TAB I

Affidavit of Ray L. Pasteris

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.) Docket No. ER05-_____

AFFIDAVIT OF RAYMOND M. PASTERIS ON BEHALF OF PJM INTERCONNECTION, L.L.C.

My name is Raymond M. Pasteris, and I am the President of Strategic Energy Services, Inc. ("Strategic"). I am submitting this affidavit in support of PJM's proposed Reliability Pricing Model ("RPM"), in particular the estimated cost of new entry generator used by PJM for RPM.

In August of 2004 PJM retained Strategic to determine the type of generator to use for the estimated cost of new entry ("CONE"), an appropriate configuration and technology for that generator, and its resulting fixed revenue requirements, expressed in $/MW-Year or $/MW-Day. The CONE revenue requirements are based on the total project capital cost and annual fixed operations and maintenance ("O&M") expenses of a combustion turbine ("CT") simple cycle peaker power plant addition. Strategic prepared separate CONE estimates for three PJM subregions: New Jersey, Maryland and Illinois.

The results of Strategic's analysis are set forth in the attached report, "Independent Study to Determine Cost of New Entry Combustion Turbine Power Plant Revenue Requirements For PJM Interconnection, LLC.," which was prepared under my direction and supervision. My qualifications and experience, as well as that of Strategic, are set forth in Addendum No. 3 to the report. Strategic retained The Wood Group, a power plant design build firm with CT construction, operation, and maintenance experience, to develop the plant proper capital cost estimates and certain plant startup and annual O & M expenses for the CT plants considered.

As explained in the report, Strategic evaluated plant configurations based on two types of combustion turbine units: General Electric's 45 MW LM 6000 Sprint aero-derivative CT and the 170 MW GE Frame PG7241 ("7FA") industrial frame CT. Recent CT plants installed in the PJM control region as well as other control regions have incorporated both these units. Our analysis found that the Frame CT plant required significantly lower fixed revenue requirements than that of the Aero CT plant. Accordingly, we have recommended to PJM that the Frame CT plant be used as the basis for the CONE estimates for all three sub regions of PJM.

The resulting CONE, on a nominal levelized basis, is $72,207/MW-Year for New Jersey; $74,117/MW-Year for Maryland; and $73,866/MW-Year for Illinois. These results are lower than (but consistent with) the results of similar Cost of New Entry

studies recently performed for the New York ISO and ISO-New England. The CT capital costs and weighted average cost of capital estimated in our study also are consistent with the capital costs and cost of capital of CT plants that achieved commercial operation in the PJM region between June 2001 and July 2003, as reported to FERC in reactive service revenue requirement filings.

The attached report also includes our professional assessment of the likely development schedule of a combustion turbine plant. As detailed in the report, we estimate the entire development of a greenfield CT plant from initial concept through site selection, interconnection studies, environmental permits, and construction to commercial operation to be four years.

Although not reflected in the attached report, Strategic performed two other tasks in support of PJM's RPM submission. First, Strategic assisted PJM's witness Professor Benjamin Hobbs with calculations of the internal rates of return ("IRR") implied by the generator profit forecasts in the dynamic modeling he performed for PJM. For this purpose, I used the same working financial model described in the attached CONE report. Professor Benjamin Hobbs requested nineteen sensitivities of increased capacity revenues be run on the financial model to determine the resulting increased IRR. These IRR results were used in his dynamic modeling.

Second, I supplied PJM's witness Dr. Joseph E. Bowring with estimates of the variable operations and maintenance ("VOM") expenses likely to be incurred by the GE Frame 7FA plant configuration. While I did not need this figure for my estimate of the fixed capital and O&M costs of the plant, Dr. Bowring uses VOM in connection with his discussion of the net energy and ancillary service revenues likely to be earned in the PJM market by the CONE plant configuration. That CONE CT plant VOM was estimated at $5.00/MWh. Strategic relied upon a General Electric Company ("GE") public document GER-3620K (12/04) "Heavy-Duty Gas Turbine Operating and Maintenance Considerations" to perform its VOM estimate. This document is available to the public for PDF download from the GE website at www.gepower.com Technical Library, GE Reference Documents (GERs).

This concludes my affidavit.

