

Dover Fueling Solutions | 10.03.2022

# The Future of Fueling Trend Report

Introduction

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# Introduction

With gas prices fluctuating, demand for electric vehicles increasing and fuel retail sites undergoing a COVID-driven boom, the fueling industry faces a transformative moment. While the industry is rooted in traditional practices, the emergence of new technologies at the pump and in the store — not to mention new levels of consumer demand — are upending the established order.

It's time to prepare for the future by asking questions like: What motivates consumers to choose one location over another? What do consumers expect from an experience at the pump? What would make them visit convenience stores more often? And where do they see the industry headed? Dover Fueling Solutions set out to answer these questions.



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**Methodology:** In July 2022, DFS conducted a survey of 1,000 consumers to better understand their sentiment around the current and future state of gas stations and convenience stores. All respondents were based in the U.S. and represent a sample that reflects U.S. census data in terms of age and gender identity. The survey results paint a picture of how consumers view the fueling and retail industry. The results also offer a glimpse of where consumers think the industry is headed and what future solutions might win their loyalty.

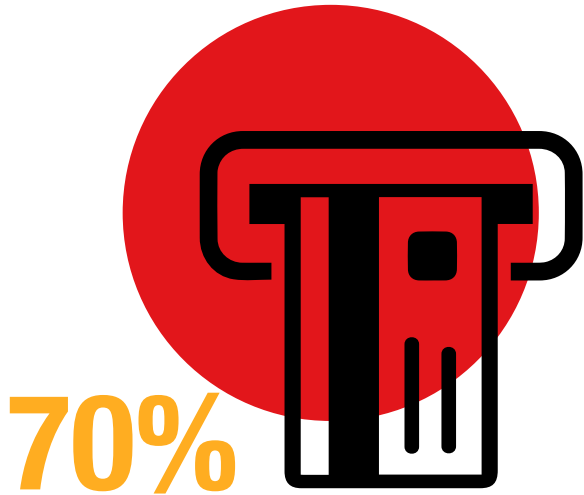
**Approach:** We've bucketed the survey results into five themes that are shaping the industry. For each theme, we've provided a set of data visualizations that clarify our findings while offering commentary about what the findings suggest for the future of the industry.

# 01 Security at the Pumps

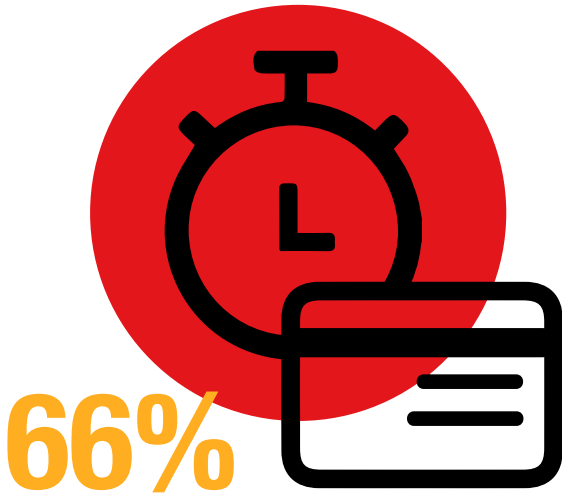


With payment skimming at the pumps increasingly common, consumers worry about swiping their cards and falling victim to a scheme. Often, the onus of avoiding these scams falls squarely on consumers, and there's no shortage of consumer-targeted guides on "how to identify a skimmer." Consumers surveyed by DFS want gas stations to mitigate this risk. When asked what features they'd value the most when making a purchase at a gas station/convenience store, they listed "payment security/no card skimmers on pumps" as the frontrunner — well ahead of experiential offerings such as loyalty programs or tech-forward solutions such as fast payments and touch-screen terminals.

