AMERICA'S LEADING FUEL MARKETERS

IGM

INDEPENDENT GASOLINE MARKETING

MAY | JUNE 2023

SIGMA

inside:

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About SIGMA: Founded in 1958, SIGMA: America's Leading Fuel Marketers has become a fixture in the motor fuel marketing industry. After more than sixty years of leadership, SIGMA is the national trade association representing the most successful, progressive, and innovative fuel marketers and chain retailers in the United States. From the outset, the association has served to further the interests of both the branded and unbranded segment of the industry while providing information and services to members.

SIGMA's approximately 260 corporate members command more than 50 percent of the petroleum retail market, selling approximately 80 billion gallons of motor fuel each year. These member companies operate throughout the United States and Canada.

Regular membership in SIGMA is available to companies involved in motor fuel retailing or wholesaling that are not owned by a refiner. In addition, Associate membership is available to fuel supplier companies and to companies that offer financial services, fuel transport services, and fleet card services. SIGMA member companies have long been recognized, both within and outside the industry, as the most aggressive, innovative, and price competitive segment of petroleum marketers.

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Dale Boyett
SIGMA President

viewpoint

SIGMA Needs You

It was really great to see so many of you at the recent SIGMA Spring Conference in New Orleans! I am consistently impressed with the quality of SIGMA's events – and the Waldorf Astoria Roosevelt Hotel did not disappoint. Not only the venue was impressive, but so was the networking and education. The session topics were timely and the speakers entertaining and informative. That's a winning combination.

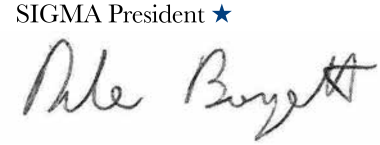
SIGMA's next event is the Summer Legislative Conference July 18-19 in Washington, D.C. Once again, this will be a great opportunity to connect with other SIGMA members, but with a difference. SIGMA really needs you to come. The association needs your voice to educate Members of Congress on the issues that make a significant difference to our industry. Sure, SIGMA has government relations professionals to make connections on behalf of the association and the industry, and they play an important role, but nothing sinks in like an in-person meeting with a tax-paying, job creating constituent.

Now, anyone who knows me well (and even those that only know me a little bit) knows that the absolute last thing I want to do in July is put on a coat and tie and real shoes. Yet not only do I do it, I bring our entire executive team. It is simply that important. I have been attending the SIGMA Summer Legislative Conference and Day on the Hill for years, and I feel pretty comfortable talking to my elected representatives. Experience, however, is not required. SIGMA's aforementioned government relations team does an excellent job on the first day of the meeting of explaining the issues we will discuss during our Hill appointments on Day 2 and providing insight and suggestions on the most effective ways to deliver our point of view so our message resonates and is truly heard. You don't have to be able to discuss our issues at an encyclopedic level (if you have had a meeting with a Member of the U.S. Congress, you know well that you don't have that amount of time). You just need to hit the high notes, and to do that SIGMA will give you talking points. It isn't a hard lift, trust me.

I plan to attend this year's Summer Legislative Conference and to again bring my team. I am asking you to do the same. The more people we have attend, the more Members of Congress we can meet. Please ***register early*** to make it easier on those responsible for making the appointments. If you aren't sure who on your team is the best person to send because the issues are not yet defined, ***register anyway***. You can always swap out for someone with more in-depth knowledge closer to the date. We can't say with certainty which issues will be "hot" until closer to the conference. It may be a little frustrating on our end, but it is just the reality of how Congress works.

Remember, no one is better positioned than you to speak to how Congress' actions affect your business and our industry. In today's economic environment more than ever, SIGMA needs you to do that this July.

Dale Boyett, Boyett Petroleum
SIGMA President ★



profile:
ARGUINDEGUI OIL COMPANIES

By Mark Ward Sr.

When news of an acquisition breaks, a press release customarily conveys optimism for the future. So when Arguindegui Oil Companies (AOC) of Laredo, Texas, last year announced it had acquired Sunoco Energy Services (SES), President and CEO Alfonso L. Arguindegui was upbeat.

"The acquisition of SES complements our existing markets and is also an exciting expansion opportunity for us," stated Arguindegui in a press release dated December 30, 2022. "We are thrilled to welcome all the SES associates to the AOC team and infuse Sunoco's current locations into the AOC terminal footprint to service a wider customer base.

Chief Operating Officer Wes Scott then observed, "This combination of complementary businesses will accelerate future growth and allow us to further leverage our company's heritage and geographic footprint with unmatched service offerings including automated frac fueling. Going forward as one team, AOC will be one of the largest fuel, lubricant, and service providers to the oilfield industry."

Speaking recently to *Independent Gasoline Marketing*, (IGM) Arguindegui explained that his words in December were more than just an expression of hope. His company's acquisition of SES is based on sound business strategy that leverages AOC's existing strengths and extends them into new markets.

Since 2004, AOC has aggressively diversified its wholesale marketing to "wherever diesel is sold," reports Arguindegui. Current customers span the transportation, oil and gas, agriculture, mining, marine, railroad, construction, aviation, government, and retail fueling sectors. Now with its SES acquisition, AOC can expand service to these customers. "We've doubled our assets in south and west Texas while opening up new markets in north and east Texas, Louisiana, and Oklahoma," he relates. "The acquisition comes with terminals, equipment, trucks, drivers, and existing accounts."

Along with AOC terminals in south and west Texas at Laredo, Odessa, Corpus Christi, Beeville, Edinburg, and Brownsville, the SES acquisition adds terminals at six more Texas sites—San Antonio, Gainesville, Nacogdoches, Midland, Pecos, and Cotulla—as well as at Bossier City, Louisiana, and Watonga, Oklahoma.

A Strategic Pivot

At the same time, the SES acquisition represents a strategic pivot for Arguindegui Oil Companies. "Our diversification over the past 15 years also included some non-fuel areas," Arguindegui says. "But we learned that you can't be everything to everybody. Now we're 90 to 95 percent focused on what we do best—providing fuel products and services." ▶

The SES acquisition, Arguindegui continues, "allows us to build on our focus, extend it to new markets, and increase the revenues we generate from providing services." As a result, AOC has strengthened its position as one of the nation's leading minority-owned providers of lubricants, fuel, and diesel exhaust fluid.

AOC's pivot is also in part a response to developments across the Mexican border. Laredo, site of AOC headquarters, is the largest inland port in the United States. Nearly half of U.S. international trade headed to Mexico, and more than a third of Mexican trade headed into the United States, crosses through Laredo.

When Arguindegui spoke to IGM in 2016, he described his company's preparations to become a fuel supplier of choice for Mexican end users. The federal government was then planning to phase out the monopoly that its state-owned oil company, Pemex, had held since 1938 over the nation's fuel industry.

"It's not every day that a 75-year-old monopoly breaks up," Arguindegui said at the time. "The whole spectrum of an entire country's energy sector will open up for business and become a true free market. ... [W]e'll need to partner with Mexican companies in order to adequately service fuel customers there. But our strengths as a company will make us a player."

Today, Arguindegui says, "We did well in the Mexican market from 2017 to 2021." But he adds that, after the 2018 presidential election of Andrés Manuel López Obrador, a progressive populist and economic nationalist, "his administration retrenched on energy policy and didn't renew some import permits. So, while our company isn't as active in Mexico, we're well positioned if a new administration opens the market up again."

Given current political realities south of the border, AOC's acquisition of Sunoco Energy Services allows Arguindegui to look north for expansion and new markets. "Texas is a huge state, the largest in the continental United States," relates Arguindegui. "People don't realize the distances involved here. Laredo is 150 miles from San Antonio, 300 from Houston, 400 from Dallas, and 600 from El Paso or Amarillo."

For decades after its 1942 founding, AOC had Laredo's isolated market almost to itself. But after the United States and Mexico signed free trade agreements in the 1990s, Laredo became more accessible. Its importance as a border crossing grew and more competitors entered the market. Needing to respond, AOC leveraged its network of bulk terminals to serve a broader base of customers. "Our SES acquisition thus continues our long-term strategy of expansion," Arguindegui observes.

As part of this evolution, Arguindegui adds, his company's San Antonio office "is now becoming more of a corporate hub for us." While AOC's roots remain at its Laredo headquarters, the ability to also provide sales and service out of San Antonio puts those operations closer to its expanding customer base.

As for the southern border, Arguindegui acknowledges that "lack of control is a real issue that needs to be addressed. But we also need labor, especially with the shortage of drivers. And you have to take media reports with a grain of salt. Laredo is one of the safest cities in the U.S. And as the nation's largest inland port, international trade between the U.S. and Mexico remains a big factor here."

A Culture of Core Values

AOC is a third-generation family enterprise founded in 1942 when Peter Arguindegui Sr. became a Continental Oil commission agent for Laredo and the surrounding area. In the 1950s, sons Peter Jr. and Carlos fulfilled their father's dream by earning degrees from Texas A&M University and later joining the company.

In 1970 when AOC expanded beyond Laredo and became an independent Conoco franchise distributor, Peter Sr. gifted the company to his sons. As president and CEO, Peter Jr. formulated a vision and plan for long-term growth. Meanwhile, as executive vice president, Carlos grew AOC's lubricants and chemicals business. By the 1980s, the two men diversified the company into fuel retailing, convenience store marketing, and cardlock operations.

A third generation came on board when Peter III joined AOC in 1986 and Alfonso and Carlos Jr. in 1988. Peter ultimately went on to launch a pipeline and transportation logistics company, while Alfonso concentrated on AOC's retail side and Carlos on the wholesale. In 2004, Alfonso and Carlos Jr. assumed control of AOC's daily operations and overall direction of the company.

Diversification followed as AOC expanded its wholesale marketing and entered non-fuel operations including car washes (which AOC has since exited) and real estate (which continues today at a reduced level). "But after 2021 when our Mexico marketing wound down, and then in the aftermath of the Covid pandemic and with crude oil prices going as low as $40 a barrel, we had to take stock as a company," says Alfonso.

One outcome of this reassessment was refocusing on AOC's core strengths in wholesale fuel products and services, culminating last year in the SES acquisition. "But over the past year," reports Arguindegui, "we've also been working through a process to identify our core values and purpose."

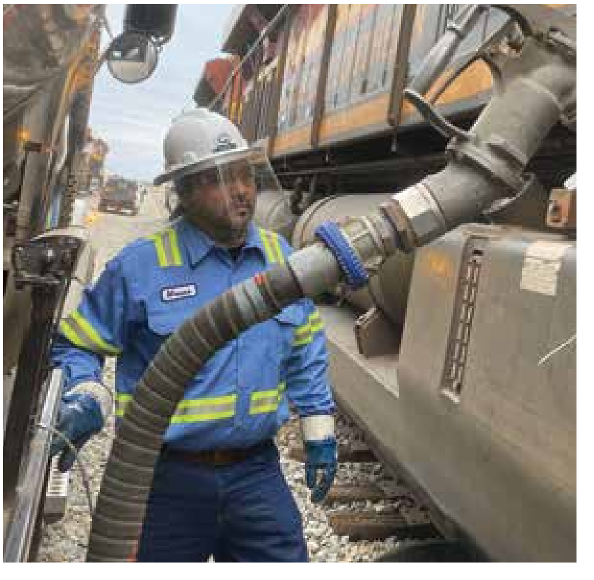
AOC has utilized tools available from EOS Worldwide. The latter's Entrepreneurial Operating System® and EOS Model sets forth six business components: vision, people, data, issues, process, and traction. Using EOS resources, the AOC leadership team has formulated four core values: Focused, Integrity, Team Player, and Problem Solver. The company has also gone beyond the traditional organization chart to develop an AOC accountability chart.

"This process is important," says Arguindegui, "because what differentiates us as a supplier is our culture. Our customers have other options for their fueling needs. Only if our leadership identifies our core values, accountability structures, and company goals, will our culture filter down to our people—so that our customers then will feel our authenticity."

Arguindegui is gratified to report that his 200 employees have embraced AOC's four core values. "With the Mexican market slowing down, two years of a pandemic, and the plunge that the industry experienced in oil prices," he says, "it was time for a 'reset.' Even if we've been around for 80 years, we still need to evolve and adapt."

A Generational Legacy

That evolution highlights the Arguindegui family's generational emphasis on education and professional development. Founder ►



Peter Sr. dreamed his sons would attend college—which they did. In his turn, Peter Jr. was a supporter of higher education, recognized by his alma mater as a distinguished donor to the Texas A&M University President's Endowed Scholarship Program.

In keeping with the family's commitment to education, AOC has established scholarship endowments at the Texas A&M University main campus in College Station, as well as at Texas A&M International University in Laredo, and at Laredo Community College and each of the Laredo public high schools.

At TAMIU's campus in Laredo, AOC has established the Arguindegui Oil Company Science, Technology, Engineering, and Mathematics Endowment Fund to support students planning careers in STEM fields. In addition, the company is a major contributor to TAMIU's student-run television station that reaches 30 counties across south central Texas.

"Expanding our region's talent pool is important," states Arguindegui. "We're a big believer in continuous education and having a diversity of ages in our company. If you're older, you need continuous education to keep up with new technologies and methods. And there's no question that we need to recruit and retain young talent. That's why we've developed our own in-house 'mock' interactive training for our different operations and products."

Continuous professional education and development is a key reason why AOC joined SIGMA a dozen years ago. "We meet people and learn new things at every meeting. It's such a vibrant atmosphere where you get to shake hands and see people eye-to-eye," says Arguindegui. "And of course, we belong to SIGMA to support its advocacy. Having a voice for independent marketers is needed and appreciated."

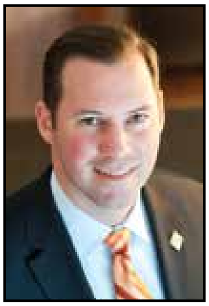
Professional development is vital for a company whose operations are wide-ranging. AOC products include fuels, lubricants, chemicals, filters, fueling and lubricating equipment and tanks, and environmental cleanup supplies. As noted earlier, customers span the transportation, oil and gas, agricultural, mining, marine, railroad, construction, aviation, government, and retail fueling sectors. Fuel brands include Valero, Citgo, Gulf, and Phillips 66, along with nine lubricant brands.

Services encompass bulk fuel delivery, onsite fueling, frac fueling, emergency fueling, fuel and inventory management programs, tank monitoring, "keep full" automatic ordering, equipment and tank installation, retail dealer branding programs, fixed and indexed fuel pricing contracts, and more. All these are provided through a network of terminals and sales offices at 13 locations across three states—a network that doubled with last year's SES acquisition.

To keep it all on track, Alfonso and Carlos Arguindegui have developed a complementary working relationship. "As president and CEO, I'm the visionary," explains Alfonso. "But we couldn't do it without 'Charlie' as executive vice president. His knowledge lies in engineering, while mine is in business administration." I've got entrepreneurship in my blood, while Charlie manages our day-to-day operations."

Arguindegui's vision goes beyond the walls of his office to include the wider community that has given so much to his family over three generations. Following a family tradition of local involvement, he has served as president of the Laredo Development Foundation and board member of the Laredo Chamber of Commerce, Boys and Girls Club of Laredo, and IBC Commerce Bank.

Looking to the future, Arguindegui relates, "Part of my role is executing on how the organization can be passed down, how to extend it and build it for the next generation. The previous generations created opportunities, set foundations, and had the foresight to structure us for growth. Now it's the turn of my generation to do the same. If the next generation is hungry and has the passion, they deserve the opportunity." ★



Inside SIGMA

BY RYAN MCNUTT, CEO, SIGMA

SIGMA SHARE GROUPS are back!

Knowledge Shared = Knowledge2

SIGMA's Share Groups are back! This year, SIGMA will host six Share Groups September 12-15 in San Antonio, Texas. In addition, SIGMA has a Retail/Foodservice Share Group that has both in-person and virtual events throughout the year. SIGMA Share Groups are smaller, topic-focused 1½ day meetings that combine presentations, breakout sessions, and peer networking. Share Groups provide a unique educational experience in different business areas related to fuel marketing.

Who Should Attend SIGMA Share Groups?

Share Groups are for employees at all levels of the company. Everyone from middle managers to owners and principles can attend share groups to gain valuable knowledge on a specific area of the business. For more information and to register, visit the Events page on the SIGMA website (https://www.sigma.org/event/)

Sincerely,
Ryan McNutt, CEO, SIGMA

September 12-13 Share Groups:

Mobile Fueling, Tankwagon, and Cardlock Share Group

Moderator: Ann Pitts, The Pitts Group

- Cardlock Site Development: Bare Ground to Big Gallons
- Hacked! Data & Equipment Security Update
- Trucks to the Last Mile: Critical Functionality and Workflow of a Delivery Operation
- Using CRM in your Sales Process and Beyond
- What's New in the World of Fuel Additives
- Leveraging Industry Data for Operational Efficiency
- Keeping Fuel Moving During Times of Emergency Disruption
- Developing a Loyalty Program: Driving Customers to Proprietary Sites
- Emerging Trends in Electric Vehicles

Maintenance and Environmental Share Group

Moderator: Ben Thomas, UST Training

- Safety Concerns with More Inspections
- Increasing Ranks of Service Providers
- Dealing with Parts Shortages and Distributions Issues
- Water in Tanks: Preventing and Dealing with the Aftermath
- Tech to Monitor Tanks – Records, Upkeep, and More
- OSHA Regulations – Updates Post Pandemic
- Risk Management – Insurance and Preparation for Incidents

Transportation Share Group

Moderator: Brendan McMahon, Consultant

- Emission Changes for 2024 – What to Expect
- Maintenance – What are you doing to combat difficult supply chains and new technology?
- Risk, Captives, and What You Can Do To Get Ahead of it
- Technology Collaboration – It's More Important Than Ever
- Putting Safety First!
- Updates from the Department of Transportation
- Recruitment – Do we have a driver shortage or a retention problem?

September 14-15 Share Groups:

Credit Share Group

Moderator: Ann Pitts, The Pitts Group

- Update on Credit Risk Post Pandemic
- Choosing and Managing Collection Agencies
- Crafting and Effective Company Credit Policy
- Managing Credit Risk in a Growth Oriented Petroleum Company
- Best Practices in Mining Available Customer Data
- Working with Sales Staff to Get to the "Yes"
- Handling Credit Worthiness During Times of Emergency Disruption
- Departmental Efficiency – Automation Options

Fuel Buying Share Group

Moderator: Scott Berhang, The Berhang Group, LLC

- The State of Gasoline Markets – How Price and Supply Are
- Likely To Affect Your Fuel Business
- The Fuel Price Influence Chain – How It Impacts You and Your Customers
- Renewables Fuel Program – What's Changed and Where We Are Today
- LCFS / CAR / RINS Benchmarks – Incorporating and Valuing in a Fuel Deal
- Fuel Contracts – Seven Things You Need to Know from an Expert
- Mergers and Acquisitions in the Jobber Space
- Hedging – Strategies to Protect Gasoline Retail Margins

IT Share Group

Moderator: Patrick Abernathy, TruAge Solutions, LLC

- Cyber Insurance – Why Is It Needed?
- Implementing Formal IT Governance
- Cyber Insurance – How to Get the Broadest Coverage
- High Level IT Security
- Anatomy of a Breach
- Vulnerability Management and Penetration Testing
- Secret Service Cyber Updates
- Updates on the Next Big Security Threats
- What's Happening with Skimming?

