

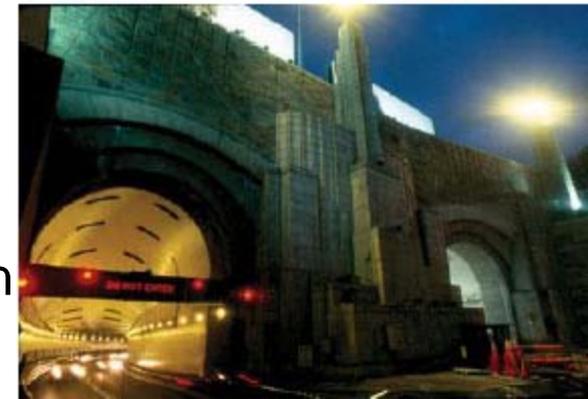
Energy Conservation Improvements

Committee on Construction

February 9, 2012

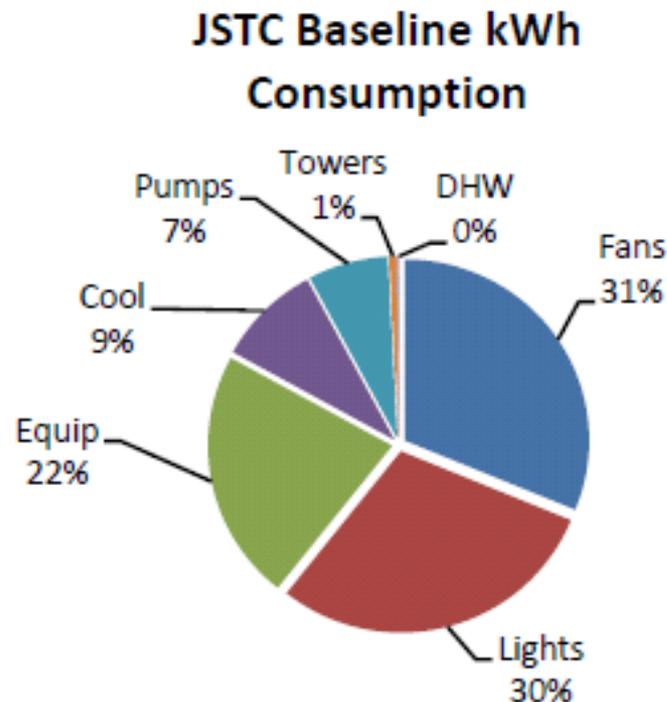
Energy Conservation Improvements

- Port Authority Bus Terminal/Lincoln Tunnel
PATH Journal Square Transportation Center
Harrison Car Maintenance Facility
- Multi-Facility Guaranteed Energy Savings Program
 - Constellation Energy
 - Johnson Controls, Inc.
- Combined guaranteed maximum cost of \$19.2 million
- Guaranteed energy consumption reductions of:
 - approximately \$2 million per year
 - aggregate of \$31 million over the projects 15-year term



Program Structure

- Energy Service Companies performed preliminary assessments of four facilities
- Strongest proposal for each facility was selected and work orders executed for Investment Grade Audits



Program Structure

- Energy Service Companies (ESCO)
 - perform services related to the audit of improvements at PA/PATH facilities
 - identify energy conservation improvements
 - design, manage construction and commission improvements
 - guarantee energy consumption reductions
 - assume technical and performance risk of project
- Port Authority selects which projects will be implemented at its facilities
- Consumption reductions measured through industry-standard protocols

