05-S-1376
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Reports

conEdison
a conEdison, inc. company

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February 27, 2007

VIA OVERNIGHT MAIL

Honorable Jaclyn A. Brilling
Secretary
State of New York
Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

Re: Case 05-S-1376 – Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Steam Service.

Dear Secretary Brilling:

The Commission's Order Determining Revenue Requirement and Rate Design, issued on September 22, 2006 in the above-referenced proceeding, provides that the Company will file: (1) its annual report on plant availability for each steam production unit for winter and summer periods; (2) its annual report on steam capital expenditures; and (3) its annual report on steam operation and maintenance expenditures.

Enclosed please find an original and five copies of these reports. Please contact me if you have any questions regarding this matter.

Very truly yours,

Richard B. Miller

cc: Active Parties (via e-mail)

Case 05-S-1376 - Con Edison Report on Availability for Each Steam Production Unit for the 2006 Winter and Summer Periods

Station	Unit	Winter Period 2006 Availability	Summer Period 2006 Availability
East River	B-10	74.5	97.4
	B-20	89.1	79.7
	B-60	58.9	64.3
	B-70	75.9	87.7
	B-115	96.6	85.6
	B-116	96.2	84.1
	B-117	91.3	56.9
	B-118	87.1	69.6
	B-119	96.9	84.2
East River Station		85.2	78.8
Hudson Ave	B-71	99.5	79.5
	B-72	91.1	74.2
	B-81	100.0	74.1
	B-82	100.0	64.4
Hudson Ave Station		97.7	73.0
59th Street	B-114	66.9	61.3
	B-115	70.8	75.3
	B-116	82.8	96.2
	B-117	81.6	95.2
	B-118	81.2	92.8
59th Street Station		76.7	84.2
74th Street	B-120	83.2	75.6
	B-121	76.4	67.0
	B-122	81.8	75.7
	B-1	92.6	97.2
	B-2	92.6	97.2
	B-3	92.6	97.2
	B-4	92.6	97.2
	B-5	92.3	97.2
	B-6	92.6	97.2
74th Street Station		88.5	89.1
60th Street	B-1	96.4	61.2
	B-2	96.4	61.2
	B-3	96.4	61.2
	B-4	96.4	61.2
	B-5	96.4	61.1
	B-6	96.4	59.7
60th Street Station		96.4	60.9
Ravenswood Steam	B-1	57.3	82.1
	B-2	81.6	89.0
	B-4	93.7	94.4
Ravenswood Steam Station		77.5	88.5

Notes:

Winter Period = 1/1/06 - 4/30/06 and 11/1/06 - 12/31/06

Summer Period = 5/1/06 - 10/31/06

Availability = Available Hours / Period Hours

(a boiler on Reserve Shutdown is considered available)

Case 05-S-1376 Con Edison 2007 Steam Production Capital Programs and Projects Report

(000's)