Washington WATCH

What to Expect When EPA Finalizes Its Renewable Volume Obligations This June

The Environmental Protection Agency (EPA) in June is expected to finalize its renewable volume obligations (RVOs) for 2023, 2024, and 2025 under the Renewable Fuel Standard (RFS).

The landmark rule, proposed late last year, will make a variety of changes to the Renewable Fuel Standard Program for the first time since its inception.

Most notably, EPA proposed three-year Renewable Volume Obligation (RVO) targets rather than establishing annual figures based on gasoline and diesel production estimates for the coming year. Although EPA has full statutory authority to determine the annual volume requirements for all years after 2022, this marks the first time that EPA has set targets that are not based on production and consumption projections. Instead, targets that once were set based on industry analysis and data now represent the agency's jumping off point for negotiating achievable targets and establishes a new precedent for changing the RVOs.

EPA also for the first time is expected to establish a framework for generating Renewable Identification Numbers on electricity produced from biogas, also known as eRINs.

For the next three years, implementation of the RFS represents the biggest opportunity for the Biden Administration to prompt tangible, immediate carbon reductions in transportation energy. Few, if any, other policies at the Administration's disposal can result in immediate carbon reductions of the fuel supply as the RFS.

In what appears to be a watershed moment, EPA is establishing precedent that could take center stage as our industry grapples with many pressing issues from lowering transportation carbon fuel emissions to electric vehicle charging and other fuel-related policies. ▶

What Sigma Expects In The Final Rvos:

EPA in December 2022 proposed to require 20.82 billion gallons of renewable fuel in 2023. EPA has proposed to require 21.87 billion gallons of renewable fuel in 2024, and 22.68 billion gallons in 2025.

For 2022, the agency previously set the total volume at 20.87 billion gallons, including 5.63 billion gallons of advanced biofuel, and 2.5 million gallons under the supplemental standard. These numbers reflect actual gallons blended for that year.

SIGMA thinks the proposed rule fails to capitalize on the agency's statutory authority to reconfigure the RFS in a manner that gravitates investment toward the lowest carbon intensity fuels.

EPA is proposing advanced biofuel blending mandates well below what the market is prepared to absorb, and conventional biofuel mandates well above what the market is prepared to absorb. The lack of growth in the advanced category is hard to justify given the amount of production capacity we expect will come online in the near term.

This appears designed to excessively rely on biomass-based diesel RINs to be used by obligated parties to satisfy their total renewable fuel obligation above and beyond the biomass based diesel and total advanced standards.

The agency has proposed just 100-million-gallon increases above 2022 levels for non-cellulosic advanced biofuels for 2023, 2024, and 2025. SIGMA encouraged EPA to increase the total advanced mandate by at least 250-350 million gallons each year above proposed levels.

For an Administration that desires carbon reduction in transportation fuels, EPA is not fully taking advantage of its opportunity to send unambiguous signals to the market that such investments will be rewarded.

Sustainable Aviation Fuel:

The inflation Reduction Act included provisions providing preferential tax treatment for sustainable aviation fuel ("SAF") relative to renewable diesel and biodiesel.

The lack of parity between the credits threatens to initiate competition over feedstock that could result in SAF growth that is offset by demand destruction for renewable diesel and biodiesel. SIGMA thinks that these undesirable consequences could be mitigated by requiring obligated parties to assume a separate RVO for each gallon of conventional jet fuel that they produce and ensuring that renewable diesel and biodiesel generate more RINs on a per-gallon basis than SAF.

The Government Accountability Office (GAO) in March 2023 released a report on sustainable aviation fuel that evaluates how federal agencies are supporting SAF and assesses how they will monitor progress of the federal Government's challenge

to supply 3 billion gallons of SAF per year by 2030 and 100 percent of expected domestic commercial jet fuel use by 2050.

GAO recommended that the Departments of Transportation and Energy along with the U.S. Department of Agriculture develop and incorporate performance measures into the Grand Challenge roadmap.

GAO in its report cited a letter that SIGMA and like-minded industry stakeholders sent to Congress expressing concern over the SAF specific tax credit in the Inflation Reduction Act. SIGMA said the lack of parity between the tax credit for SAF and other alternative fuels, including the biodiesel tax credit, will create competition over feedstocks as producers are incentivized to make SAF.

Electronic Renewable Identification Numbers:

EPA also proposed a framework for how electronic Renewable Identification Numbers (eRINs), would be permitted under the RFS. The proposal would allow automakers to generate a RIN when electricity is produced from qualifying renewable biomass.

SIGMA continues to argue against placing the value of eRINs at other segments of the value chain, such as with automakers. Doing so would not incentivize private investment in charging stations or consumer investment in EVs because the eRINs' value would not be shared throughout the value chain. It would simply provide additional incentives to an industry already encouraged to invest in EVs via separate federal policies.

EPA instead should permit public charging station owners to generate eRINs

The RFS has been remarkably successful at eliciting private investment to transition the transportation sector towards renewable alternatives and if structured appropriately, could be just as effective in promoting investments in EV charging stations. Unfortunately, the proposal's structure of only allowing automakers to generate eRINs will not result in the types of investments that are necessary to support the charging infrastructure that is critical for transportation electrification.

In comments filed with EPA, SIGMA said that the proposal's eRIN structure is premised on two flawed assumptions: That electric vehicle price is the primary barrier to electrification; and that creating a new revenue stream for OEMs will yield a reduction in EV price.

A lack of a convenient publicly accessible network of charging stations is a greater impediment to EV uptake than vehicle price. A new poll by The Associated Press-NORC Center for Public Affairs Research and the Energy Policy Institute at the University of Chicago found that just four in 10 consumers say their next vehicle will be electric. Nearly three-quarters of poll respondents cited too few charging stations as a reason they wouldn't go electric, including half who call it a major reason.

The availability of EV charging stations at existing retail fuel outlets is the most effective way to overcome EV consumers' refueling concerns.

These investments are being hampered, however, by an electricity market structure that was not designed for, and is not compatible with, selling transportation energy to on-the-go motorists. Allowing public EV charging station owners and operators to generate eRINs would enable fuel retailers and other private businesses to overcome most existing market impediments. ★

Tiffany Wlazlowski Neuman represents SIGMA on matters of public affairs.

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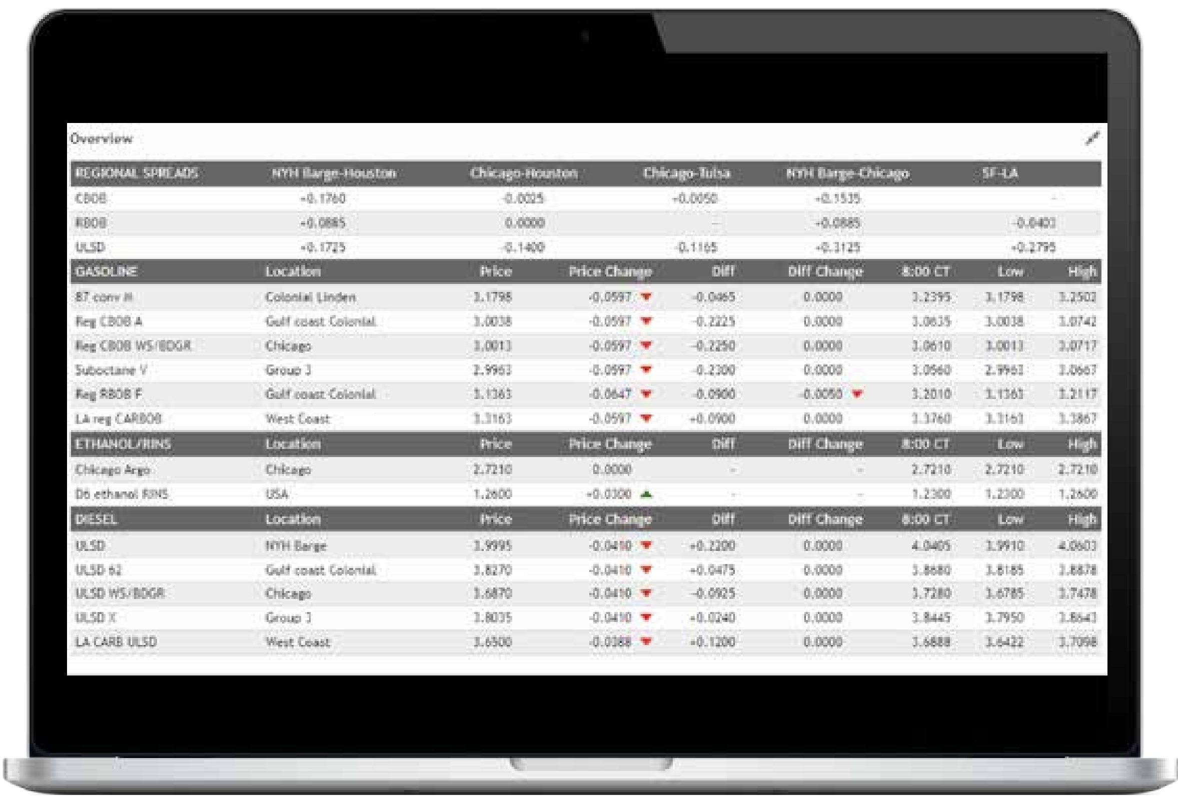

Overview

REGIONAL SPREADS	NYH Barge-Houston	Chicago-Houston	Chicago-Tulsa	NYH Barge-Chicago	SF-LA
CBOB	+0.1760	-0.0025	+0.0050	+0.1535	-
RBOB	+0.0885	0.0000	-	+0.0885	-0.0403
ULSD	+0.1725	-0.1400	0.1165	+0.3125	+0.2795

GASOLINE	Location	Price	Price Change	Diff	Diff Change	8:00 CT	Low	High
87 conv H	Colonial Linden	3.1798	-0.0597	-0.0465	0.0000	3.2395	3.1798	3.2502
Reg CBOB A	Gulf coast Colonial	3.0038	-0.0597	-0.2225	0.0000	3.0635	3.0038	3.0742
Reg CBOB WS/BDGR	Chicago	3.0013	-0.0597	-0.2250	0.0000	3.0610	3.0013	3.0717
Suboctane V	Group 3	2.9963	-0.0597	-0.2300	0.0000	3.0560	2.9963	3.0667
Reg RBOB F	Gulf coast Colonial	3.1363	-0.0647	-0.0900	-0.0050	3.2010	3.1363	3.2117
LA reg CARBOB	West Coast	3.3163	-0.0597	+0.0900	0.0000	3.3760	3.3163	3.3867
ETHANOL/RINS	**Location**	**Price**	**Price Change**	**Diff**	**Diff Change**	**8:00 CT**	**Low**	**High**
Chicago Argo	Chicago	2.7210	0.0000	-	-	2.7210	2.7210	2.7210
D6 ethanol RINS	USA	1.2600	+0.0300	-	-	1.2300	1.2300	1.2600
DIESEL	**Location**	**Price**	**Price Change**	**Diff**	**Diff Change**	**8:00 CT**	**Low**	**High**
ULSD	NYH Barge	3.9995	-0.0410	+0.2200	0.0000	4.0405	3.9910	4.0603
ULSD 62	Gulf coast Colonial	3.8270	-0.0410	+0.0475	0.0000	3.8680	3.8185	3.8878
ULSD WS/BDGR	Chicago	3.6870	-0.0410	-0.0925	0.0000	3.7280	3.6785	3.7478
ULSD X	Group 3	3.8035	-0.0410	+0.0240	0.0000	3.8445	3.7950	3.8643
LA CARB ULSD	West Coast	3.6500	-0.0388	+0.1200	0.0000	3.6888	3.6422	3.7098

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illuminating the markets

Inside RISK MANAGEMENT

BY SENIOR NATIONAL ACCOUNT EXECUTIVE PATRICK CUNNINGHAM, FEDERATED MUTUAL INSURANCE COMPANY

Are You Prepared to Lose a Key Employee?

Employees are your business's most important asset. Every company employs individuals with specialized skills, knowledge, and valuable customer relationships critical to its success — they are the people your business can't do without. What would happen if one of those valuable team members passed away? How would your business be impacted, both financially and culturally?

Should you find yourself faced with losing an essential employee, a key person life coverage policy can help lessen the financial impact to your operations. This type of insurance policy can:

- Provide funds for expenses related to recruiting, hiring, and training the key employee's replacement
- Provide funds to reduce the financial impact of lost customers or business relationships maintained by the key employee
- Provide time and flexibility to make business continuation decisions if the key person is owner of the business

With a key person policy, a business owns, pays the premium for, and is the beneficiary of a permanent life insurance policy on their valuable employee. The death benefit is paid to the business at the time of the employee's death, and it is generally received income-tax free. The cash value of the policy is considered an asset (which may help strengthen your balance sheet) and can be accessed via a withdrawal or loan to meet business expenses during their lifetime.

Don't risk your business's future by not preparing to lose a critical member of your team. Consider incorporating permanent key employee life insurance into your overall risk management strategy. ★

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Inside CONVENTIONS

SIGMA 2023 Spring Conference Recap

SIGMA hosted its 2023 Spring Conference on May 2-4 at the Waldorf Astoria Roosevelt New Orleans Hotel in New Orleans, Louisiana. Networking started even before the official start of the conference as attendees competed on Tuesday morning in the SIGMA Open Scramble sponsored by ETP on the links at TPC Louisiana. Consistently included in GolfWeek's "Best Courses You Can Play." (Golf Digest Top 100 Public Golf Course), the breathtaking scenery at stretches over 250 acres of wetlands along the Mississippi River Delta. Early arrivals that chose not to golf enjoyed time poolside at the Roosevelt rooftop pool, sponsored by iRely.

Tuesday afternoon, the conference kicked off with the Opening General Session featuring a presentation from veteran OPIS oil analyst Tom Kloza on "Cross Winds: The Outlook for US & Global Refining" during the Opening General Session. Tom looked at the North American hot spots and sore spots and detailed why the "coming attractions" for new production capacity represent colossal "head fakes" for supply. Sharing his thoughts on "updrafts, downdrafts, and outright wind shear" that he thinks are store for North American and international fuels' markets in the next 18 months, Tom predicted that the first half of 2023 may see 410,000 b/d of new refining in the United States but cautioned that the year could end with some key refinery closings. Meanwhile, some huge international plants threaten to alter supply and demand dynamics in the North Atlantic, Latin America, and through the Pacific Rim, adding up to very uneven supply for gasoline, diesel, and jet fuel.

On Tuesday evening, attendees had a fabulous time networking and socializing at The House of Blues. Founded by Dan Aykroyd and Isaac Tigrett, the first House of Blues location opened in Cambridge's historic Harvard Square in 1992 and has since expanded into 12 venues across the United States. Now a premier destination for music, art, and food, the House of Blues is known worldwide for its education and celebration in the history of Southern culture, and the artistic contributions made by African Americans in music and art. Attendees enjoyed cocktails and hors d'oeuvres while soaking up the atmosphere and exhibitions before heading out to dinner on their own. ▶

2023 Golf Winners

1ST PLACE WINNERS
Lucas Munds, The Kroger Company
Mariah Munds, The Kroger Company
Matthew Speake, Global Partners LP
Brodie Mccusker, Global Partners LP

1ST PRIZE RAFFLE WINNER
Bill Jenkins, Bayside Petroleum
Ron Fullencheck, Sei Fuel Services, 7-Eleven
John Huettel, Titan Cloud Software
Allen Porter, Tanknology

2ND PRIZE RAFFLE WINNER
Greg Tyler, The Kroger Company
Robert Mustain, Marathon Petroleum Company LP
Jeff Mansfield, Global Partners LP
Daniel Mccarty, Delek Trading And Supply

WOMEN'S CLOSEST TO THE PIN
Angie Johnson, Delek Trading And Supply

WOMEN'S LONGEST DRIVE
Mariah Munds, The Kroger Company

MEN'S CLOSEST TO THE PIN
Dan Head, Brown Brothers Harriman & Co

MEN'S LONGEST DRIVE
Brian Baker, Jd Street

Wednesday morning opened with a Breakfast Education Session presented by Richard Amador, Michael Blommer, and Jake Ingber from Capital One on "EV Consumer Behavior and Transaction Trends." Following the session was the Legislative Issues Briefing, where SIGMA's Government Relations Team brought attendees up to speed on what is, and is not, happening in Washington, D.C., as well as offering their insights and predictions for what the rest of 2023 will bring leading into the 2024 election year. After a Lunch Education Session featuring "A Pump-side Chat: Connecting Convenience in the Store and at the Pump" with Bethany Allee, PDI Technologies, Greg Crow, PDI Technologies, and Patrick De Haan, GasBuddy, A PDI Company, attendees had the opportunity to participate in Breakout Education Sessions throughout the afternoon on timely and relevant topics of interest. The day concluded with the All Industry Reception sponsored by DTN in the Roosevelt's Crescent City Ballroom.

Thursday morning the conference concluded with the Business Meeting and General Session, where attendees were briefed by SIGMA President Dale Boyett and other members of the SIGMA Board of Directors on the strength and health of the association. Following the SIGMA committee reports, attendees enjoyed hearing from Brian Milne, DTN, on "Breaking Down the EPA's Proposed Renewable Fuels Standard "Reset." Brian described the Environmental Protection Agency's recent action to expand volume targets under the federal RFS program through 2025, with a significant proposed change. For the first time, electricity from renewable resources used to charge electric vehicles will be allowed to generate renewable identification numbers (RINs). Brian broke down the proposed rule, considering the effect the expansion of ethanol blending requirements will have on the U.S. gasoline market, and explored the growing impact of EVs in the transportation pool.

The second presentation of the session was from Michael Gregory, BMO, on "Economic Outlook: From Here to Price Stability." Although inflation has fallen from 40-year highs, it's proving to be stubborn on the way down, forcing the Fed's hand. Sharing that the FOMC raised policy rates another 50 basis points, lifting the fed funds target range to 5.00%-to-5.25%, just a bit below the level hit before the Great Recession in 2007, Gregory said despite some early-year economic momentum, the cumulative impact of 500 basis points worth of tightening should be coming home to roost. At least a mild recession seems likely and perhaps necessary to restore price stability, he concluded.

Next on the SIGMA calendar is the Summer Legislative Conference and Day on the Hill July 18-19 in Washington, DC. Schedule and registration information is on the Event page on the SIGMA website, so mark your calendars and plan to attend.

In September, SIGMA Share Groups are back in person in San Antonio, Texas September 12-15. Share Group topics include Mobile Fueling, Tankwagon, and Cardlock, Maintenance and Environmental, Transportation, Credit, Fuel Buying, and IT. These day-and-a-half topic focused sessions are ideal for every member of your team, from the executive level on down, offering peer-to-peer information sharing and tips you can take home and put to immediate use. ★

U.S. Motorists Brace for Tight Supplies, Uneven Prices

BY JARED AINSWORTH AND STEPHANIE CRAWFORD, ARGUS MEDIA

Tight gasoline supply and sharp price movements at the pump have become old hat for many U.S. consumers, and that trend could continue just months ahead of the summer driving season.

Stockpiles of New York Harbor summer-grade gasoline were thin going into spring as the region transitions to cleaner, more expensive lower RVP fuels this spring. Sluggish arbitrage economics — both domestically and from Europe — could further tighten supply.