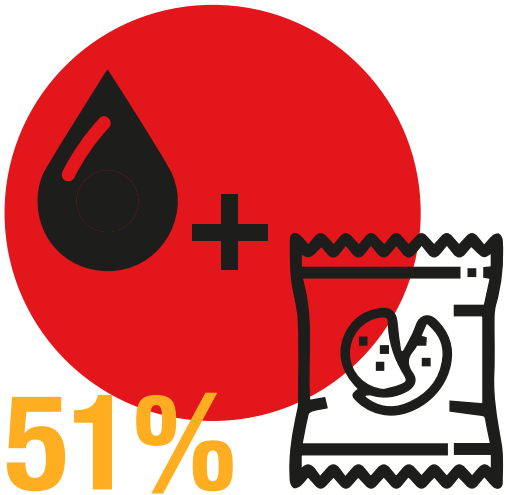
# The top 3 features consumers most want to see at the pump/convenience store



Payment security/no card skimmers on pumps



Fast payments (not having to swipe multiple times, etc)



Ability to pay for store items at the same time as fuel

# The **top 3 features** Gen Z values the most at the pump/convenience store



In-store, self-service checkout/ contactless shopping



Contactless/touchless payments or mobile payment options.



Loyalty programs to save money or work toward rewards

Generationally, there was no notable difference in the data across millennials (ages 26–41), Gen Xers (42–57) and baby boomers (58–76) when it came to valuing payment security. Across all three generations, payment security was cited roughly equally as something they “value a great deal.” For Gen Z (18–25) consumers, however, payment security didn’t hold as much value as other convenience store/gas station features like contactless/touchless payments at the pump and in-store, self-service checkout.



# Commentary

**Mounting consumer dissatisfaction with security at the pumps is likely attributable to two factors. The first is consumer awareness of – and frustration with – the increasingly prevalent skimming schemes taking place at gas stations all over the country, which can go undetected for long periods of time. The second factor – which is likely compounding the frustrations of the first – is economic instability and fluctuating gas prices.**

For gas stations, providing consumers with a basic sense of payment security should be table stakes, and our survey's findings indicate that station owners need to do a better job of educating consumers about the security mechanisms they already have in place, including embedded security technology to prevent skimming. The fact that consumers remain preoccupied with payment security should push gas station owners to better communicate their existing security practices.

Additionally, because most skimming schemes are targeted at traditional credit cards with magnetic strips, implementing contactless payments and EMV card readers are two ways to thwart sophisticated scammers. Gas station owners can also invest in more security at the pump, including tiered security systems, as future- proofing strategy.



# 02 EV Charging



The U.S. has passed a critical point, where over 5% of new car sales are for fully electric vehicles. Based on a Bloomberg analysis of 19 countries with EV-positive trends, this figure represents a “tipping point” indicating that the U.S. is on its way to much broader adoption over the next few years. Yet EV adoption still lags among certain groups. For Gen Zers and millennials, DFS’ findings suggest that the availability of more EV- charging stations may be a key incentive to purchasing EVs in the coming years. Of those surveyed, DFS found that 61% of Gen Zers and 61% of millennials would be more likely to consider purchasing an EV if more gas stations offered EV charging.

“I’d be more likely to buy an EV if more gas stations offered EV charging.”

over  
**5%**

of new car sales are for fully electric vehicles - Bloomberg

**61%**

Gen Z & Millennials

**53%**

Gen X

**42%**

Baby Boomers



# Commentary

While there's consumer demand for EV-charging stations, in some markets it remains infeasible for station owners, since EV adoption in those regions isn't widespread enough to make installing EV chargers profitable. Indeed, the profitability of EV-charging remains largely geographically dependent. In California, for instance, EVs comprised over 12% of new auto sales in 2021. Similarly, in New York, the state reported more EV sales in 2021 than the previous two years combined. By contrast, EV adoption has lagged in the Midwest, where EVs constituted less than 1% of new vehicle registrations in 2020.

Because EVs represent a new space, retailers should expect a learning curve as they begin meeting the challenges and opportunities of EV adoption. With traditional fueling, gas stations are working in a very defined business model, where owners know how much margin they make on every gallon and how many cars they can expect to fuel. EV charging, however, represents a marked departure from established business models.

This presents a need for gas station owners to consider what other goods and services to combine with EV charging to boost profit margins. Therefore, gas station owners should consider the market they're serving and closely follow EV adoption trends within that market. Because the process of obtaining EV permits can be protracted — up to 24 months in some cases — it's important for gas station owners to remain proactive and consider how they can deliver an engaging experience for a new segment of consumers.



# 03 An Evolved C-Store



As the emergence of EV charging increases the amount of time people spend at fueling stations, the question becomes how these outlets can improve the experience around the forecourt and within c-stores. To better understand what consumers are looking for, we asked respondents to consider a future in which they're waiting for their EV to charge and looking for something to do. What would be most valuable to them? When it came to ranking different amenities, respondents selected coffee shops/cafes by a significant margin — beating other options like places to work, fitness centers and shoe repair services.

