2024 SmartWay Leader: Penske Truck Leasing

ABOUT COMPANY

PENSKE | Rental Leasing Logistics

Penske Truck Leasing is a Penske Transportation Solutions company headquartered in Reading, Pennsylvania. Solutions from Penske include full-service truck leasing, fleet maintenance, truck rentals, used trucks, and a wide variety of services and technologies to meet customer needs.

For more information, visit our website:
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SMARTWAY *PROFILES IN LEADERSHIP* AREA OF EMPHASIS

Technology Innovation — New vehicles, equipment or associated supporting infrastructure to move and deliver goods more efficiently in the freight supply chain network. (e.g., electric or alternatively powered vehicles, autonomous vehicles, etc.)

"We're excited to be working with Hitachi on deployment of this cutting-edge technology. When we were first introduced to the Grid-eMotion solution, we were impressed with its capability and flexibility and what that could mean for our customers. This installation in Stockton will provide 'real world' experience and significantly enhance our collaboration with Hitachi."

- Drew Cullen, Senior Vice President of Fuels and Facility Services, Penske

ALTERNATIVE FUEL OPTIONS AND SERVICES FOR ADVANCED-VEHICLE DEPLOYMENT

Penske Truck Leasing has designed a suite of options to meet customer demand for moving goods using cleaner options that include services for advanced-vehicle deployment, fueling-options, and greater availability and flexibility to use alternatively fueled vehicles.

Formation of Penske Energy

Penske Transportation Solutions and ForeFront Power formed a new joint venture named Penske Energy LLC. The new venture aims to help commercial fleet operators plan, design, and deploy optimized electric vehicle (EV) charging infrastructure that supports and safeguards their operations. Penske Energy will provide fleet operators with EV charging and energy infrastructure consulting that includes strategic and operational planning, technology assessment, infrastructure designs, and practical project implementation.

ZEV Deployment and Testing of Alternative Technologies

Penske has been an early adopter of battery-electric commercial vehicles and has made substantial investments in testing, maintaining, and expanding charging infrastructure to support these vehicles. The company continually tests and operates EV trucks across its leasing, rental and logistics fleets in various industries including retail, manufacturing, grocery, quick-service restaurant chains, medical, automotive parts, and others. Penske currently participates in the deployment of a wide selection of zero- emissions vehicles and continues to expand its charging network of Direct Current Fast Charging (DCFC) and level-2 charging across California and other states within the U.S. Penske's fleet includes electric vehicle options such as: Ford eTransit and Bright Drop Zeco cargo vans; Freightliner MT50e; Xos step van; REE automotive; International eMV EV; Freightliner eM2 EV; Isuzu NRR EV; Volvo VNR tractor; Freightliner eCascadia; and Orange EV yard tractor.

In addition to EV deployment, Penske Truck Leasing has worked with vehicle manufacturers to enhance EV offerings. Penske is adding its first electric truck from REE Automotive Ltd., an automotive technology company and provider of full by-wire electric trucks and platforms. Penske intends to deploy the software-driven P7-C EV to interested customers. These vehicles will benefit from a supplier driven cross-collaboration, where REE teamed with Wabash to upfit the P7-C chassis with a custom DuraPlate truck body utilizing the unique low floor, all-wheel steer, all-wheel drive, and a full "drive by wire" architecture. Wabash's DuraPlate technology is designed to be lightweight and durable, incorporating "light weighting" goals and adding additional energy efficiencies into the overall product.

Penske focuses its strategy on pursuing grant opportunities through various agencies and partnerships, which allows Penske to test the newest state-of-the-art technology in the industry. Some key customer deployments include Costco's Orange EV yard tractors in which Costco, Penske, and MSRC partnered to deploy five-yard tractors in one of Costco's main depots in California. These yard tractors are replacing conventional diesel equipment, resulting in reduced emissions, reduced downtime and increased efficiency. In another collaboration with Balford Farms, a Penske Truck Leasing customer, Penske has enabled the addition of Ballard Farms' first electric yard tractor to its fleet. The Orange EV yard tractor will support the company's warehouse and distribution center, which operates 24 hours a day, 365 days a year.

