



## **Nuvve Corporation and Honda are Collaborating to Demonstrate the Benefits of Vehicle Grid Integration (VGI)**

*Green Energy Technology Leader and Leading Car Manufacturer Announce Agreement to Test Bidirectional EV Charging Solutions as part of California's INVENT Project*

**SAN DIEGO, CA – April 25, 2019** – Nuvve Corporation, the world leader in vehicle-to-grid (V2G) – also known as vehicle grid integration (VGI) – deployments, and American Honda Motor Co., Inc. have entered into an agreement to demonstrate the benefits of electric vehicles (EVs) that are VGI-ready. Most EV charging systems on the market today are unidirectional, meaning they can only receive energy when plugged in, but VGI-enabled EVs transfer power bidirectionally allowing them to both charge and discharge energy to the electric grid. The demonstration will feature Honda vehicles that have bidirectional-capable charging systems as part of the INVENT project.

INVENT is a Nuvve-directed project at the University of California San Diego (UC San Diego) campus and is the largest VGI project in California. Funded by a 4 million dollar grant from the California Energy Commission and winner of the Energy Storage North America 2018 Award for Innovation in Mobility, the project is using 50 EVs, including Honda vehicles, to test multiple services to the electric grid ranging from demand charge management and frequency regulation to renewable energy capacity firming. To accomplish this, Nuvve's software aggregation platform, GIVE™, will be simultaneously connected to multiple EVs using unidirectional and bidirectional charging stations to compare the value of these services.

Nuvve's GIVE™ platform enables EV batteries to store energy and discharge energy when needed, such as when demand on a local electric grid is high or renewable energy sources (i.e. wind and solar) are unavailable. The technology also enables stored energy to be sold back to energy markets, creating a stream of revenue that can be shared with EV owners. Between this and intelligent charging – charging when electricity rates are the lowest – VGI-enabled charging can help lower the cost of EV ownership.

Additionally, when multiple EVs, such as electric buses or other fleets, are plugged into the same system at once, GIVE™ can create a virtual power plant (VPP) from the EV batteries. This can be especially helpful with microgrids, such as the UC San Diego campus, or in remote areas such as islands that do not have a robust electricity infrastructure.

Honda is a natural OEM collaborator for this demonstration because of its own commitment to e-mobility solutions. Since 2013, Honda has been involved in efforts to develop VGI solutions aimed at providing a potentially valuable energy storage resource to benefit the nation's electric grid, while providing more cost-effective ownership of plug-in electric vehicles. In 2018, the company deployed the [SmartCharge™](#) program, which incentivizes Honda EV customers to charge their vehicles when



more renewable energy resources are online. Honda's goal with the INVENT project is to demonstrate the capability of plug-in vehicles to transfer electric power to and from the vehicle.

Gregory Poilasne, CEO of Nuvve Corporation, says, "Honda has a strong heritage and history of innovation. Collaborating with them to encourage the production of more bidirectional EVs will help lower the cost of EV ownership, pave the way for the mass adoption of EVs, help stabilize electric grids, and support the integration of renewable energy sources on the grid."

"Through our collaboration with green energy technology leader, Nuvve, we have the potential to create V2G solutions that can reduce carbon emissions, improve grid stability, and create new value for EV customers," adds Ryan Harty, Manager of Connected Environmental Business at American Honda Motor Co., Inc.

The GIVE™ platform is now operational on five continents and available commercially in Europe and North America. The INVENT project is scheduled to continue through the end of 2020. To learn more, visit [nuvve.com/projects/ucsd-invent/](http://nuvve.com/projects/ucsd-invent/).

#### **About Nuvve Corporation**

Nuvve Corporation is a San Diego-based green energy technology company whose mission is to lower the cost of electric vehicle ownership while supporting the integration of renewable energy sources. Our proprietary vehicle-to-grid (V2G) technology – Nuvve's Grid Integrated Vehicle (GIVE™) platform – is refuelling the next generation of electric vehicle fleets through cutting-edge, bi-directional charging solutions. Since our founding in 2010, Nuvve has been responsible for successful V2G projects on five continents and is deploying commercial services worldwide. For more information please visit [www.nuvve.com](http://www.nuvve.com) or follow us on [LinkedIn](#) and [Twitter](#).

#### **About Honda:**

Based on its vision of "Blue Skies for Our Children," Honda is working to advance technologies that address society's environmental and energy concerns. Honda has set a voluntary goal to reduce carbon emissions from its vehicles and operations by 50 percent by 2050 compared to the year 2000, and has announced plans to electrify two-thirds of its auto sales by 2030. In North America, the Honda Electrification Initiative will see Honda's electrified powertrain technologies applied to an expanding portfolio of cars and light trucks in the years ahead. Honda's electrified vehicle line-up today includes the Clarity series of vehicles, featuring fuel cell, battery electric and plug-in hybrid powertrains, along with the Accord Hybrid and Insight.

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