AFFIDAVIT OF RAYMOND M. PASTERIS

Raymond M. Pasteris, being first duly sworn, deposes and says that he has read the foregoing "Affidavit of Raymond M. Pasteris on behalf of PJM Interconnection, L.L.C.," that he is familiar with the contents thereof, and that the matters and things set forth therein are true and correct to the best of his knowledge, information and belief.

/s/ Raymond M. Pasteris
Raymond M. Pasteris

Subscribed and sworn to before me this 25 day of August, 2005.

/s/
Notary Public

My Commission expires: 1/18/09

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Peter M. Molnar, Notary Public
Lower Makefield Twp., Bucks County
My Commission Expires Jan. 18, 2009
Member, Pennsylvania Association of Notaries

Independent Study to Determine Cost of New Entry Combustion Turbine Power Plant Revenue Requirements

For

PJM Interconnection, LLC.

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August 30, 2005

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Wood Group Capital Cost Estimates
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Strategic Energy Services, Inc. Qualifications and Experience

Executive Summary

Introduction

In August of 2004 PJM retained Strategic Energy Services, Inc. ("Strategic") to determine the cost of a new entry ("CONE") generator, its technology and its resulting fixed revenue requirements expressed in $/MW-Year or $/MW-Day. The CONE revenue requirements are based on the total project capital cost and annual fixed operations and maintenance expenses ("O&M") of a combustion turbine ("CT") simple cycle peaker power plant addition in three PJM regions. These regions are New Jersey, Maryland and Illinois. This evaluation only considered capital and fixed O&M costs. Net revenues from the sale of energy and ancillary services are not included in this report and were determined by PJM using CONE CT performance information contained is this report.

Choice of Generation Technology

Recent CT plants installed in the PJM control region as well as other control regions have incorporated multiple aero-derivative units of approximate 40 MW to 50 MW per unit and/or multiple industrial frame units of 40 MW to 170 MW units. Newly constructed CT power plants have primarily incorporated General Electric's 45 MW LM 6000 Sprint aero-derivative CT and the 170 MW GE Frame PG7241 ("7FA") industrial CT. Accordingly, it was decided to evaluate both these GE CT units. Levitan & Associates, Inc. and Concentric Energy Advisors, Inc. also evaluated these technologies for the CONE and ICAP demand curve studies for ISONY and ISONE, respectively.

Evaluation Methodology

Two CT power plant design configurations, one consisting of two GE LM 6000 units, the other consisting of two GE Frame 7FA units were evaluated initially at the New Jersey regional location. The CT power plant emerging with the lowest fixed revenue requirements, expressed in $/MW-Year or $/MW-Day, would be further evaluated for the Maryland and Illinois regions.

The Wood Group, a power plant design build firm with CT construction and O&M experience was contracted by Strategic to develop the plant proper capital cost estimates for the Frame CT and Aero CT plants. The Wood Group assembled these estimates based on major equipment quotations, balance of plant material costs and man-hours based on prevailing union labor rates in the designated region. The plant proper estimate is an engineering, procurement and construction ("EPC") turnkey proposal as if contracted to the Wood Group to fully implement the project "turnkey" in 2004 dollars. The Wood Group operations division also provided assistance in determining plant startup, capitalized spare parts, O&M staffing, and annual maintenance expenses. Strategic determined other development expenses such as land, environmental permitting, legal, project management and interest during construction. Strategic utilized PJM's capital cost database to estimate electric interconnection and system upgrade costs. Strategic determined the annual property tax payments and insurance premiums.

Proforma Analysis

A twenty (20) year after tax discounted cash flow ("ATDCF") economic model was used to determine the revenue requirements for the CONE CT project to cover capital recovery, annual fixed O&M expenses and earn the target internal rate of return ("IRR") for the investor/owner. The mid-year convention was used to account for revenues and

expenses incurred continuously throughout each year in the 20-year project evaluation. This ATDCF methodology for evaluating new power generation investments is the most commonly used by power plant owners and developers. Accordingly, the financial results of this study will be consistent with the financial results obtained by owners and developers when applying the study capital costs, annual O&M expenses and financial criteria. The model only accounted for the capital costs to build the plant and annual fixed O&M expenses over the 20-year project life. It includes fixed revenue, fixed O&M expense, debt service, depreciation, income taxes and after tax cash flow. Variable operating expenses such as fuel and variable operations and maintenance ("VOM") expenses were not included in the financial model.

