

Energy Conservation Improvements

Committee on Operations

December 10, 2014

Energy Conservation Improvements – Phase IV Tunnels, Bridges & Terminals



- Tunnels Bridges & Terminals multiple locations: George Washington Bridge, Holland Tunnel, Lincoln Tunnel, Outerbridge Crossing, and Goethals Bridge
- Multi-Facility Guaranteed Energy Savings Program
- Guaranteed maximum cost of \$25.8 million
- Recover all project costs within 11 years
- Guaranteed energy consumption reductions of:
 - approximately \$2 million per year
 - aggregate gross savings of \$52.8 million, net savings of \$27 million over average useful life of the improvements (20 years)

Project Scope – Phase IV

Tunnels, Bridges & Terminals

- Extensive lighting upgrades of difficult-to-access locations:
 - Upper level, lower level, Palisade Interstate Parkway Helix, and Trans-Manhattan Expressway of the George Washington Bridge
 - High-mast parking lot lighting
 - Street lighting maintained by the PA
- Interior lighting improvements
 - Goethals Bridge administration building
 - Outerbridge Crossing administration building
 - Holland Tunnel NY vent buildings
 - Lincoln Tunnel NY and NJ vent building
- Mechanical upgrades
(control systems upgrades, boilers, chillers, pumps, coils, fans, and air-handling unit replacements)
 - George Washington Bridge
 - Holland Tunnel
 - Outerbridge Crossing
 - Goethals Bridge



Project Funding Plan

- As with Phases I, II and III, PA will fund project implementation
- 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, Phases IV

- Annual Greenhouse Gas (GHG) emissions reductions of approximately 3,000 tons of carbon dioxide equivalent – comparable to 338,000 gallons of gasoline saved annually.
- Aligns PA with the objectives of Executive Order 88 in New York State, which requires State Entities to reduce electricity consumption by 20 percent by 2020 to further the “mutually compatible goals of environmental protection, energy security, and economic growth.”
- Utilizes the energy performance contracting approach outlined for State agencies in the New Jersey Energy Master Plan
- Staff analysis indicates that this project will result in:
 - 90 direct job years
 - \$8.4M in direct payroll wages
 - \$37M in economic activity



Cost/Schedule

Requested Authorization:

- Energy Conservation Improvements, Phase IV: \$25.8 million
- Contract Award: Constellation Energy
- Expected start date: February 2015
- Expected completion date: November 2016