Transportation

Linking Corporate Sustainability Goals Beyond Direct Business Inputs And Outputs

Biogen Idec, RTP, N.C. Campus Encouraging Plug-in Electric Vehicles for Employees
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In today's corporate world, many businesses are tying their environmental impact and sustainability goals to current business measures. Some have established carbon offset goals, some have instituted process improvements to lessen their impact on the environment, and many are encouraging their employees to "be green." In Research Triangle Park, North Carolina, Biogen Idec is taking their sustainability goals beyond direct inputs and outputs by determining how a new technology – unrelated to core business – can be employed to further corporate environmental sustainability efforts.

"Without charging stations on campus, a PEV would not be feasible for a large percentage of our employees," said Travis Pysar, Manager, EHS & Sustainability, Biogen Idec.

For the most part, corporations and institutions focus sustainability efforts at areas of business directly related to attributes they control. For example, a military installation may be focused on waste and concentrate on material sustainability and recycling while a university may look at transportation within the confines of transporting students from class to lab to library.

While Biogen Idec's commitment to sustainability includes waste reduction, energy efficiency, water conservation and managing product lifecycles, they also explored how each of their 1,000 employees at the company's 550,000-square-foot manufacturing, office, warehouse and lab complex in Research Triangle Park (RTP) make an impact on the environment through their daily commute.

Biogen Idec installed 10 Level 2 charging stations at their RTP Campus.

THE NEED FOR CHARGING INFRASTRUCTURE

Biogen Idec continually evaluates ways to minimize its consumption of natural resources. In a recent employee commuter survey, many employees expressed an interest in purchasing a plug-in electric vehicle (PEV) in the near future. Biogen Idec employees' average commute was estimated at 24 miles (round trip). For PEVs to be a viable option, this distance falls into the acceptable commuting range. However, employees would be more likely to purchase a PEV if workplace charging was available. By providing charging stations, Biogen Idec hopes to address one of the major hurdles that drivers face when owning a PEV, which is range anxiety due to limited infrastructure.

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As such, the installation of charging stations for PEVs on Biogen Idec's campus would offer employees an alternative to traditional gasoline-powered vehicles.

MOTIVATORS

Advanced Energy conducted interviews with personnel and management at Biogen Idec regarding the applicability of installing charging stations to support employees that were interested in participating in Advanced Energy's PEV Usage Study. This two-year study evaluates changes in driving and vehicle operating behaviors throughout a two-year period by collecting unique, specific data from 40 individual owners of the all-electric Nissan LEAF. Additionally, the study seeks to characterize and quantify trends that are relevant to electric vehicle owners in the North Carolina Research Triangle Park market.

Advanced Energy leveraged the U.S. Department of Energy (DOE) and North Carolina State Energy Office (NCSEO) consumer adoption initiatives to offer $15,000 in incentives to early adopters toward the purchase of a Nissan LEAF in exchange for participation in Advanced Energy's PEV Consumer Usage Study ($7,500 off of the purchase price and $7,500 in federal tax rebates). Also, in collaboration with Triangle J Council of Governments and DOE Clean Cities organizations, Advanced Energy worked with corporate campus partners in the North Carolina Research Triangle Area to deploy 24 charging stations and provide employee education on the benefits of electrified transportation through the Carolina Blue Skies Initiative.

BLUE SKIES CORPORATE CAMPUS PROGRAM

The Blue Skies Corporate Campus Program enabled participating corporations, such as Biogen Idec, to have charging stations installed at a substantial discount. This was done for the purpose of reducing employee dependence on petroleum fuels and examining how driving and charging habits are affected when charging is available at work. At first, Biogen Idec considered installing fewer charging stations without grant money from the Carolina Blue Skies Initiative.

"Initial demand pointed to the need of four-to-five charging stations, and we did consider installing just a few," said Pysar. "However, we decided to anticipate future demand and budget for installing 10 charging stations."