Financial Criteria

Target Internal Rate of Return ("IRR")

A target IRR of 12% was chosen for the proforma evaluation and is based on achieving this IRR over a 20-year project life. Applying this 12% discount rate to the net present value ("NPV") of the 20-year after tax cash flow, including the equity investment in year one, the NPV would equal zero. This investment hurdle rate represents a mature and properly functioning capacity market, which provides appropriate and reasonably stable capacity revenues. Concentric Energy Advisors, Inc. used a 12% target IRR for the CONE study for ISONE. Strategic has reviewed this report and agrees with the basis of the 12% target IRR.

Debt to Equity Ratio

A 50% debt to 50% equity ratio was assumed in the proforma model evaluation. This ratio is consistent with the financial structure of a creditworthy integrated electric utility company or independent power company ("IPP"). This would be a reasonable financial structure for the CONE CT plant project.

Debt Term and Interest Rate

Consistent with the financial structure of a creditworthy integrated electric utility company or IPP a long term, 20-year, bond with an interest rate of 7.0 % was used in the proforma model. A mortgage style loan was used which provides for increasing principal payment and decreasing interest payments over the loan term.

Tax Depreciation

The federal tax code allows for CT only power plants to utilize Modified Accelerated Cost Recovery System ("MACRS") over a 15 year tax life on the qualifying portions of the total project cost.

Federal and State Income Taxes

A 35.0% federal income tax rate was used in the proforma model. The state tax rate for New Jersey was 9.0 %, Maryland, 7.0% and Illinois 7.3%.

Escalation

An annual escalation rate of 2.5% was assumed for all fixed O&M expenses over the entire project life.

CONE Revenue Requirement Results

The resulting CONE CT revenue requirements of the Aero CT plant and the Frame CT plant may be found on Table 1 below. The Frame CT plant required significantly lower fixed revenue than that of the Aero CT plant. Accordingly, it is the conclusion of Strategic that the Frame CT plant is the lowest cost CT plant. It is Strategic's

recommendation to PJM that the Frame CT plant be utilized by PJM as the CONE CT for all regions of PJM.

Table 1
CONE CT REVENUE REQUIREMENTS
FRAME AND AERO CT PLANT

SUMMARY		
REGION	**New Jersey**	**New Jersey**
CT Model	**GE Frame 7FA**	**GE LM 6000**
Number of CTs	2	2
Net Capacity (MW)	336.1	94.1
Heat Rate (BTU/kWh) (HHV)	10,826	9,902
Capital Cost ($Million)	$156.636	$79.597
Capital Cost ($/kW)	$466.04	$845.45
2004 ($/MW-Year)	$58,752	$110,203
2004 ($/MW-Day)	$160.96	$301.93
2006 ($/MW-Year)	$61,726	$115,782
2006 ($/MW-Day)	$169.11	$317.21
Total Levelized ($/MW-Year)	$72,207	$135,442
Total Levelized ($/MW-Day)	$197.83	$371.07
FINANCIAL CRITERIA		
Project Evaluation (Years)	20	
Percent Equity	50%	
Percent Debt	50%	
Internal Rate of Return (%)	12.0%	
Loan Term (Years)	20	
Loan Interest Rate (%)	7.00%	
MACRS Depreciation Schedule (Yrs)	15	
GENERAL ASSUMPTIONS		
Ambient Temperature (F)	92.0	
Ambient Wet Blub Temperature (F)	78.0	

In Tables 1 and 2 revenue requirements are presented in $/MW-Year and $/MW-Day for the years 2004 and 2006 and non-escalated nominal levelized. The 2004 value represents the current revenue requirements of the CONE CT assuming the revenue requirements and fixed expenses escalate at 2.5% annually over the project life. The 2006 value represents the first year of plant operation revenue requirements with the 2004 revenue requirement escalated at 2.5% annually for the two years between 2004 and 2006. The nominal levelized value represents constant, non-escalating annual revenues over the 20-year project life beginning in 2006 having the same NPV as the 20-year revenue requirements escalating at 2.5% starting in 2006.