	2006 Forecast	2006 Actual	Project Identified in Rate Case - Y or N	If a Project, is it complete and in service - Y or N?	FOR ALL PROJECTS: provide total cost to date (through 2006)	Explanations for Any Variation of greater than 15%	Project Status
Environmental							
Various Locations - Blanket for EH&S Projects	625	1,084	Y	On-going Program		Includes Opacity Meters at HA - $218 and Fire Sprinkler System at 74th - $210, which are carry overs from 2005.	
Spill Containment - Secondary Containment (74th St)	936	350	Y	N	352	Kerosene spill discovered. Project delayed until remediation work was determined.	To be completed in 2007
Replace 3 Oil-filled Transformers (74th St)	500	683	Y	Y	1,331	Additional parts required to repair misaligned ductwork.	Project complete - in service
Emergency Lighting - SW House and Annex (Hudson Ave)	200	61	Y	Y	791	Lower cost due to work scope reduction.	Project complete - in service
Total Environmental	**2,261**	**2,178**					
Capacity							
Microturbine Installation (74th St)	-	566	N	N	566	See New Project data attached.	To be completed in 2007
Other	-	(3)					
Total Capacity	**-**	**563**					
Reliability							
Elevator #4 Refurbishment (74th St)	300	376	Y	Y	376	Additional repairs identified once project construction started.	Project complete - in service
Provide Diesel Supply to MOV and Controls (74th St)	420	109	Y	Y	403	Project accelerated in 2005 due to post blackout requirements.	Project complete - in service
Rebuild Boiler 120 ID Fans (74th St)	950	(82)	Y	N	469	Postponed to 2008 to accommodate higher priority projects.	To be completed in 2008
HP Feed Pumps Flow Monitoring (74th St)	325	4	Y	N	101	Postponed to 2009 to accommodate higher priority projects.	To be completed in 2009
Upgrade 13.8kv Feeder 24M02 (74th St)	400	629	Y	Y	629	Work scope increased to include series reactors.	Project complete - in service
Replace 13.8kv GE Magnablast Breakers Due to D-222 Fire (74th St)	1,250	325	Y	N	331	Delayed for equipment manufacturing delays and changes in equipment design.	To be completed in 2008
Modernize PB Controls (74th St)	1,500	-	Y	N		Postponed to 2007/2008 to accommodate higher priority projects.	To be completed in 2007
Replace Federal Pacific Breakers A3-3 and A5-3 (74th St)	200	554	Y	Y	1,094	Project delayed in 2005 - additional work required in 2006.	Project complete - in service
PB Fans Replacement - Phase 2 (74th St)	200	144	Y	Y	695	Construction labor costs were less than originally estimated.	Project complete - in service
Replace PB Air Compressors (74th St)	650	454	Y	Y	454	Construction labor costs were less than originally estimated.	Project complete - in service
Chemical System Monitoring (74th St)	400	-	Y	N		Postponed until completion of new water treatment facility in 2008.	To be completed in 2008
PB 1 Retube (74th St)	180	-	Y	N		Postponed and minor maintenance completed to correct leaks.	To be completed in 2008
Modernize PB Controls - 60th St (74th St)	1,500	3,079	Y	N	3,913	Original estimate did not include installation labor.	To be completed in 2007
PB Fan Replacements - 60th St - Phase 1 (74th St)	750	307	Y	Y	1,729	Construction labor costs were less than originally estimated, and more construction completed in 2005 than originally anticipated.	Project complete - in service
Chemical System Monitoring - 60th St (74th St)	150	721	Y	N	721	Original estimate did not include installation labor.	To be completed in 2007
Feedwater Piping Upgrade (East River)	1,060	-	Y	N		Postponed to 2007 to accommodate higher priority projects.	To be completed in 2007
Upgrade Obsolete 2.4kv Switchgear (59th St)	663	387	Y	Y	387	Vendor bids for project were lower than originally anticipated.	Project complete - in service
#4 Deaerator Replacement (59th St)	1,000	1,057	Y	Y	1,118		Project complete - in service
Installation of Water Treatment Equipment (59th St)	9,000	2,184	Y	N	2,602	Postponed to 2008/2009 to better define technical issues for permanent solution. Interim solution installed.	To be completed in 2009
Chemical System Monitoring (59th St)	200	730	Y	N	730	Original scope of project expanded to incorporate additional parameters to be measured to ensure good water quality.	To be completed in 2007
Close Loop Cooling Piping Replacement (59th St)	300	519	Y	N	544	Project originally scheduled for completion in 2007, but accelerated and majority of work completed in 2006.	To be completed in 2007
Main Pier 98 Cathodic Protection (59th St)	760	371	Y	Y	489	Work completed - equipment purchased in 2005 and bids were lower than anticipated.	Project complete - in service
Replace 114 Superheater (59th St)	1,200	972	Y	Y	1,134	Long-lead equipment purchased in 2005 - overall costs in line with estimates.	Project complete - in service
Upgrade Annex Boiler Controls FSSS/BMS (59th St)	750	-	Y	N		Postponed to 2007/2008 to better define scope of work and to resolve technical issues.	To be completed in 2008
Relocate 82 and 83 FD Fans (Hudson Ave)	800	1,295	Y	Y	1,823	Additional cost due to increase in structural scope required to attach new fans to existing ductwork.	Project complete - in service

