

Part 2 Integrative Case

Part 2: The Environment of Management

Brown Goes Green: UPS Embraces Natural Gas Trucking Fleet

Can 3 million commercial trucks consuming nearly 4 billion gallons of diesel fuel annually in the United States really “go green”? To find out, the White House in 2008 launched a National Clean Fleets Partnership aimed at helping businesses embrace vehicles that run on natural gas, electricity, hydrogen, and other alternative fuels. Since it was first announced, the public-private partnership has sparked close collaboration between the U.S. Department of Energy and top fleet operators like United Parcel Service (UPS; nicknamed “Brown”).

UPS’s participation in a national green highways initiative may seem counterintuitive to many—but it shouldn’t. Brown’s quest to attain cost savings through fuel-efficient motoring stretches back to the 1930s, when the parcel delivery service used 20-mph electric cars to deliver packages in New York City. In the 1980s, UPS introduced vehicles that ran on compressed natural gas. In 2006, the company partnered with the U.S. Environmental Protection Agency (EPA) to design and build the world’s first hydraulic delivery vehicle—a truck propelled by hydraulic pumps that store and release energy captured during braking. Today, the Georgia-based delivery giant continues to test alternative-fuel technologies, seeking to transform more than 96,000 delivery vehicles into fuel-efficient green machines.

Although numerous alternative-fuel technologies are competing for dominance at UPS, liquefied natural gas (LNG) has gained significant momentum in recent years, especially for Brown’s largest trucks. Like most eighteen-wheelers, UPS’s tractor-trailers run on diesel fuel. This is beginning to change, however. In the years since the 2004 discovery of massive shale gas fields in the Marcellus Shale region of the United States, natural gas supplies have skyrocketed, causing methane prices to drop to about half the price of diesel. This development has had a significant influence on business. In particular, transportation managers faced with an affordable supply of domestic clean energy have begun evaluating the efficiency and environmental impact of their fleets.

In 2011, UPS embraced the new natural gas boom by ordering 48 LNG-engine tractor-trailers—an investment that boosted the company’s long-haul natural gas fleet total to 59. By the end of 2013, that number had increased to 112. And in 2014, UPS committed to purchasing 700 LNG vehicles as part of a companywide goal to drive 1 billion miles using alternative fuel vehicles by 2017.

Brown was not alone; similar moves by Ryder Systems, Waste Management Inc., and AT&T led *Wall Street Journal* energy reporter Rebecca Smith to wonder if the entire trucking industry was about to “ditch diesel.” As Smith noted, “Never before has the price gap

between natural gas and diesel been so large, suddenly making natural-gas-powered trucks an alluring option for company fleets.”

According to Mike Britt, the director of vehicle engineering at UPS, Brown has good reason to switch from diesel to LNG. “The added advantage of LNG,” says Britt, “is it does not compromise the tractor’s abilities, fuel economy, or drivability, and it significantly reduces greenhouse gases.” The benefits of LNG are numerous indeed. While most alternative-fuel vehicles can drive only limited distances, LNG trucks have a 600-mile single-tank range, plus a reliable network of fueling stations. In addition, LNG-fueled trucks produce 25 percent less carbon emissions and consume 95 percent less diesel than conventional trucks. Most important, natural gas engines deliver full horsepower. Highlighting a stark contrast between LNG and electric-powered vehicles, Britt quips that a 450-horsepower eighteen-wheeler uses so much power that to haul two trailers through mountainous terrain, “the first trailer would have to be all batteries.” The performance gap leads Britt to conclude: “LNG is the only suitable alternative to diesel for the really heavy long-haul tractor trailers you see on the highway.”

At UPS, terms like “fleet efficiency” and “environmental impact” aren’t mere buzzwords—they are increasingly part of Brown’s corporate culture. In 2011, UPS created its first executive-level management position for green concerns: the chief sustainability officer (CSO). Today, UPS’s CSO is one of the most visible figureheads of the company. Scott Wicker, a longtime company veteran appointed to the post, has been instrumental in defining what a CSO does. “The key thing I do in my job is try to keep UPS focused on the environmental impacts that we have as an organization—and we’re constantly working to reduce those environmental impacts,” Wicker states. “But it’s not just the environment: sustainability is also about what we do as a company in terms of our people, our customers, and the communities in which we live and work.” Under Wicker’s leadership, sustainability has garnered significant attention at UPS, appearing prominently in the company’s policy book, upside blog, and corporate Web site. In addition, Wicker and his management teams develop and roll out sustainability initiatives to UPS’s 400,000 employees.