The results of evaluating the CONE CT revenue requirements of the Frame CT plant for the New Jersey, Maryland and Illinois regions of PJM are found on Table 2. The differences in revenue requirements are primarily a result of construction labor rates, O&M labor rates, land costs, property taxes and state income tax rates. Strategic reviewed FERC reactive filings of nine (9) recently constructed multiple frame CT peaker power projects in PJM regions. These power plants, totaling 4,792 MW, began commercial operation between June 2001 and July 2003. The average all-in project capital cost for these power plants was $399.92/kW. See Table 15 for further details on newly constructed frame CT power plants. The design of these plants did not include SCR emissions controls and duel fuel capability which adds $40.00/kW and $11.00/kW, respectively yielding an adjusted capital cost of $450.92/kW. This compares closely with the CONE regional capital cost range of $466.04/kW to $475.30/kW found in Table 2 below.

Table 2
CONE CT REVENUE REQUIREMENTS
PJM REGIONAL FRAME CT PLANT

SUMMARY			
PJM REGION	**New Jersey**	**Maryland**	**Illinois**
Capital Cost ($Million)	$156.636	$158.527	$159.749
Capital Cost ($/kW)	$466.04	$471.67	$475.30
2004 ($/MW-Year)	$58,752	$60,305	$60,102
2004 ($/MW-Day)	$160.96	$165.22	$164.66
2006 ($/MW-Year)	$61,726	$63,359	$63,144
2006 ($/MW-Day)	$169.11	$173.59	$173.00
Total Levelized ($/MW-Year)	$72,207	$74,117	$73,866
Total Levelized ($/MW-Day)	$197.83	$203.06	$202.37

FINANCIAL CRITERIA	
Project Evaluation (Years)	20
Percent Equity	50%
Percent Debt	50%
Internal Rate of Return (%)	12.0%
Loan Term (Years)	20
Loan Interest Rate (%)	7.00%
MACRS Depreciation Schedule (Yrs)	15

GENERAL ASSUMPTIONS	
CT Model	**GE Frame 7FA**
Number of CTs	2
Ambient Temperature (F)	92.0
Ambient Wet Blub Temperature (F)	78.0
Net Capacity (MW)	336.1
Heat Rate (BTU/kWh) (HHV)	10,826

1.0 Plant Design

1.1 GE Frame 7FA Plant

Since its introduction to the markets more than ten years ago the GE Frame 7FA has been a technically and commercially successful combustion turbine in simple and combined cycle operation. The particular model used in this study is the PG7241. Many of these specific unit models have been installed in the PJM system in simple and combined cycle configuration. There are greater then thirty GE Frame 7FA units currently installed and operating in the PJM region.

The Frame CT plant design for this CONE study consists of two GE Frame 7FA units. This is consistent with the majority of new CT plants constructed in PJM having two or more GE Frame 7FA units. The primary fuel is natural gas with No. 2 oil as liquid fuel backup. It is assumed that pipeline gas is available at adequate pressure to be utilized by the CT without on site fuel gas compression. The minimum fuel gas pressure requirement of the GE Frame 7FA is 450 PSIG.