Gasoline stocks in the central Atlantic region — which includes New York, Delaware, Maryland, New Jersey, and Pennsylvania — fell to a seven-week low at 30.2mn bl during the week ended 17 March, according to the U.S. Energy Information Administration (EIA). Inventories lagged the five-year average by 10pc while even dropping 1pc below year-earlier levels when stocks were just weeks away from tumbling to the lowest since 2017 last April.

Market participants said the tightness is centered on lower-RVP gasoline and that the region is well-supplied with winter-grade fuel. Summer-specification 7.2 RVP regular RBOB at Buckeye pipeline in the New York Harbor was assessed at a 1¢/USG discount to April NYMEX futures on 22 March, while winter-grade 13.5 RVP RBOB was more than 21¢/USG lower at a 22.125¢/USG discount to the NYMEX, according to Argus assessments.

Immediate respite will not likely come from the U.S. Gulf coast, where gasoline stocks fell to a 10-week low at 82mn bl as of 17 March. Prompt 7.2 RVP Buckeye RBOB fetched a narrow 2.875¢/USG to Gulf coast Colonial Pipeline prices on 22 March, down more than 7¢/USG from a 10¢/USG spread on the same day a year prior.

Transatlantic arbitrage from Europe, meanwhile, has been stunted by rising freight rates. Freight averaged $46.31/metric tonne for 37,000t clean vessels between northwest Europe and New York Harbor from 14-22 March, compared with $27.04/t during that same stretch a year earlier.

Gasoline imports into the Atlantic coast ticked up by less than 1pc to 283,000 b/d as of 17 March after falling to a four-month low in the previous week. Meanwhile, Atlantic coast refinery activity was the lowest in two years at 68pc at a time when U.S. gasoline demand was trending higher, reaching a three-week high during the third week of March.

Stocks Tighten Throughout United States

Gasoline supply tightness isn't solely in the U.S. Northeast. Total U.S. gasoline inventories were the lowest in 10 weeks at 229.6mn bl as of 17 March, with stocks shedding more than 5pc since the second week of February. Gulf Coast stocks were the tightest in 10 weeks, while inventories at the U.S. midcontinent were the lowest in a month and down by 12pc from the same week a year earlier.

The price of Gulf Coast Colonial Pipeline RBOB, a gasoline blendstock, rose by 15.9¢/USG to $2.55/USG from 13-22 March, and Chicago RBOB prices increased by 12.48¢/USG to $2.528/USG. Price structure at the U.S. West Coast, however, is often isolated from the rest of the country and the pipelines and infrastructure that connect the U.S. Gulf Coast with markets in the midcontinent and East Coast. But prices for in-state California CARBOB gasoline rose following a drawdown of stocks in mid-March, which fell to a four-month low on 17 March as reduced refiner gasoline output offset import gains.

San Francisco CARBOB prices with April delivery fetched a 12¢/USG premium to May NYMEX RBOB futures on 22 March, up by 10¢/USG from the prior. Further south, Los Angeles CARBOB prices held at flat to the April NYMEX RBOB for March timing, but values climbed by a combined 9.5¢/USG from the prior week.

U.S. retail gasoline prices through the first three months of March were the highest in four months at an average of $3.42/USG, according to the EIA. Still, this was down by 79.6¢/USG from a year earlier when the Russia-Ukraine conflict was in its early stages. ★

Inside FAMILY BUSINESS

PRESENTED BY RONALD C. REECE, PH.D. –
ADAPTED FROM AN ARTICLE BY GLENN R. AYRES

RESILIENCE

Much is being said today about sustainability in general and more specifically about family enterprise sustainability. Many factors contribute to enterprise sustainability but one that can't be ignored is the resilience or lack of resilience in the owner/manager/leader of such organizations. If you are in that position, you know what I'm speaking of. The juggling of family, finances, employees, competition, government regulations, supply chain issues, high interest rates, and so much more. At times you may even ask yourself, "is it worth it?" Most or the time the answer is Yes. You find the resilience to stay the course.

What is Resilience?

Resilience is the process of adapting well in the face of adversity, trauma, tragedy, threats, and significant sources of stress. It means "taking the heat," "standing up to," "bouncing back" from difficult experiences. Resilience is not a trait that people either have or do not have. It involves behaviors, thoughts, and actions that can be learned and developed in anyone over time; some consciously and many unconsciously.

Being resilient isn't about a person not experiencing difficulty or distress. Emotions of frustration, anger, fear, and sadness are common in people who have suffered adversity or trauma in their lives. In fact, the road to resilience is likely to involve considerable emotional distress. As the old saying goes – "what doesn't kill you makes you stronger."

Resilience is ordinary, not extraordinary. People commonly demonstrate resilience and generally adapt well over time to life-changing situations and stressful conditions. I often say, "humans are so vulnerable yet so resilient."

There are cataclysmic events to respond to such as September 11, 2001, terrorist attacks, or the unexpected death of a loved one, and more. Then there are the happenings of daily life as well. And from a business perspective there are also pervasive events such as the economic crash of 2008 or the more recent COVID pandemic. ▶

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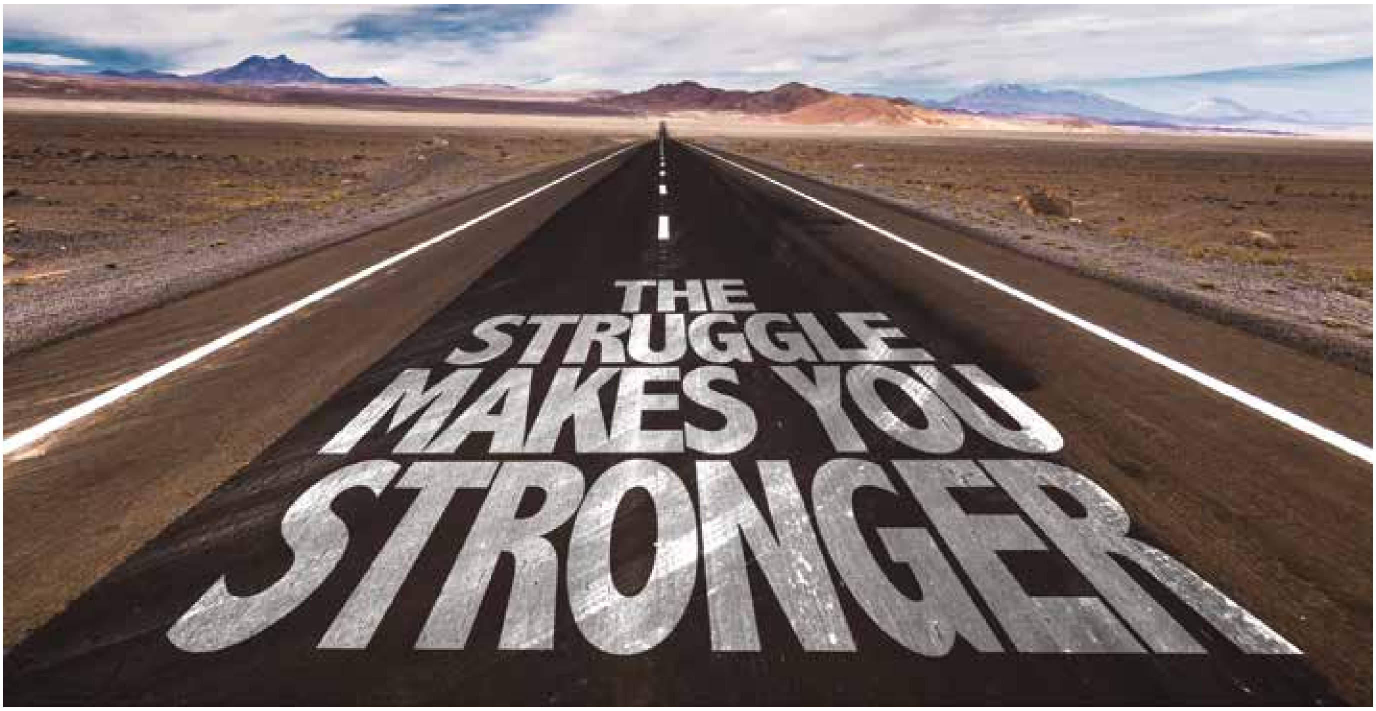

Some Factors in Resilience

Relationships:

A combination of factors contributes to an individual's resilience. A primary factor in resilience is having caring and supportive relationships within and outside the family. Relationships that create love, trust, and offer encouragement with reassurance help bolster a person's resilience.

Also, a spiritual connection or relationship to a high power offers resources for resilience.

Cognitions:

- The capacity to make realistic plans and take steps to carry them out.
- A positive view of yourself and confidence in your strengths and abilities.
- Skills in communication and problem solving.
- The capacity to manage strong feelings and impulses.

Learning From Your Past:

Focusing on past experiences and sources of personal strength can help you learn what resilience strategies work for you. Each of us has a library of experiences to draw from. Consider the following:

- What kinds of events have been most stressful for me?
- How have those events typically affected me?
- Have I found it helpful to think of important people in my life when I am distressed?
- Whom have I reached out to for support in working through a traumatic/stressful experience?
- What have I learned about myself and my interactions with others during difficult times?
- Has it been helpful for me to assist someone else going through a similar experience?
- What obstacles have I been able to overcome, and how?
- What has helped make me feel more hopeful about the future?

Staying Flexible:

Resilience involves maintaining flexibility and balance in your life as you deal with stressful circumstances and traumatic events. This happens in several ways, including:

- Letting yourself experience strong emotions, and realizing when you may need to avoid experiencing them at times in to continue functioning.
- Stepping forward and taking action to deal proactively with situations to meet the demands of daily living and business.
- Stepping back to rest, reenergize and nurture yourself.
- Spending time with loved ones to gain support and encouragement.
- Relying on others as well as yourself.

Many years ago, I did a Chamber of Commerce seminar – "Entrepreneurs the Stuff it Takes and the Stress it Makes." Imbedded in the message were elements of resilience and what it meant. Some recent research on resilience in family enterprise leaders – "the person in the chair"- shows that positive characteristics and strengths of honesty, curiosity, fairness, and kindness along with reliance on core values impact resilience. ▶

In times of adversity, big-picture thinking, long-term commitment, authenticity, and speed of action and along with those supportive relationships were of benefit to a business leader's resilience and therefore sustainability.

Your Journey:
Each person's journey is unique. The family enterprise owner/manager/leader journey is more complex than ever. Take a moment to reflect on the words above. Acknowledge your resilience and give yourself credit. Then go one step further.

Think about more than resilience and ask, **"Am I flourishing?"** Respond to the following statements using the 1 – 7 scale. Rate each item relative to yourself and your life. Higher totals are indicative of greater degrees of flourishing.

7 Strongly agree
6 Agree
5 Slightly agree
4 Mixed or neither agree nor disagree
3 Slightly disagree
2 Disagree
1 Strongly disagree

I lead a purposeful and meaningful life.

My social relationships are supportive and rewarding.

I am engaged and interested in my daily activities.

I actively contribute to the happiness and well-being of others.

I am competent and capable in the activities that are important to me.

I am a good person and live a good life.

I am optimistic about my future.

People respect me.

I sincerely hope you recognize the core elements to your resilience and that you are really flourishing!

You are worth it and what you do in the family enterprise is worth so much to so many. ★

Soon,
Ron

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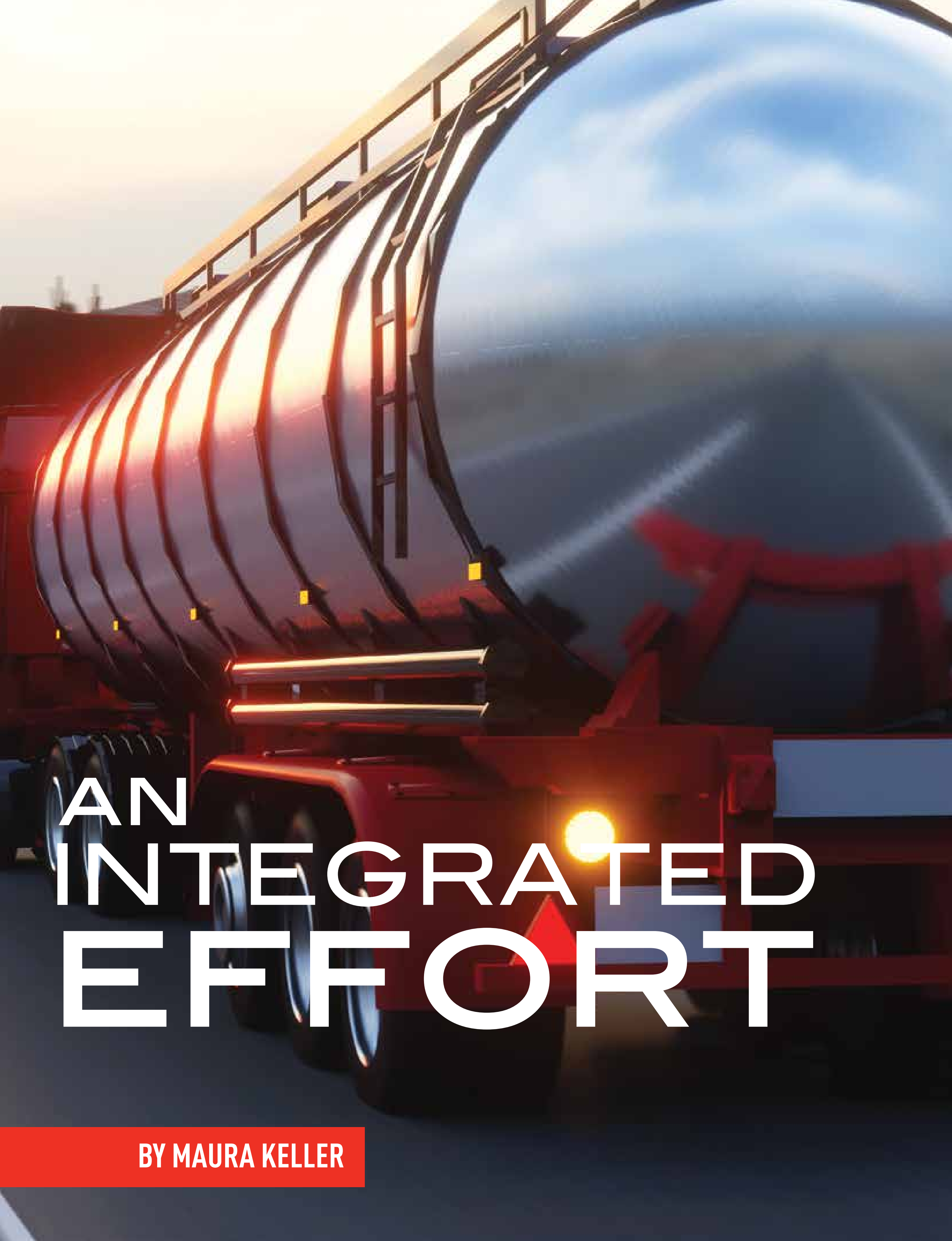


AN INTEGRATED EFFORT

BY MAURA KELLER

Today's successful fuel dispatching systems are focused on customer fulfillment needs, while also minimizing distribution cost and sourcing efforts, and managing inventories. Data systems embedded into today's fuel management and dispatch systems are at the forefront of ensuring a successful end result.

"Technology has changed almost every part of fuel management and dispatch in the last decade, in big and small ways," says Kevin Bretthauer, vice president of sales at FuelCloud. "In general, however, technology has improved fuel management and dispatch by capturing and presenting data that simply wasn't available before. Managers and dispatchers have access to historical trends, real-time transaction information and tank volumes, and forecasts for future fuel use, all of which unlock incredible new possibilities at every stage of buying, holding, selling, and using fuel."

Bretthauer points to the new abundance of data that is driving efficiency because organizations are more confident in their decisions. If today's technology is all about data, then making the most of that technology is a question of using the data that's available to you.

"While there are lots of simple improvements that can be made with the right data, the real trick is being able to make large-scale changes if the data supports them," Bretthauer says. "That process can be daunting, especially if those big changes mean shaking up long-established processes, but retraining your organization to respond to what the data tells you will pay enormous dividends in the long-run."

Bretthauer stresses that thanks to the data-driven technology involved in today's fuel dispatch systems, fuel customers who know how much fuel they have, spend less money buying more fuel than they need 'just to be safe,' while fuel distributors are able to plan more cost-effective deliveries because they can send gallons where they are needed, precisely when they are needed.

Lee Girard, Field Marketing Manager - ATG Platform at Gilbarco agrees. "In the past decade, communications, data collection, and system security tools have provided owners of fueling facilities the ability to provide just in time information that can be used to optimize fuel distribution that has a direct impact on profitability," Girard says.

Indeed, a solid dispatching system should help automate the following:

- Where and when to deliver fuel
- What is the best source of supply
- Who to have haul it

According to Isaiah Newton, associate product manager, Fill-Rite Company, technology has simplified the process for gathering data and making quick, on-the-go adjustments in fuel management and distribution. Decision makers now have seamless access to more accurate data from anywhere, allowing them to make quicker, more informed decisions about their businesses without having to physically be onsite or to manually collect data from multiple sites in different geographic locations.

"Fuel is typically the number one or two expense for companies with fleets of vehicles. It is also valuable, and therefore highly susceptible to theft," Newton says. "So, companies can make the most of new technology in fuel management today by using it not just to the gather data and information, but also to enhance control and security."

And for fuel wholesalers, having the dispatch system coupled with an accounts receivable system allows for immediate credit checks and avoids the delivery of loads to those customers with little or no remaining credit. When the dispatch system is in sync with the billing system, updating delivery information, such as gross and net gallons, diversions, accessorial freight charges, etc., is far easier and allows for faster turnaround into the billing cycle.

Using the data that emerges from today's systems, Newton says companies can identify trends over time and make more proactive decisions when it comes to their fuel needs/usage. For example, Fill-Rite's system allows operators to see, in-real time, patterns of usage by person, place, and vehicle enabling the industry to make informed decisions such as dispatches with simple but articulate charts, graphs, and reports.

Today's Trends in Fuel Management & Dispatch

The range of companies that benefit from having bulk fuel delivered, and those that offer fuel dispatch and management systems, is wide. The most common being small- to medium-sized businesses in the petroleum, agricultural, construction, mining, logging, and transportation industries.

"With slippage rates as high as they are, more and more businesses that utilize bulk fuel on their sites are looking for better ways to control their fuel," Newton says.

Newton stresses that every company that utilizes an on-site fueling system needs to consider fuel management because slippage (intentional or unintentional theft from the original purpose) can be as high as 14% which equates to an "invisible" loss to the company.

"Fuel management is not about control but rather trust," Newton says. "With labor being an important part of any operation, owners need to ensure that fuel distribution is done both correctly and fairly to fulfill the necessary duties of the equipment being filled." ▶

And Girard at Gilbarco says utilizing the wide variety of communication and fuel management tools currently used in the industry will improve overall efficiency and profitability at c-store and fueling locations.

Best Practices with Fuel Management & Dispatching

Best practices for fuel management and dispatch will depend a lot on the scale of a customer and wholesalers' operations: what works for one or two tanks might not apply to managing dozens of fuel sites, and vice versa. As it relates to technology, then, Bretthauer says a good starting point for both fuel management and dispatch is having a clear understanding of what functionality you need from the technology you're planning to invest in.

