

# Fleet Efficiency

## Overview

Our fleet operations adopt sustainability in their everyday practices and long-term business plans by reducing emissions through efficiency, new technology, and the development and sharing of best practices.

## Technology and Equipment Advancements

We have made significant progress in fleet efficiency by improving energy efficiency, right-sizing vehicles and diversifying the sources of fuel used by our fleet. PepsiCo improves the efficiency of new vehicles by implementing advanced aerodynamic devices, utilizing low rolling resistance tires, reducing weight and improving powertrain performance on new equipment. In 2018, we also retrofitted nearly 800 existing trailers with aerodynamic devices.

In 2018, PepsiCo Beverages North America (PBNA) optimized and right-sized the specification for new service vehicles used to maintain our vending business. We right sized from 14-bay trucks to 4-to-6 bay trucks, whereby improving fuel economy by over 25 percent. Additionally, Frito-Lay North America (FLNA) introduced 388 additional e-van trailers that maximize the available volume in trailers, which enabled us to reduce the total number of miles required to deliver the same amount of product.

PBNA is also accelerating deployment of its Geo Box delivery system, which replaces bay delivery trucks with specially designed trailers that are pre-loaded at the warehouse. Geo Box ensures the right quantity and assortment of product reaches the retail customer in a more efficient and timely manner and reduces fuel use through optimized loads and routes, resulting in fewer miles driven and less frequent trips to the warehouse.

## Renewable Energy and Electrification

Our FLNA class 8 tractor fleet is comprised of 43 percent Compressed Natural Gas (CNG) vehicles, and in 2018, the CNG fleet drove 61 million miles. We continue to increase the use of natural gas that is sourced from renewable sources, and we have established fueling contracts to ensure that starting in 2020, all future fleet natural gas will be sourced from renewable sources (RNG).

In addition to the vehicles that deliver our products, we also use forklifts, floor scrubbers and other material handling equipment to keep our manufacturing and distribution system running optimally. After converting 220 propane floor scrubbers used in our facilities to electric in 2018, our PBNA scrubber fleet is now comprised of 70 percent electric scrubbers. We will continue to deploy electric material handling equipment in the future.

In our effort to continuously explore emerging technologies that will position us for the future, we made an initial reservation for 100 all-electric class 8 tractors from Tesla. These will be deployed across both our snacks and beverage businesses to evaluate how best to leverage electric vehicles and technologies moving forward. In 2018, FLNA will benefit from a grant awarded to the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) by the California Air Resources Board (CARB) Zero- and Near-Zero Emission Freight Facility (ZANZEFF) program to implement several innovative technologies in Modesto, CA. The transformative technologies that will be deployed in at the Modesto facility include 15 class 8 battery electric tractors, 38 near zero NOx emission class 8 CNG tractors, 6 battery electric straight trucks, 3 battery electric yard trucks and 12 battery electric fork lifts. On-site solar powered, electric vehicle charging infrastructure, and battery storage systems will also be deployed to minimize reliance on the electric grid.

## Safety and Fuel Efficiency

We continue to make improvements in fleet efficiency through Advanced Driver Assist Systems (ADAS), safety technology, more efficient routing, and driver training that encourages fuel conservation. The training encourages gentler acceleration, avoiding unnecessary braking and eliminating idling. We have also gone above and beyond safety regulations to outfit new vehicles

with features including: collision mitigation, lane departure, blind spot detection, adaptive cruise control, LED headlights, backing cameras, antilock brakes, traction control and electronic stability control. Such features not only enhance safety but also help improve fuel economy.

## Partnerships

Finally, we believe it is important to engage in and support larger multi-stakeholder initiatives that move businesses toward more efficient alternatives. For example, we are one of the original signatories of the Sustainable Fuel Buyers' Principles, developed by the non-governmental organization Business for Social Responsibility (BSR). These Principles encourage accelerating the transition to sustainable, low-carbon fuel and related technologies. In the U.S., PepsiCo is a certified member of the U.S. Environmental Protection Agency's (EPA) SmartWay initiative, whose purpose is to improve fuel efficiency and the environmental performance of goods-movement supply chains.