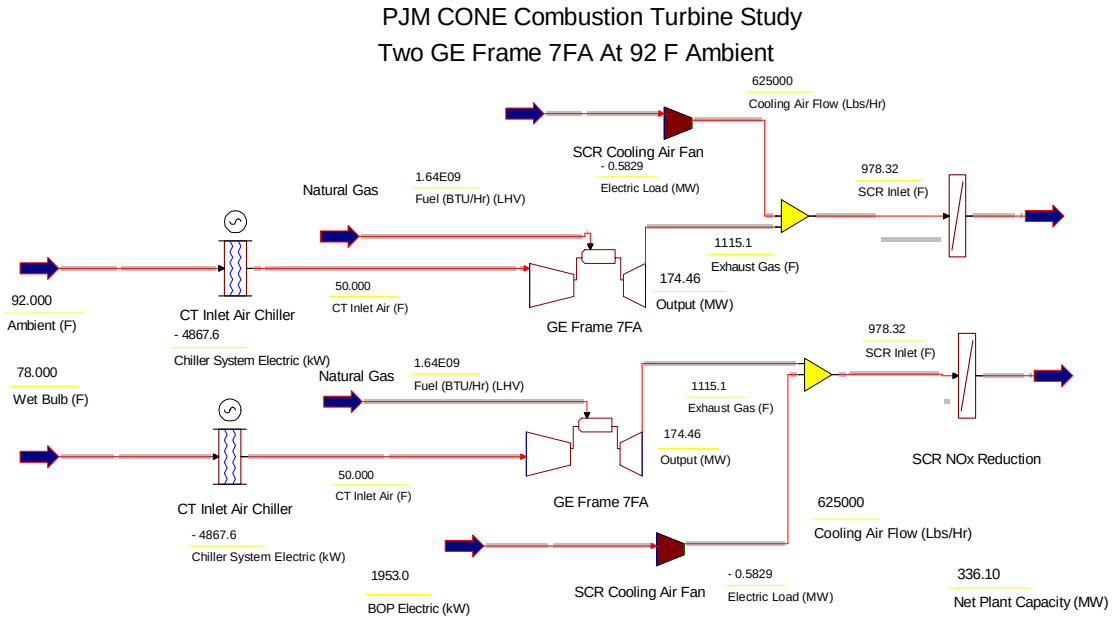
The Frame 7FA, when firing natural gas, utilizes dry low NOx ("DLN") combustor technology to reduce NOx emissions to 9.0 PPM at 15% O_2. Selective Catalytic Reduction ("SCR") technology has been added to further reduce emissions from the stack to 2.5 PPM at 15% O_2. Due to the high exhaust temperatures of the Frame CT, which are greater than 1,100° F, cooling air is introduced upstream of the SCR to lower and control the exhaust temperatures to an acceptable range for the SCR operation. Cooling air fans and associated ductwork are included in the Frame CT plant scope and capital cost. A hot SCR catalyst design is incorporated. 9.0 PPM emissions from one CT are approximately 62.0 pounds per hour of NOx. Reducing the NOx level to 2.5 PPM through the SCR reduces the emissions to approximately 17.2 pounds per hour per CT. Assuming two CT units both operating 1,500 hours annually the NOx emissions are 25.8 Tons per year.

While firing distillate fuel water injection is used to reduce emissions from the CT to 42 PPM. At this NOx level entering the SCR achieving a stack NOx level of 2.5 PPM would not be expected. Accordingly, the plant may be limited to a specified, not to exceed annual operating hours on oil.

The unit is not designed with black start capability. Because of the large mass of the rotating elements of the GE Frame 7FA, windings in the electric generator are used to start the unit. Smaller CT units typically use an external motor driven hydraulic system for startup. Accordingly, it was deemed impractical to consider black start for the GE Frame 7FA. No black start ancillary service revenues are available from the Frame CT plant.

Turbine inlet air-cooling to 50° F is included in the Frame CT plant design. Motor driven mechanical chillers chill water to approximately 40° F. The chilled water is pumped through a heat exchange coil located upstream of the CT compressor inlet and cools the compressor inlet air. The CT electric output and heat rate are equal to that of a 50° F ambient day in spite of actual ambient temperatures greater than 50° F. Figure 1 provides details of the Frame CT plant under ambient conditions of a 92° F dry bulb temperature and a 78° F wet bulb temperature. The net electric capacity of the Frame CT plant is 336.1 MW. This capacity is net of the chiller system parasitic load of 9,735 kW. Each CT output is 174.46 MW. Without turbine inlet cooling the net electric capacity is 297.33 MW with each CT output only 150.21 MW. The net plant capacity increase due to inlet air-cooling is 38.8 MW. Evaporative cooling was evaluated and would yield a net plant capacity of 312.0 MW at the same ambient conditions. Each CT output would be 157.54 MW. Mechanical refrigeration provides a net plant capacity gain of 24.1 MW over evaporative cooling. The incremental capital cost of the mechanical chiller system is approximately $8.4 Million. This investment increases capacity by 38.8 MW making the cost of inlet air cooling only $216.50/kW. This is well below the plant proper cost of $391.00/kW without inlet cooling. Accordingly, the inlet air cooling investment lowers the overall plant proper cost to $370.90/kW.

Figure 1



1.2 GE LM 6000 Aero – Derivative Plant

The GE LM 6000 has also been a technically and commercially successful combustion turbine in simple and combined cycle operation. The LM 6000 CT is an aero-derivative type unit. The particular model used in this study is a GE LM 6000 PC with Sprint. Many of these units have been installed in the PJM system in simple cycle only. There are more than ten GE LM 6000 units currently in operation in the PJM system.