						costs due to additional scaffolding requirements, piping, rigging of	
Feedwater System Upgrade (Deaerator, BFPs, Piping (Hudson Ave)	4,450	7,056	Y	N	8,845	major components (deaerators and pumps) and longer conduit runs.	To be completed in 2007
Install FD Fan Starters (Hudson Ave)	250	633	Y	Y	633	Increased scope to integrate controls with new LPB controls project.	Project complete - in service
ID Fan Upgrades - Pole Changes and Bearing Monitoring System (Hudson Ave)	1,400	381	Y	N	381	Postponed to 2007 to accommodate higher priority projects.	To be completed in 2007
Burner Throat Upgrades - 2 Boilers (Hudson Ave)	770	806	Y	Y	1,163		Project complete - in service
Chemical System Monitoring (Hudson Ave)	205	-	Y	N		Postponed to 2008 to accommodate higher priority projects.	To be completed in 2008
New LPBH Controls (Hudson Ave)	500	1,191	Y	N	1,191	Increase in scope to upgrade control of additional equipment resulting in additional control modules, conduit and cable lines.	To be completed in 2007
Upgrade LP Ignitors (Kerosene, 24 Guns, BMS) (Hudson Ave)	1,600	361	Y	N	1,697	Completed one boiler and postponed remaining boilers due to higher priority projects.	To be completed in 2007
4 BFP and Turbine Replacement (Ravenswood)	800	1,389	Y	N	2,197	Additional work required to relocate piping and electrical conduits due to interferences identified during construction.	To be completed in 2007
Upgrade Controls (Ravenswood)	750	-	Y	N		Postponed to 2008 to accommodate higher priority projects.	To be completed in 2008
Replace Deaerator (Ravenswood)	-	182	Y	Y	1,619	Carry over from 2005 due to performance not originally met.	Project complete - in service
Tube Replacement (East River)	-	737	N	Y	737	See New Project data attached.	Project complete - in service
Power Supply Enhancements (East River)	-	324	N	Y	324	See New Project data attached.	Project complete - in service
Maintenance Enhancements (East River)	-	551	N	Y	551	See New Project data attached.	Project complete - in service
Replacement of Air Compressors (East River)	-	251	N	N	481	Carry over from 2005 - system in test phase. See New Project data attached.	To be completed in 2007
Install Jib Cranes (East River)	-	205	N	N	205	See New Project data attached.	To be completed in 2007
Install Piping Enhancements (East River)	-	260	N	Y	260	See New Project data attached.	Project complete - in service
MSSO = M1-M4 Mains A/B Valves, MOVs & Desup Valves & Steam Temp Control (Hudson Ave)	-	557	Y	N	557	Projects accelerated due to excessive damage to 2 liners which had to be addressed in 2006. Remaining liners will be completed in 2007.	To be completed in 2007
B Board and L&P Distribution Panels (Hudson Ave)	-	184	Y	Y	799	Carry over from 2005. Additional electric load required to be relocated to facilitate the new feedwater system.	Project complete - in service
Verizon Conduit Installation (Hudson Ave)	-	433	N	N	433	See New Project data attached.	To be completed in 2007
Replace 2 Valves (59th St)	-	343	N	Y	343	Originally Small Capital project - valve costs were higher than anticipated. See New Project data attached.	Project complete - in service
Replace Boiler 115 Superheater Tubes (59th St)	-	168	Y	Y	1,607	Carry over from 2005.	Project complete - in service
Install 2 New Motor Control Centers (59th St)	-	129	N	Y	562	Carry over from 2005. See New Project data attached.	Project complete - in service
Annex Control Feedwater Regulators (59th St)	-	128	N	Y	602	Carry over from 2005. See New Project data attached.	Project complete - in service
Sendout Enhancement (59th St)	-	1,395	N	N	1,394	See New Project data attached.	To be completed in 2007
PB Modifications - 60th St (74th St)	-	387	N	Y	387	See New Project data attached.	Project complete - in service
Replace Butterfly Desuperheater (74th St)	-	506	N	N	506	See New Project data attached.	To be completed in 2007
Replace 120 Air Heater Baskets (74th St)	-	275	N	Y	275	See New Project data attached.	Project complete - in service
Replace 121 Air Heater Baskets (74th St)	-	706	N	Y	706	See New Project data attached.	Project complete - in service
Other	-	735					
Total Reliability	**35,633**	**34,408**					
Regulatory							
Emergency Public Address System (East River)	500	297	Y	N	297	Design package required revision resulting in late start in construction.	To be completed in 2007
Structural Repairs in SSS (East River)	1,150	258	Y	N	268	Postponed to 2007/2008 to accommodate higher priority projects.	To be completed in 2008
Structural Steel and Concrete (59th St)	655	728	Y	Y	736		Project complete - in service
Stack Removal - Nos 1, 2, 3 (Hudson Ave)	400	440	Y	Y	443		Project complete - in service
Replace LPBH Roof (Hudson Ave)	750	-	Y	N		Postponed to 2007 to accommodate higher priority projects.	To be completed in 2007
Structural Steel and Concrete - Phase 3 (Hudson Ave)	500	-	Y	N		Postponed to 2007 to accommodate higher priority projects.	To be completed in 2007
FP Standpipe System Relocation (Hudson Ave)	1,000	-	Y	N		Postponed to reevaluate scope.	To be completed in 2009
Roof Replacement (Ravenswood)	630	419	Y	N	419	Construction delayed due to weather.	To be completed in 2007
Lighting Upgrades (East River)	-	413	N	Y	413	See New Project data attached.	Project complete - in service
Steel/Concrete Upgrades - Phase 2 (Hudson Ave)	-	1,648	Y	Y	2,344	Carry over from 2005 due to increase in scope of project.	Project complete - in service
Install Blowdown Slip Retaining Wall (Hudson Ave)	-	909	Y	Y	909	Project accelerated into 2006 due to poor condition of retaining wall.	Project complete - in service
Other	-	(18)					
Total Regulatory	**5,585**	**5,094**					
Small Capital							
Various Locations - Blanket for Small Capital Projects	2,630	2,535	Y	On-going Program			
Total Small Capital	**2,630**	**2,535**					
Total Steam Production Capital Programs and Projects	**46,109**	**44,778**					