According to UPS’s green chief, effective sustainability reinforces a company’s economic responsibility. “Above all else, sustainability is about being able to maintain a balance between our impacts on the environment and society, but at the same time keep the company economically prosperous,” Wicker says. Kurt Kuehn, UPS’s chief financial officer (CFO), underscores this point, citing two key objectives of sustainability: “Doing what’s right for the environment and society, and also being mindful of the bottom line so we’re a healthy company financially.”

Minding the bottom line is especially relevant to Brown’s pursuit of alternative-fuel technologies. At \$195,000 each, LNG tractor-trailers cost twice as much as conventional semi-trailers—a high premium for going green. However, Mike Britt says that UPS can offset that expense through a combination of government subsidies and natural-gas-related fuel savings. For Britt, added investment in LNG reaps added reward for companies and communities: “Liquefied natural gas is a cheaper, cleaner-burning fuel that is better for the environment and more sustainable than conventional diesel. It’s also a fuel that’s in abundant supply inside the United States—it doesn’t have to be imported.”

Questions

1. Explain how UPS's alternative-fuels fleet is a response to trends taking place in the company's general environment.
2. Describe how UPS is using boundary-spanning roles to adapt to energy-related uncertainty in its environment.
3. How does UPS's clean fleets initiative illustrate the concepts of sustainability and corporate social responsibility?

Sources: Based on White House Fact Sheet: "National Clean Fleets Partnership," press release, April 1, 2011, www.whitehouse.gov/the-press-office/2011/04/01/fact-sheet-national-clean-fleets-partnership (accessed June 14, 2012); Rebecca Smith, "Will Truckers Ditch Diesel?" *The Wall Street Journal*, May 23, 2012, <http://online.wsj.com/article/SB10001424052702304707604577422192910235090.html> (accessed June 14, 2012); Matthew L. Wald, "UPS Finds a Substitute for Diesel: Natural Gas, at 260 Degrees Below Zero," *The New York Times*, February 22, 2011, <http://green.blogs.nytimes.com/2011/02/22/u-p-s-finds-a-substitute-for-diesel-natural-gas-at-260-degrees-below-zero> (accessed June 14, 2012); Jeffrey Ball, "Natural-Gas Trucks Face Long Haul," *The Wall Street Journal*, May 17, 2011, <http://online.wsj.com/article/SB10001424052748704740604576301550341227910.html> (accessed June 15, 2012); Justin Williams, "Natural Gas Truck Movement," *Energy & Capital*, April 26, 2013, <http://www.energyandcapital.com/articles/ups-natural-gas-vehicle-fleet/3326> (accessed January 6, 2014); "UPS Adds to Its Natural Gas Truck Fleet." *Environmental Leader*, February 25, 2011, www.environmentalleader.com/2011/02/25/ups-adds-to-its-natural-gas-truck-fleet (accessed June 15, 2012); Scott Wicker (CSO, United Parcel Service), interview by Kevin Coffey, *The upside blog*, April 13, 2012, <http://blog.ups.com/2012/04/13/talkin-sustainable-logistics-fortune-brainstorm-green> (accessed June 16, 2012); William Smith, "New Terminology, Same Priority: Sustainability Engrained at UPS," *The upside blog*, April 30, 2012, <http://blog.ups.com/2012/04/30/new-terminology-same-priority-sustainability-engrained-at-ups> (accessed June 16, 2012); Jill Swiecichowski, "Brown's Legacy of Being Green," *The upside blog*, July 21, 2010, <http://blog.ups.com/2010/07/21/browns-legacy-of-being-green> (accessed June 15, 2012); "UPS Replaces Diesel with Cleaner LNG Tractor Trucks," *Environment News Service*, February 22, 2011, www.ens-newswire.com/ens/feb2011/2011-02-22-091.html (accessed June 14, 2012).