"For fuel management, what level of inventory monitoring and control do you need? What reports are you running on a regular basis? Do you have existing systems that need to be accommodated with whatever new technology you're introducing?" Bretthauer says. "Answering these questions before you spend money and time integrating a new tool can help you avoid problems down the line trying to deal with a tool that doesn't meet your needs – or does more than you need it to."

Also, Newton notes that there is a tremendous amount of customization available, so it can be easy to get slowed down by considering all the options available in today's fuel dispatch systems.

"Having a clear understanding of what you hope to accomplish with your fuel management system and then utilizing the resources provided by the supplier up front makes the incorporation into your business a lot smoother," Newton says.

One common mistake to avoid that can affect the efficiency of fuel dispatching programs includes not fully committing to a new system or technology.

"Instead of cutting out steps to the process, companies maintain old manual steps and then feel like the technology just adds to the complexity of the process," Newton says. And remember that efficient dispatch is all about efficient delivery. Bretthauer points out that the mistake that fuel distributors make is two-fold: first, not optimizing their delivery routes to the fullest extent, and second, not appreciating how impactful optimized delivery routes can be.

"One of the worst things that can happen is for a truck to have to return to a site in an area they visited a few hours before simply because they didn't know there was an additional nearby delivery to make," Bretthauer says. "The cost of that one additional trip may not seem that big, but they add up quickly."

For fuel marketers and fuel management systems (FMS), Bretthauer thinks there's still room for growth in how marketers understand the role that FMS can play in their relationships with their customers.

"Fuel marketers that can provide any services outside of just delivering fuel are more likely to build stickier relationships with their customers that aren't solely dependent on price per gallon," Bretthauer says. "Fuel management systems are a great value-added service because jobbers also benefit from customers who know more precisely how much fuel they have and how much fuel they need. More and more jobbers are understanding that customers want fuel distribution partners that can provide more holistic solutions to their fuel problems, and are seizing that opportunity."

A Pricing Perspective

Ethan Walker, senior solution engineer, enterprise productivity at PDI Technologies, says the fuel pricing structure also plays a role in fuel management and dispatching systems.

"More and more retailers are automating fuel price changes directly to their site level POS systems. While this capability has been around for some time, it is becoming easier to integrate to POS systems with advancements in technology," Walker says. "Overall, this enables retailers to react quicker to the competition and/or to move markets with a few clicks of the mouse."

Just like the fuel dispatch systems themselves, automation and efficiency are available to users of fuel pricing solutions. "It is hard work to maximize automation capabilities, but it is well worth it in the long run," Walker says. "Companies are seeking to maximize automation and overall efficiency, in addition to taking advantage of the data that is available that can drive actionable results."

Depending on the perspective of automation within each organization as it pertains to fuel dispatch systems and pricing, Walker says the ROI that can be achieved primarily from maximizing efficiency and automation, in addition to having access to machine learning technology, can help maximize fuel volume and margins.

It's important to note that sometimes within the fuel distribution pricing space, fuel pricing teams can end up as fuel pricing "administrators" vs. fuel pricing "analysts." Taking advantage of fuel pricing systems that can maximize efficiency is sometimes overlooked.

That's why Walker suggests turning "administrators" into "analysts" enables your team to look for areas to improve volume/margin, vs. spending time on the tasks of manual work in the day-to-day of getting your prices and product out to the field.

"Leveraging data will continue to drive insights and innovation in the world of fuel pricing," Walker says. "There is more and more granular data that will ultimately be able to be used to be smarter as it relates to pricing."

Planning Ahead

Bretthauer thinks all of the disparate parts of fuel dispatching and management are going to grow closer together in the very near future. He says the technology that's coming to the fuel industry is increasingly being designed to integrate, so data from one system can move seamlessly into every other tool that an organization is using.

"Everyone now expects quality data to come from their systems. Being able to move that data from one system to the other in order to create a holistic picture of fuel and solve broad problems is the new standard," Bretthauer says.

In addition, Girard says the Gilbarco team expects the future use of Application Programming Interface (API) integration with service-related dispatch systems will improve the accuracy and efficiency of those processes, which will help improve overall profit margins.

"As software intermediaries, APIs can enable different systems to share data, so by using GPS tracking data, fleet managers can create a better, more holistic overview of their entire fleet," Girard says.

Looking ahead, Bretthauer says every company that runs a commercial fleet would love for International Fuel Tax Agreement (IFTA) reporting to be easier, but automating that reporting requires fuel management systems, dispatch, and vehicle telematics to all share their data freely.

"We're not quite at the point where that kind of data sharing is possible, but we're not that far away," Bretthauer says. "When fleet managers can use their technology to get a full data picture, we're going to see the next big iteration in what fuel management can be." ★

RFS and the Push for Greater Ethanol Content in Gasoline

BY BRIAN L. MILNE, DTN EDITOR, ANALYST

Despite falling short of its statutory goals, the Renewable Fuel Standard (RFS) remains the most significant federal program supporting the biofuel industry and has had a consequential impact on gasoline marketers. Established by the Energy Policy Act of 2005 and expanded in 2007 by the Energy Independence and Security Act, the RFS states the annual targets for the volume of renewable fuel that must be consumed in lieu of petroleum-based transportation fuel, known as a Renewable Volume Obligation.

As administrator of the RFS, the Environmental Protection Agency has the authority to adjust the RVO, which is proposed as a volume of renewable fuel and as a percentage of how much petroleum-based fuel would be offset. Traditional corn-based ethanol, simply referred to as a renewable fuel by the RFS program, accounts for most of the renewable fuel consumed as a road transportation fuel in the United States. The other "nested" categories include cellulosic biofuel, biomass-based diesel, and advanced biofuel.

Owing to insufficient production, EPA has had to frequently issue waivers for the cellulosic biofuel nested category. However, EPA's 2019 final rule pegged volume requirements below statute for total renewable fuel, triggering the agency's reset authority under the RFS. Once triggered, EPA can modify statutory volumes based upon six factors, while doing so in coordination with the Secretaries of Energy and Agriculture. Those six factors are: (1) environmental impact; (2) energy security; (3) annual production rate of renewable fuels; (4) impact on infrastructure, including the sufficiency of infrastructure to deliver and use renewable fuel; (5) cost to consumers; and (6) other factors such as job creation, price and supply of agricultural commodities, rural development, and food prices.

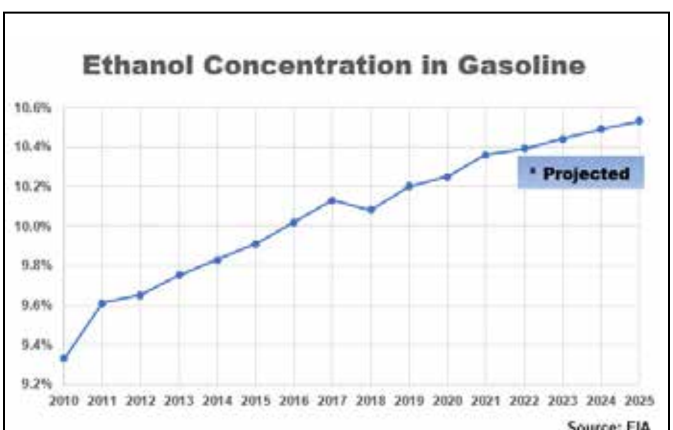
2023 is the first year EISA does not specify volume requirements for the RFS. Instead, EPA proposed a Set Rule establishing the annual RVO. On December 1, 2022, EPA proposed volume requirements for 2023 through 2025, and a public comment period on the proposal ended on February 10. The final rule should be announced no later than June 14 based on the terms of a consent agreement between the ethanol trade group Growth Energy and the EPA. EPA's checkered history in meeting deadlines under the RFS program prompted Growth Energy to seek the consent decree with the U.S. District Court for the District of Columbia. ▶

EPA Proposed RFS Volume Targets (billion RINs)	2023	2024	2025
Cellulosic biofuel	0.72	1.42	2.13
Biomass-based diesel	2.82	2.89	2.95
Advanced biofuel	5.82	6.62	7.43
Renewable fuel	20.82	21.87	22.68
Supplemental standard	0.25	n/a	n/a

One RIN is equivalent to one ethanol-equivalent gallon of renewable fuel

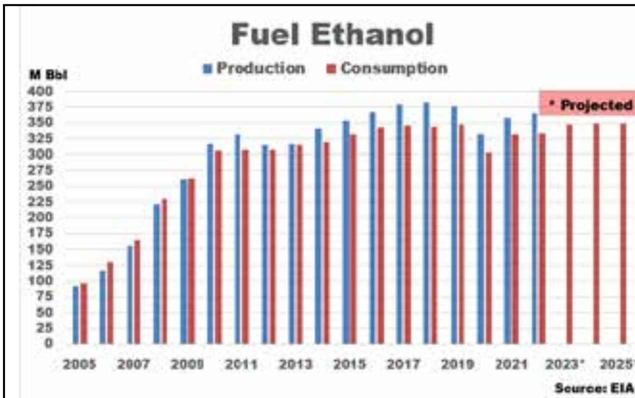
In a review of expectations for increased ethanol consumption for this year through 2025, the Energy Information Administration offers a conservative projection, pointing to limitations in how fast retailers would invest, if at all, in their stations to allow for higher blends. Historically, pushing above the 10% ethanol blend rate in gasoline has been stymied by fuel volatility standards that are the most restrictive during the summer months, when increased ambient temperatures accelerate the release of volatile organic compounds into the atmosphere. Ethanol adds to fuel volatility. While E10 has a one pound per square inch waiver to offset this volatility (measured as a Reid vapor pressure rating), E15 currently does not, precluding conventional gasoline sales above E10 during the summer season from June 1 through September 15.

The inability for most retail outlets to offer E15 during the summer season has restricted their expansion. Ethanol's concentration in the U.S. gasoline pool has hovered above 10% since 2016, but just barely, estimated at 10.39% in 2022. There are more E85 stations than E15 stations, with consumers of E85 requiring a flex-fuel vehicle (FFV) designed to handle fuel with a greater concentration of ethanol than gasoline. For 2021, EPA determined there were 2,458 E15 stations and 4,063 E85 stations, representing less than 5% of the more than 145,000 gas stations in the United States, according to NACS. In a draft regulatory impact analysis, EPA projects the number of E15 stations to top E85 stations at 5,146 to 4,866 in 2025.



The number of light-duty FFVs, which totaled about 28 million in 2020 (roughly 10% of all spark-ignition vehicles) is expected to decline with fewer models available. The total number of FFV model offerings has declined since 2014, with the annual increase in light-duty FFV registrations falling from 10% in 2017 to 1.6% in 2020.

In determining estimated costs of the RFS, EPA projects slow growth in ethanol consumption from 2023 through 2025, projecting a year-on-year increase for 2023 at 14.5 million barrels or 4.35% to 347.4 million bbl which trails off to annual growth of 700,000 bbl or 0.2% in 2025 for consumption of 349.3 million bbl. For greater ethanol concentration in the gasoline pool, there needs to be investment at retail stations that make those outlets compatible to sell E15. As EPA notes in its analysis, stations with the capability to sell higher ethanol blends already have the infrastructure in place. Investment costs by retailers to sell higher ethanol blends could vary from a few thousand dollars to more than $100,000 per station.



In their research and in consulting the EPA's Office of Underground Storage Tanks, the agency estimates a typical retail station upgrade to sell E15 would cost $80,000 in assuming four new dispensers, with additional investment of $15,000 for additional equipment changes, such as pipes, pumps, and the hardware associated with underground storage tanks.

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additional equipment changes, such as pipes, pumps, and the hardware associated with underground storage tanks.

Liability concerns also have the potential to slow the expansion of higher-blend outlets, with concerns centering over the use of retail storage and dispensing equipment. Even if compatible, the equipment is required to be approved to store or dispense E15. A retailer might incur liability if a consumer refuels a vehicle in which the engine is not designed or approved for the higher blend.

Under EPA regulations, retailers storing gasoline with an ethanol concentration greater than 10% in underground tanks must demonstrate compatibility of their tanks by a certification or listing that the equipment is nationally recognized by an independent testing laboratory or have written approval by the equipment or component manufacturer.

"The use of any equipment to offer E15 that does not satisfy these requirements, even if that equipment is technically compatible with E15, would pose potential liability for the retailer," said EPA.

The agency sees an opportunity for retailers to install new systems with the compatibility to store E15 when their existing storage tank systems are at the end of their warranty or need a repair or upgrade.

"In sum, the relatively small, albeit growing, number of stations offering E15 represents a significant constraint on the expansion of E15 through 2025," said EPA.

On March 14, a bipartisan group of U.S. Senators and members of the House of Representatives reintroduced the Consumer and Fuel Retailer Choice Act of 2023 that amends the Clean Air Act to allow the 1psi RVP waiver for E15 by inserting "or more" after "ten percent."

"Originally introduced late in the last Congressional session, the Consumer and Fuel Retailer Choice Act would harmonize fuel volatility regulations for ethanol-blended fuels across the country, allowing for the year-round sale of E15 in conventional gasoline markets," said the Renewable Fuel Association in welcoming the legislation.

RFA notes too, that if passed, the legislation would supersede an effort by Midwest state governors to make regulatory changes to assure the availability of E15 sales year-round in their states. On March 1, EPA announced a proposal granting eight Midwestern states their petitions to reject the 1psi RVP vapor pressure waiver for E10, which would require oil refineries to adjust their baseline gasoline to accommodate ethanol without a waiver. Those states include Illinois, Iowa, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin.

While EPA called the effort "a permanent solution to provide year-round E15 in those states," AFPM slammed the measure, indicating it would create a "new regional boutique fuel with lower RVP."

"A boutique fuel for only these midwestern states is going to be significantly more complicated and expensive to produce and will require major adjustments to the refineries and fuel supply chain infrastructure serving the Midwest," said AFPM, who hired consultants at Baker and O'Brien to study the issue. They found that a new gasoline blend for these eight states would come with annual costs between $550 and $800 million, while a supply disruption could push annual costs to $1.1 billion.

Partly due to AFPM's effort, EPA delayed the effective date of its Midwest proposal until April 28, 2024. ★

Brian L. Milne is a 27-year veteran of the energy industry, serving in multiple roles at DTN including Editor and Analyst. Milne has delivered dozens of presentations on a wide range of topics discussing energy markets, and has been quoted widely in the media, including the Wall Street Journal, Barron's, USA Today, Newsweek, CNN, National Public Radio, and major regional news outlets. He has authored numerous articles for international magazines, exploring market dynamics and providing forward-thinking commentary and analysis. Milne graduated Monmouth University in New Jersey with a B.A. in History and an Interdisciplinary in Political Science (Magna Cum Laude).

Biofuels: An Immediate Solution for the Climate Crisis

BY CLEAN FUELS ALLIANCE

In the race to lower carbon emissions and combat climate change, one resource that is nearly depleted is time. Carbon added to the atmosphere today compounds the environmental challenges of tomorrow, and because of technological and infrastructure restraints, many industries that rely on heavy-duty (and often heavy-polluting) equipment are years or even decades away from electrification.

"To meet the ambitious carbon reduction goals that Americans are aiming for, we have to use all of the tools in our toolbox," says Clean Fuels Alliance America CEO Donnell Rehagen. "Both clean fuels and electric vehicles have important roles to play in staving off the detrimental effects of climate change and make progress toward those goals."

For many companies and municipalities, switching to biofuels has proven to be a simple and effective way to meet their carbon reduction goals.

"Carbon emissions are cumulative, and they persist in the atmosphere. Anytime we can reduce more carbon now, it has less opportunity to persist in our environment," says Scott Fenwick, technical director for Clean Fuels Alliance America. "[Biofuels] have the ability to immediately impact carbon emissions today, versus waiting five or ten years for electric vehicles to become viable and affordable, and will do more in the long term to reduce these emissions."

Electric vehicles have become more attainable for light-duty passenger vehicles, and this success has many people dreaming of an all-electric future. However, for some applications, significant technology development is still needed.

"You have folks who really want to leapfrog technology and go straight from fossil fuel equipment to electric equipment, but the technology to go all electric is not there yet," says Veronica Bradley, director of environmental science at Clean Fuels Alliance America.

She remarked that there are many uses for clean fuels in equipment, like commercial aircraft, that don't have an electric option today. For example, she said that with today's technology, the battery for a 737 would take up the whole aircraft, leaving no room for passengers or cargo. Sustainable aviation fuel, which is now coming to the market, lowers emissions by changing what's in the tank, instead of changing the entire airplane. ▶

SIGMA

UPCOMING EVENTS!

2023

JULY

July 18–19
SIGMA Summer Legislative Conference/
Day on the Hill
Hyatt Regency Washington Capitol Hill
Washington, DC

SEPTEMBER

September 12–13
SIGMA Share Groups – San Antonio, TX
- Mobile Fueling, Tankwagon, and Cardlock Share Group
- Maintenance and Environmental Share Group
- Transportation Share Group

September 14–15
SIGMA Share Groups – San Antonio, TX
- Credit Share Group
- Fuel Buying Share Group
- IT Share Group

NOVEMBER

November 1–3 [Note New Dates and Location!]
SIGMA Annual Conference
JW Marriott Grande Lakes
Orlando, FL

2024

FEBRUARY

February 5–7
SIGMA Executive Leadership Conference
Sun Valley Resort
Sun Valley, ID

MAY

May 6–8
SIGMA Spring Conference
Omni Barton Creek Resort and Spa
Austin, TX

NOVEMBER

November 12–14
SIGMA Annual Conference
Westin Copley Place

Moreover, large transport vehicles such as semi-trucks travel long distances hauling heavy loads on rigid deadlines in areas without reliable access to charging infrastructure.

"There are still a lot of cases where electrification is not viable yet," Fenwick says. "Those are the sweet spots for biodiesel and renewable diesel to be able to offer a low-carbon option for those uses and markets."

And the OEMs are responding. Jennifer Weaver, original equipment manufacturer (OEM) market development manager for Clean Fuels Alliance America, states that nearly all of them already support B20, biodiesel blends as well as renewable diesel, and they are working in tandem with Clean Fuels to drive innovation.

"We're seeing OEMs have a significant interest in higher biodiesel blends, on the order of B30, B40, B50, all the way up to B100," Weaver says. "These companies are getting pressure from their customers to do more to lower their carbon footprint and to meet environmental, social, and governance (ESG) goals."

Biodiesel has evolved over the last several decades, and a growing number of companies and municipalities are using it to meet their carbon goals. With assistance from the Clean Fuels team and a push from new federal regulations, OEMs are developing cleaner engines that support higher biodiesel blends and emit less carbon.

"We are in the process of working with all of those OEMs as they are developing their strategies of how they're going to meet that new emissions level to make sure that biodiesel is included as part of the equation," Weaver says. "They are increasingly acknowledging that using an already low-carbon fuel in their engines is going to make it even easier for them to get there. We work with them far in advance of their production time to make sure that's all contemplated, tested and thoroughly vetted by the time those new models hit the production line."

This symbiotic relationship between Clean Fuels and the OEMs has led to a premium product that has less impact on the environment.

