GREEN WAREHOUSING

TAPPING A LUCRATIVE OPPORTUNITY

Taking an initiative to reduce greenhouse gas emissions and safeguard the fragile resources of the earth, warehousing companies are moving towards green logistics. And to aid these companies in attaining these goals and executing environment-friendly supply chain operations, Milestone Capital Advisors offers its expertise in green warehousing. The company provides end-to-end solutions with respect to green design, energy-efficient operations to help logistics companies go green.

BY RACHITA JHA

Increasing environmental concerns have taken a center stage when it comes to effectively managing supply chain operations. According to reports, around 75 per cent of a company's carbon footprint comes from transportation and logistics alone. In such a scenario, warehouses can play an important role in mitigating the environmental impacts of logistics activities through green initiatives. Currently, the warehousing sector is at a nascent stage and remains an under-serviced asset for many logistics companies. This is because storage, warehousing and logistics are the weakest links of supply chain infrastructure. In order to strengthen their performance, huge investment is needed for development purposes. But as the demand for quality warehousing infrastructure is being strongly felt across all industries owing to growth in the emerging economies, the future of the warehousing sector seems bright. According to reports, the future trends indicate a huge demand for nearly 340 million sq ft area of warehousing space by 2015, with investments worth $8 billion required in capex over the next five years. These investments would primarily come from the retail and manufacturing sectors owing to their substantial contribution to the growth of the Indian economy. The early planning and setting up of a warehouse facility under a company's expansion strategy helps it to maximize economical gains at a faster pace.

STEPPING INTO GREEN LOGISTICS

The recent trend shows that many companies are taking the green route to develop warehouses that improve the environmental performance and build energy efficiency into operations.

Priority agenda that will change the shape of present Indian warehouses...

- Removal of CST post 2010
- India becoming global manufacturing hub, especially for cars
- Growth of organized retailing in India
- Increased trend of outsourcing supply chain management
- Increased investments by private equity firms and capital flows by institutions into warehouse projects.

Inputs by Ved Prakash Arya, MD and CEO, Milestone Capital Advisors

The driving force behind the green movement is the continuous rise in fuel costs. Moreover, growing demands from global players for green supply chain processes and the need to cut down on external and wasteful costs that leave carbon footprints in environment are other major factors driving companies to go green.

Milestone Capital Advisors, a leading investment firm, has caught the green pulse of the logistics industry and has ventured into assisting companies in shifting towards green warehouse facilities. Moreover, the company also aims at bridging the investment gap, which has been proving to be a hurdle in the development of organized and quality warehouses.

"In addition to the economic recovery, the increasing focus of companies on product diversity and consumer demands are sure to boost demands for green warehousing facilities amongst other logistics needs," avers Ved Prakash Arya, MD and CEO, Milestone Capital Advisors.

Green logistics is changing the conventional thought process wherein warehouses are considered as cost centers rather than value creators. This is done by means of environmental

initiatives that are changing the business value offered to customers by companies. The Indian logistics industry has lately joined the green bandwagon and is actively driving the green revolution. At the global level, organizations are planning pro-green measures. For instance, Deutsche Post World Net (DPWN), the parent company of DHL, has rolled out initiatives focused on reducing its carbon footprint by 30 per cent by 2020. Taking cue from the global counterparts, Milestone has taken several measures to encourage the development of eco-friendly warehouses in India.

TRENDS IN ECO-FRIENDLY WAREHOUSES

Trends in energy conservation initiatives by logistics companies are giving impetus to energy-saving strategies in supply chain operations and warehouse design parameters. This also helps in bringing long-term benefits to the companies. "The large roof structures facilitating use of solar PV, reduction in costs of alternative fuels on a year-on-year basis, etc. will ensure lower consumption through the grid and eventually play a crucial role in the green revolution," observes Arya. The next important strategy includes inventory management as it is one of the leading reasons for increased costs in warehouse operations. Automation has virtually made inventory paperless and the use of information technology is bringing warehouse operation towards the greener side. In addition, using construction materials that possess good strength and durability proves to be of utmost importance. It plays an important role as the warehouse structures are expected to exist and perform over long periods of time, and hence the construction materials used should be compliant to sustainable standards to bear the long-term wear & tear and reduce the cost of replacement to a large extent.

The ever-increasing fuel costs and the government's move to put a high premium on the price of energy will have a knock-on-effect on supply chain. This will act as a spinner for companies to seek environmental solutions. The global environmental convention such as the Kyoto Protocol has set the trend for logistics business to go green. This is because it offers incentives to companies for undertaking environment-friendly practices in warehouses and helps to generate extra carbon credits for themselves. Moreover, carbon credits add value to the company to flag its commitment towards the environment and connect with customers.

GREEN BENEFITS

The environmental initiative builds the value proposition of a logistics company and sets it apart from the competitors as it reflects its commitment to the environment. The benefits of undertaking environmental initiatives include:

- Brand building for being projected as an eco-friendly company holding corporate social responsibility.
- Cost management from energy savings by reducing fuel consumption and CO_2 emissions resulting in efficient and sustainable supply chain infrastructure, which creates an opportunity to earn carbon credits.
- Human well-being index results in increased productivity of employees.

