

# EV fleet CASE STUDY



## Background

According to the California Air Resources Board (CARB), in 2018 the transportation sector accounted for the largest portion of total statewide greenhouse gas (GHG) emissions (39 percent), and the medium- and heavy-duty truck and bus sector accounted for 23 percent of those emissions.<sup>1</sup>

Companies in California whose primary function is to sell or transport goods to and from warehouses, distribution centers, import/export facilities, manufacturing complexes, retail centers, and to end-use customers, are well positioned to benefit from significant total cost of ownership savings by electrifying their fleet.

Distribution and delivery fleets have large and diverse fleet operations that can take advantage of the growing number of electric vehicle (EV) and equipment product offerings from leading OEMs, while meeting corporate sustainability goals, and getting ahead of looming regulations.

<sup>1</sup>California Greenhouse Gas Emission Inventory—2018 edition, California Air Resources Board: <https://ww2.arb.ca.gov/ghg-inventory-data>

<sup>2</sup> National Renewable Energy Laboratory, 2016: <https://www.nrel.gov/docs/fy16osti/66755.pdf>

## Frito-Lay Modesto is PepsiCo's next testing ground for electric technology

### PepsiCo Commits to Reduce Absolute GHG Emissions

As part of a company-wide commitment toward sustainability, PepsiCo aims to reduce its absolute greenhouse gas emissions by 20% by 2030. With more than 70,000 vehicles and other assets across its operating companies, the fleet presents a significant opportunity to minimize environmental impact.

Frito-Lay, a subsidiary of PepsiCo, deployed its first electric vehicles in 2010 with nearly 300 electric box trucks. To date, the trucks have been driven 15 million miles and consumed less than one-third the equivalent amount of energy than their diesel counterparts.<sup>2</sup> This has resulted in significant cost savings and reduced emissions across the entire fleet.

### Frito-Lay Modesto, Showcase for Sustainability

To further its sustainability goals, Frito-Lay is completely replacing all existing diesel-powered freight equipment with zero-emission and near zero-emission technologies at its Modesto facility. The 500,000-square-foot central California manufacturing facility is one of the largest in the US, and one of the first major corporate warehouses to venture into zero-emission technology at scale.

The Frito-Lay freight sustainability project is part of the California Climate Investments, and is a collaboration with the San Joaquin Valley Air Pollution Control District and other community partners to improve air quality for residents and surrounding areas.

By early 2021, Frito-Lay plans to deploy a variety of electric vehicles and technologies at the Modesto facility, including:

- Fifteen (15) heavy-duty Tesla battery electric tractors
- Six (6) Peterbilt 220EV battery electric box trucks
- Three (3) BYD 8Y battery electric yard tractors
- Twelve (12) Crown battery electric forklifts powered by lithium-ion technologies
- Thirty-Eight (38) Volvo tractors with low NOx engines powered by natural gas with renewable attributes

### Utilities are a Critical Partner

One of the biggest challenges Frito-Lay and other fleets face is how to identify and prepare for the right amount of energy needed to electrify. Frito-Lay worked closely with local utilities early on in the Modesto project to understand a number of unknowns including how the grid operates, how much energy is needed for the planned project, and how to best install charging equipment to fit this—and future—needs.

**“We hope this work will become an operating model for all of our facilities across the US, and that we act as the catalyst to accelerate adoption of alternative fuel vehicles across the industry.”**

**Michael O'Connell, Vice President of Service and Distribution, PepsiCo**

### More Opportunities for Electrification

PepsiCo and its subsidiaries continue to explore opportunities for EV deployment at facilities across California and will partner with PG&E's EV Fleet program to bolster upcoming projects. With close to 90% of the delivery vehicles averaging 100 miles or less per day, this last mile duty cycle is a prime candidate for fleet electrification.

The EV Fleet program helps fleets like PepsiCo and its subsidiaries simplify electrification by offering incentives, rebates, site planning, permitting, construction, and maintenance support.

**Prepare your fleet for electrification with the help of PG&E's EV Fleet program**

**Visit: [pge.com/evfleet](https://pge.com/evfleet)**

<sup>2</sup>“PG&E” refers to Pacific Gas and Electric company, a subsidiary of PG&E Corporation.

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