THE STATE OF NEW HAMPSHIRE

BEFORE THE NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

Docket No. 08-145

FREEDOM LOGISTICS, LLC

HALIFAX-AMERICAN ENERGY COMPANY

Investigation into Modifications to Merrimack Station

STIPULATION OF AGREED FACTS

By and through their undersigned counsel, the parties to the above-captioned proceeding hereby stipulate to the following facts:

1) Public Service Company of New Hampshire ("PSNH") conducted a planned outage of Merrimack Unit 2 from April 1 to May 22, 2008, ("April-May Outage").
2) During the April-May Outage, PSNH performed the capital projects, and what it characterizes as operation and maintenance projects, and other balance of plant maintenance described in PSNH's response to Data Request TS-01, Q-Staff-002 (copy attached).
3) PSNH's new HP/IP turbine was designed to increase the fossil fuel generation efficiency and net generating output of Merrimack Unit 2.
4) Costs accrued thus far in connection with the work described in PSNH's response to Data Request TS-01, Q-STAFF-001 (copy attached) are $11.4 million dollars.
5) The new turbine is expected to increase the net capability of Merrimack Unit 2 by a base of 6 megawatts (MW) to an upper range of 13 MW, resulting in net capability increases of 1.87% to 4.06%. According to PSNH, a potential increase of up to 4.175 additional MW could be realized from the new turbine if additional potential efficiencies are achieved.

6) The turbine being replaced was originally installed in 1968. The salvage value in 2008 was $34,745.

7) The parasitic load of the scrubber will cause the net power output (as measured in MW) from Merrimack Station to be reduced.

8) No changes in the types of coal to be burned at the Station are expected due to the new turbine.

9) In April 2006, the turbine upgrade was approved by PSNH personnel at an estimated cost of $9 million to $15 million.

Dated at Concord, New Hampshire this 8th day of April, 2009.

Melissa Hoffer
Conservation Law Foundation

Dated at Lebanon, New Hampshire this 8th day of April, 2009.

N. Jonathan Peress
Downs Rachlin Martin PLLC
Attorneys for Freedom Logistics, LLC and Halifax-American Energy Company, LLC

Dated at Manchester, New Hampshire this 8th day of April, 2009.

Robert Bersak
Public Service Company of New Hampshire

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Public Service Company of New Hampshire
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Data Request TS-01

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Q-STAFF-001
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Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff

Question:
Please provide the total cost and components of the turbine project.

Response:
The total cost of the turbine project is $11.4 million. The Contractor may be entitled to a performance payment upon final performance testing.

The turbine components included the HP/IP rotor with integral shroud rotating blading, integral shroud stationary blading, nozzle block, inner and outer cylinder casings, associated seals and piping, inspection ports.

Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff

Question:
Please provide a listing of work done at Merrimack Unit 2 during the turbine outage, separated into capital and O&M.

Response:
In April and May 2008, Merrimack Unit 2 underwent its scheduled major unit inspection outage. The outage began on April 1 and ended on May 22 lasting just under 52 days. Capitalized projects and major operations and maintenance work completed during the outage are listed below. There were also numerous other corrective and preventative tasks performed throughout the unit.

Capitalized Projects

HP/IP turbine replacement:
Installation of a new HP/IP turbine including the HP/IP rotor, stationary blade rings, and inner and outer cylinder casings.

Generator rotor replacement:
Completed the replacement of the generator. This replacement incorporated improved design features and allowed for a shorter outage duration.

Air heater tube replacement:
The tubular air heater had been on a multi-year replacement program. The hot-end air heater replacement of the tubes began in 2007. The remaining tubes were installed during this outage.

Boiler floor replacement:
The boiler floor replacement project involved the replacement of the boiler floor sections, supports and headers.

Selective catalytic reducer (SCR) catalyst replacement:
The SCR was installed on the unit in 1995. The 4 catalyst layers are on a replacement schedule to maintain optimum NOx reductions. Layer 4 of the catalyst was replaced during the outage. This effort included vacuuming, sampling, thermocouples, staging removal, and demobilization.

Secondary superheater (SSH) inlet bank replacement:
During prior inspections 23 pendants in the SSH inlet tube bank were identified with reduced tube wall thickness, typical in this area of the boiler caused by ash erosion and corrosion. The replacement of pendants involved removing a side wall section to remove and replace the (23) pendant sections in the most cost effective manner.

Ash conditioning equipment:
Ash conditioning equipment was installed on an existing flyash storage tank. This conditioning equipment will provide the option for either dry or wet loading of flyash into the tanks.

Station batteries relocation and replacement:
Station batteries are required safety equipment to provide stand-alone power to critical systems such as emergency lighting and the several emergency pumps. The batteries were installed in a dedicated battery room with a forced ventilation system consistent with good industry practice.

Excitation switchgear voltage regulator replacement:
The older analog components were replaced with new digital components which have self diagnostics and more readily available spare parts.

Sootblowers removal and replacement:
Sootblower maintenance and replacement is an on-going annual outage effort. During this outage 13 sootblowers and associated supporting equipment were replaced.

Selective catalytic reducer sub-girt, insulation and lagging replacement for duct DO4C:
To eliminate a potential safety hazard, an area of the SCR duct had sub-girt, insulation and lagging replaced.

Computer System: Replaced the distributed control system (DCS) system.

Primary Superheater (PSH) Bypass Valve: Replaced the 202 PSH bypass control valves.

Secondary Superheater (SSH) Bypass Valve: Replaced the 207 SSH bypass valve.

Main boiler feed pump (MBFP) control valve: Replaced the MBFP FCV 5 control valve.

SCR Expansion Joints: Replaced a number of SCR expansion joints consistent with the expansion joint program.

Coal Bunker Gates: Replaced E, F & G coal bunker gates.

Projects Charged to Operation and Maintenance

Boiler Maintenance

Cyclones pin replacement and refractory installation: 468,000 pin studs were installed and refractory was applied by hand (ramming) to the slag necks and sprayed into the boiler floor section.

Secondary superheater inlet / intermediate / outlet alignment checks and shield repair / replacement: Additional boiler tube maintenance included vacuuming the furnace area, inspections, alignments, shield repairs, and selected replacements.

Vertical reheat superheater (VRSH) inspection of OXI stop and installation of additional OXI stop: 693 of 1207 VRSH tube shields were removed and areas sandblasted in order to apply the erosion inhibitor Oxi-Stop, as needed.

Air heater wall tie replacement: Sixteen wall ties that extend from north to south on the hot side of the air heater were replaced. In addition, tie supports were installed in two places from east to west to keep the ties in place.

Penthouse inspection and repairs of refractory walls: An inspection was performed and found the boiler penthouse was in good condition with only 1-2 inches of ash buildup, confirming the 2007 repairs were successful. The refractory walls were also inspected and in general found to be in good shape. Incidental repairs of the refractory wall were made as necessary.

Nondestructive examinations of the boiler: A variety of inspection and non-destructive testing was performed throughout the boiler.

Other Balance of Plant Maintenance

Stack maintenance: The inner stack liner was washed and inspected. Repairs were made as needed.

Precipitator: Repairs were made to the precipitator box casing, and the new and old precipitators, ducts, hopper rooms and gutter system were vacuumed and inspected.

Miscellaneous planned maintenance work included valve inspection and repair, the corrosion fatigue inspection program, and general system maintenance.