"We're really proud of what the industry has done," says Steve Howell, senior technical advisor for Clean Fuels and an early champion for biodiesel. "We're selling over 3 billion gallons today, and we wouldn't be selling that amount of fuel if the standards weren't working."

Howell says diesel engines are cleaner than ever before, and this industry will continue to evolve.

"One of the key things that Clean Fuels Alliance America is doing is making sure that we're doing that research for the future, and I think that's a competitive advantage for biodiesel and the biodiesel industry," Howell says. "We used to think of diesel technology as 'old, dirty diesels', but now they are clean."

It's not just OEMs supporting clean fuels—municipalities are too. Weaver noted that cities were some of the earliest adopters and strongest supporters. She says one of the most notable adopters is New York City, the largest city in the United States.

"New York City uses biodiesel blends in over 11,000 diesel municipal fleet vehicles," Weaver says. "Everything from sanitation trucks and police vehicles to parks department equipment, light towers, and generators. They even use Bioheat for the heating oil that powers their buildings."

Bioheat fuel is a clean, renewable, and cost-effective alternative to liquid heating fuels. Converting a home's heating system to electric heating can cost up to $20,000, which is cost prohibitive for many, and the electric systems can place a heavy burden on electric grids. Bioheat fuel, just like biodiesel and renewable diesel, offers an immediate solution to reduce greenhouse gas emissions for those that rely on liquid fuels.

Carbon buildup in our atmosphere is truly a global problem and meaningful reduction will require all of the tools in our toolkit, including electrification and the continued development of new green technologies. Clean fuels—including biodiesel, renewable diesel, sustainable aviation fuel, and Bioheat—can slow the accumulation of carbon in our atmosphere and push back the detrimental effects of climate change today. Time may not be a renewable resource, but renewable fuels give companies and municipalities an option to cut the emissions of some of their heaviest polluting vehicles and equipment to make an immediate impact in their carbon footprints. ★

This article was funded by the United Soybean Board and state checkoff organizations.

What An APP Can Do

BY MAURA KELLER

Today, we live in a rapidly changing digital environment. As a result, there are a plethora of technical products and ideas to make the retail environment and the consumer experience more engaging. With the extensive growth in mobile devices, retail apps are rapidly being adopted by businesses and consumers alike. If orchestrated effectively, retail apps can provide consumers with a variety of tools for product information, in-store shopping discounts, loyalty programming and more – all of which provide better consumer engagement throughout the retail purchasing experience.

Founder and CEO of International Retail Group, Linda Johansen-James, says as technology advances there has been a big shift among consumers to using mobile apps because they provide convenience, and typically enable consumers to accumulate points, track orders, and save payment information for a quick checkout.

"In its annual State of Mobile 2023 Report, Data.ai (formerly App Annie) discovered that demand for mobile apps accelerated last year while consumer spending shrank," says Johansen-James. "Consumers are drawn to the sheer convenience of being able to shop from their phones, plus they also feel as though they are getting better deals because a lot of apps also offer promo codes that can be used."

The biggest benefit to retailers offering apps for their stores is that the apps streamline an individually tailored consumer experience by tracking the consumer's data and providing suggestions. As Johansen-James explains, mobile apps also help foster customer loyalty, as many apps allow users to accumulate points towards future purchases.

According to Carlos Castelán, managing director at The Navio Group, apps continue to be popularly used by consumers across retailers of all types. Apps often see higher conversion rates than desktop website or mobile-optimized sites so they are an important tool to retailers.

"However, because of the extra initial steps for consumers – searching and downloading them on the app store – they tend to be used in categories that are frequently purchased by consumers, such as, grocery and, in some cases, fuel or convenience stores," Castelán says. "Retail apps that are most popular with consumer tend to be ones where they make frequent purchases, or part of a loyalty program, or if the app is used for payment."

As Craig Rowley, senior client partner and retail expert at Korn Ferry, further explains, apps have been developed typically as part of a retailer's loyalty program – so are widely available but vary greatly in use depending on how mature the company's loyalty program is.

"Most prevalent are client-developed apps that allow the retailer to provide direct connection in a mobile environment," Rowley says. "Most have the loyalty program connected first through social media or email – with apps still being developed."

"Retailers are using apps for many things. For customer facing applications, we have eCommerce, Scan & Go, Scan & Ship, Save the Sale, price scanning, loyalty, coupons, and inventory checks," says Matt Hudson, CEO, BILDIT.co. "There are other novelty uses as well such as marketing and promotions."

Hudson points to companies like Exxon Mobile, which has the iOS App Clips available to pay for gas.

"Loyalty plays a big part for convenience stores. Exxon also has a full mobile app for rewards and Citgo uses an app for payment. BP also has a mobile app for payment and QT has mobile ordering with curbside pickup for food, coupons, and a store finder," Hudson says. "Sheetz has order online, pay, and rewards. The Exxon Rewards app has over 122k reviews, making it the largest out of the top gas stations. BP has 65k over 4.7 star reviews, QT has 27k, Sheetz oddly has 1.9k, Pilot Flying J has 29k, and Citgo Pay only has 169k."

The biggest advantages of retail apps are real-time connections with the customer, the ability to track purchasing behavior in the store and drive sales with real time deals. "They are also a good way to maintain contact with best customers," Rowley says.

In addition, Castelán says retailers that offer apps to their customers have a much easier time reaching customers that have the app downloaded to send more relevant promotions as well as faster checkout, which is essential for convenience stores.

What Consumers Want

Coupons are a large driver for customers to use retail mobile apps. Exclusive content is another.

"For instance, Chipotle still offers the quesadilla only in the app. And many apps have exclusive promotions," Hudson says.
Rowley points to a couple of additional things that consumers are seeking in today's apps. First, is information on products and the ability to find items in the store and second is the linkage to loyalty programs to get discounts, awards, points, or deals for purchases. Less important is suggestive selling. ▶

Another primary reason that customers download an app is to save time. Apps that have been implemented well do not require a user to login more than once.

"It provides a much faster experience, and it provides the ability to quickly check an account or order," Hudson says. "Mobile apps have the advantage of being downloaded from the store, meaning that much of the structure of the mobile is already downloaded making it perform better in many cases."

Some interesting statistics from a recent Shopify report regarding mobile app usage that Hudson points to include:

- 51% of Americans downloaded at least one shopping app to their smartphone at the peak of the COVID-19 pandemic.
- 21% of device users access retail shopping apps multiple times a day, and 35% access them multiple times a week.
- 49% of Americans have used a shopping app to compare price

"Loyalty is a huge driver for retailers, and convenience stores are a great example of a place where mobile app opportunities exist. ExxonMobil Rewards has implemented many features like App Clips at the pump which make it easier to get rewards and pay for gas," Hudson says. "These kind of high-utility features are what drive customers to visit Exxon. Customers are willing to do a lot to save the frustration of inputting loyalty card numbers or issues with getting or tracking their points."

Tackling the Challenges

Costs of app development and implementation are a barrier to entry for many retailers. Because mobile app engineering is more expensive and requires iOS and Android as well as specific expertise, it can be a challenge. "This is why we created BILDIT, we wanted to give retailers a platform to make it easy to build mobile apps, just like it's easy to build a web site," Hudson says.

Often retailers also will struggle with the rules that Apple and Google have set out. They also struggle to implement Google Pay and Apple Pay as they require many downstream systems to support the unique technology of both.

"Implementing loyalty can actually be relatively straightforward for tracking points, but for great implementations (like Starbucks) it requires a very sophisticated finance mechanism as well as technology team to support scanning QR codes in store, storing points as a discount, and ordering in store," Hudson says.

Rowley says the technology itself can be challenging, particularly, making it work with store systems and loyalty programs. Also teaching customers to use the app, including using it when they are in the store, can be challenging.

"Another big challenge for many retailers incorporating apps is understanding whether they have the scale – and the app can enhance the current customer experience – to justify tech investments and ongoing enhancements," Castelán says.

An Evolution of Sorts

Laetitia Berthier, head of customer success at SymphonyAI Retail, a global enterprise AI company for the retail industry, says technology and AI have become essential tools for retailers to build better engagement with customers. But retailers are still far from leveraging them at their full potential, especially in their customer apps and on their websites and online stores.

So what are retailers generally doing well in the area of retail apps? Berthier points to personalization: By using customer data and AI, retailers are able to provide personalized promotions and discounts to save money on the items that matter most to each individual shopper.

"Retailers also increasingly deliver personalized product recommendations to help shoppers discover new products, and smart lists to make it easier for customers to purchase the items they need," Berthier says. "This personalization helps to make customers feel valued and appreciated, which leads to increased engagement and loyalty."

One area where retailers could do a better job is in sharing the benefits of the loyalty program for the customer. As Berthier explains, loyalty programs are often integrated within the app, but very few allow customers to easily track their rewards. Having an overall view of the benefits of the program and rewards used so far helps to further incentivize loyalty.

Retailers also could better use gamification to engage customers through their apps or online platforms, especially the younger generations who love it," Berthier says. "For example, retailers can offer rewards or incentives for completing certain actions, such as buying a product multiple times, leaving a product review, etc."

Also retailers could improve upon optimizing online assortment by analyzing customer data to determine which products are most important to put on the online shopping app vs. in-store. "Retailers can also use this information to curate personalized assortments for each customer segment, which can increase customer engagement and loyalty," Berthier says.

And while many retailers offer personalized promotions and discounts, Berthier suggests that they could do a better job of offering personalized pricing – for example, offering different

prices for products based on a customer's shopping history or preferences. As she points out, the big difference with personalized promotions is the duration of this benefit for the customer, which will help to create a very strong value perception and long-term loyalty – an all-the-more powerful tool in this period of high inflation.

"While many retailers have made significant strides in personalizing the customer experience on their app and website, there is still room for improvement," Berthier says. "They can continue to provide a seamless and personalized shopping experience for their customers, improving loyalty and sales in the process. To accelerate this transformation, they need not only the right technology, but also the right change management support to stay ahead of the game."

In addition to the above, the presence of App Clips have further helped the retail apps environment significantly grow. When Hudson thinks of the Amazon Pilot store where users can scan QR codes and have products directly shipped home in any size, color, style – that is where App Clips and full mobile apps excel. "As retailers struggle with keeping inventory level at stores, continue to see foot traffic decline, and as customers get more comfortable with the idea of browsing in the store, buying online, and shipping to home, this could be something that we see as imperative for companies to survive," Hudson says. "Customers want to be able to buy any size, color, style without concern for inventory. They want it to be easy to pay with any payment they want, and they want it shipped fast. However, the problems achieving those things are physical problems like supply chain, whereas the App Clip or mobile app technology is relatively simple to solve compared to those problems."

"Apps are increasingly a part of life in retail," Rowley says. "As the technology evolves and becomes more user friendly, the more impactful they will be. We are in the infancy of apps today – but they are moving fast."

Castelán believes apps will continue to play an important role for retailers given the ability to provide consumers with timely and targeted communication.

Gasoline marketers and c-store owners should continue to monitor the space," Castelán says. "This is particularly important as contactless payments continue to gain hold as a way to provide consumers a convenient way to get in and out of stores without having to wait at a checkout line."

Johansen-James says it's safe to say that the use of mobile apps in retail is not going anywhere and will only continue to become more integrated with the in-store experience in the future.

"Gasoline marketers and convenience store owners should watch for poorly designed apps, as they will only hurt consumer trust in the brand since mobile apps are intended to make for an easy and seamless shopping experience," Johansen-James says. "Overall, gas stations and convenience stores also need to watch out for any security concerns by ensuring their mobile app is secure, reliable, and user-friendly and is in compliance with privacy laws." ★

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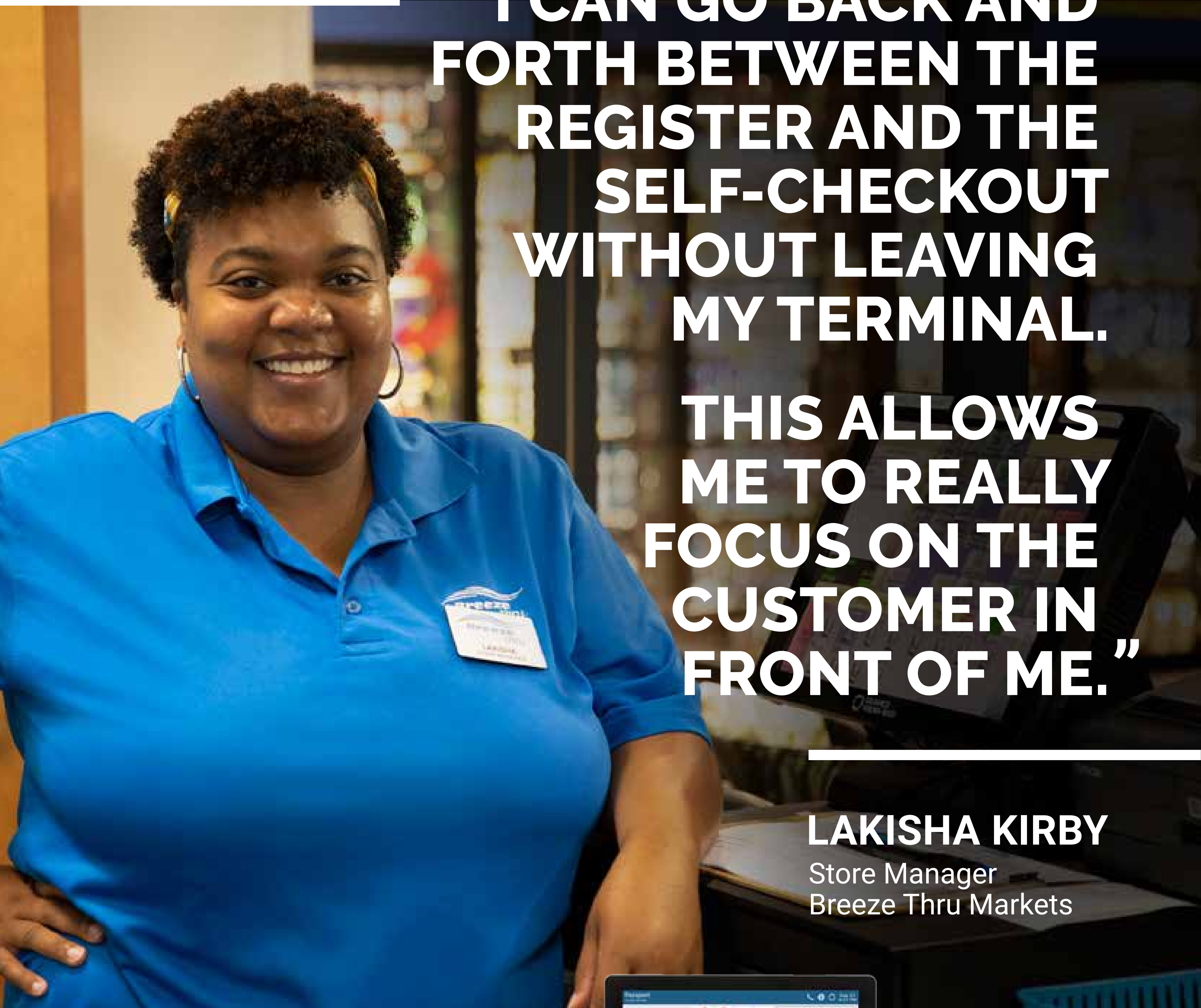


“I CAN GO BACK AND FORTH BETWEEN THE REGISTER AND THE SELF-CHECKOUT WITHOUT LEAVING MY TERMINAL.

THIS ALLOWS ME TO REALLY FOCUS ON THE CUSTOMER IN FRONT OF ME.”

LAKISHA KIRBY
Store Manager
Breeze Thru Markets

The Passport Express Lane self-checkout adds a definite “wow” factor. With self-checkout, customers have the option to side-step the line and be on their way. That can be very helpful if lottery tickets are a popular item with your c-store clientele. Self-checkout improves the customer experience and lets your team members work more efficiently while putting the “convenience” back in “c-store”.

To hear more from Lakisha, and see the full suite of Passport POS products in action, visit info.gilbarco.com/lakisha

6 Takeaways from WPMAEXPO 2023

BY GRAVITATE

Recently in Las Vegas, Nevada, the Gravitate team attended the WPMAEXPO 2023, an event that brings together petroleum marketers, carriers, convenience store owners, and their vendors to network, share knowledge, and strategize on how to improve their businesses.

From our three days at WPMAEXPO, here are our most important observations on the main concerns and priorities of marketers, carriers, and c-store owners.

1. Driver shortages are finally subsiding.
Over the last few years in this industry, much focus has been on driver shortages and their impact on the supply chain.

There's good news—the driver pool is expanding at last! This is most likely owed to:

- Dramatic increases in driver pay
- A widespread shift toward hourly pay, which has helped to attract more drivers

The payment model for trucking should reflect the time and effort drivers put in. Every minute spent loading, unloading, safety checks, and driving deserves compensation. However, there is a debate on the right compensation model as hourly pay is simple to administer and largely appreciated by drivers, but it doesn't create an incentive to be efficient.

By implementing a more comprehensive payment structure, both parties win. Drivers are fairly compensated for their time and companies better retain high-quality, valued drivers.

However, it's worth noting that driver shortages are asymmetric with respect to geographies. In highly competitive markets, such as Houston, Denver, or Nashville, drivers have many employment alternatives. But in more stable markets, drivers are easier to recruit and retain.

2. Supply is still a challenge in many markets.
Many refinery-supplied markets are short on product with high prices for spot product. As a major example, the six-week, cold-weather shutdown at the Suncor refinery near Denver, which accounts for about 40% of the gasoline supply in Colorado, has resulted in a very tight market in the region, from Colorado up to Idaho and Montana. ▶


E15 boosts your bottom line.
Drive sales
Increase Margins
Maximize Profitability
Learn more at
GrowthEnergy.org/retailer
growth energy®
America's Ethanol Supporters

3. High margins are here to stay.
With rapid inflation affecting everything from labor to equipment, services, land, and capital, the per-gallon breakeven for retailers has skyrocketed over the last three to five years. To support these higher costs, the profit per gallon of fuel has increased as well—and many experts predict it will remain up.

4. Accounts receivable (AR) delays can be crippling.
Collecting on your AR quickly has always been a critical issue in our industry especially for fuel carriers.

Because of rising interest rates, minimizing AR aging is critical to avoid greater expenses and to maintain healthy cash flow. Yet, at many companies personnel are still chasing paper to finalize and validate invoices.

Companies recognize the need to streamline the flow of data in order to speed up payment. Often, a missing or inaccurate BOL is the culprit. There are systems available now that support a more streamlined data flow and enable faster and more complete fuel and freight reconciliation.