Case 05-S-1376		**Con**
Edison 2007 Steam Production Capital Programs and Projects Report		
(000's)		
		2007 Forecast
Environmental		
Various Locations - Blanket for EH&S Projects		50
Various Locations - Security Initiatives		2,900
Upgrade CEMS Opacity Analyzer Equipment (Ravenswood)		200
Spill Containment - Secondary Containment (74th St)		300
Total Environmental		**3,450**
Capacity		
Microturbine Installation (74th St)		450
Total Capacity		**450**
Reliability		
Modernize PB Controls (74t St)		3,100
Dock and Tunnel Enhancements (74th St)		800
HP Cooling Water Pump and Tank (74th St)		300
122 HP Preheater Baskets (74t St)		450
PB Drum Level Instrumentation Upgrade (74t St)		480
Drum Level Instrumentation - 60th St (74t St)		100
Installation of Water Treatment Equipment (74th St)		4,000
Replace 13.8kv GE Magnablast Breakers Due to D-222 Fire (74th St)		200
Replace Butterfly Desuperheater (74th St)		60
CCR Upgrade (East River)		400
Feedwater Piping Upgrade (East River)		1,060
Replacement of Air Compressors (East River)		150
Water Treatment PLC Upgrades (East River)		750
Install Jib Cranes (East River)		260
Feedwater System Upgrades (Deaerator, BFPs, Piping) (Hudson Ave)		2,100
New LPBH Controls (Hudson Ave)		800

ID Fan Upgrades - Pole Changes and Bearing Monitoring System (Hudson Ave)		600
Install FD Fan Starters (Hudson Ave)		250
Upgrade 208/480 AC Systems and BATs (Hudson Ave)		300
Install Closed Cooling System for Air Compressors and ID (Hudson Ave)		550
MSSO = M1-M4 Mains A/B Valves, MOVs & Desup Valves & Steam Temp Control (Hudson Ave)		200
Demin Deaerator Restoration (Hudson Ave)		350
B Board (Hudson Ave)		50
Upgrade LP Ignitors (Kerosene, 24 Guns, BMS) (Hudson Ave)		50
Verizon Conduit Installation (Hudson Ave)		50
4 BFP and Turbine Replacement (Ravenswood)		200
Retube Boiler #3 (Ravenswood)		1,000
Installation of Water Treatment Equipment (59th St)		4,000
Install New BMS - Annex Boilers (59th St)		1,700
Refurbish Dock and Bulkhead (59th St)		7,500
Replace Batteries and Rectifiers 1, 2 (59th St)		350
Steam Sendout Piping Enhancement (59th St)		500
Switchgear Upgrade (59th St)		10
Chemical System Monitoring (59th St)		75
Deaerator #5 (59th St)		500
Close Loop Cooling Piping Replacement (59th St)		30
Various Locations - IT Initiatives		1,065
Total Reliability		**34,340**
Regulatory		
Structural Steel and Concrete (74th St)		1,270
Exit Egress (East River)		3,000
Emergency Public Address System (East River)		100
Upgrade/Replace Fire Pump and Standpipe System (Hudson Ave)		1,500
Concrete/Steel Upgrade for LPBH - Phase 3 (Hudson Ave)		500
Replace LPBH Roof (Hudson Ave)		1,500
Roof Replacement (Ravenswood)		50
Repair/Replace Station Roofs (59th St)		1,000
Total Regulatory		**8,920**
Small Capital		
Various Locations - Blanket for Small Capital Projects		2,130
PB Treated Water Duplex Strainer (74th St)		75
Total Small Capital		**2,205**

Attachment SP

PROJECT: 20698-02	Sendout Enhancement – 59th St

Work Description:

The work associated with this project includes the replacement of approximately 240 feet of steam sendout piping on the Annex sendout loops and the installation of isolation valves to allow for single loop operation.

Justification:

In January 2006 a leak developed on the sendout loop. Follow-up inspections of additional welds determined that the pipe required replacement.

Completion Date:

2007

Planning And Budgeting:

A total of $1.4 million was expended in 2006. An additional $500,000 is allocated in the 2007 budget.

Status:

To be completed in 2007.

Cost Estimate

Materials & Supplies	$297,000
Construction Contracts	897,000
Company Labor	161,000
Other Direct Costs	75,000
Overheads/Contingency	600,000
Total Estimated Cost	$2,030,000

Attachment SP

PROJECT:	Lighting Upgrades – East River

Work Description:

This project included Installation of permanent lighting in operating areas of Units No. 1 & 2.

Justification:

Units 1 & 2 operating area lighting was originally installed for construction purposes. These lighting fixtures and power supply systems were not adequate for an operating facility. Also, lighting is required in the additional access and egress platforms recently installed. A new lighting system was installed that conforms to regulatory standards.

Completion Date:

2006

Planning And Budgeting:

A total of $413,000 was expended in 2006.

Status:

Complete

Completed Cost Summary

Materials & Supplies	$52,000
Company Labor	236,000
Overheads	125,000
Total Cost	$413,000

Attachment SP

PROJECT:	Maintenance Enhancements – East River

Work Description:
This project included the installation of a new cable tray, conduit and cable system above each of Unit No.1 & 2 GT engine compartment. Also a new 600-amp power supply unit and additional lighting were installed.

