

Newark Liberty International Airport Energy Conservation Improvements

Committee on Operations

April 30, 2015

Energy Conservations Improvements – Phase 5 Newark Liberty International Airport



- Newark Liberty International Airport
- Multi-Facility Guaranteed Energy Savings Program
- Guaranteed maximum cost of \$14.3 million
- Recover all project costs within 12 years of construction
- Guaranteed energy consumption reductions:
 - Average of \$1.2 million per year
 - Aggregate gross savings of \$26.5 million, net savings of \$6.4 million over a 23-year period (3-year installation + 20-year average useful life of the improvements.)

Project Scope – Phase 5

Newark Liberty International Airport

- Extensive lighting upgrades of difficult-to-access locations
 - Parking Lots E, F, P1 to P4, P6
 - Terminals A & C
 - South Cargo Area
 - Areas surrounding Buildings 1, 79, & 80 and Northeast Corridor Station
 - Street lighting maintained by the PA
- Interior lighting upgrades
 - Northeast Corridor Station
- Mechanical upgrades
(control systems upgrades, boilers, chillers, pumps, coils, fans, and air-handling unit replacements)
 - Building 49 - boilers
 - Building 80 - chillers, pumps, air-handling units, & HVAC controls
 - Terminal B/FIS - HVAC controls
 - Terminal C Walkway - chiller



Project Funding Plan

- As with Phases 1 through 4, PA will fund project implementation
- Annual utility and operating and maintenance savings attributed to reduced utility 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.



ESCO Program Summary

Program	Facility	ESCO	Annual Energy Savings As of 3/26/15	Guaranteed Annual Energy Savings	Annual Greenhouse Gas Emissions Reduction (CO2e)	Completion
Phase I	PABT/LT	Constellation	\$856,294	\$814,877	3,000 tons	95%
Phase I	JSTC/HCMF	Johnson Controls	\$283,195	\$554,533	2,000 tons	60%
Phase II	EWR/SWF	Honeywell	\$951,993	\$1,150,200	4,200 tons	90% / 80%
Phase III	JFK	Johnson Controls	\$0	\$467,368	2,000 tons	15%
Phase IV	TB&T	Constellation	\$0	\$1,074,618	3,000 tons	5%
Phase V	EWR	Honeywell	\$0	\$634,013	2,800 tons	
		TOTAL	\$2,091,482	\$4,695,609	17,000 tons	

Environmental & Economic Benefits, Phase 5

- Annual Greenhouse Gas (GHG) emissions reductions of approximately 2,800 tons of carbon dioxide equivalent – comparable to 315,000 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 December 2011 New Jersey Energy Master Plan
- Staff analysis indicates that this project will result in:
 - 50 direct job years
 - \$5.1M in direct payroll wages
 - \$22.7M in economic activity



Project Cost/Schedule

- Energy Conservation Improvements, Phase 5: \$14.3 Million
- Contract Award: Honeywell Building Solutions
- Expected start date: June 2015
- Expected completion date: April 2018