**39%**

Coffee shop/ cafe



**11%**

Business center/  
place to work



**29%**

Sit-down restaurant



The services consumers would most want while they wait for their EV to charge



22%

Dry Cleaner

20%

Fitness Center



20%

Business center/  
place to work

## The services **Gen Z** most want while waiting for their EV to charge

When looking at the data cross-generationally, it's evident that Gen Z is more interested in EV-charging stations providing places to work, exercise or even clean their clothes. By contrast, baby boomers would most like to see coffee shops, dog parks and sit-down restaurants.

# The services **baby boomers** most want while waiting for their EV to charge



As gas station owners consider how to evolve their services both at the pump and within the c-store, they shouldn't overlook their traditional customers. Instead, they should make decisions that best serve the aggregate customer base. Right now, however, all generations indicated that they often don't feel incentivized to enter a store while shopping for gas. When asked about their top reason for not visiting a store during a fill-up, the largest percentage of respondents said they have no need for the items offered in stores.

What is the top reason you would NOT go into the store when stopping for gas?

**40%**

No need for in-store items

**16%**

Unwilling to spend more money/budget

**16%**

Not enough time

**13%**

Lack of perceived safety

**9%**

Store is not clean

**6%**

Outdated technology or lack of helpful technology



A woman with dark hair in a ponytail, wearing a dark jacket over a blue and white striped shirt, is smiling and looking at a shelf in a convenience store. She has a black bag slung over her shoulder. The store is filled with shelves of various products, and there are gold tinsel decorations hanging from the ceiling.

# Commentary

Historically, the purpose of a c-store is to deliver goods and services with speed and ease. But the emergence of EVs could evolve that model, as it will become increasingly common for consumers to spend 25 to 30 minutes at the station while waiting for a full EV charge. That said, we expect that even as EV adoption expands, a subset of EV drivers will still engage with fueling stations and c-stores in a more traditional manner, using charging stations for a quick, partial charge before hitting the road. This mix could vary notably between big box retailers — which may draw more consumers for full charges — versus c-stores, where partial charging could become the norm.

Location demographics will also be an important factor in the future c-store. Station owners with locations in metropolitan areas — where there are more multifamily housing residents without the ability to charge in a garage — will need EV stations more than drivers in single-family residential areas. Therefore, these stations may be more likely to consider an evolved c-store experience.

But how can station owners plan to deliver a more immersive experience? Building out coffee shops and cafes could offer one solution — and from the station owner perspective, these offerings are relatively high margin. The more gas stations can align with consumer expectations and provide a more immersive experience — whether through connected forecourt technology or delivering relevant content at the pumps — the better prepared they'll be to deliver an evolved fueling experience in the years to come.

# 04 Future-State Fueling



Consumers envision Jetsons-like fueling stations. In the retro, animated series *The Jetsons*, a futuristic family pilots their ship to an entirely automated fueling station. Robots attend to them, everything is self-service, and the whole process couldn't be more seamless. When we asked our survey respondents to paint a picture of the future fueling station — specifically, what it will look like in 20 years — a notable subset of respondents cited that show as a reference point. What this anecdotal data speaks to more broadly is that consumers expect fueling stations to undergo a radical change over the next two decades. Digging into the open-ended responses, a few themes emerge in terms of consumers' perception of what fueling stations will look like during that timeframe.

“EV charging will mostly only be available.”

“I imagine that they will be geared toward electric vehicles or alternative, non-fossil fuels.”

“Mostly electric stations with few options for real gas.”

## Future fueling stations will be more EV focused

Consumers overwhelmingly envision EV taking priority over traditional fueling solutions.

“There won’t be gas stations. There will be charging stations.”



“I think the gas stations will be turned into EV-charging stations.”

“Everything will be self-service and automatic.”

“They will be more technologically based with less human interaction.”

“Everything will be automatic. The only reason for employees will be to stock up.”

## Future fueling stations will be more automated and have more self-checkout

Many consumers imagine that tech advancements at the pump and in the forecourt will transform the fueling station experience.

“I believe gas stations of the future will have advanced technology, including but not limited to touch screen, mouse options and easier payment methods.”

“All contactless.”