Justification:
The power and control cables for much of the interconnection of Units No 1 & 2 engine instrumentation, blowers, pressure switches, etc. were routed over the roof engine compartment. To perform a hot gas inspection (once every three years) it is necessary to remove the engine compartment roof. This roof removal requires that all of these conduits, cable and connections be removed and reconnected upon completion of the inspection, which would be very time-consuming. By rerouting this existing system and installing quick disconnects, this time can be reduced significantly.

Completion Date:
2006

Planning And Budgeting:
A total of $551,000 was expended in 2006.

Status:
Complete

Completed Cost Summary

Materials & Supplies	$46,000
Company Labor	325,000
Other Direct Costs	16,000
Overheads	164,000
Total Cost	$551,000

Attachment SP

PROJECT: 21915-06	Install Jib Cranes – East River

Work Description:
Project is install two 5–ton jib cranes by GT 1 & 2 hot section compartment. In addition, install and reinforce platforms for GT maintenance and enhance egress.

Justification:
The two jib cranes and platforms will provide a higher degree of safety and productivity during gas turbine maintenance. The existing overhead cranes, 75-ton hoists, have a hoisting speed of 4-feet per minute. Each gas turbine has approximately fifty-six combustion components that must be raised and lowered twenty feet. Utilizing these main hoists results in 10 hours of hoist time. Installation of new jib cranes with hoist speeds of 30-feet per minute reduces the hoist time to about an hour and 15 minutes. Additional reinforcement of existing platforms will provide a lay down area near these new jib cranes during maintenance work.

Completion Date:
2007

Planning And Budgeting:

A total of $205,000 was expended in 2006. An additional $260,000 is allocated in the 2007 budget.

Status:

To be completed in 2007.

Cost Estimate

Materials & Supplies	$70,000
Company Labor	252,000
Other Direct Costs	12,000
Overheads/Contingency	136,000
Total Estimated Cost	$470,000

Attachment SP

PROJECT: 22046-06	Tube Replacement – East River

Work Description:
Project consisted of the refurbishment of the 99 convection pass outside wall (CPSW) tubes along with the associated boiler refractory, insulation and casing work on the package boiler units 117 & 119.

Justification:

The convection pass outside walls (CPSW) of these two units have experienced a significant amount of tube failures over 2006. Thirteen and eight CPSW tubes have failed in units 117 and 119, respectively, caused by oxygen pitting and corrosion fatigue. The remainder of the un-failed tubes in both units exhibited similar damage.

Completion Date:

2006

Planning And Budgeting:

A total of $737,000 was expended in 2006.

Status:

Complete

Completed Cost Summary

Materials & Supplies	$183,000
Company Labor	280,000
Other Direct Costs	75,000
Overheads	199,000
Total Cost	$737,000

Attachment SP

PROJECT:	Power Supply Enhancements – East River

Work Description:
Project consisted of transferring half of the Water Treatment electrical load from the present Light & Power Feeder 2 connection to Unit No. 2, 480 volt switchgear 2-1L.

Justification:

The electrical design for the 480V power to East River Units 1 & 2 Water Treatment auxiliary loads were from the Unit 5/50 FD and ID fan Substations. By utilizing these former supplies, half of the water treatment was unitized with Unit No. 1, but the other half was tied to L&P Feeder 2. L&P feeder No. 2 also fed Unit No. 6/60 auxiliaries. To achieve unitization for both Units, removing Unit 2 from L&P 2 to 2-1L will accomplish this.

Completion Date:

2006

Planning And Budgeting:

A total of $324,000 was expended in 2006.

Status:

Complete

Completed Cost Summary

Materials & Supplies	$59,000
Company Labor	170,000
Other Direct Costs	5,000
Overheads	90,000
Total Cost	$324,000

Attachment SP

PROJECT:	Install Piping Enhancements – East River

Work Description:
Project included the installation of permanent piping to replace temporary hose connections in Units 1 & 2 water treatment system and improve the efficiency of the reverse osmosis membrane cleaning system. About 465 feet of 2, 3 and 4-inch diameter piping was installed.

Justification:
During the first year of the operation the R.O. system required more cleaning cycles to reduce membrane fouling than was originally anticipated. Membrane fouling is attributed to City water quality and to biological growth when R. O. skids are sitting idle. To reduce the cleaning cycles and minimize the volume of waste effluent generated, several process enhancements were implemented using temporary hoses. This project replaced the temporary hoses with permanent piping.

Completion Date:
2006

Planning And Budgeting:
A total of $260,000 was expended in 2006.

Status:
Complete

Completed Cost Summary

Materials & Supplies	$48,000
Company Labor	136,000
Overheads	76,000
Total Cost	$260,000

Attachment SP

PROJECT: 22125-06	Microturbine Installation – 74th St

Work Description:

In compliance with the steam rate settlement agreement (05-S-1376), the company needs to undertake the installation of one Microsteam Turbine to demonstrate alterative means of generating power within our customers' facilities. The Microsteam Turbine must be installed in 2007.

