! I do believe that VGI can make the difference for meeting California's EV goals despite all obstacles, with an incredible amount of work and ingenuity, and that we will look back at this VGI Working Group report as a key part of the foundation needed to get us there."*

— ED PIKE  
Senior Utilities Engineer,  
California Public Utilities Commission

# HOW CALIFORNIA WILL ADVANCE ELECTRIC VEHICLES AND CLEAN ENERGY ADOPTION THROUGH VEHICLE-GRID INTEGRATION

## OVERVIEW

In 2019, California's energy agencies partnered with Gridworks to facilitate the Vehicle-Grid Integration (VGI) Working Group and advance the adoption of electric vehicles (EVs) and clean energy. As facilitator, Gridworks engaged stakeholders from a variety of agencies and organizations to identify and report on opportunities to use electric vehicles for cost and emissions reductions within the power sector.

## LANDSCAPE

In pursuit of a carbon-neutral economy, California set a goal to have 5 million zero-emission vehicles on the road and 250,000 charging ports in service by 2030. The state also emphasized that accelerating vehicle grid integration would reduce costs or mitigate cost increases for all ratepayers that might otherwise emerge as a result of increased usage of EVs.

Vehicle Grid Integration offers numerous potential benefits, including:

- Accelerating the adoption of EVs through incentives that lower the total cost of vehicle ownership for both individual owners and fleet operators.
- Reducing costs to electricity ratepayers by reducing power transmission congestion and the need for costly distribution system upgrades, as well as reducing the need to invest in new fossil-fuel electricity generation.
- Incentivizing increased decarbonization of the electric sector by expanding the use of clean energy and providing renewable grid services.

Because VGI represents a historical merging of the clean transport and clean energy sectors, the Working Group needed to build consensus among an extensive group of stakeholders to realize these benefits.

## APPROACH

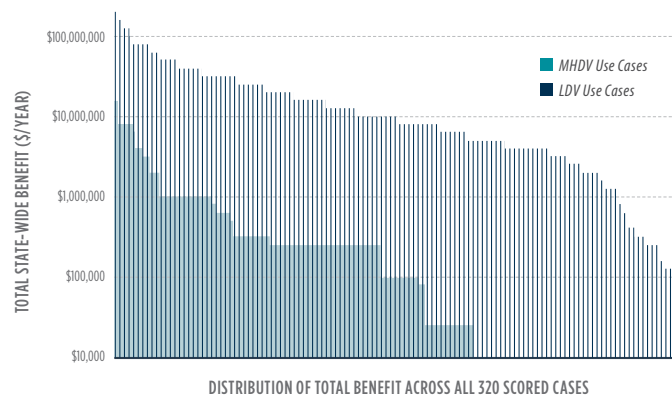
The VGI Working Group engaged experts from over 80 organizations to identify the value of a wide range of VGI use cases, then to develop and vet policy recommendations. Over a ten-month period, Gridworks—together with the California Public Utilities Commission and the state's three major utilities—led an intensive series of workshops, subgroups, dialogues, and solicitations of Working Group members.

A central challenge of VGI—the need to integrate across multiple sectors—was reflected in the diversity of the Working Group's participants, which included electric utilities, community choice aggregators, EV manufacturers, charging providers, government leaders, and advocacy and research groups.

## OUTCOMES

This initiative led to several achievements in support of Vehicle Grid Integration, including:

- Identifying more than 300 different VGI use cases potentially able to provide value by 2022.
- Developing 92 individual recommendations for policy actions to immediately begin realizing the value of VGI.
- Assessing opportunities and stakeholder interests across a full range of sectors and applications
- Influencing a comprehensive, unanimous policy decision by the California Public Utilities Commission that is strongly based on the Working Group's results, launching California's VGI future less than six months after the conclusion of the Working Group.



## ABOUT GRIDWORKS

*Gridworks facilitates difficult discussions and collaboration between policymakers, decarbonization advocates, energy providers and utility operators. We work with these groups to determine the best approach to meet decarbonization goals. Our work has eased the shift toward clean energy in the Western U.S. We're expanding to further our mission and invite you to work with us to navigate your clean energy challenges.*

Learn more at [gridworks.org](https://gridworks.org).