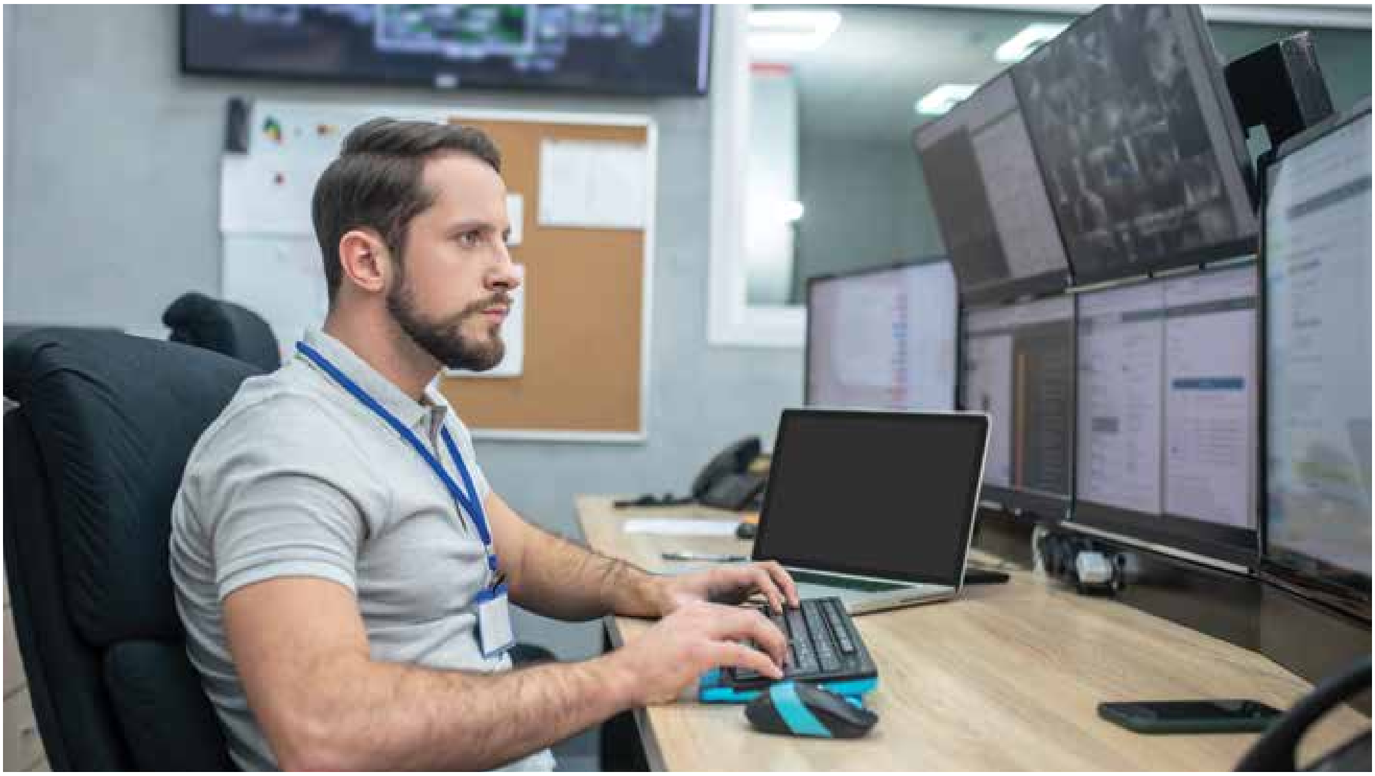
5. Companies want to consolidate systems.
Many companies struggle with an ever-growing number of applications that have overlapping functionalities, which increases confusion and complexity for system users and creates operational inefficiencies. But it's a major challenge to understand where software overlaps and where functional gaps exist without the expertise and time to invest in this activity. This often results in companies adding new applications before they remove legacy tools, which only compounds the problem.

Often, an outside perspective on as-is technology and an assessment on existing functionality is a good first step before deciding to purchase new software.

6. Company consolidation is front and center again.
Hot topics of conversation included BP's acquisition of TravelCenters of America's (TA's) 281 c-store locations, a deal expected to close by mid-2023, and rumors of Kum & Go. On one side, we see big oil companies getting back into the c-store business, while on the other side, we see continued land-grabbing from large c-stores and venture-backed companies. ★

4 Transformative Results of Paperless Dispatch

BY PDI TECHNOLOGIES



One of the hardest things in life is embracing change when it feels like everything is already working well. In fact, most of us don't gravitate toward change until there's a highly compelling reason to do so.

The same principle applies to businesses in the fuel supply industry. People love their "tried-and-true" processes and routines. However, the business world is also full of examples where it would have been much better to initiate (and control) change rather than being forced to change out of necessity.

One such case of proactive change is digital transformation and how it can help your business succeed against much larger competitors. If you give your employees a smarter and more efficient way to work, they won't cling to their familiar but less-efficient processes. For oil companies and haulers, this is especially true for fleet drivers and dispatchers.

As a result, digital transformation has quickly risen to become a top priority based on its ability to support paperless dispatch. Here are four great ways paperless dispatch benefits your business.

1. Simplifies Your Administrative Processes

Drivers and dispatchers that rely on paper for their fuel logistics operations leave themselves susceptible to manual errors, increased administrative time, and a general lack of visibility into systems and processes.

Moving to paperless dispatch allows drivers to provide delivery numbers on the spot and share information in real time via the cloud. Dispatchers stay aware of each action and can take advantage of a "manage by exception" model benefitting from automatic reconciliation, real-time load visibility, and planned versus actual delivery tracking. This approach reduces stress for everyone involved, and the back office benefits as well. For example, electronic deliveries with digital bill-of-lading (BOL) and signature capture can help streamline invoicing to reduce overall operating costs.

2. Increases Flexibility and Agility

Because of the highly sequenced delivery schedule for drivers, any changes based on an accident, incident, or unforeseen circumstances can directly impact the driver's ability to drop fuel at the delivery site. ▶

By leveraging a paperless solution, dispatchers get a real-time view of what's currently loaded on the truck as well as onsite inventory. Drivers can avoid runouts and overfills by using this data to determine the right quantities of fuel to drop at each location. As a result, both drivers and dispatchers can adapt faster to fluctuations in the supply chain.

For example, imagine a driver in a scenario where fuel is retained. In that case, they must find another site to deliver the remaining fuel or return to the terminal to unload. With paperless dispatch solutions, dispatchers and drivers leverage real-time information to determine sites where they can add a new delivery.

This simplified approach reduces friction and improves flexibility for everyone involved—including your customers. Compared to their paper-based counterparts, in-truck driver mobility solutions provide the agility to adjust plans in real time.

3. Reduces Risk by Increasing Security and Reliability

Because the information for each delivery is accessible through a mobile in-truck solution, drivers and dispatchers no longer need to worry about paper records being misplaced, lost, or accidentally destroyed. The data is connected to the dispatch office, so deliveries can still be reconciled, and customers can still be billed.

Oil companies and haulers can enjoy the added benefit of selecting tablet-based solutions. The available options range from replaceable tablets to explosion-proof devices to secure data in case of a collision or other accident. But no matter the incident, employees utilizing a tablet-based solution have greater peace of mind in case something does go wrong. All of the data is stored in the cloud, so it remains easily accessible regardless of circumstances on the ground.

4. Improves Environmental Sustainability

Moving to a highly efficient paperless dispatch model is also good for the environment. The choice leads to less paper waste, which contributes to a more sustainable business model. Making this type of eco-friendly choice can improve how consumers perceive your business so you can earn their trust, especially in an industry that is often in the spotlight for environmental concerns.

In some instances, you may not be able to avoid printing an invoice due to government regulations or customer demands. However, you can still go as paperless as possible by leveraging a mobile printer in those situations. By printing invoices on a case-by-case basis, your business can reduce the overall amount of paper used.

Make the Change before You're Forced to

Even though digital transformation requires you—and your team—to embrace change, that doesn't mean it has to be painful. In fact, you can quickly turn paperless dispatch into a winning approach across your organization.

By leveraging paperless dispatch, drivers and dispatchers can improve their efficiency, visibility, and decision making at every step of the fuel delivery process. Simpler and more flexible in-truck mobility solutions save time and money while reducing errors. Instead of worrying about issues that could prevent deliveries, drivers and dispatchers can increase their productivity and accuracy while pleasing customers and lessening your company's environmental impact.★

Achieving Carbon Reductions Strategically

BY JOHN EICHBERGER, FUELS INSTITUTE
PRESENTED BY

Fuels Institute

Another day, another policy announcement. Without doubt, the pursuit of carbon reductions has not lost any momentum. As I draft this, Washington, DC, is all abuzz about a new federal regulation that will tighten down emission standards on light duty vehicles to such an extent that some are considering it a de facto mandate to convert more than 60% of new vehicle sales to zero emissions vehicles (ZEV) by 2032. And last month, the European Union adopted a policy to ban sales of internal combustion engine vehicles (ICEV) by 2035 (except those operating on zero carbon fuels). Yes, the motivation behind these policies is to dramatically reduce carbon emissions from transportation in order to mitigate the effects of climate change, but are these the most effective policies? We must recognize that there are limitations to how quickly these efforts will reduce carbon emissions and begin to consider a more strategic approach that matches vehicle technologies with their energy sources. Could such a plan yield greater carbon reductions faster and at less cost? I think that is a conversation we need to have.

Why?

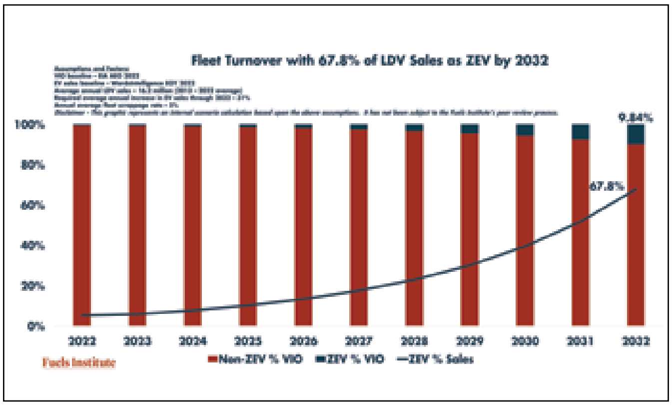
Why are policymakers proceeding with bans and mandates designed to promote the technology of ZEVs, typically defined as battery electric vehicles (BEV) and fuel cell electric vehicles, with BEVs expected to dominate in the light duty vehicle sector during the timelines included in these policies? There are a variety of reasons. First of all, transportation is responsible for up to one-third of carbon emissions in the United States and such policies take a direct approach at this leading source of emissions. Second, because the tailpipe on a vehicle is a tangible source of emissions with which everyone can relate. Third, because it comes across as definitive and actionable, demonstrating that leaders have identified the problem and are assertively pursuing a solution. But there is more involved in reducing carbon emissions than the optics of a policy.

How Fast?

Sales of BEVs in the U.S. may lag behind other countries, but they have shown great momentum and through first quarter of 2023 represented 6.9% of all light duty vehicle sales, with approximately 50 different models available for purchase. And with the majority of vehicle manufacturers investing heavily in their BEV production capacity, these numbers are almost certainly going to increase.

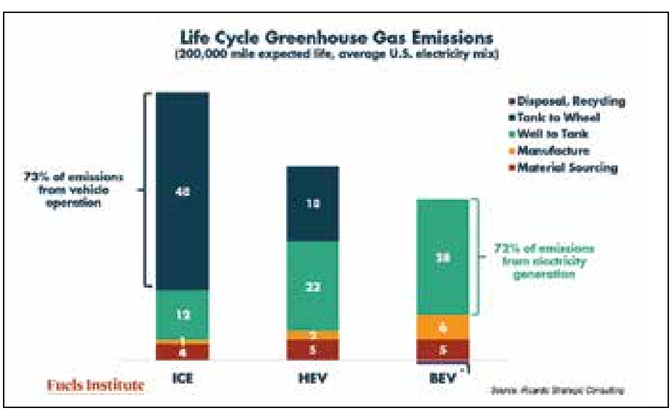
Policies seeking to accelerate the transition of the transportation fleet to a new technology hope to capitalize on the lower emissions profile of these vehicles and ween the market off vehicles that rely mostly on fossil fuels for energy. However, these proposals seem to be ignoring the intrenched size of the legacy market. In the United States alone, there are nearly 300 million ICEVs in operation and throughout the world the number is closer to 1.5 billion. A new vehicle technology will do nothing to mitigate emissions from these vehicles; only by addressing the carbon intensity of the fuel can we mitigate emissions from the existing ICEV fleet.

And even if the new policy were successful in converting 67% of new vehicle sales to BEV by 2032, that would leave more than 90% of the vehicles in operation still operating on liquid fuel. What will we do about those vehicles? An unfortunate consequence of policies that seek to eliminate specific technologies is that they send a signal to the market to stop working on those technologies, and without innovation in low carbon fuel production to support ICEVs, efforts to mitigate carbon emissions will be significantly impeded. There must be a way to encourage new technology while supporting innovation in legacy systems that will remain in operation for decades.



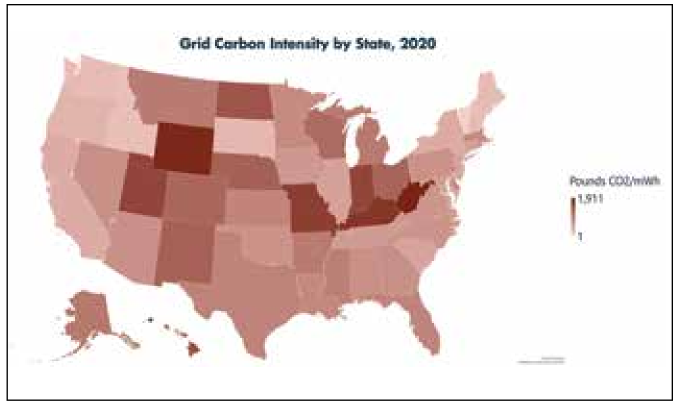
But Also…

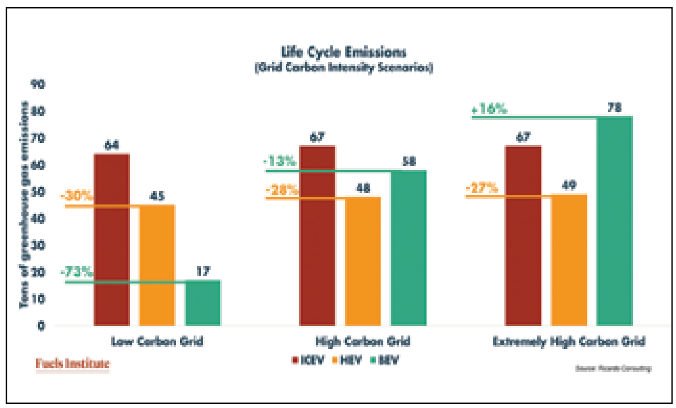
ZEVs are not zero emissions. The absence of a tailpipe does not mean that there are no emissions associated with the vehicle. Yes, on average BEVs do emit less carbon over their lifetime than ICEVs – but manufacture of both vehicles and batteries plus the generation of electricity result in carbon emissions. Our life cycle analysis report last year demonstrated that 72% of the life cycle emissions of a BEV come from the generation of electricity and this fluctuates depending on how that electricity is generated, so where BEVs are operated makes a difference. This fact is often glossed over in the promotion of these proposals because few constituents can personally relate to emissions from power plants, so calling the vehicles without tailpipes "zero emissions" is a message that resonates. Yet life cycle emissions must be a critical component of the discussion and must be included in a strategic approach to carbon reductions. In the United States, electricity generation is responsible for 25% of carbon emissions, so shifting emissions from the tailpipe to the generating facility is not solving the overall carbon situation.



Yet…

That said, there are some regions of the country that produce electricity with much less carbon than the national average. What if we were to develop a policy to encourage the distribution of BEVs to those markets where the carbon benefits would be greatest? In the map below, the lighter the color, the less carbon emitted by the associated electricity generation system. The chart that follows shows the impact of lower carbon intense grids on the life cycle emissions of a BEV verse an ICEV. It makes sense to rely on BEVs where they will yield the greatest benefit and a strategic policy could provide incentives to encourage the distribution of BEVs to these regions.

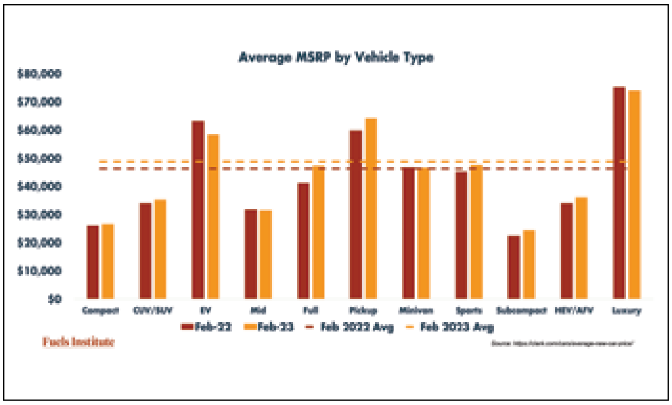


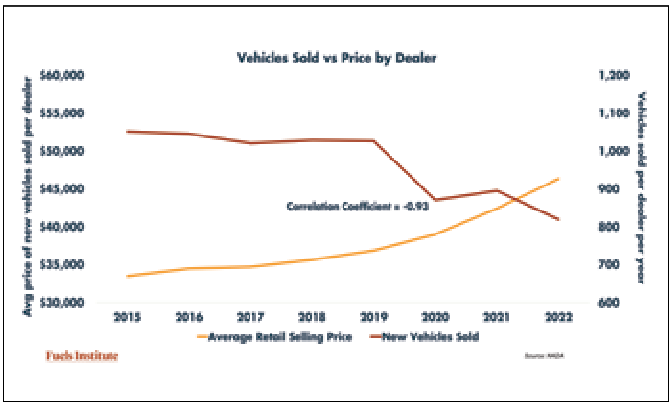


Finally…

Any policies under consideration must think about affordability, accessibility, and reliability. Sounds like a broken record, but if new vehicles or energy options are not affordable, accessible, and reliable, the end user will reject them and we will never achieve the lofty ambitions with which these policies are introduced and supported. In general, consumers are responding favorably to EVs. In a recent Fuels Institute survey (results to be released soon), 49% of Americans said they had a somewhat or very positive opinion about BEVs and 34% of those who might purchase a vehicle within two years would consider a BEV.

But we cannot underestimate the importance of affordability. To effect significant change long term, we need to turn the fleet over to lower emitting vehicles. Yet, the price of a new vehicle will largely determine our ability to do that and, recently, new vehicles are becoming less and less affordable, with the average price of a new vehicle surpassing $48,000 this year. Add to this the impact of inflation on financing costs (the way in which most Americans buy a vehicle) and rapid fleet turnover is becoming less attainable. Look at the following charts – as the average price for a new vehicle has increased, sales of new vehicles have decreased. This is not a coincidence and will slow down the rate of fleet turnover and, consequently, the pace at which we reduce carbon emissions.