The opportunity to participate in the program was presented to Biogen Idec's capital planning group. Once the funds were approved for the initial installation, the company's Environment, Health, Safety and Sustainability group applied for the grant and managed the installation of the charging stations.

Advanced Energy performed a site assessment to determine the most beneficial placement of the charging stations on Biogen Idec's campus to maximize usage and reduce liability and costs. Considerations included visibility, accessibility, convenience, power supply, safety and exposure to the elements. The ground level of the campus's parking deck proved to be the best location.

"The original budget for installing 10 charging stations was $82,000. The project kick-off meeting was held in October 2011 with the goal of having charging stations installed and operational by the end of the year. The final cost was on target with 50 percent of the installation cost reimbursable through the Blue Skies Initiative. The stations were operational on January 12, 2012.

"To have the charging stations installed and operational by January 2012 was a big accomplishment," said Lisa Poger, program manager, PEV Usage Study, Advanced Energy. "Some of the PEV Usage Study participants are employees of Biogen Idec. The purchase of the all-electric Nissan LEAFs for the study was complete in January, and employees were able to charge at work right from the start. We've heard nothing but positive feedback from users about how workplace charging has made an impact in their driving and charging habits and led to a significant reduction in range anxiety."

DRIVING FORWARD

The charging stations at the Biogen Idec campus will supplement the company's goal of reducing its environmental impact by encouraging employees to adopt an environmentally-friendly form of transportation. The charging stations will allow employees to completely charge their cars while at work. The ability to charge an electric car at work has been recognized as a critical factor in an individual's decision to purchase an electric vehicle and is expected to encourage early adopters. Employees are able to charge their cars at no cost to them as a company-provided benefit.

Machelle Sanders, Vice President, Manufacturing and General Manager for Biogen Idec's RTP Campus (right), speaks at the charging station dedication ceremony.

"Biogen Idec is proud to be on the leading edge of encouraging adoption of environmentally-friendly forms of transportation for our employees. By providing these charging stations at no cost to employees, we're pleased to be part of the larger effort to build out the necessary infrastructure for electric vehicles," said Hector Rodriguez, Director of Environment, Health, Safety and Sustainability for Biogen Idec. Biogen Idec purchased the charging stations with support from the Carolina Blue Skies Initiative, a project led by Triangle J Council of Governments (TJCOG).

As part of a dedication ceremony for the new charging stations, Machelle Sanders, Vice President, Manufacturing and General Manager for Biogen Idec's RTP Campus, expanded on the company's logic behind this move and how it underscores Biogen Idec's commitment to environmental sustainability in the region. She began with a challenge to other companies.

According to Sanders, making these stations available to employees positions Biogen Idec as an attractive employer and demonstrates their commitment to being a responsible company. Further, it supports their employees and their interests in reducing their own personal environmental impacts. In fact, Biogen Idec has been encouraging employees to adopt other environmentally-friendly forms of transportation. The company provides vanpool subsidies, promotes bicycle commuting and carpooling, and is a proud member of SmartCommute@rtp. Providing free charging stations is yet another incentive to enable employees to be less dependent on gasoline.

> *"We'd like to see other companies in the area take similar strides and we believe there is a business case for electric cars and having the infrastructure to support them."*
>
> *—Machelle Sanders, Vice President, Manufacturing, Biogen Idec*

Pat Hoy was one of four Biogen Idec employees that took advantage of the incentive through Advanced Energy's PEV Usage Study to purchase a Nissan LEAF. He received a $7,500 stipend to offset the purchase price in addition to the $7,500 federal tax credit. Speaking briefly at the company's dedication ceremony, Hoy mentioned that one of the greatest benefits of owning a PEV is that it allows him to bypass the gas station. "I haven't been to a gas station in three and half weeks since I've owned the car...there aren't too many other people that can say that." Hoy also highlighted some of the technological benefits, such as being able to remotely precool the car's interior using his smartphone (as long as the car is plugged in).