“Nobody will work there; instead, it will be pay as you go. I think everything will be fingerprint scanner.”

“There will be more amenities.”



“There will be things to do while you wait (spa, etc.)”

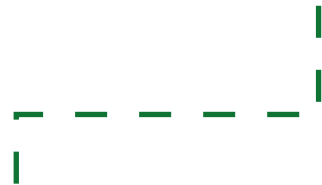


“More gas stations with restaurants.”



## Future fueling stations will have more options for entertainment and other activities

Several consumers mentioned that, as they plan to spend more time at fueling stations in the coming years due to EV charging, they expect — or at least hope — to see gas stations offering more options, such as restaurants and cafes, to fill the time.



“I think there will be places for people to charge cars and go inside a small cafe to work online or relax with a drink and snack.”



“I think most will have a coffee shop or quick restaurant for people to sit and either eat or work while their car is charging.”

## Gen Z

“I think they’ll all just be machines that can **operate on their own.**”

“There will only be **contactless payments**, and fuel will be much more expensive than EV charging.”

“**More electric stations** and better-quality merchandise.”

“I think they will be more like **supermarkets.**”

“About the same but with **more electric charging.**”

“They’ll be **ultra-modern** with everything we need inside.”

“There will be touchless options; **no humans** or customer service.”

“There will probably be a lot more **electric-charging ports.**”

“I can only hope there will be **more human contact** than machine contact.”

“Gas stations will be run and operated by **robots.**”

“Very high tech. Android operated. One to two cashiers on site to monitor equipment and property.”

## Millennials

## Gen X

“Everything will be **automatic.** The only reason for employees will be to stock up.”

“They will be more like **shopping malls.**”

“There will be **few, if any, employees.**”

“They’ll be like full-service hotels restaurants or beauty salons.”

“Like **‘Back to the Future 2.’**”

“I think **only charging stations** will be available.”

“Hopefully, they will be extremely **user-friendly and fast.**”

“**Who knows.** We’re still waiting for the flying car.”

“There will be no people working there. It will be **fully automated.**”

“They will look like **giant parking lots** with plugs and meters.”

“They will **all be in complexes** with groceries available, car washes and one or two fast food chain options.”

“Less gasoline, **more electric outlets.**”

“Hopefully, they’ll be **geared toward electric cars** due to climate change and global warming.”

## Baby Boomers

# What will gas stations of the future look like?

# Commentary

While EVs represent a burgeoning market, the shift to a completely EV-focused fueling station won't be as complete as consumers imagine. Instead, we're likely to see a mix of charging stations and traditional fueling in the decades to come.

In terms of automation and self-checkout, we're absolutely heading in the direction consumers predict, with tech advancements overtaking traditional fueling. We recommend gas stations get ahead of this trend by building out dedicated, future-focused lanes that offer a fully contactless, digital-first experience.