The Aero CT plant design for this CONE CT study consists of two GE LM 6000 units. The primary fuel is natural gas with No. 2 oil as liquid fuel backup. It is assumed that pipeline gas is available at adequate pressure to be utilized by the CT without on site fuel gas compression. The minimum fuel gas pressure requirement of the GE LM 6000 is 650 PSIG.

The LM 6000, when firing natural gas, utilizes water injection to reduce NOx emissions to 25 PPM at 15% O_2. Selective Catalytic Reduction ("SCR") technology further reduces emissions from the stack to 2.5 PPM at 15% O_2. Cooling air fans and associated ductwork are not required for the SCR. The LM 6000 exhaust, at approximately 850° F, is at an acceptable temperature for hot SCR operation. 25 PPM emissions from one CT results in approximately 36.0 pounds per hour of NOx. Reducing the NOx level to 2.5 PPM through the SCR reduces the emissions to approximately 3.6 pounds per hour. Assuming two CT units both operating 1,500 hours annually the NOx emissions would be 5.4 tons per year.

While firing distillate fuel water injection continues to be used to reduce emissions from the CT to 42 PPM. At this NOx level entering the SCR achieving a stack NOx level of 2.5 PPM would not be expected. Accordingly, the plant may be limited to a specified, not to exceed annual operating hours on oil.

The GE LM 6000 unit is designed with black start capability. These units are commonly supplied with black start capability. Accordingly, black start ancillary service is available from the Aero CT plant.

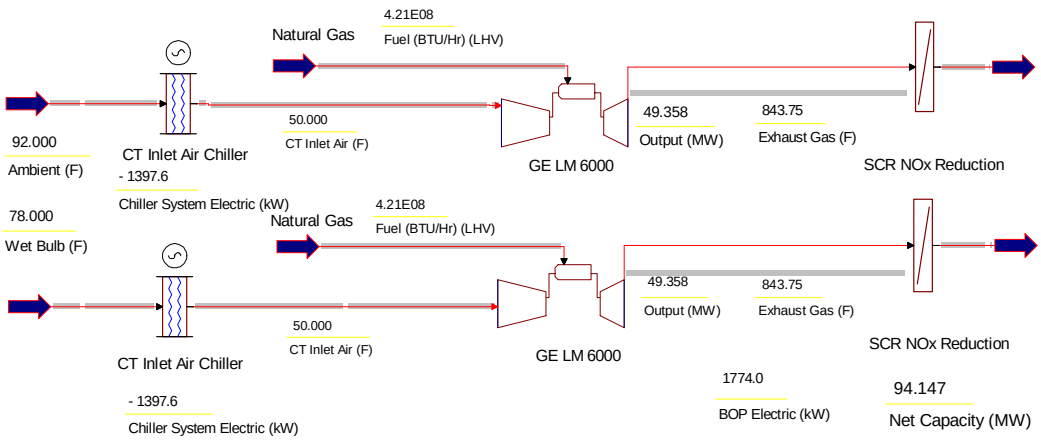
Turbine inlet air-cooling to 50° F is included in the Aero CT plant design and is a common option when purchased from GE. The chiller system is similar to that described for the Frame CT plant. Figure 2 below provides details of the Aero CT plant at ambient conditions of a 92° F dry bulb temperature and a 78° F wet bulb temperature. The net electric capacity of the Aero CT plant is 94.15 MW. This is net of 2,795 kW of chiller system parasitic load. Each CT output is 49.36 MW.

Without turbine inlet cooling the net electric capacity is 74.11 MW with each CT output at 37.94 MW. The net plant capacity increase is 20.04 MW with turbine inlet cooling.

Figure 2

PJM CONE Combustion Turbine Study

Two GE LM 6000 At 92 F Ambient



2.0 Construction Scope and Capital Cost

2.1 Plant Proper Capital Cost

The Wood Group, a power plant design build firm with CT plant design and construction experience, was retained by Strategic to develop the plant proper capital cost estimates for the Frame CT and Aero CT plants. The Wood Group assembled capital cost estimates based on equipment quotations, materials, and man-hours based on prevailing union labor rates in the designated PJM regions. The plant proper estimate is an engineering, procurement and construction ("EPC") turnkey cost as if contracted to the Wood Group to complete in 2004 dollars. The Frame CT plant proper cost for New Jersey was estimated at $124.648 Million, for Maryland at $125.293 and for Illinois at $126.528. The Aero CT plant proper cost for New Jersey was estimated at $66.681 Million.