A More Strategic Approach…

I understand the attraction of simplicity. It is easier to understand, it is easier to explain, it is easier to say, "Job done." But the transportation sector is complex and if our goal is to reduce and eventually eliminate carbon emissions, we need to take a more strategic approach and may have to shift our definition of "business as usual" as we tackle this issue. A couple of ideas we have kicked around internally include the following:

- Adopt a life cycle approach to carbon reductions and encourage reductions anywhere in the production and use process for vehicles and their associated energy.
- Encourage utilities to adopt lower carbon generation technologies, smart grid management, and a portfolio of options that preserve the reliability and affordability of power.
- Incent fuel producers (petroleum and biofuel) to invest in low carbon production strategies, such as carbon capture, low carbon farming practices, and conversion to renewable energy resources for their operational energy needs.
- Incent vehicle manufacturers to deploy BEVs to low-carbon electricity markets and deploy high efficiency ICEVs and hybrid electric vehicles to higher-carbon electricity markets. Over time, as the grid becomes less carbon intense, these deployment strategies can evolve to take advantage of carbon reduction opportunities.
- Revise the pathway approval process for new liquid fuels and/or renewable fuel feedstocks to increase the low carbon options available for ICEVs.
- Accelerate fleet turnover by incenting consumers to trade in older, less efficient vehicles for newer, more efficient vehicles (this is contingent on affordability of new vehicles).
- Support expanded development of renewable fuel options, such as renewable natural gas, and the concurrent deployment of vehicles capable of operating on such fuels, especially for medium and heavy-duty vehicles.
- Support investments in research and development for emerging fuels and technologies, including but not limited to:
  - o Hydrogen for fuel cells and ICEVs
  - o E-fuels produced from renewable resources
  - o Energy-dedicated crops for advanced biofuel production
  - o Low carbon drop-in fuel products

These are just some ideas – the devil is always in the details. But to successfully reduce carbon emissions, without imposing unacceptable financial harm on vehicle owners and operators, we must take a more holistic approach and implement strategies that fit the conditions and needs of the market being served. We can strategically deploy solutions at acceptable costs, but we cannot do so if we continue to rely upon simple solutions that play well in a sound bite but do not effectively achieve our objectives. ★

John Eichberger is Executive Director of The Fuels Institute, a non-profit, independent think tank founded and managed by NACS, the association for convenience and fuel retailing. Drawing diverse stakeholders from the vehicle and fuels industries, the Institute encourages multi-industry collaboration and produces credible, independent analytical reports to better inform business leaders and policymakers about opportunities and challenges in the vehicles and fuels markets.

Real Estate Issues in M&A and Financing Transactions

BY MATRIX CAPITAL MARKETS GROUP GUEST CONTRIBUTOR
JAMES DIERKING, WINTHROP & WEINSTINE, P.A.

Many M&A and financing transactions in the downstream energy space involve real estate, which is often one of the key assets being transferred or pledged. Whether you are obtaining financing for the purchase or refinance of a portfolio, or are selling a portfolio, you will be required to make a number of representations, warranties and covenants related to the real estate (and other assets involved in the transaction). With a little pre-transaction preparation, you can help ensure a smoother, less chaotic negotiation with your Buyer or Lenders.

Under the Purchase Agreements and Loan Agreements for transactions described above, Sellers/Borrowers make many representations, warranties, and covenants relating to the real estate, ranging from its physical condition, to its title status, to its environmental condition, and the business operations conducted on the applicable sites. Prospective Sellers/Borrowers anticipating a possible transaction in the foreseeable future are well-advised to conduct a review of their real estate and other key operational assets in advance of a sale or financing process in order to best prepare for potential issues that are likely to arise over the course of the transaction, and to anticipate Purchaser and Lender concerns before they come up. In many respects, Buyers' and Lenders' interests align, but they come from slightly different perspectives and will likely have different risk tolerance.

Some of the most typical representations, warranties, and covenants are addressed below, along with some pre-transaction recommendations a prospective Seller or Borrower should consider:

A. Representations and Warranties:

(1)Environmental: The Real Properties and the operations conducted thereon by Seller are in compliance in all material respects with all applicable Environmental Laws. There has been no Release of Hazardous Materials from any Real Property for which required Remedial Measures have not been completed, and no Real Property is listed as a CERCLA or RCRA cleanup site on any state or federal list.

(2) Tanks: Attached is a correct and complete list of all above and below ground fuel tanks that are located on or under the Real Properties, which are in compliance in all material respects with all applicable Environmental Laws.

With respect to matters relating to Environmental and Tank issues, a Seller or Borrower should assess all of the applicable Properties for current environmental compliance and any potential tank issues (including the age, expected remaining life, and any leak history), as well as the status of any ongoing remediation. In addition, explore the potential ▶

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for available state funds to assist with remediation expenses and understand any reporting and/or monitoring obligations and how those may impact a Purchaser. Sellers in particular should be prepared to take a position on indemnification and post-closing obligations vis a vis the Purchaser, such as "My Watch – Your Watch" or "As-Is." Finally, Sellers and Borrowers should develop a plan for addressing any known non-compliance.

(3) Title - Basic: Seller owns marketable, record title to the Real Properties and the Purchased Assets (including the Real Properties) are held free and clear of any Encumbrances other than Permitted Encumbrances.

(4) Title - No Other Third-Party Rights: There are no written leases, concessions, or other Contracts granting to any Person the right to use, possess, develop, or occupy any Real Property or any portion thereof, other than pursuant to an Assumed Contract.

(5) Title - No Other Sale or Similar Contracts: There are no outstanding purchase and sale contracts, options, rights of first offer, rights of first refusal to purchase, or rights of repurchase or forfeiture of, or with respect to, any Real Property or any portion thereof or interest therein.

(6) Title - Claims, Violation of ADA/Other Law: Seller has not received notice from any Governmental Entity of any violation of the Americans with Disabilities Act, nor has any Claim been asserted by any Person that Seller or any Real Property is not in compliance with the Americans with Disabilities Act. With regard to any other Laws, Sellers have not received notice from any Person or Governmental Entity of any violation of any Law related to the condition of the Real Property, including any applicable health, safety, fire, parking, insurance, electrical or building or zoning codes, that remains unresolved as of the date hereof.

With respect to the various title-related representations and warranties that are likely to be included in a Purchase Agreement or Loan Agreement, Sellers and Borrowers can often head-off issues that otherwise may delay a transaction closing by reviewing the portfolio in advance. Things to look for: (i) any existing liens or encumbrances on the properties other than customary utility easements and mortgages; (ii) potential third party use or occupancy rights, such as a QSR, liquor store, or similar lease for portions of the property; (iii) purchase options or rights of first refusal in favor of third parties (e.g. a ROFR in a fuel supply contract); and (iv) general compliance with applicable regulations and codes, including for accessibility, signage, and parking matters.

(7) Compliance - Private Easements: The Real Property has, during the past three years, been used in accordance with all Laws and all covenants, conditions, restrictions, easements, and agreements of any kind or nature affecting the Real Property in all material respects.

(8) No Claims: There are no Claims, at law or in equity, affecting all or any portion of the Real Property or to which Seller is a party, including, without limitation, judicial, municipal, or administrative proceedings, alleged building code, health and safety or zoning violations or changes, personal injuries or property damages alleged to have occurred on the Real Property, or by reason of the condition or use of the Real Property, and no events have occurred which may give rise to such Claims.

(9) Condemnation: Seller has not received any written offer for sale or transfer in lieu of condemnation or notice of any condemnation, expropriation, eminent domain, or similar Proceeding affecting all or any portion of any Real Property, nor to Seller's Knowledge is there any outstanding, accepted, or rejected offer of sale or transfer in lieu of condemnation or any pending condemnation, expropriation, eminent domain, or other similar proceeding affecting all or any portion of any Real Property.

The above representations and warranties which essentially relate to operational and compliance aspects of the subject Properties can often be overlooked, but some consideration of them in advance of a transaction can save significant time. To the extent there are any issues in these categories, resolution can sometimes involve working or coordinating with outside third parties, so addressing them as early as possible can help avoid delays. Actions a Seller or Borrower can take in advance include: reviewing any private easements or development agreements to confirm compliance; monitoring any ongoing public improvements or takings that may result in special assessments, (especially those that may impact site access), visibility, traffic flow, or parking; confirming, especially in new construction or renovation situations, that all necessary utilities are (or will be available); and reviewing and developing a plan for handling any ongoing legal actions that may require some level of indemnification. ►

B. Covenants

(1) Sellers will, upon being provided reasonable notice by Buyer:

(i) Information: Furnish Buyer and its authorized representatives and advisors with documents and information relating to the Purchased Assets, the Assumed Liabilities and the Real Properties as reasonably requested by Buyer, its lenders, and its authorized representatives and advisors.

(ii) Cooperation; Access: Reasonably cooperate with Buyer and its authorized representatives and advisors in its investigation and examination of the Purchased Assets, the Assumed Liabilities and the Real Properties; and reasonably cooperate with Buyer in connection with its review of the Purchased Assets, the Assumed Liabilities and the Real Properties, including reasonably cooperating in Buyer's ESA, environmental compliance testing, and investigation of any matters relating to Environmental Laws.

(iii) Operations Pending Closing: Keep the Business and Real Properties intact in all material respects, including the present operations, physical facilities, equipment, working conditions, inventory levels as set forth on the attached Schedule (subject to fluctuations in the ordinary course of business), and relationships with suppliers, customers, and employees.

(iv) Buyer's Inspection/Testing Rights: Buyer has the right to test any tanks located on the Real Properties and to perform a Phase I Environmental Site Assessment ("ESA") at any or all of the Real Properties.

In many respects, the typical covenants in a Purchase Agreement or Loan Agreement will act in tandem with the related representations and warranties. Much of the "pre-transaction" planning around covenants will be similar, but some specific considerations include: developing a plan for handling site inspections, keeping confidentiality in mind; keeping business operations pending sale to "ordinary course" matters; and thinking through how you will handle environmental and tank testing matters with the prospective Purchaser.

The above is far from an exhaustive list of representations, warranties, and covenants that Sellers and Borrowers are typically required to make but are representative of the issues that are likely to come up through the course of the transaction. With some early review and preparation, many of these can be handled more smoothly and resolved more quickly, increasing the likelihood of closing the deal in alignment with your objectives. ★

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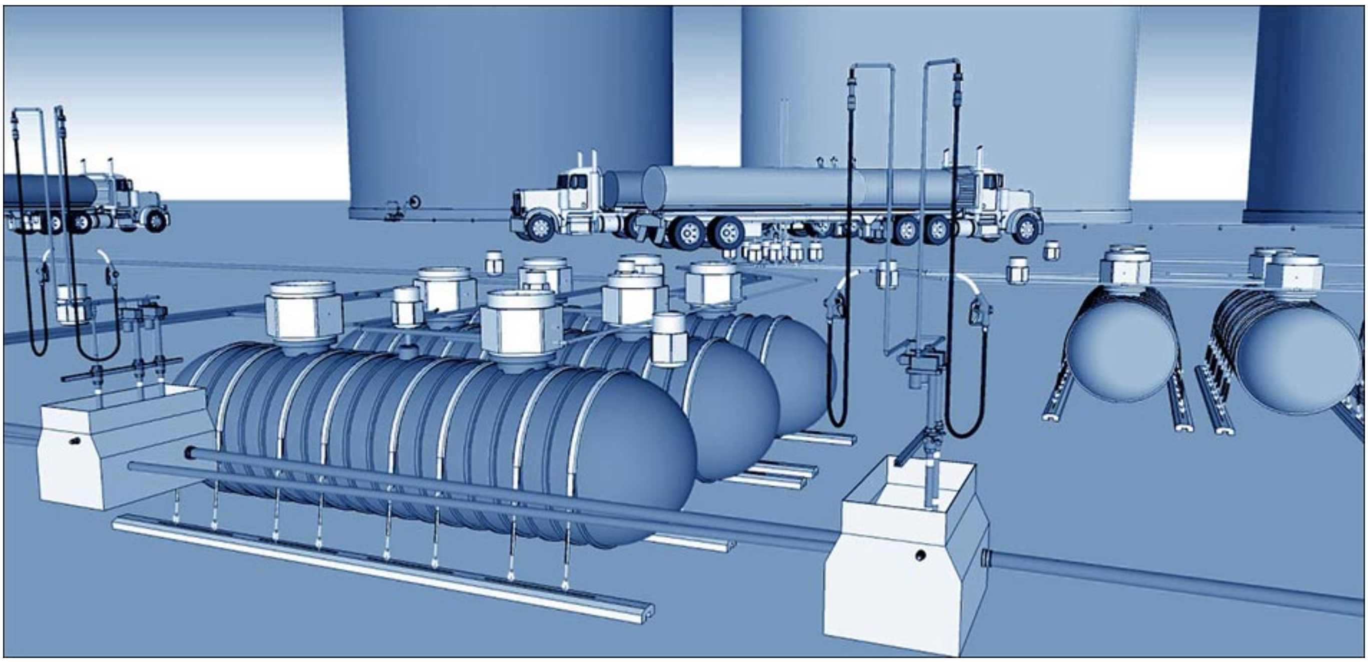
Simplify and Improved Fuel Inventory Control through Today's Available Technology Solutions

BY TONY CAPUTO, WARREN ROGERS.



Fuel operators fully-realize the costs of maintaining fuel inventories at their retail locations. At $3+ cost per gallon, an average retail c-store can have over $50,000 of inventory on-hand at any time. At a travel center, this inventory can exceed $200,000 or more!

Much mystery still surrounds what happens to fuel products as they are received from the terminal, dropped into the underground tanks by the hauler, rest underground in the tanks and lines, and how accurately the fuel is being dispensed. Many operators may still rely on tank gauge testing and statistical inventory and delivery accounting to track their fuel purchases, sales, and underground inventories. Traditionally, this has been a fine practice, but may not give you the immediate notice that you need when shortages, theft, leaks, or losses occur. Oftentimes, it can be as long as 30 days before large variances or shortages are detected. But, if an operator is below the 1%+130 gallon variance allowed by most states, then that may be considered good enough.

Fortunately, growing technology does exist to better-automate inventory reconciliation and add addition depth and metrics to the equation. As companies grow and advance into the future, investment in data analytics and increased technology can pay off handsomely.

For example, with automated continuous inventory reconciliation, you can obtain the most accurate and complete picture of your fuel operation — from every underground tank and fuel line, and dispenser, into your customers' fuel tanks. A robust system can feature real-time, continuous reconciliation technology and is also ideal for high volume sites equipped with automatic tank gauging systems (ATG) and advanced dispenser pump controllers. However, no matter the volume or size of a site, a serious issue can still cost the operator thousands of dollars.

How it Works

With the completion of every fueling transaction, a simultaneous observation of elapsed sales and associated tank system product heights and temperatures are recorded. Continuous reconciliation identifies operational problems as they occur with pinpoint accuracy. Some advanced forms of continual reconciliation are certified to provide the EPA leak detection monitoring for complex manifold tank systems, often up to 100,000 gallons in capacity. Moving to continuous ▶

reconciliation not only gives the operator improved leak detection, it can also speed the notification of potential leaks, losses, meter drift, and theft compared to weekly or 30-day inventory reconciliation.

Most forms of continuous reconciliation technology features:

***Precision ATG Tank Charting** – A must for accurate inventory calculations. Many operators depend on the charting from the ATG, which may be inaccurate or change over time. Tilt and groundwater changes can affect the geometry of underground storage tanks dramatically. With more-advanced services, the provider will rechart your tanks based on the precise movement between the tanks and dispensers in order to increase the accuracy of fuel variances, leak, and loss detection. The provider can also make suggestions to the operator so they can update their tank charts, or even handle the change to the ATG for them.

***Inventory Variance Reporting** – (1%+130, MD, CT, NY) to meet state and federal regulations is also a benefit of many of these advanced analytical services. As a result, operators can better know where their tanks stand on variances, even on a daily basis. Often, these services can fully-automate paperwork and fuel delivery auditing requirements. With this method of electronic monitoring, operators can no longer count on basic ATG inventory and delivery readings for your loss analysis alone.

• **Meter Drift Analysis** – This is an available method of identifying meters drifting away from strike and holding back or giving away product. Meter drift analysis reports can often be provided for each dispenser position associated with a product to help you identify the financial impact that meter error is having on site profitability.

• **Dispenser Flow Rate Analysis** – This advanced procedure calculates the dispenser flow rates for each position associated with each fuel product. The purpose of dispenser flow rate analysis is to identify dispenser positions which are delivering products slowly to the customer due to clogged filters, defective flow arrestors, or inadequate turbine pump capacity.

• **Delivery Audit** – Delivery auditing can identify the gross and net amounts of product that has been delivered to the tank system. This is critical information, because deliveries to retail facilities are not metered when product is introduced to the tank system. Electronic delivery auditing provides a reliable measure of the actual amount of product delivered versus the bills of lading (BOL) that you receive.

Such delivery calculations can also take factors such as temperature, tank geometry, and the quantity of elapsed sales during the delivery all into consideration in the provider's findings, as these can all affect accuracy.

• **Blend Ratio Verification** – Product blending has become increasingly common as retail operators make every effort to optimize the use of existing tankage, reduce the costs of tank replenishment, and handle multiple grades and types of fuel. Petroleum retailers have turned to product blending to create mid-grade gasoline and free up existing tankage for other products. Typically, dispenser blend ratios for gasoline are set to meet octane requirements. When the ratios at particular dispenser positions differ from the settings needed to meet

octane standards, some solution providers can pinpoint these occurrences by dispenser position and actual blending percentage.

Travel Center operators typically blend Biodiesel with conventional Diesel at each fueling facility. Biodiesel blending may consist of a transfer of Bio-Diesel into conventional diesel tanks during a delivery. Alternatively, Biodiesel can be injected into a trunk line while fuel dispensing is in progress. Robust inventory reconciliation solution providers can monitor these blending operations accurately to ensure proper blend ratios are upheld and to maintain an audit of transfers for Biodiesel tax credit and state fuel tax purposes.

• **Fuel Theft at the Dispenser** – If a dispenser has been tampered with so that it will not record actual amounts of product withdrawn from the tank system, an advanced use of monitoring technology identifies and alerts you to these incidents by date, time, and amount.

• **Repair Validation** – During a dispenser or automatic tank gauge repair at a facility, solution provider support desks can assess whether the repairs were effective or if additional work is needed. This ability to verify that a repair has been made and inform you that performance has been restored — in real-time, eliminates repair call-backs, increases efficiency, and saves you money.

In summary, the use of electronic and continuous inventory reconciliation can identify many issues related to forecourt performance, allowing operators to correct well before the costs grow. As you look for ways to improve your operation, an investment in increased forecourt monitoring technology and robust inventory reconciliation can pay off handsomely in cost savings as well as add automation and staff efficiency to the equation. ★

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APAC	MOPS (FOB Singapore) refined products MOPJ naphtha
LATAM	Brazilian refined products

What's next for the refined products markets?

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Gulf Coast Premium Grades Rise Ahead of the Summer Driving Season

BY S&P GLOBAL COMMODITY INSIGHTS

Premium gasoline lived up to its name last year with record-high spreads to regular grades. The spreads have come down considerably in 2023, but octane tightness and prompt demand persist while export purchases keep taking chunks out of domestic supply. The result, experts say, looks to be octanes moving back up but not as wildly as 2022.

The Gulf Coast high octane and low volatility gasoline grades started their upward rally on March 2022 amid strong buying interest and a tight high-octane, low-volatility components market caused by the commercial flow disruptions because of the Russia-Ukraine war. Prices never returned to pre-war levels.

This year, market participants consider the balance between demand and the summer gasoline blending components availability is better, and do not expect to see a return to last year's peak levels, although they also don't expect a return to normal.

Premium CBOB climbed to a record high of $4.7237/gal on June 9, 2022, and the widest spread over the low-octane, regular CBOB reached 73.75 cents on June 17, 2022, according to Platts data from S&P Global Commodity Insights.

