Alternative Energy: **Maximizing Industrial Real Estate Investments with Alternative Energy Resources**

KEY TAKEAWAYS

- **Cost Reduction:** Embracing solar and hydrogen energy resources helps organizations mitigate energy and fuel costs throughout their supply chains.
- **Minimized Carbon Footprint:** Relying on alternative energy for even a fraction of an industrial facility's power can significantly reduce an organization's carbon footprint.
- **Reputation:** Investing in energy efficiency offers distributors and logistics firms a competitive advantage as clients place a higher priority on supply chain sustainability.

Energy efficiency is quickly moving to the top of business leaders' agendas. Illustrating the private sector's growing commitment to sustainability, more than two-thirds of U.S. executives expect their organizations' investments in energy efficiency to increase in 2017.

Doubling down on alternative energy sources at any point in the supply chain doesn't only benefit the environment – it's a smart business strategy. Research shows that organizations can yield anywhere from a 27 to 81 percent internal rate of return on their low carbon investments.

Despite these positive results and organizations' increasing action, there is ample room for improvement. By strategically developing industrial facilities (including distribution centers and warehouses) to accommodate alternative energy resources, supply chain organizations can:

- Capture long-term energy cost savings
- Maximize the ROI of their industrial properties
- Build a stronger, more competitive brand reputation

1. SOLAR CANOPIES

With the cost of U.S. commercial solar infrastructure projected to decline over the next few years, industrial organizations are warming up to solar installations' potential for energy savings. As a result, solar canopies – overhead, ground-mounted installations designed to cover parking areas – are a valuable addition to industrial properties. Compared to traditional rooftop solar panels or ground mounts, canopies eliminate the risk of roof damage and don't require additional land for installation.

Global Logistics and Supply Chain Organization - Goodyear, AZ, Distribution Center

A leading supply chain management and in-flight service provider for the airline industry, is one organization that has tapped into the power of solar canopies. In August 2016, the company announced the development of a new 292,000 SF distribution center in Goodyear, AZ, featuring a solar canopy over its truck docks.

The canopy generates 144.9 kW of electrical energy, allowing the facility to reduce carbon emissions by more than 400 kg per day. Over 25 years, the canopy is projected to reduce greenhouse gas emissions by more than 4,100 tons. With the canopy doubling as a carport, the organization can keep its diesel trucks out of the sun – helping improve the fuel efficiency of its fleet.

2. HYDROGEN FUEL CELLS

Hydrogen fuel cells – though less common than solar energy – are becoming an attractive resource for industrial organizations. The benefits of hydrogen fuels cells are numerous, from zero emissions and reliable power to 50 percent (or more) electric efficiency. In a distribution or warehouse setting, hydrogen fuel cells are a smart alternative for powering material handling vehicles (i.e., forklifts). With hydrogen technology, organizations can eliminate the need for time-consuming battery charging and save floor space often jeopardized by battery storage and charging stations.

Hardware Retailer Distribution Center – Wilmer, TX

Today, more than 11,000 fuel cell-powered forklifts are operated in North America, in facilities across 20 U.S. states – including a distribution center operated by one of the world's largest hardware retailers in Wilmer, TX. The 450,262 SF facility, developed by CenterPoint Properties in 2014, features an on-site hydrogen generation and fueling station for material handling equipment.

Using Nuvera's PowerTapTM technology, the system converts tap water and natural gas into hydrogen, which serves as a fuel source for the facility's forklift equipment. The system allows the tenant to minimize its CO2 emissions by approximately 70 tons and avoid around 330,115 kWh of annual electric consumption.

As sustainability becomes as much of a business issue as an environmental one, industrial organizations must find new ways to promote energy efficiency throughout their operations. By integrating alternative energy infrastructure into new and existing industrial properties, organizations stand to minimize their carbon footprints and maximize their cost-saving potential.

SOURCES

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ABOUT CENTERPOINT PROPERTIES

Headquartered in Chicago, CenterPoint is a national industrial real estate firm focused on the development, acquisition and management of industrial property and transportation infrastructure. For more than two decades, CenterPoint has been a leader in brownfield remediation and redevelopment initiatives for the industrial real estate industry. We established the national model for rehabilitating blighted and underutilized industrial property into revitalized locations that comply with government regulations, reduce carbon footprints, and promote economic and business growth.

CenterPoint's brownfield projects have earned two U.S. EPA Phoenix Awards and numerous city, state and federal accolades, including recognition from project partners and political leaders. Strategically located near ports, rail terminals and population centers, our brownfield sites help companies increase logistics efficiency and reduce drayage, energy costs, waste output and the environmental impact and cost of transportation.

For more information about our innovative brownfield remediation and redevelopment programs, visit our website at centerpoint.com.