This project proposes to install a Microturbine at the 74th Street Station resulting in reduced auxiliary electrical load for the Station. The Microturbine's 480v generator output will be utilized for distributing auxiliary electric power. This will displace power taken from Con Edison's electric system. Steam supply to the Microturbine will be provided from a 200 psig steam source within the station located at the inlet to Deaerator. Exhaust steam will be connected to No. 3 Deaerator. Steam traps will be added as required by design. Heat Balances calculations have been performed showing that, at all available operating equipment combinations, the Microturbine can be run at full rating of 275kW.

Justification:

This project is required as part of the steam rate agreement and must be in service by end of 2007. In addition, use of distributed generation would reduce auxiliary electric cost ($4.5 million in 2005) at 74th. Based on the expected cost savings, the payback period for this project is about 4.5 years. Furthermore, demonstrating this technology at the 74th Street Station to SBU customers would encourage the use of distributed generation.

The Microturbine installation at 74th Street Station serves as a demonstration site for Steam Customers to visit and learn about this technology for use in their locations. In addition, customers that installed this technology would benefit by certifying their building project through the U.S. Green Building Council's LEED program, contributing to LEED credits based on its energy recovery and energy cost reduction. There is no on-site combustion; there are no requirements for emission permits, exhaust stacks, fuel delivery or storage, or additional fire safety systems

Completion Date:

2007

Planning And Budgeting:

A total of $566,000 was expended in 2006. An additional $450,000 is allocated in the 2007 budget.

Status:

To be completed in 2007.

Attachment SP

Cost Estimate

Materials & Supplies	$375,000
Construction Contracts	260,000
Company Labor	15,000
Overheads/Contingency	200,000
Total Estimated Cost	$850,000

Attachment SP

PROJECT: 21429-04	Replacement of Air Compressors – East River

Work Description:
Project is to install two new 400 scfm rotary screw air compressors and cooling- air ducts at the East River's South Steam Station. These two units will be relocated from the basement to the first floor of the building.

Justification:
The two existing air compressors installed in 1987, had an average of approximately 84,000 service hours. Maintenance was high due to major component failures and spare parts were becoming obsolete. Wiring was faulty and there was a high degree of corrosion in the unit due to water intrusion from boiler leaks. Due to the large amount of downtime, the reliability of the Station was at risk. To maintain reliability, a rental compressor was put into service.

Completion Date:
2007

Planning And Budgeting:
A total of $251,000 was expended in 2006. An additional $150,000 is allocated in the 2007 budget.

Status:
To be completed in 2007.

Cost Estimate

Materials & Supplies	$173,000
Construction Contracts	310,000
Company Labor	50,000
Overheads/Contingency	137,000
Total Estimated Cost	$670,000

Attachment SP

PROJECT: 21654-05	Replace 2 Valves – 59th St

Work Description:
This project consisted of replacing the Annex Non-Return Valves with similar valves that will allow for boiler isolation.

Justification:

The non-return valves were aging, difficult to repair, not reliable and did not provide isolation. As a result, it was difficult, if not impossible, to perform hydrostatic pressure tests on an isolated boiler after maintenance.

This project replaced the valves that leaked past their seats. The valves have been repaired numerous times but reliability of the valves was a problem. These valves are needed to perform satisfactorily to permit repair of one annex boiler while the other remains on line.

Completion Date:

2006

Planning And Budgeting:

A total of $343,000 was expended in 2006.

Status:

Complete.

Completed Cost Summary

Materials & Supplies	$148,000
Company Labor	102,000
Other Direct Costs	7,000
Overheads	86,000
Total Cost	$343,000

Attachment SP

PROJECT: 21654-05	Install 2 New Motor Control Centers – 59th St

Work Description:

There were five Motor Control Centers (MCCs), A, B, D, E and F, located in the south east corner of the basement at the 59th Street Station. These MCCs supplied various 480V, 3 ph, 60 Hz loads located in the area. Some loads supplied by these MCCs have been retired and the remaining loads were consolidated to the two new MCCs.

All five MCCs were removed and replaced with two new NEMA-type 3R non-walk-in motor control centers, with internal space heaters. All active loads were consolidated into these two new MCCs. The new MCCs were located such that they are not subject to flooding. Feeder cables and conduits were replaced to fit the new arrangement.

Justification:

MCCs A, B, D, E, and F were approximately 50 years old, and located in an area prone to occasional flooding. The wet conditions severely deteriorated the equipment both externally and internally, resulting in frequent malfunctions. There was a potential danger to plant personnel and of faults resulting from standing water getting into the equipment. The MCCs are obsolete and replacement parts are not available.

Completion Date:

2006

Planning And Budgeting:

A total of $129,000 was expended in 2006. There was additional spending in 2005.

Status:

Complete.

Completed Cost Summary

Materials & Supplies	$109,000
Company Labor	303,000
Other Direct Costs	2,000
Overheads	148,000
Total Cost	$562,000

Attachment SP

PROJECT:	Annex Control Feedwater Regulators – 59th St

Work Description:

A new digital governor control system was installed for each boiler feed pump (BFP) turbine to control the entire turbine speed range during start-up and normal operations. In addition, the existing mechanical governor valve system was removed and the governor internals were replaced and retrofitted to operate as the steam admission control valve.

