



DOT has replaced conventional incandescent bulbs in pedestrian and traffic signals with light emitting diodes (LED) at over 10,700 signalized intersections, saving the City approximately 30,000 metric tons of CO² annually.

GREENING

Greening the Department From Top to Bottom

New York City has an ambitious agenda for greening municipal operations, including cutting energy consumption and greenhouse gas emissions from the City's municipal buildings and operations by 30% by 2017. NYCDOT will play a crucial role in shrinking New York City's environmental footprint. As one of the largest City agencies, the choices we make about the materials used both in our offices and on our city streets can have an enormous impact. DOT is exploring ways to green all aspects of our operations, including our vehicle fleet, facilities, and thousands of streetlights and signals. DOT will also coordinate with other agencies to control storm water runoff from city streets by improving drainage, using more porous streetscaping materials and expanding opportunities for planting.

Mayor Bloomberg has also outlined an ambitious plan to reduce the city's overall greenhouse gas emissions by 30% by 2030. DOT will play an important role in this citywide initiative by making it easier for New Yorkers to choose more sustainable modes of transportation and reduce the use of private vehicles.

Today's Streets Yesterday's Pavement

Asphalt used in street is a mixture of hard, sharp rock and asphalt cement, a petroleum product. NYCDOT's asphalt recycling program replaces some of this material with pavement removed from the street during resurfacing projects.

New York City's nation-leading use of recycled asphalt pavement makes municipal asphalt production an unsung but extraordinarily green operation. The city's current asphalt production, featuring high recycled content, provides the following environmental benefits:

SAVED:
174,000 tons
of milled asphalt
from landfilling per year.

AVOIDED:
840,000 barrels of oil
per year required to produce
new asphalt cement.

AVOIDED:
about 321,000
local truck miles
traveled per year
reducing diesel emissions, congestion
and other truck impacts such as noise
and street and highway wear-and-tear.
Replacing conventional asphalt with
recycled asphalt also reduces the need
to import asphalt cement and reduces
the amount of pavement millings that
must be trucked away for landfilling.

GREENING POLICIES

Reduce emissions from DOT fleet

NYCDOT operates one of the largest vehicle fleets in the city, including light- and heavy-duty vehicles and ferries. DOT has an active alternative fuels program, replaces old vehicles with those with the highest environmental ratings and is installing cleaner engines in ferries and other heavy equipment. DOT will expand these programs and stay on the cutting edge of new pollution-reduction technologies.

Incorporate best stormwater management practices into street designs

DOT is a member of the City's Best Management Practices (BMP) Task Force, working with other agencies to green the public right-of-way and improve environmental performance of our streets and other public space. We will help pilot proven BMPs including improved tree pit designs to increase storm water retention and the creation of vegetated swales along parkways.

Reduce DOT's energy consumption

In accordance with City laws, DOT will implement policies requiring that purchases of office equipment, electronics, appliances, and lighting meet high energy efficiency standards and are used to maximize energy savings.

Reduce employee use of light-duty vehicles

DOT will implement policies to encourage its employees to be role models for all New Yorkers by using the most environmentally friendly modes of transportation.

Maximize energy efficiency of all street lighting and signals

DOT lights NYC streets, bridges, and signals with nearly 250,000 light bulbs. We are switching to more energy efficient lighting to help reduce the City's greenhouse gas emissions and save taxpayer dollars over time.

Maximize use of recycled asphalt

Recycled asphalt pavement (RAP) reduces pollution, congestion, and petroleum consumption associated with asphalt cement transport and production. DOT currently uses 40% RAP at the Hamilton Avenue asphalt plant, making our agency the largest RAP user in the nation. We will increase the capacity of the Hamilton Avenue plant to 50% recycled content and build a second asphalt plant in Queens to further reduce air pollution and greenhouse gas emissions.

Incorporate best practices for waste handling and spill prevention

NYCDOT will implement procedures and policies to minimize waste streams. Where waste minimization at its source is not possible, recycling will be utilized as the preferred alternative to other forms of disposal. Facility-specific training will be conducted to educate personnel on the proper handling and maintenance of wastes to reduce the potential for spills.

