



Electric vehicles and the future of gas stations

Threats and opportunities

→ www.thepirl.com
→ www.drintl.com

Market Trends
Whitepaper

Copyright © 2022
Pirl Technology, Inc.

All Rights Reserved.





Electrified transport is the existential challenge of the decade for gas stations →

"Up to 80% of the fuel-retail network as currently constituted may be unprofitable in 15 years"



Introduction

The transition to electrified transport is the defining challenge of the decade for gas stations and the rest of the oil and gas industry. With the auto industry investing **half a trillion dollars over the next five years** into electric vehicles (EVs), the speed of the transition will surprise many.

As gas prices skyrocket and hot summers trigger fresh reminders of climate change, consumer demand for electric vehicles has exceeded most expectations. The total cost of ownership (car price, fuel and maintenance) of internal combustion engines already exceeds that of some some electric vehicles (EVs). The future is happening faster than expected.

The question is how, not if to respond. Gas stations, the last mile touchpoint of the gargantuan oil & gas industry, face particular challenges during this transition.

In this brief note, we review the threats and opportunities facing gas station owners as they make tactical and strategic decisions that will determine their future.



Threats

Loss of customers

80% of EV charging is done at home, which means EV owners do not need to travel to a fuel location most of the time. Because of this, experts estimate that as much as 80% of the fuel retail market could be unprofitable by 2035.

Decline in store sales

A decrease in traffic to gas stations leads directly to a decrease in store sales. Currently, 44% of gas station customers go to the stores, and among them, 1 in 3 ends up making a purchase. Gas station stores bring in over 70% of overall profits, making them a critical asset to owners.

Loan defaults may rise

Many gas stations have outstanding debt which is often refinanced. With the threat of a significant decline in profitability, lenders will be wary to provide financing, and increasingly, defaults will rise.

Closure costs are substantial

When a gas station closes, closing costs can be substantial. Laws in the District of Columbia require gas pumps and underground tanks to be removed by sixty days, with \$20,000 fines for noncompliance.

Existing a business is not a problem in hot industries where new buyers are easily found, but in a threatened industry, buyers are scant and gas station sellers may be forced to assume substantial environmental remediation costs they may not have budgeted for.

Opportunities

Install Level 2 and 3 chargers

Level 3 (DC fast charging) chargers are mostly banned from homes due to the high voltage required, but commercial operators can install them. Gas stations often have the space, and depending on local substation constraints, the infrastructure to install fast chargers.

The ideal mix is a combination of lower cost Level 2 chargers to reduce upfront cost and increase return on investment.

Reinvent the retail experience

EVs present a tremendous opportunity for gas stations to shift to a new retail paradigm. 70% of a gas station's profit comes from the convenience store. EV owners are higher income earners (over \$100K) and gas stations can implement exciting new retail concepts such as entertainment centers that will generate higher sales.

Blackout insurance

The number and frequency of power outages have more than doubled in the past five years. Blackouts affect 70 million Americans annually. During blackouts, consumers cannot charge their EVs. This is a grave failure point.

Gas stations can install batteries and provide energy storage services. This can serve as "blackout insurance" for EVs owners who may pay for guaranteed access to chargers during outages.

Grid storage services

The batteries can also provide grid balancing services to utilities for a fee.



Who we are

Pirl has partnered with
D+R →

Pirl builds next generation electric vehicle charging stations to accelerate the transition to electrified transport. Using the latest Internet-of-Things (IoT) technology, we deploy stations that charge rapidly, have a lower environmental footprint, and delight owners with an engaging user experience.

D+R International offers a complete ecosystem of services built to help our clients transform the way we use energy in transportation and buildings, bring new technologies to market, and create long lasting change.

Building the future of EV charging

Learn more about us:
thepirl.com
drintl.com

Kobby Osei-Kusi
kobby@thepirl.com

David Steiner
dsteiner@drintl.com