MOVING TOWARDS A HOLISTIC GREEN STRATEGY

The entire process of transportation, storage and movement of goods needs to be simplified along with least cost of operations, to stay sustainable in an ideal logistics and supply chain system in the long-run. An eco-friendly warehouse is not only about environment-friendly transport and inventory. These are by no means the only avenues to embark on green logistics. Amongst the other environmental initiatives that can be included for green warehousing, the architecture and design of the warehouse is an important aspect during the pre-construction stage. It includes the use of good passive design in the development stage itself that can actually avoid a lot of retrofit costs later. In this respect, Milestone has taken a pioneering initiative of providing complete sustainability solutions in the development space across industries including commercial, residential and large infrastructural projects with Ecofirst Advisory Services, a joint venture with UK's leading zero carbon developer Ecofirst. The company has LEED accredited professionals with sustainable design background, along with experts in water resources management and energy consumption management that provide holistic green solutions to maximize environmental benefits in the warehouse facility. Elaborating on the way forward for warehouse facilities to go green, Arya adds, "The future outlook of any sustainable development initiative should be focused on developing and preserving sustainable communities, having their own systems and processes for material movement and storage, thus minimizing too many satellite storage options."

Solar-Thermal-Sunstation, Magna-Park, Gazeley

GREEN BUSINESS MAKES SENSE

Lot of MNCs are taking warehouses on lease to operate their functions effectively and it is seen as a growing trend in India. But before making the decisions, these companies ask for provisions involving environmental competence and compliance. These companies have aggressive targets of reducing carbon emissions from both mobile infrastructure and immobile infrastructure in the entire supply chain. This situation demands companies to adopt green measures. Therefore, for India–seen as the future global manufacturing hub–green warehouses will provide the much desired qualification to engage in business with the European and American companies. The green warehouse apart from being a viable business proposition also improves the working environment for the manpower. Interventions in energy management and waste management apart from cost savings also strengthen the long-term benefits for the warehousing company in creating a healthy and safe building environment for the manpower working in the warehouse. These benefits have led to an increase in the development of eco-friendly warehouses in India. In the case of warehouses needed to be constructed in SEZs, MIDC etc, it has now become mandatory to construct eco-friendly warehouses.

Important steps for LSPs to become green

- Building a roadmap based on corporate social responsibility, customer acceptance and good business sense
- Looking for customer competitive advantage and USPs
- Evaluating green initiatives in terms of cost, timescale and business case
- Measuring and benchmarking
- Adopting the right green practices in master planning for eco-friendly design and energy-efficient construction and operations in warehouses.

ECO-FRIENDLY WAREHOUSE DESIGN

The warehouse design is an important aspect while planning an environment-friendly warehouse, as the design of the building will decide the future returns on environment and investment as savings in energy, water and materials. To begin with, the company will need to adopt environment-friendly construction methodology and materials like precast concrete construction method as it is estimated to reduce CO_2 emissions by 12 per cent annually. Also use of recycled materials procured and supported by the local economy that would ultimately reduce distance traveled to source materials should be adopted. The warehouse design should use insulated steel panels in exterior wall of facilities, which improves insulation of the facility by at least three times. Also, the use of Fiber Reinforced Plastic (FRP) or polycarbonate sheeting to about 20 per cent of total roof area, for natural light to come into the warehouses should be facilitated. "The use of turbo ventilators or air extractors on rooftops for natural ventilation of hot air is also an effective warehouse design strategy for energy conservation and temperature control. Renewable energy installations such as wind turbines and photovoltaic systems for utilizing the generated energy source for lighting, powering ventilations, air condition systems, irrigation of green areas bring down the energy budget of the warehouse building facility," adds Arya. The enhanced greenery and recreational areas on site as well as rooftops of facilities contributes towards the reduction of CO_2 emissions. Rainwater harvesting and recycling systems have become an intrinsic design feature for any building, whereby rainwater is collected in a retention tank, filtered and then utilized for watering plants, flushing and other needs. And to extend the technology-driven energy conservation measures, the installation of motion detecting sensor lighting systems for common areas can also be considered for saving energy costs.

IDEAL GREEN WAREHOUSE

Typically, warehouses are designed on the basis of value engineering but unfortunately it had never been done keeping in mind the issues of environmental sensitivity and sustainability. So, an ideal warehouse includes the building facility along with the operations including the entire storage system, material movements, etc. An ideal warehouse is one that is self-sufficient in meeting the needs for power and water, and designed to garner maximum carbon credits through environment-friendly designing. It should support maximum use of natural energy sources, thereby, cutting down the need for artificial energy.

For example, currently asbestos sheets are used for roofs that can actually turn carcinogenic due to abrasion. The new approach would ideally involve use of non-corrosive coatings to avoid the same and add more life to the roof. Such simple measures can actually change the way warehouses are designed today.

FUTURE OUTLOOK

Several MNCs in India have started demonstrating green consciousness and have started working on the ways to go green. Warehouse developers like Gazeley and Prologis, well-known for their green warehouses, are setting up operations in India. This is expected to spur large-scale developments in green warehousing in India.

"We are setting our warehouse parks on pan-India basis in all the major metros and important logistics points. Also our warehouses are going to be integrated, large-scale, infrastructure and supply chain efficient parks, enabling consolidation of operations and acting as regional hubs," says Arya. But, the key challenges are in terms of accurate measurement and benchmarking of emissions across the extended supply chain. There is also a lack of clarity as to what constitutes green benefits, besides just good practices and cost management. The future lies in shifting towards green warehouse as it puts a company above the others in its commitment towards the environment and taking that extra care to nurture and protect the fragile resources of the earth. LMI