Lightening Our Greenhouse Gas Emissions

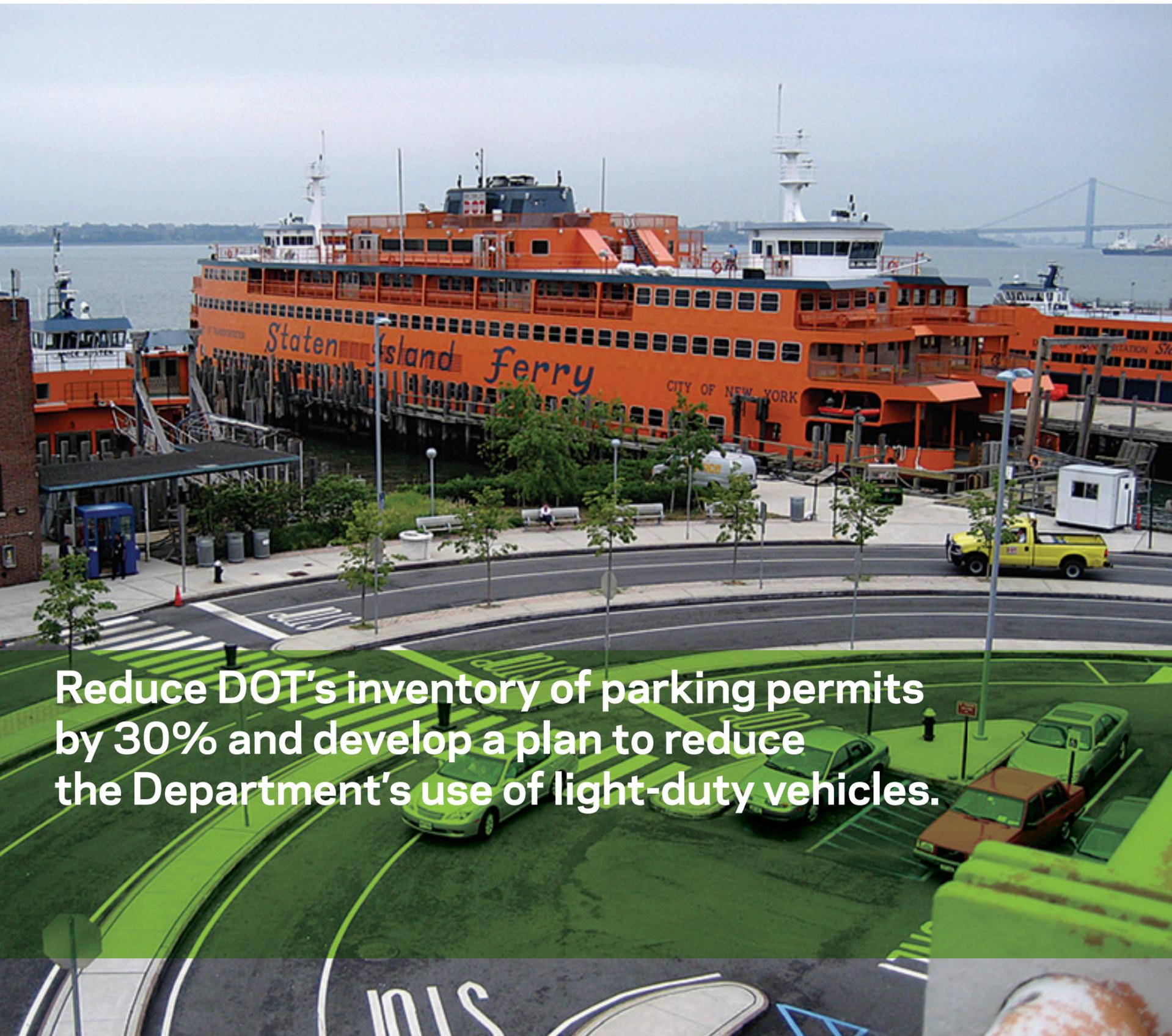
DOT will significantly contribute to the City's goal of reducing its operational energy profile by 30% through its green lighting initiative. We will reduce wattage in the nearly 250,000 bulbs on streets, highways and the East River bridges. All told, this will result in electricity savings of 71,299 megawatt-hours per year and commensurate greenhouse gas emission reductions.