To satisfy minimum flow requirements for the BFP's existing start-up operation conditions, the existing BFP recirculation lines were increased from 2" to 4" diameter, and new recirculation valves were installed.

Justification:

The existing Feedwater Control System for 59th St. Station Annex Boilers 114 and 115 has had problems during start-up, steady state and transient operating conditions. These problems resulted in a lack of accurate feedwater flow control to the boiler drums to maintain drum level. This problem was related to the time response of the BFP turbines, which must react quickly to speed up or slow down in reaction to feedwater demand signals from the feedwater controllers.

The pumps operate within a lower speed range, requiring a more precise speed control for proper feedwater and drum level requirements. In addition, the BFP's are periodically operated at lower flows and higher pressures during start up. This condition results in a need for increased recirculation flow to ensure that the BFP's minimum flow requirements are met at the higher speeds and pressures during start-up operations.

The controls for the BFP turbines did not provide the required response for this equipment during start-up of the boilers. This caused the boilers to trip on low and high drum level, because the BFP turbines did not respond fast enough to correct decreasing or increasing drum level, or tended to overshoot, resulting in large drum level swings.

This project provides the appropriate response of the BFP turbines during start-up and normal operations.

Completion Date:

2006

Planning And Budgeting:

A total of $128,000 was expended in 2006. There was additional spending in 2005.

Status:

Complete.

Attachment SP

Completed Cost Summary

Materials & Supplies	$235,000
Construction Contracts	210,000
Company Labor	30,000
Other Direct Costs	11,000
Overheads	116,000
Total Cost	$602,000

Attachment SP

PROJECT: 21905-06	Verizon Conduit Installation – Hudson Ave

Work Description:

This project is to install a new conduit route from the street property line to the station CCTN room on the 6th floor of the Switch House. Also this path will connect Manhole M187 so that Verizon can splice into additional cables. In addition, the project includes the installation of a campus cable route from the CCTN room to the Maintenance Building.

Verizon will install new 600 pair copper cable and a fiber optic cable from their Central office to the station CCTN room. In order for Verizon to accomplish this, Con Edison will install a new conduit route from the street property line to the CCTN room. This installation will improve reliability and availability for telecommunication service to the station.

Justification:

The 75-year old cable has multiple points of failure and must be replaced. Failures on this cable are already impacting the services to the station, which includes voice lines, telemetry, fax lines, modems, alarms and all protection circuits. Hence, unless this cable is replaced, all Verizon telecommunication service to the station could be disrupted.

Completion Date:

2007

Planning And Budgeting:

A total of $433,000 was expended in 2006. An additional $50,000 is allocated in the 2007 budget.

Status:

To be completed in 2007.

Cost Estimate

Construction Contracts	$310,000
Company Labor	29,000
Other Direct Costs	10,000
Overheads/Contingency	138,000
Total Estimated Cost	$487,000

Attachment SP

PROJECT: 21660-05	PB Modifications– 74th St

Work Description:
The purpose of this project is to replace the existing Clark Reliance water column and gage glass with a new water column and gage glass; remove the Levalert system and install a Hydrastep level indicator system on the drum along with bringing the level indication signal to the control room, and alarm and trip signals to the Burner Management System (BMS).

This work will be done for all six package boilers at 60th St Station

Justification:
The manufacturer of the Levalert device is out of business, and parts are no longer available to repair and maintain them. The gage glasses are routinely valved out and not in service due to various problems and require corrective maintenance.

The boiler drums need to have a serviceable local direct reading level gage and two independent remote level indicating devices; the Hydrastep or equivalent remote indicator, and the differential pressure transmitter level indicator.

Completion Date:
2006

Planning And Budgeting:

A total of $387,000 was expended in 2006.

Status:

Complete.

Completed Cost Summary

Materials & Supplies	$148,000
Company Labor	135,000
Other Direct Costs	2,000
Overheads	102,000
Total Cost	$387,000

Attachment SP

PROJECT: 21799-05	Replace Butterfly Desuperheater – 74th St

Work Description:
This project includes the replacement of the existing oversized 24" Adams butterfly valve with a new properly sized butterfly valve that will provide stable operation. Also, the Yarway mechanical desuperheater will be replaced with a Copes-Vulcan variable orifice desuperheater and a new water spray valve will be installed.

Justification:
East River Units 1 & 2 are capable of supplying steam to some customers that are normally supplied by the 74th St. and 75th St, steam sendout mains. To allow this alternate supply, the 74th St. station would be required to operate at a reduced load level of 100,000 lbs./hr or below. This reduced level is currently not achievable with the installed 24" Adams butterfly valve. With a smaller and properly sized butterfly valve, the expected operating range would be from minimum flow of 80,000 lbs./hr to maximum flow of 750,000 lbs./hr.

