

**APTA Sustainable Source Article**  
**January 21, 2008**

**Transit Agencies Work Toward Going Greener**

While many U.S. public transportation agencies are taking steps toward implementing sustainable practices, some are going further, implementing a comprehensive approach toward "going green." Here is a sample of ways in which transit systems are putting their vision into practice.

You have to look at integrating this holistically," said Tim Lindholm, director of capital projects, Facilities-Operations, with the Los Angeles County Metropolitan Transportation Authority. "You have to look at everything--from the type of technology you use to operate buses to construction to an agency's procurement processes, such as buying recyclable materials."

Los Angeles Metro began by making such changes as using recycled office paper and investing heavily in water-saving equipment, Lindholm said. A more intensive change now underway is the installation of "arguably more solar panels than any other transit agency around," about 3,200 panels. While this can be a costly technology at first, he stressed that "the payoffs are good--you cut your power immediately."

Lindholm said solar technology is a necessary investment to enable MTA to start cutting its carbon dioxide emissions. The authority's next sustainability plan is the largest solar project it has ever attempted: converting a central maintenance facility that covers 25 acres of property with a yearly electric bill of \$1.1 million.

"We're going to totally green that facility. We're changing out 4,000 lights and all the compressors and the heating ventilation and AC equipment to put in efficient equipment, and we're putting in one megawatt of solar panels--and that will cut the electrical bills at this facility in half," he said.

MTA is accomplishing this as a public-private partnership with a vendor that will also provide the financing. "The way we designed the deal," said Lindholm, it's environmentally responsible and socially responsible, but it's fiscally responsible as well."

The New York Metropolitan Transportation Authority also is working toward sustainability. "People are beginning to realize that great rapid transit systems are not only key to economic prosperity, but also a provider of climate stabilization sources," said Ernest Tollerson, N.Y. MTA's director, policy and media relations. "If we're going to decrease the amount of CO2

pumped into the atmosphere, you need a whole set of strategies to reduce it--and one of those big strategies is getting people as much as possible to use rapid transit."

One place where the public can see this sustainability agenda "in action," Tollerson said, is MTA New York City Transit's Stillwell Terminal in Coney Island, where a number of lines terminate. Its roof is a combination of glass and solar panels; that array of solar cells provides some of the baseload of that station. "It is not the typical terminal," he said. "It's quite beautiful, a wonderful piece of architecture."

A less visible example of environmental operation is the MTA's Corona maintenance shop where subway cars are overhauled. This high-tech sustainable facility has the advantages of natural ventilation and natural daylighting. In addition, the roof was designed with a certain pitch so the rainwater drains to a 40,000-ton tank under the shop, and that water is used to clean the subway cars. A fuel cell on the roof provides part of the baseload of electricity for the shop.

Joe Smith, in charge of the entire bus network for NYC Transit, is starting another sustainable effort: using nitrogen to fill bus tires. Nitrogen-filled tires maintain a more constant air pressure level, he said, meaning that the tires will require fewer refills and subsequently, less maintenance. In addition, the consistency in air pressure should improve the average miles per gallon for New York's buses and increase the life span of each tire, leading to savings in tire purchase costs and landfill space.

As a further part of its sustainability effort, last September the MTA formed a Sustainability Commission, chaired by Jonathan F.P. Rose, which is charged with outlining a sustainability master plan by Earth Day 2008. "The commission will build on the exciting green initiatives we've already completed to make sustainability a permanent part of the MTA's DNA," said MTA Executive Director and Chief Executive Officer Elliot G. Sander.

In Salt Lake City, the Utah Transit Authority took its first step toward sustainability with employee training on the way to achieving ISO 14001 certification on environmental quality. More recently, UTA Chief Executive Officer John English said, "We changed our procedure for idling buses--and saved a ton of pollutants by doing that." UTA also initiated new procedures in its wastewater treatment system.

English noted that the initial training taught the employees to be on the lookout constantly for all opportunities to improve UTA's environmental position.

One visible example of UTA's holistic approach is the Salt Lake City Intermodal Terminal, built jointly with UTA and Salt Lake City. It's a converted old warehouse that uses a great deal of

natural light and a lot of glass, has water conservation landscaping, and traps daytime heat to help heat the building.

"Right now we're heavily involved in energy conservation initiatives in the company, trying to save energy. We have come up with a sustainability measure--energy investment per rider--to measure how much energy in BTUs it takes to deliver public transit services to our riders," said Grantley Martelly, regional general manager, central business unit. "Many times people either measure the rolling stock or the fixtures, but the commuters and customer service are as important as the people driving the stock."

UTA has held two sustainability conferences and is planning another this spring, which will be more focused on transit-oriented development as a sustainability tool for communities.

"We have a long way to go," said English, "but we're making a dent in it. In the last five to seven years, our transit ridership has grown at twice the rate of our population. Particularly, rail is a much more sustainable transportation mode than the private automobile," he added. "We're investing hugely in that regard."

Palm Tran in West Palm Beach, FL, is currently implementing a series of "green" initiatives, including filling bus tires with nitrogen (as in New York City) and converting its entire 138-bus fleet to operate on biodiesel.

Biodiesel is a cleaner-burning fuel than traditional diesel that substantially reduces pollutant emissions, such as air toxins and hydrocarbons. It can be blended with regular diesel or be used by itself; Palm Tran will use up to 20 percent biodiesel in its fueling mix.

When asked why Palm Tran is making this change, Executive Director Chuck Cohen cited "the impact it would have on the environment...and it turned out to be a little bit of a cost savings." When the agency originally considered the switch, he said, the new fuel actually "was a little bit more expensive" than traditional diesel, but that only reinforced that money was not the issue.

Florida DOT provided a grant to pay the startup costs for the nitrogen pilot program. Palm Tran will gather metrics by using nitrogen-filled tires in one group of buses and regular air in the tires of another group, and if the study supports the viability of using nitrogen, Cohen will install the system on all the buses.

Another of the agency's green efforts is the installation of an air purification system with black light technology on 30 buses, with the goal of providing a cleaner air environment inside the vehicles.

Following the opening of a new bus wash in Palm Tran's South County facility in 2007, the system will install another this year in its North County facility; both facilities use recycled water. Florida is experiencing a water shortage--according to Cohen, rainfalls in the last two years are the lowest the state has recorded in the past century--so the use of recycled water will help minimize the agency's impact on water use. "It's a good thing to be doing, and it's something that's been in our plan for a couple of years," he said.

The Capital District Transportation Authority of Albany, NY, has begun using 5 percent soybean-based biodiesel fuel in its buses, and has announced its plan to convert its entire 326-vehicle fleet to biodiesel by year's end. CDTA statistics show that the system's use of the B5 blend will save an estimated 125,000 gallons of diesel fuel for the year while also lowering the region's carbon dioxide emissions by approximately 1,000 tons annually.

"Making our system more environmentally responsible is part of CDTA's mission," said CDTA Chairman David Stackrow. "Converting the region's bus fleet to biodiesel fuel is a major step toward reducing pollution and the impact of global warming."