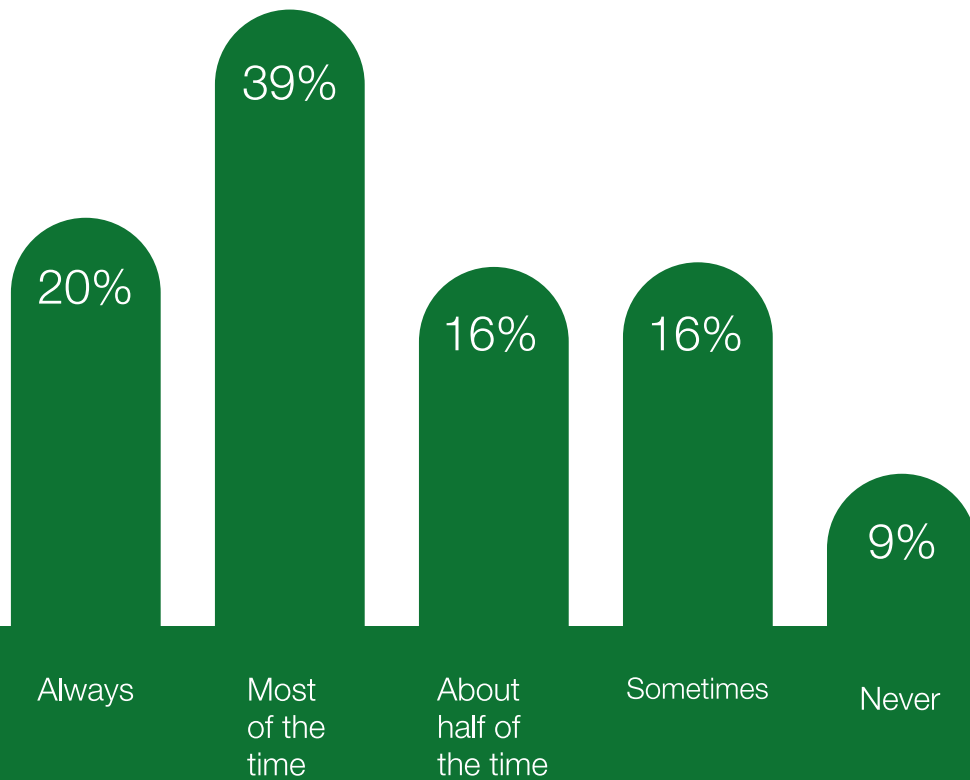


# 05 Pricing Transparency




One clear way gas stations can solidify customer loyalty is to give their patrons confidence that they're getting what they pay for. With increasing customer complaints of inaccurate prices at the pump, owners need to ensure that gas stations are correctly calibrated — and that this accuracy is effectively communicated to consumers. According to DFS' findings, only 20% of customers feel they always get the exact amount of fuel they're paying for, while nearly 10% say they never do.





A mere **12%** of Gen Zers and **16%** of millennials feel they get the amount of gas they pay for

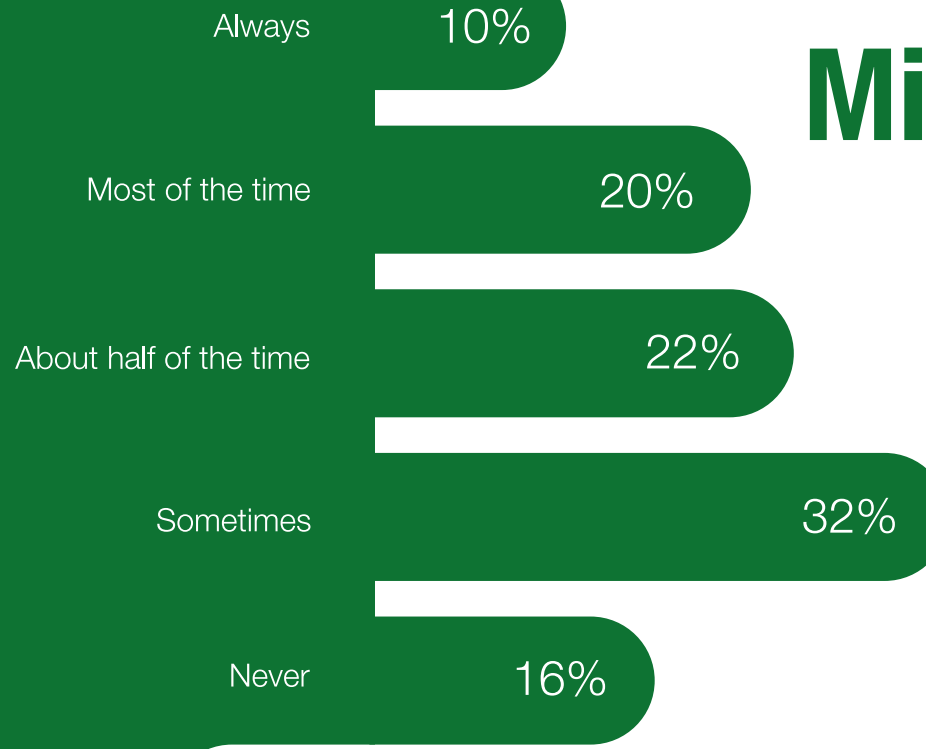


What will gas stations of the **future** look like?