Also on June 9, Platts assessed premium RBOB at a record high of $4.9762/gal, while the spread against regular RBOB was at a record 67.25 cents/gal.

Spikes on premium grades were due to market tightness, especially on reformate and alkylate as they are the preferred octane boosters during summer because of their low volatility, market sources said.

The reformate price saw its own record high at $6.1402/gal on June 13, 2022, while alkylate price hit a record $5.222 cents/gal on June 6, 2022.

The same bullish trend on the high-low octane spreads was observed starting earlier this year. The monthly averages, however, show a softer trend than seen in 2022 spikes.

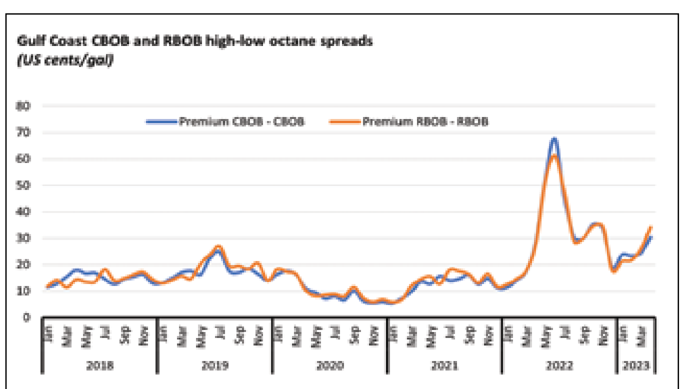
"Octane value is moving back up," a gasoline trader said. "But it still is not as bullish as last year."

The commercial flows of gasoline blendstocks continued to see disruptions. But market participants believe they were in a better position to face this summer's challenges. Analysts also do not expect demand to grow significantly as it did in previous years, which could help to limit price volatility.

"Total U.S. gasoline demand continues to exceed 2022 numbers but are not expected to recover to 2019 levels on an annual basis ever again," said an analyst report from S&P Global Commodity Insights.

Supply tightness still appears to be an issue, especially after exports from the Gulf Coast grew to seasonal records the first quarter of 2023. The short demand-supply balance was reflected in a record deep backwardated market the first quarter of the year, which has not softened despite the March 16 startup of a 250,000 b/d expansion capacity at the ExxonMobil Beaumont, Texas, refinery. It is largest US refinery expansion in over 10 years, giving the refinery total stream capacity of 630,000 b/d.

"Gasoline cracks are expected to remain strong but relatively flat the next several months as refiners remain focused on distillate production as jet demand returns. Directionally, stronger summer gasoline cracks are forecast for 2024," the analyst report said. ▶



Octane Imports For A Tight Market

Available imports from asia and europe have not stopped flowing to the us, but imports this year look lower than past year, according to us customs data. Sources were unclear if the octane balance is healthier compared to one year ago.

Demand for low-rvp, high-octane gasoline blending components, such as reformate and alkylate, rises during the spring as U.S. summer gasoline grades require more of their content, and they are usually the main concern.

The reformate and alkylate spot market looked smaller this year, with fewer transactions and indications heard in the market. Most of the imported reformate and alkylate has been immediately incorporated into blending, leaving few additional barrels to trade in the spot market, sources said to platts.

Domestic demand has not returned yet to prepandemic levels, but exports keep rising while the high-octane, low-rvp blendstocks availability is limited.

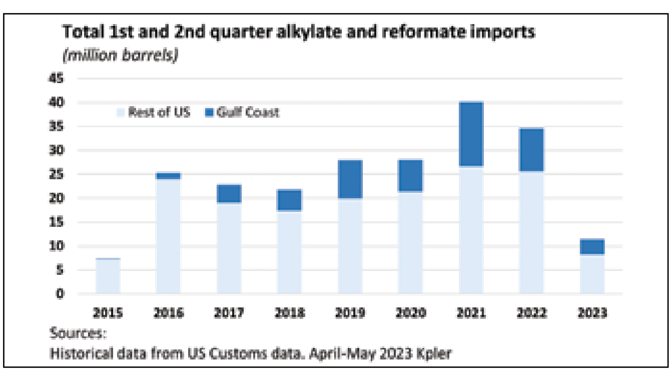
"I hardly see any reformate these days, usually it's so overpriced that it only works to refiners," a second trader said.

"We're very short of high octanes in the gulf now," a gasoline broker said.

U.S. customs data for the first quarter of 2023 showed maritime alkylate imports to the usgc at 1.303 Million barrels, which are about 190,000 barrels below the record high observed in q1 2020 of 1.497 Million barrels. All the volume came from india and the bahamas, which has been receiving ships with alkylate from india.

Maritime imports of reformate, on the other hand, reached 948,785 barrels in q1 2023, about 926,000 barrels below the q1 2021 record of 1.875 Million barrels.

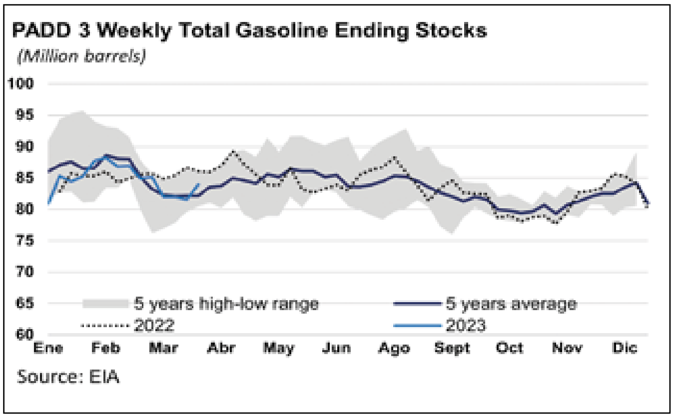
Kpler fixtures show 525,000 barrels of alkylate arrived in the gulf coast in early april and 140,000 barrels of reformate were scheduled to arrive to the gulf coast in may.



Low Summer Inventories, Exports Level Uncertain

USGC gasoline volumes declined in the first quarter amid seasonal turnaround that refineries need to start producing summer gasoline grades. Higher demand and strong exports added to the inventory reduction.

At the beginning of the second quarter, Gulf Coast total gasoline inventories were reported at 83.938 million barrels, which is 1.765 million barrels above the five-year average, but 2.169 million barrels below last year.

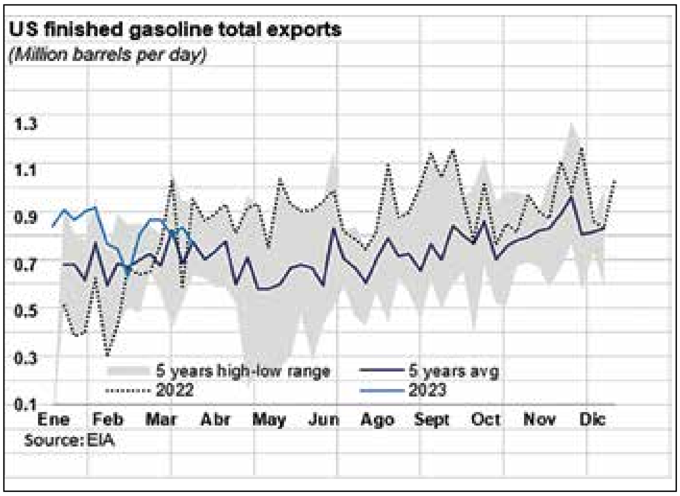


SPCI analytics forecast inventories to rise in the second half once summer demand ends and expanded capacity comes online, but refinery closures or conversions in the Gulf Coast (PADD 3) and West Coast (PADD 5) will weigh on the market in 2024.

"While we anticipate that stocks will build in 2023, inventory is expected to drop to 5-year lows at the start of 2024 as refiners shift to distillate maximization mode in the autumn and winter months," the report said. "Modest demand growth will tighten the balance, and the shutdown of LyondellBasell Houston and Phillips 66 Rodeo will further constrain supply in PADD 3 and 5."

Exports started the year outpacing seasonal records in January and early February only to decline to five-year averages as imports from Asia to Mexico displaced US barrels.

China exported 71,200 mt of gasoline to Mexico in January, or roughly two normal-sized MR tankers, double the December volume, China Customs data showed. Asian sources said at least seven more gasoline cargoes shipped to Mexico by March, and Kpler data showed from five to nine ships carrying gasoline and other clean refined products would arrive in May and June.



On the other hand, the USGC gained market share in Europe, replacing barrels that used to go to Latin American countries, the Caribbean, Africa and the U.S. Atlantic Coast. The war between Russia and Ukraine triggered the fresh draw, aided this year by strikes at French refineries.

Market sources were assessing if the start of the Beaumont refinery and the extra Asian volume to Mexico would bring some relief to the Gulf Coast.

USGC Gasoline at Record Backwardation in March

The U.S. refining system has contracted over the last two years, while demand growth and higher exports have kept the supply-demand balance short.

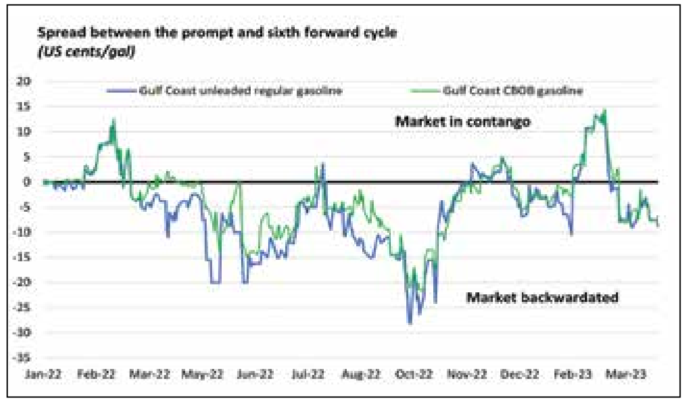
The result is a constant backwardation rarely seen in the market, reducing incentives to store gasoline, according to Platts data. Punctual peak backwardation conditions occur during hurricane seasons, but usually no longer than a week.

Platts assesses USGC finished gasoline, which is a free-ethanol gasoline grade with 87 AKI, for the first six shipping cycles on Colonial Pipeline, which carries 1.37 million b/d of gasoline from Houston to New York Harbor. The spread between the first and the sixth cycle reflects a month of market structure.

In April, finished gasoline averaged 6.30 cents/gal higher on the first cycle compared with six cycles forward. The last time April was so backwardated was April 2006 at 9.68 cents/gal.

Structure for the bigger CBOB market structure also registered a record-high backwardation. CBOB is a gasoline basis that needs to be blended with at least 10% ethanol to reach 87 AKI, which is the most common gasoline blend used in the United States.

The spread between prompt CBOB and a month out averaged a backwardation of 6.16 cents/gal in April, the widest since Platts started assessing CBOB forward cycles in September 2016.



SPCI analysts consider that gasoline demand was recovering faster on the Gulf Coast and the Midcontinent and slower on the Atlantic Coast and the West Coast and cited the failure of Silicon Valley Bank as an important demand detractor on the West Coast. Production was returning from heavy seasonal maintenance, while Beaumont and other smaller expansions also were expected to help during the busy summer driving season, and partially offset refinery capacity going offline.

"Overall refinery throughput is forecast to remain strong through 2023 on strong product demand and favorable refinery economics," the report said. "Exports are expected to continue to remain high through 2024 as Latin American demand continues to grow and outpaces their ability to produce product locally. Strong exports and rising demand should provide support for gasoline crack spreads in the upcoming spring and summer driving seasons." ★

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— Tate Sideman, Vice President & General Counsel, The Fikes Company

LCFS: Coming Soon to a State Near You

BY DENTON CINQUEGRANA, OPIS

California set the standard several years ago with a Low Carbon Fuel Standard (LCFS) followed by Oregon and just this year Washington began its clean fuels program.

While California and Oregon have been established for several years and Washington is in its first few months, there are two more states with a bill in the legislature and one more that is exploring a similar program.

Minnesota and New Mexico are seeing progress in state legislature toward an LCFS style program.

In Minnesota, the state legislature's Senate Committee on State and Local Government and Veterans moved recently to advance a measure that would set the state on the path to carbon neutrality in its transportation sector by 2050.

Under the Clean Transportation Standard Act, or S.F. 2584, the carbon intensity (CI) of transportation fuel in the state would need to be reduced by 25% from a 2018 baseline by 2030, with a further 75% by the end of 2040.

The state would achieve this by setting a schedule of annual standards for the CI of such transportation fuels, according to the bill, which would be separated out for a variety of fuel pathways.

Under the Minnesota measure, those assessments on CI would be administered using the Department of Energy's Greenhouse Gases, Regulated Emissions, and Energy Use in Technologies (GREET) model – long the method of choice for the biofuels industry in assessing carbon intensity.

Following passage by the committee, the measure will now go before the state legislature's Senate Environment, Climate, and Legacy Committee.

Progress on that measure follows similar moves in New Mexico, where the state legislature has been weighing a similar bill, H.B. 426, that would mandate the CI of the state's transportation fuels on average be reduced by 20% compared to a 2018 baseline by 2030 and 30% by 2040.

That measure, which follows a failed effort last February in the legislature to create a CFS, has since moved through two committees. In early March, the bill most recently passed through the state legislature's House Government, Elections, and Indian Affairs Committee by a vote of five to three.

The Commonwealth of Pennsylvania is also taking a hard look at establishing similar programs. Currently there are two state senators looking for co-sponsors to advance a clean fuels program. ▶

Table 1. U.S. Biofuels operable production capacity

million gallons per year

Period	Fuel Ethanol	Biodiesel	Renewable Diesel and Other Biofuels[1]
2022			
January	17,399	2,245	1,468
February	17,423	2,232	1,468
March	17,323	2,231	1,468
April	17,340	2,217	1,922
May	17,318	2,215	1,922
June	17,418	2,215	1,947
July	17,291	2,089	2,089
August	17,152	2,084	2,134
September	17,165	2,084	2,134
October	17,175	2,092	2,134
November	17,179	2,092	2,670
December	17,179	2,090	2,854
2023			
January	17,219	2,051	2,939

[1]Other biofuels include renewable heating oil, renewable jet fuel, renewable naphtha, renewable gasoline, and other biofuels and biointermediates.

Source: U.S. Energy Information Administration, Form EIA-819 "Monthly Report of Biofuels, Fuels from Non-Biogenic Wastes, Fuel Oxygenates, Isooctane, and Isooctene"

U.S. Energy Information Administration | Monthly Biofuels Capacity and Feedstocks Update

While states are exploring and/or passing these programs those that have not been in favor all cite the same reason for not being on board and that is rising fuel prices, most specifically gasoline. But the question becomes does a clean fuels standard program cause fuel prices to rise?

That really depends on who you talk to. Just do an internet search on "LCFS impact on fuel prices" and you can find studies that say yes and no.

One of the better applications for fuel in an LCFS program is renewable diesel. The product is becoming more widely available and there are multiple refineries that are in the process of transitioning to produce renewable diesel. However, with a potential six states having or implementing programs that lower the carbon intensity of transportation fuels, is there enough output to go around?

The Energy Information Administration at the end of 2022 estimated that total U.S. production of renewable diesel stood at 2.6 billion gallons per year (or about 170,000 b/d). That could more than double to just under 6 billion gallons by the end of 2025 should all the projects that are expected go through as planned. According to the most recent EIA data, January production capacity reached nearly 2.94 billion gallons (annualized).

Renewable diesel production is certainly on the rise, but in the 2022 fiscal year California collected taxes on more than 3 billion gallons of diesel fuel. California also plans to phase out diesel trucks by 2040 with new models being zero-emission in 2024 and diesel and gasoline drayage trucks must be retired after 18 years in order to guarantee they the meet the zero-emission requirements by 2035.

That could leave more gallons of renewable fuels available to other states, but for the time being California will be a destination for plenty of renewable diesel.

There have also been some benefits with renewable diesel sales being made at prices that are lower than petroleum diesel. However, there is some nuance to that.

Renewable diesel is actually more expensive to make than petroleum-based diesel and the feedstocks can also be pretty costly. It is the regulatory benefits from LCFS programs, RINs and a blenders' tax credit, that help renewable diesel to be priced competitively with petroleum diesel.

It is that LCFS credit price that makes renewable diesel a compelling case for those that are looking at transitioning a refinery. However, without some more aggressive carbon intensity targets prices are likely to remain depressed compared to historical trend as the credit bank is likely to swell.

California has sights set on the next round of amendments to the LCFC program this year and could be implemented as early as next year. Early indications are that the state's air resources board intends to tighten carbon intensity reduction targets and extend them until 2035 and possibly beyond.

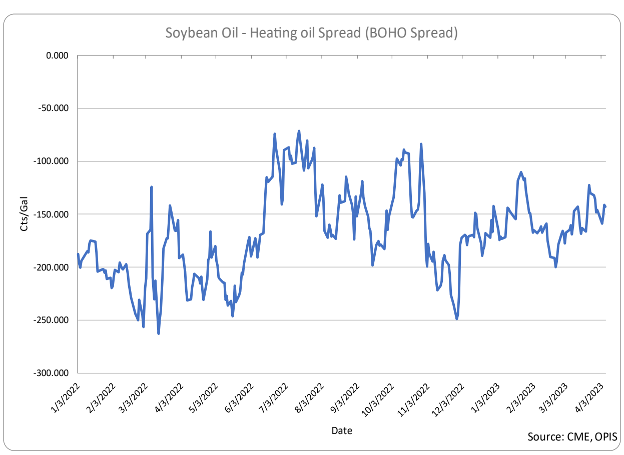
New targets should help boost the credit prices that have been under pressure over the past several months. During 2021 the average California LCFS credit price was $177.51 m/t, according to OPIS data. That average slipped to $98.26 m/t last year and so far through the first quarter has averaged just $66.70 m/t.

More competition for renewable diesel can also helped to boost the credit markets as states that may be more local to production centers siphon barrels that might normally move to Pacific states.

Another aspect that could make the renewable diesel craze a bit more tricky is the growing demand for feedstocks.

The preferred feedstock to produce is used cooking oil (UCO) and animal tallow. UCO is preferred due to the lowest carbon intense feedstock that is available. However, a lot of the UCO is already accounted for through term agreements. Additionally, the supplies of those are rather thin.

The more common feedstock quoted amongst the seed oils used for renewables is soybean oil. The price of "bean oil" has come down from record levels in May of 2022 when the price of soybean oil was the equivalent of almost $7/gal.



Soybean oil values are often compared to that of ULSD in what is commonly known as the BOHO spread or soybean oil minus heating oil spread. The BOHO spread is a good measure for the profitability of making renewable diesel or biodiesel before any kind of credits or incentives are applied.

The spread in 2023 has been consistently running at around $1.56 so far in 2023 but has been in a volatile range. Since the beginning of last year, the spread has seen soybean oil priced anywhere from about 71cts over ULSD to more than $2.60/gal more than ULSD.

Increased demand for from renewable and biodiesel producers for feedstocks could also spur food inflation, something that the Biden Administration and the EPA are certainly keenly aware of.

With strong prices for soybeans and soybean oil, farmers will have to decide every planting season should they increase land use to plant soybeans and at the same time reduce other crops. It was only a decade or so ago where the food versus fuel argument was taking place due to increased use of ethanol that was taking corn away from human and animal food supplies. While that debate fizzled out, a 2.0 version of that debate seems likely. Unless Americans start to eat a lot more French fries and chicken wings. ★

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