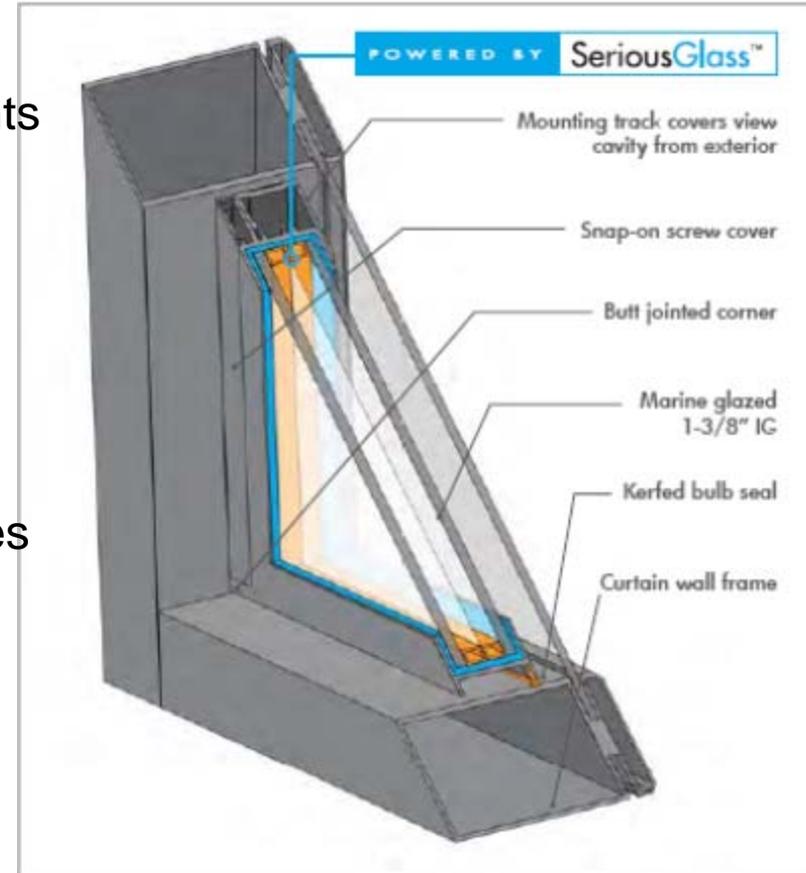
Project Scope

PATH (Journal Square/Harrison Maintenance Facility):

- interior and exterior lighting upgrades
- tower window upgrades
- building heating/cooling system improvements
- lighting and HVAC controls upgrades
- transformer replacements
- compressed air system repairs
- solar photovoltaic system installations
- water conservation measures

Port Authority Bus Terminal/Lincoln Tunnel

- building interior and exterior lighting upgrades
- roadway lighting upgrades
- new lighting controls and sensors
- building envelope improvements
- steam pipe insulation,
- new snow melt system controls
- building envelope improvements



Project Funding Plan

- PA will pay for project implementation from operating funds for Phase I
- Annual utility and operating and maintenance savings attributed to reduced energy consumption will offset the cost of the projects, and yield ongoing savings for the PA.
- ESCOs are responsible for identifying and pursuing grants/incentives available to reduce the total cost of improvements.



Environmental & Economic Benefits

- Annual Greenhouse Gas (GHG) emissions reductions of approximately 5,000 tons of carbon dioxide equivalent – comparable to 560,000 gallons of gasoline saved annually.
 - \$720,000 in avoided GHG offset purchases over the 15-year guarantee period
 - Replacing older equipment, with higher-efficiency, longer-lived equipment, thus reducing material usage and cost
 - Improvements support energy efficiency and clean energy in the region
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- 120 job years
 - \$8.9 million in wages
 - \$24.1 million in economic activity

A screenshot of a web browser displaying a "CARBON CALCULATOR" page. The page is titled "CARBON CALCULATOR" and features logos for "THE PORT AUTHORITY OF NY & NJ", "CANTOR CO.", and "NobisEnergy". The main content area is for a "BUS" trip calculation. It shows the following details:

- 1. Trip Type:** One time (selected), Round trip.
- 2. Mileage:** From Terrytown, NJ to Penn Station, NY, NY. Total CO2: 0.004 tons, 7,061.48 total miles.
- 3. Frequency:** One time (selected), Weekly, Monthly, Yearly.

Buttons for "Save", "Continue", and "Offset now!" are visible at the bottom. A sidebar on the left lists categories like "Airports", "Bus Terminals", "RAIL", and "PLANE". A map on the right shows the route between Terrytown, NJ and Penn Station, NY, NY.