

# As pressure mounts, real estate developers implement ‘green’ techniques in warehouses, DCs

## Realty check



Tejon Ranch Co.

Tejon Ranch spent \$360,000 to reduce the environmental impact of expanding a California facility.

**BY BILL MONGELLUZZO**

**W**hen Tejon Ranch Co. applied for permission to expand its warehouse and distribution complex north of Los Angeles to 20 million square feet, a key consideration was air pollution.

The industrial real estate company needed a way to offset the effects of air pollution from its operations so that the new DC didn't cause a net increase in pollutants. The answer turned out to be the dozens of diesel-powered oil and water pumps that are scattered throughout the San Joaquin Valley.

Tejon Ranch estimated the pollution that its warehouse operations would produce from trucks and other sources, and calculated the number of pumps that would have to be replaced to offset those emissions.

After asking the San Joaquin Air Quality Management District to val-

idate its findings, Tejon Ranch Co. wrote a check for more than \$360,000 to the regulatory authority to begin replacing the pumps with modern, low-emission equipment.

Tejon's mitigation strategy added a dimension to efforts by industrial real estate developers to make their warehouses and distribution centers more palatable to nearby communities and regulatory agencies. Just as seaports and rail terminals nationwide are encountering resistance to growth from neighboring communities, distribution centers likewise find themselves attracting public attention.

Industrial real estate developers for years have been responding to demands from governments and environmental regulators to cut energy consumption and reduce pollution. These demands have been especially pressing in Europe and Japan, where government agencies that grant development rights have

required construction of "sustainable" buildings.

Until recently, however, developers have focused their environmental efforts on office buildings, shopping malls and other commercial buildings. Traditional warehouses and distribution facilities had escaped scrutiny.

That scenario began to change about two years ago, particularly in California, where community organizations emphasized the health hazards resulting from facilities that generate truck traffic and use diesel-powered lift equipment.

In the face of such demands, industrial real estate developers are grappling with the need to reduce the environmental impact of their facilities in two areas — the warehouse structure itself and the operations that produce diesel emissions that have been linked to a number of respiratory and cardiovascular diseases.

The sustainable building techniques that developers have used in commercial structures do not always produce the same reductions in energy use and pollution when applied to warehouses and distribution facilities. Therefore, the industrial real estate industry's Leadership in Energy and Environmental Design (LEED) program that has been established for sustainable building construction does not apply in all cases to warehouses.

For example, roofing materials that reflect solar rays and reduce air conditioning requirements in an office building will not achieve the same reduction in energy consumption in a warehouse that is mostly open and therefore does not have air conditioning in the areas where freight is handled.

The office component of a traditional warehouse accounts for only 5 to 8 percent of the space, said Steve

Campbell, senior vice president of AMB Property Corp. AMB regularly installs reflective roofing in new warehouses and when replacing damaged roofs on existing warehouses to make the work environment more comfortable. For example, AMB used reflective roofing materials on 13 structures in South Florida that were damaged in a hurricane, Campbell said.

Lighting is an area where traditional warehouses can sharply reduce energy consumption. Installation of skylights and the use of fluorescent lighting can improve the efficiency of energy use by as much as 75 percent, said Arthur Hodges, a spokesman for ProLogis. Electricity is one of the largest cost components of warehouse operations.

Incorporating smart building design and utilizing energy-efficient heating and air conditioning are generally standard procedures when building new warehouses. Developers also incorporate other environmental measures such as recycling building materials, grinding and reusing asphalt, recycling rainwater and landscaping properties with plants that need less watering.

Industrial real estate developers shared these and other best practices at a recent industry forum in Philadelphia that focused on environmental issues. Internally, many developers have formulated and published their own green policy mission statements that formalize the use of sustainable building techniques as company policy.

"This isn't a fad. It's not going away," Hodges said.

The biggest problem that industrial developers will face in the years ahead is reducing the impact of truck traffic that is generated by their operations, even though they have no direct control over trucks in most instances.

Generally, developers will cooperate with other members of the supply chain, such as port authori-



Trucks can purchase electrical power by the hour and turn off their engines at Tejon's truck stop.

Tejon Ranch Co.

ties, motor carriers and shippers. The ports of Los Angeles and Long Beach, for example, have adopted a clean-air action plan that seeks to replace some 16,000 trucks that call regularly in the harbor with cleaner 2007-model trucks. Many of those haul containers from the harbor to local warehouses and distribution centers.

AMB contributes to reducing air pollution from trucks by emphasizing infill projects — that is, redeveloping land that has already been developed — close to the ports, Campbell said. Since the large industrial sites needed for 1 million-square-foot distribution centers are increasingly difficult to find, the day will come when developers have to build multistory distribution centers, he added.

Campbell said he always argues in favor of locating distribution facilities close to ports rather than 50 miles or more from the harbor where land is cheaper. He said the transportation costs and diesel emissions inherent in the longer distances negate the lower land costs.

When developers have control over trucking facilities, they are able to incorporate creative pollution-reduction measures. Tejon Ranch Co. operates a large truck stop and

fueling center at its industrial complex. At most rest areas, truckers keep their vehicles idling in order to operate their air conditioners and computers.

Barry Hibbard, vice president of commercial industrial development at Tejon Ranch, said it costs a trucker about \$2.90 an hour in fuel costs when idling, so Tejon has installed electrical power at the truck stop and charges \$1.95 an hour. This commercial incentive also results in a noticeable reduction in pollution.

In many instances, measures that reduce pollution also produce economic benefits, such as reduced fuel consumption and lower energy costs. Quantifying these benefits will give industrial real estate developers hard numbers they can bring to the bargaining table when negotiating a higher lease rate for an environmentally friendly property or when seeking investor support for their projects. ♦

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