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## New Study Uncovers EV Load Flexibility Potential in the Largest US EV Market

WALTHAM, Mass, April 21 – Electric vehicle (EV) sales soared in 2021, [nearly doubling 2020 sales numbers](#). With over 20 new EV models expected to hit showroom floors in 2022, analysts predict another surge of EV sales this year. In an effort to better understand the impact of the EV boom, improve resilience, and address emerging grid needs, Opinion Dynamics recently completed a study to investigate and determine the load reduction potential of EV Automated Demand Response (ADR) technologies.

The study, conducted on behalf of Pacific, Gas and Electric Company (PG&E), analyzed data of EV consumers to quantify the peak and overnight load management potential for EV charging control technologies. This data revealed that EV charging load is greatest overnight, and EV charging controls hold promise for mitigating EV overnight peaks. Opinion Dynamics also verified the EV load management capabilities of vendors that control chargers directly (ChargePoint® and Enel X®) as well as vendors that leverage vehicle telematics (Geotab Energy®) with a sample of PG&E EV owners through a technology field test. The field test results revealed that all vendors effectively curtailed EV charging during demand response (DR) events with minimal impact on the study participants.

Additionally, field test participants showed interest in bidirectional charging, a technology that continues to show promise in [complementary pilots](#) conducted for PG&E.

These findings are supplemented by the results of a survey Opinion Dynamics conducted of 3,000 PG&E EV owners to assess customer awareness and perceptions of the environmental, financial, and grid benefits of managed charging, as well as interest in using their vehicle as a battery during times of grid stress. Results of the survey indicated:

- Nearly half of respondents indicated they would be willing to enroll in an EV DR program that included a \$50 incentive for enrollment.
- By contrast, we found a \$300 incentive would be necessary to convince 45% of EV owners to upgrade to a Smart Level 2 charger.
- Additionally, Opinion Dynamics ascertained EV owners' incentive and program design preferences to inform the development of future EV load management programs.

Opinion Dynamics' report brings to light several priority areas to optimize the use of EVs as a grid resource in the next five years, such as bundling EV charging with other DR control technologies, and numerous other insights relevant to program managers and grid planning teams across the United States. The report ([available here](#)) offers additional program design, market insight, and customer experience recommendations for developing future EV load management offerings.

Opinion Dynamics is a market leader in providing our clients with accurate and actionable information regarding energy and how people consume it. With more than 70 employees focused solely on energy, our industry expertise includes transportation electrification, customer-focused strategies that unlock flexible load, energy efficiency, and strategic electrification and decarbonization. Opinion Dynamics is headquartered in Massachusetts with offices in Northern and Southern California, and Portland, OR, as well as satellite offices throughout the country. For more information, please visit [www.opiniondynamics.com](http://www.opiniondynamics.com).

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Contact:  
Hilary Polis, Associate Director, Transportation Electrification  
PH: 510-214-0181  
hpolis@opiniondynamics.com

Media Contact:

Keri Bailey, Communications Manager

PH: 617-492-1400 x4645

[kbailey@opiniondynamics.com](mailto:kbailey@opiniondynamics.com)