DOT's Green Buildings

NYCDOT is greening its buildings. The new maintenance building in DOT's Sunrise Yard in Ozone Park will reduce energy consumption by 65% over a standard design through state-of-the-art lighting and HVAC, while site design reduces stormwater run-off and the impact on the neighborhood's residents. The facility, designed by New York City Dept. of Design and Construction was the Grand Prize Winner of the 2005 Green Building competition. DOT is also greening its ferry terminals. At Whitehall we have installed a photovoltaic array, rated at about 50,000 watts that will produce about 65,000/per year (see left). At St. George DOT is creating a living roof that will use a rainwater collection and irrigation system to capture stormwater to sustain local flora on an 18,000 square-foot roof-top garden.

Solar panels at Whitehall Ferry Terminal.



Reduce DOT's inventory of parking permits by 30% and develop a plan to reduce the Department's use of light-duty vehicles.

GREENING ACTIONS

Better manage storm water run-off from streets

- Coordinate with DEP to create streets that detain a maximum volume of storm water.
- Increase the use of permeable surfaces and porous pavements to decrease runoff.
- Capture more stormwater through the Greenstreets program with Parks Dept.
- Allow for connected tree pits to provide better surface drainage.
- Increase capacity for curb replacement and curb openings to increase storm water capture.

Reduce vehicle emissions from DOT fleet

- Expand alternative fuels program.
- As part of a normal replacement/upgrade cycle, incorporate clean fuel/high MPG/clean engine technology into all DOT vehicles.
- Implement Staten Island Ferry clean fuel strategy and operate all Staten Island passenger ferries with ultra-low sulfur biodiesel.
- Continue installation and upgrade of emissions reduction technology, including diesel oxidation catalysts on all Staten Island Ferry passenger ferries.
- Develop comprehensive clean-burning fuel policy for all private ferry operations requesting permits and licenses from DOT.

Reduce DOT's energy and resource consumption

- Conduct annual audits and generate reports for all DOT facilities to maximize reduction of electricity use, air pollution, and water use.
- Cease purchases of bottled water at the new 55 Water facility.
- Explore the feasibility of switching to non-toxic cleaning supplies at 55 Water Street and other DOT facilities as building maintenance contracts permit.
- Activate photovoltaic system at the Whitehall Ferry Terminal and maintain "Living Roof" at the St. George Ferry Terminal.

Reduce employee use of light-duty vehicles

- Reduce DOT parking permits by 30%, and develop a plan to reduce the Department's light-duty vehicle fleet via a vehicle pool or car-sharing system.
- Adopt an at-work agency travel policy urging DOT employees to use the most sustainable possible method of work-related transportation, according to this hierarchy:
 - Most sustainable
 - ↑ Conference call/travel avoidance
 - Walk/bicycle
 - Subway/train
 - Bus/Ferry
 - Shared car
 - Taxi
 - ↓ Single-occupant car
 - Least sustainable
- Identify innovative technologies to track parking placard use.

Maximize energy efficiency of all street lighting and signals

- Reduce the wattage of 250,000 light bulbs on streets, highways, and East River bridges.

Maximize use of recycled asphalt

- Win NY State Dept. of Environmental Conservation approval for use of recycled asphalt pavement (RAP) as fill.
- Achieve 50% RAP content in all in-house asphalt production.
- Require all vendors to use 25% RAP in DOT-contracted asphalt production.
- Develop environmentally sound and cost-effective strategies for rail and marine transfer of excess RAP to interested local and regional municipalities.
- Open second DOT asphalt plant.

Pollution prevention

- Implement spill prevention control and countermeasure plans at 14 NYCDOT locations.
- Conduct location specific training to emphasize proper waste management and spill prevention practices.
- Division of Ferries will participate in maritime industry forums and continuing education to stay up-to-date on environmental protection and spill response technologies and best practices.