



Case Study City of Oakland



Leveraging pedal signal correction to reduce fuel use and charge times throughout the fleet.

Challenge

Having earned a bevy of national and regional awards over the last decade, the City of Oakland understands the science and process for building and operating an increasingly green fleet.

Led by assistant director Richard Battersby, CAFM, CPFP, the Bureau of Maintenance and Internal Services at Oakland Public Works manages nearly 1,800 mobile assets, including all-electric Nissan Leafs for its day fleet, high-efficiency Toyota Prius Cs for parking enforcement, and a variety of Ford F-series pick-ups to meet both general and specialized maintenance needs.

The Bureau judiciously invests in new vehicles, infrastructure, and technology in order to meet continually evolving mandates while also saving public dollars by reducing fleet fuel needs. “Even with the availability of alternative fuels, the greenest gallon is still the one you never use,” stated Battersby.

Goal: Improve mileage and range of electrics and hybrids

In May 2018, Oakland deployed SmartPedal throughout its entire parking-enforcement fleet comprised of Prius Cs and a quarter of the all-electric Leafs in its day-use fleet.

A ruggedized computing device the size of an iPhone charger, SmartPedal monitors the up-and-down motion of the vehicle as it travels, determines the effect of this motion on the driver’s use of the accelerator pedal, and automatically corrects the pedal signal to eliminate unwanted changes in power. This multi-patented process repeats dozens of times per second and operates transparently to the driver and other vehicle systems.

SmartPedal also features a snap-fit install process that is fast, simple, and foolproof. After five minutes of training, a single mechanic at Oakland completed the entire installation in a day.

Overview

Customer
City of Oakland

Fleet Size
1,800

“The greenest gallon is still the one you never use.”

*Richard Battersby
Assistant Director
City of Oakland DPW*

Product
SmartPedal

Mileage Gains:
Prius c 5.6%
Leaf 10.3%

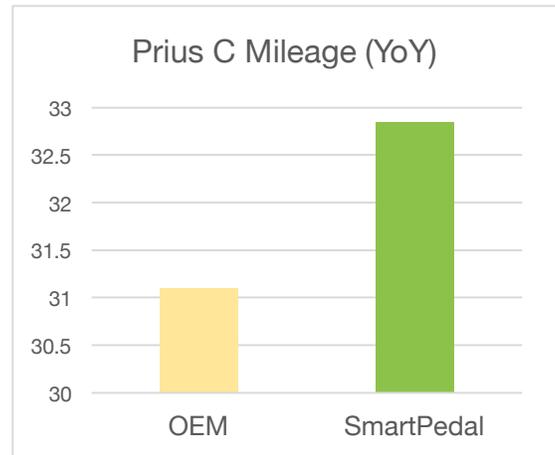
Result: Prius C mileage increased 5.6%

Mileage and consumption data were tracked through the existing telematics system and manual inspection for 221 days from May 24 to December 31, 2018.

During this period, the combined average mileage for the SmartPedal-upgraded Priuses increased 5.6% versus the mileage for the same period a year ago with a combined total of nearly 255,000 miles travelled.

In addition to fuel savings, using less fuel to travel the same distances also reduced wear and tear on the combustion-related components of the powertrain.

The increase in mileage also led to indirect savings: drivers spent more time on the job and less time at the pump.

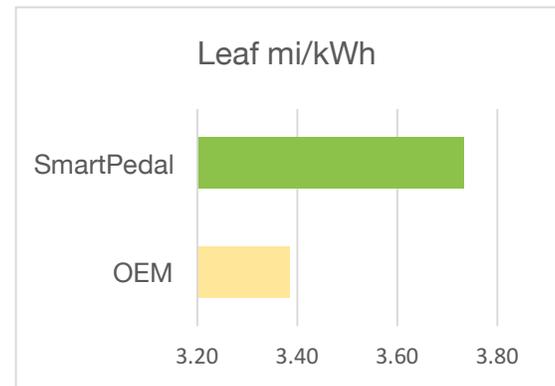


Result: Leaf mileage and range increased 10.3%

During the same period, the SmartPedal Leafs generated 10.3% better mileage than the stock Leafs tracked in the day fleet with combined averages of 3.73 and 3.39 mi/kWh, respectively.

Along with saving energy dollars, the increased efficiency also reduced potential demand on charging infrastructure—an otherwise constrained and capital-intensive resource.

Increasing the daily range of the electrics also helps ensure that users will be comfortable operating these vehicles even as batteries and range gradually diminish throughout the expected seven-year asset life.



Greening the broader fleet

After seeing the results, Battersby and Interim Equipment Services Manager Joseph Williams, CAFM, CPFP, decided to deploy SmartPedal to sedans, trucks, and vans throughout the fleet.

“We approach new technologies with some skepticism, but SmartPedal proved itself pretty quickly,” stated Williams. “For us, a 5% gain in fleet mileage reduces emissions by 600,000 pounds over two years.”

“One of the best cities in America also operates one of the greenest fleets in the country. We’re proud to be a part of that,” expressed Marc Lurie, CEO of SmartPedal Labs.

Approved for government purchase

At \$299, SmartPedal is one of the most cost effective and highest ROI solutions available for increasing mileage.

The City Council of Oakland adopted a resolution authorizing a multi-year agreement with SmartPedal Labs. Other cities and counties may purchase by referencing Contract Purchase Agreement (CPA) No. 2020000286.