Completion Date:
2007

Planning And Budgeting:

A total of $506,000 was expended in 2006. An additional $60,000 is allocated in the 2007 budget.

Status:

To be completed in 2007.

Cost Estimate

Materials & Supplies	$100,000
Construction Contracts	75,000
Company Labor	170,000
Overheads/Contingency	230,000
Total Estimated Cost	$575,000

Attachment SP

PROJECT: 21879-05	Replace 120 Air Heater Baskets – 74th St

Work Description:
The intent of this correction is to return the air heater to its design efficiency, regain control over the exit gas temperature and obtain the desired air heater secondary air temperature for proper combustion. While the air heater is disassembled for basket replacement it is appropriate and necessary to replace the circumferential and radial seals to reduce leakage and bypassing of gas and air between the hot and cold side baskets

Justification:
These Air Heater baskets have been in service for over twenty years and are now beyond being successfully cleaned. Exit gas temperature is high, heat transfer is reduced with loss of unit efficiency. With increasing exit gas temperature there is potential for serious damage to adjacent components and/or airheater fires.

Since repair of these components is not practical, replacement is justified to improve the air preheater performance, reliability, and maintain proper exit gas temperatures.

Completion Date:

2006

Planning And Budgeting:

A total of $275,000 was expended in 2006.

Status:

Complete

Completed Cost Summary

Materials & Supplies	$8,000
Company Labor	189,000
Overheads	78,000
Total Cost	$275,000

Attachment SP

PROJECT: 22084-06	Replace 121 Air Heater Baskets – 74th St

Work Description:
The intent of this correction is to return the air heater to its design efficiency, regain control over the exit gas temperature and obtain the desired air heater secondary air temperature for proper combustion. While the air heater is disassembled for basket replacement it is appropriate and necessary to replace the circumferential and radial seals to reduce leakage and bypassing of gas and air between the hot and cold side baskets

Justification:
These Air Heater baskets have been in service for over twenty years and are now beyond being successfully cleaned. Exit gas temperature is high, heat transfer is reduced with loss of unit efficiency. With increasing exit gas temperature there is potential for serious damage to adjacent components and/or airheater fires.

Since repair of these components is not practical, replacement is justified to improve the air preheater performance, reliability, and maintain proper exit gas temperatures.

Completion Date:

2006

Planning And Budgeting:

A total of $706,000 was expended in 2006.

Status:

Complete

Completed Cost Summary

Materials & Supplies	$119,000
Construction Contracts	425,000
Company Labor	18,000
Overheads	144,000
Total Cost	$706,000

Case 05-S-1376 - Con Edison 2007 Steam Operation and Maintenance Report

	Variation Explanation	Dec YTD 2006 Act	Dec YTD 2006 Bgt	Dec YTD Var to Bgt
Steam Explanations:				
Scheduled Overhauls - Major		$8	$0	$8
Scheduled Overhauls - Firmup	Underrun attributed to deferred 59th Street safety valve test/repair, waste neutralization tank inspection/cleaning and capital rulings on some Hudson Avenue outage work.	$1,808	$2,331	($523)
Plant Inspection & Repair	Underrun primarily attributed to deferred 59th Street fuel oil heater inspection, regulator condensate trap replacement and air tank inspection.	$484	$571	($87)
Major Maintenance	Overrun attributed to nature and scope of 59th Street Local Law 11 compliance (emergency building facade repair) and other building and grounds maintenance coupled with refractory work on boiler # 1 and tube leak welding at Ravenswood.	$913	$25	$888
Corrective Maintenance	Overrun attributed to 74th Street EH&S audit findings response, scope of East River 10/20 outage related costs, volume of 59th Street work driven by Maximo refinements and nature and Hudson Avenue Local Law 11 compliance (building facade repair) work exceeding estimate.	$6,482	$5,388	$1,094
Plant Component Upgrade	Underrun principally attributed to 74 St deferral of upgrades and change in nature of work (shift to capital), to offset EH&S audit findings response work.	$419	$600	($181)
Total - Steam		$10,114	$8,915	$1,199

Case 05-S-1376 - Con Edison 2007 Operation and Maintenance Budget for Major Categories

	2007 Bgt
Corrective Maintenance	
Ravenswood	$0
East River	$787
Hudson Avenue	$3,073
59th Street	$3,167
74th Street	$2,110
East River 10/20	$1,098
Total - Steam	$10,235

Typically, corrective maintenance includes repairs to boilers, valves, piping, pumps, insulation, electrical components, traps, concrete and steel, tanks, hanging tubes, and equipment painting, along with the associated material and supplies and vendor support.

Plant Component Upgrade	
Ravenswood	$0
East River	$170
Hudson Avenue	$142
59th Street	$80
74th Street	$1,095
East River 10/20	$0
Total - Steam	$1,487
Total - Steam	$11,722

Upgrades to plant components include machine guarding, equipment control mechanisms, pump mechanisms, temperature controls, trenching, control room equipment, traps, metering, regulators, and analyzers, including the associated material and supplies and vendor support.