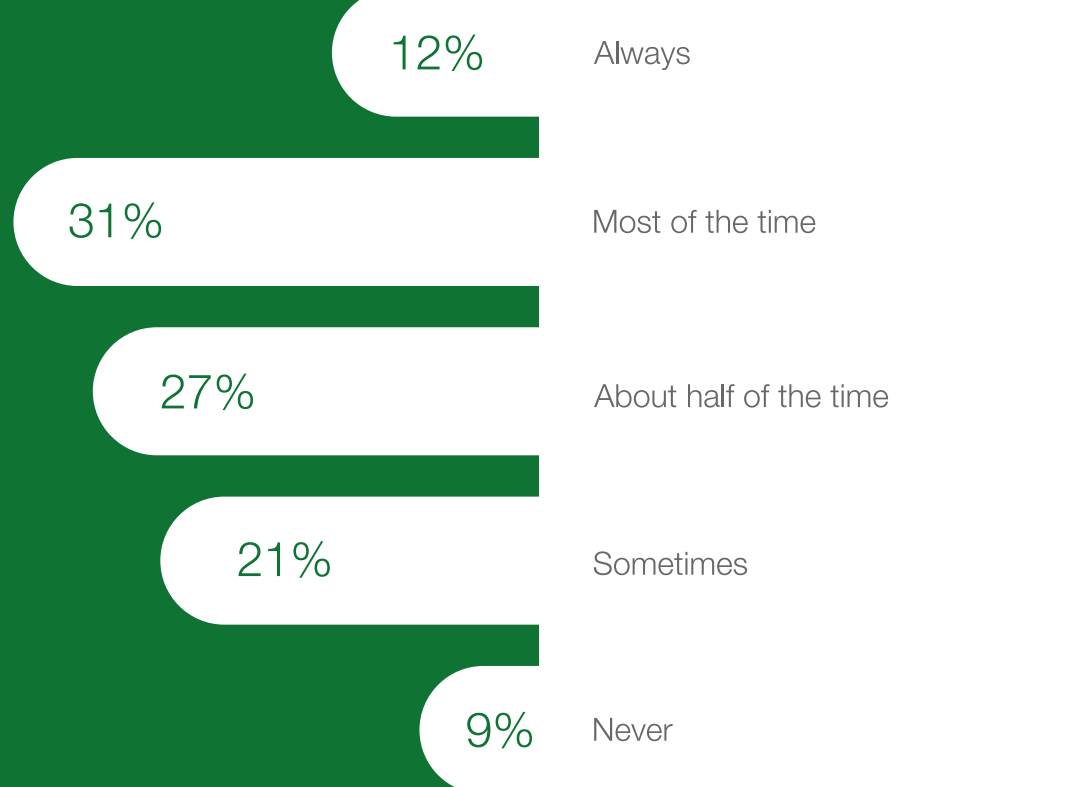
# Do you believe you get the exact amount of fuel you pay for?

These results indicate gas stations have some generationally targeted work to do when it comes to demonstrating accuracy at the pumps.

# Millennials



# Gen Z





# Commentary

This finding seems to reflect consumer attitudes regarding fuel price inflation in 2022. With record-high prices at the pumps, consumers want to make sure they're getting what they pay for, and our survey found they're skeptical. This skepticism is likely compounded by the growing popularity of EV culture, which perhaps contributes to a sense of guilt among traditional fueling consumers about not using EVs, furthering their desire for accuracy.

One solution gas station owners can consider is providing consumers with a more granular breakdown of their fueling stats, using pumps that provide fueling stats to the thousandth decimal place.

# Conclusion

As gas station owners prepare for both the near-term and longer-term future, it will be important to make adjustments based on consumer preferences. For example, as EV charging emerges as more of the norm, station owners should begin considering how they can expand their c-store offerings to deliver a more immersive experience. Building out coffee shops and cafes could be part of that plan, but it's also critical to consider generational differences.

Beyond preparing for EV-driven changes, there are other elements of the fueling experience that station owners should evaluate and act upon today. Security at the pumps, for instance, is one consumer worry that station owners can address with proactive measures like tiered security systems and contactless payments. Similarly, gas stations can implement more granular fueling stats at the pumps to assuage consumer concerns about getting what they pay for.

By taking proactive steps now, station owners can begin delivering today on consumer expectations for the fueling experience of the future.

# About Dover Fueling Solutions



DFS is a leading global provider of advanced customer-focused technologies, services and solutions in the fuel and convenience retail industries. Through a portfolio of products that includes fuel dispensers, EV chargers, tank gauging, fleet management and retail automation, DFS is empowering the evolution of the consumer experience in fueling and convenience retail.

For more information on DFS and its solutions, visit:

[doverfuelingsolutions.com](https://doverfuelingsolutions.com)

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