Frito-Lay Zero and Near-Zero Emission Project – Modesto, California

The San Joaquin Valley Air Pollution Control District has partnered with Frito-Lay, a division of PepsiCo, to implement an industry-leading showcase for environmentally sustainable manufacturing, warehousing and distribution which will transform the 500,000 square-foot Modesto, California manufacturing site to one of Frito-Lay's largest in the United States. Frito-Lay aims to replace all of its existing diesel-powered freight equipment with zero-emission (ZE) and near zero-emission (NZE) technologies.

San Joaquin Valley AIR POLLUTION CONTROL DISTRICT

The project will integrate an incredible array of commercially available and pre-commercial ZE and NZE technologies in a number of applications. In addition to the fleet assets, an on-site renewable energy generation (solar PV) and energy storage systems will be installed to better serve the energy needs of the manufacturing facility and warehouses.

Dates: 2019 - 2021
Grantee: San Joaquin Valley APCD
Partners: Frito-Lay; American Natural Gas; BYD Motors LLC; Café Coop; CALSTART; ChargePoint; Crown; Gladstein, Neandross & Associates; Meritor; Peterbilt; Project Clean Air; Tesla; University of California, Riverside CE-CERT; and Volvo.

Grant Amount:

CARB Contribution:	$15,382,243
Matching Funds:	$15,382,244
Project Total:	$30,764,487

Vehicles/Equipment Funded

Vehicles:

- Fifteen Tesla heavy-duty battery electric tractors
- Six Peterbilt 220 EV battery electric trucks
- Three BYD battery electric yard trucks
- Twelve Crown Lithium-Ion battery electric forklifts
- Thirty-eight Volvo VNL tractors with ISX12N low NOx engine

Equipment:

- Compressed natural gas fueling station providing renewable fuel
- 1 MW solar carport with energy storage
- Truck charging infrastructure and energy storage for battery electric vehicles

Lessons Learned

- Start the contracting process with all subcontractors as early as possible
- Ensure that project is priced and scoped with prevailing wage and California Public Works requirements
- Assemble a project team with a diverse set of perspectives and expertise to ensure success
- Engage utilities as early as possible

Status Updates

- All CNG tractors commissioned and CNG Station completed in March 2020
- All forklifts commissioned
- Design and construction for solar carport and truck charging infrastructure in progress
- Project completion anticipated in early 2021

Frito Lay Good fun! · ANG American Natural Gas · CALSTART · UCR College of Engineering- Center for Environmental Research & Technology · Project Clean Air · café coop · gna · Crown lift trucks · Volvo · Peterbilt · Meritor · BYD · chargepoint