LESSONS LEARNED

Site Selection

With a parking deck on-site that already had an adequate electrical supply to accommodate the 10 charging stations, the site selection process was pretty straight forward. The company chose to install all 10 charging stations in its parking deck to minimize installation costs. If demand grows, they will explore installing charging stations at other locations throughout the campus.

Equipment Selection

The Biogen Idec team chose the Eaton floor-mounted design. The fact that they are made in North Carolina made them an attractive vendor. The manufacturer's turn-around time was also quick enough to meet Biogen Idec's aggressive timeline.

Employee Education

The company hosted Advanced Energy on-site to educate interested employees. Additionally, the company held its annual sustainability day in October 2011 and had a Nissan LEAF on site for test drives.

Operation/Policy

Although the installed charging stations are not open to the general public, anyone working at or visiting the site with an electric car (e.g., employees, contractors, visitors, etc.) may use the charging stations free of charge.

Maintenance

To date, no maintenance has been required on the charging stations.

"As anticipated, the initial demand for electric car charging stations is less than our capacity with the 10 charging stations we've installed," said Pysar. "As the technology matures and more car manufacturers offer an electric car alternative, we anticipate more employees exploring PEVs as a viable option for commuting."

Installation

Biogen Idec utilized one of the electrical contractors that the company uses on a regular basis. The installation of the charging stations was not overly complicated and was easily performed by the contractor. One item the contractor did catch was the fact that the charging stations purchased were not designed to be installed flush against a wall. The access panel is on the back of the unit and per North Carolina Electrical Code there must be three feet of clearance. Therefore, the charging stations were rotated 90 degrees to comply with electrical code.

PROJECTED SUSTAINABILITY IMPACT

Corporations that endeavor to uphold commitment to sustainability and corporate stewardship should, as Biogen Idec determined, consider even ancillary effects of their business. Employees commuting to work may average 24 miles round trip. Each commute, on average, equals one gallon of gas and 20 pounds of CO_2 per day per employee. The Research Triangle Park region of North Carolina has a very low vehicle occupancy rate, meaning most employees commute in single occupant vehicles. Employees commuting to Biogen Idec's corporate campus will use approximately 212,500 gallons of gasoline emitting 4,250,000 pounds of CO2 annually. Targeting and encouraging cleaner commutes will have a significant effect on the firm's environmental impact.

ABOUT BIOGEN IDEC

Through cutting-edge science and medicine, Biogen Idec discovers, develops and delivers to patients worldwide innovative therapies for the treatment of neurodegenerative diseases, hemophilia and autoimmune disorders. Founded in 1978, Biogen Idec is the world's oldest independent biotechnology company. Patients worldwide benefit from its leading multiple sclerosis therapies, and the company generates more than $5 billion in annual revenues. For product labeling, press releases and additional information about the company, please visit www.biogenidec.com.

ABOUT ADVANCED ENERGY

Advanced Energy, headquartered in Raleigh, N.C., serves as a national resource, focuses on Transportation, Renewables, Motors and Drives, Industrial and Buildings, creating economic, environmental and societal benefits through innovative and market-based approaches to energy issues.

Advanced Energy's Transportation Initiatives team is working to assist communities in understanding, planning for and implementing electric transportation initiatives. An established figure in the development and deployment of plug-in electric vehicle technologies, Advanced Energy successfully facilitated the creation of the world's first commercially available plug-in hybrid vehicle in 2007. Advanced Energy also works with municipalities, electric utilities and National Laboratories monitoring and evaluating the performance of numerous fleets of plug-in hybrid vehicles across the country, including the Plug-in Hybrid Electric School Bus program.

Advanced Energy currently manages the NC Get Ready and the NC PEV Taskforce programs to accelerate the adoption of electrified transportation in North Carolina – two of the key initiatives in the nation making a true commitment to the widespread acceptance of electrified transportation. For more information, visit www.advancedenergy.org.

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