Expanding Availability of Fuel Choice

In addition to innovative vehicle deployments, Penske has made concerted efforts to expand access to fuel or energy options, including Renewable Diesel (RD) and electricity. Penske is partnering with Hitachi Energy to launch a large-scale centralized electric truck charging pilot in Stockton, CA. For this pilot initiative, Hitachi Energy has supplied Penske with its state-of-the-art Grid-eMotion® Fleet EV charging system. The integrated DCFC (direct current fast charging) solution is designed to scale up and deliver multi-megawatt level charging capabilities, tailored to meet the demanding requirements of truck fleets of varying sizes. The new system's features include its ability to reduce space requirements up to 60 percent compared to

conventional charging systems. Additionally, it cuts cabling needs up to 40 percent – ensuring effective use of resources while maintaining high-capacity charging for EVs.

Penske is deploying other alternative fuels, such as Renewable Diesel (RD) in states with low carbon fuel standards (LCFS) states.

Renewable diesel is currently available at all Penske Truck Leasing locations in California and Oregon. This provides accessibility across a broad operational region to make this transition to renewable diesel as easy as possible for their regional customers.

Because Renewable Diesel can be produced from raw materials (also known as feedstock) such as crop residues, animal fats, used cooking oil, vegetable oil, fish fat and switchgrass, many forms of renewable diesel quality as advanced biofuel under the U.S. Environmental Protection Agency's (EPA) Renewable Fuel Standard (RFS) Program, all while still meeting ASTM D975 spec for traditional petroleum diesel.

Call-Out Benefit

A combination of providing sustainable fuel choices for goods movement, as well as services that treat vehicles and infrastructure as a "system," can increase the pace of successful transition to zero- and near-zero freight movement.

Renewable diesel can significantly reduce emissions compared to fossil fuel-based diesel. More specifically, renewable diesel reduces: Lifecycle greenhouse gas (GHG) emissions by 50 percent or more; Particulate matter by more than 40 percent; Carbon monoxide by more than 25 percent; Total hydrocarbons by more than 20 percent; and Nitrogen oxides (NOx) by 10 percent.

Additional characteristics and benefits of renewable diesel include its full compatibility with all diesel engines, higher cetane level for better performance, lower aromatics for improved public health, and excellent cloud point for cold weather use. It is being used as a drop-in product that does not require modifications for tanks or vehicles and is original equipment manufacturer (OEM) approved. In sum, use of renewable diesel can reduce implementation costs and complexities, as well as result in less maintenance-related issues.

OUTCOME/ RESULT/ IMPACT

- Advancing the understanding of the use-case for electric vehicles and renewable diesel to inform rapid scaling.
- Organizing for growth in demand.
  - The formation of Penske Energy lays the foundation for applying integrated alternative vehicle-infrastructure solutions under increasing demand scenarios.
  - Build-out of Penske-provided alternative fuel infrastructure sets the conditions for its customers to have more fuel choices that meet their operational and sustainability needs.

"LEADING THE WAY": TRANSFERABLE LESSON LEARNED

A variety of alternative fuel options will be needed to meet the needs of a varied customer base that seeks to grow advanced-vehicle deployment in both the near- and far-terms. The scalability of each alternative fuel type – such as the ability to provide a range of charging station sizes or a range of renewable diesel fuel amounts – can also aid in the phased deployment of these fuels into real-world operations.

The deployment of zero- or near-zero emission vehicles and infrastructure to urban or space-limited environments can have significant positive impacts on the communities in which they operate – both from noise and air quality perspectives.

CONCLUSION

The deployment of alternatively-fueled vehicles, the installation of infrastructure needed to provide fueling options for more than just deisel, and the services to ensure that the vehicle-infrastructure system is developed in an integrated way, is critical to providing fuel choices that are needed to advance the deployment of zero- and near-zero freight transportation.

SmartWay *Profiles in Leadership*

Profiles in Leadership is SmartWay's newest recognition initiative. Beginning this year, EPA will recognize freight sustainability leadership actions of SmartWay Affiliates and eligible SmartWay Partners (Logistics companies, Air carriers, Barge carriers and Rail carriers). EPA developed this recognition concept after hearing that Affiliates and Partners would like to see greater opportunities for recognition of sector leadership. EPA SmartWay created this new type of recognition to provide additional opportunity for advancing freight transportation sustainability.

SmartWay defines leadership in this context as the ability to drive change, influence industry, lead freight efficiency performance, and sustain freight-related environmental excellence. *Profiles in Leadership* is an official SmartWay program acknowledgement of leadership demonstrated by investments that are strategic, financial, and innovative, which will yield future environmental and efficiency benefits.