2.2 Construction and Draw Down Schedules

The Wood Group also provided construction and draw down schedules. The construction schedule for the Frame CT plant is 18 months and 15 months for the Aero CT plant. The construction and draw down schedule were used by Strategic to determine interest during construction.

2.3 Black Start Capability

The Aero CT plant is capable of black start services and black start facilities have been included in the capital cost. Black start capability is not included in the Frame CT plant as the unit is not started via a separate motor driven hydraulic system but utilizes the generator winding as a motor to start the unit using electric from the system.

2.4 Duel Fuel Capability

Both the Aero CT and the Frame CT plants are capable of natural gas and No. 2 oil operation and the necessary equipment including on site fuel oil storage and transfer have been included in the plant proper capital cost.

3.0 Other Project Capital Costs

3.1 Electric Interconnection

In the normal process of power project development within PJM the PJM Transmission Planning Department develops the capital cost for plant direct interconnection to the PJM system as well as the capital cost of PJM system upgrades. For the CONE CT study 111 power plant interconnection and system upgrade capital costs were available in the PJM database for proposed, in construction and recently completed power plant projects. Project installed capacities ranged from 2 MW to 765 MW. The database was sorted into the 100 MW to 400 MW capacity range that represented the range of the CONE CT projects under evaluation. This capacity range produced 13 projects with an average direct interconnection cost of $12.70 per kW and $8.06 per kW for PJM system upgrades. This produced a total interconnection cost of $21.76 per kW of installed net plant capacity. This value was increased to a value of 22.30 per kW net plant capacity to include power lines from the CONE CT plant proper to the PJM interconnection point.

3.2 Natural Gas Interconnection

PJM does not compile a database of natural gas interconnection costs. The Wood Group provided estimates for the natural gas metering station at the plant site. These costs were estimated at $500,000 for the Aero CT plant and $1,000,000 for the Frame CT plant. Based on further input from The Wood Group and review of other available information a cost of $21.00 per net kW capacity was utilized to represent the total cost of natural gas interconnection that includes the metering stations and a gas pipeline outside the plant proper. The pipeline distance from the plant to the high-pressure gas interconnection point is assumed to be 5 miles or less. The CONE CT evaluation assumes that natural gas is available at a pressure level adequate to be used directly in the CT without on site fuel gas compression. For the Aero CT plant this pressure is assumed to be 650 PSIG and for the Frame CT plant this pressure is assumed to be 450 PSIG.

3.3 Plant Mobilization and Startup Costs

As a power plant nears construction completion the owner begins to mobilize for the commissioning, testing and startup. These costs are typically capitalized and include hiring, relocation expenses, labor costs for the O&M staff 5 to 6 month before startup, training, production of O&M manuals, special tools and office equipment and furnishings. Startup consumables were also capitalized which include purchased electricity, fuel, water and chemicals.

The Wood Group operations division provided the mobilization costs for the Aero CT plant and the Frame CT plant. The Wood Group operations division provides startup, operations and maintenance services for CT based power plants. The mobilization cost for the Aero CT plant was estimated by the Wood Group to be $1,139,279. The mobilization cost for the Frame CT plant was estimated at $1,505,426.

Fuel, water and electric costs were assumed to include 72 hours of CT full load testing and 3,600 hours or 5 months of plant parasitic electric load purchased from the local utility. No credit was taken for electric sales revenues during plant testing. The consumable expenses for the Aero CT plant were estimated by Strategic at $553,194. The consumable expenses for the Frame CT plant were estimated at $1,992,909.

3.4 Initial Capitalized Spare Parts Inventory

The Wood Group estimated the spare parts inventory consistent with their estimate for startup and O&M services provided to the CONE CT plants. The capitalized spare parts for the Aero CT plant were estimated at $553,725 while the capitalized spare parts for the Frame CT plant were estimated at $2,000,000.

3.5 Project Development Costs

Owner or developer internal and contracted expenses for professional services can be capitalized. These costs include, development, legal, financial and technical professionals during the development, construction and startup of the project. Strategic, having experience in power project development, estimated these costs. The development costs for the Aero CT plant was estimated at $1,800,000 while the development costs for the Frame CT plant was estimated at $2,250,000.

Environmental and regulatory professional services and application fees to obtain air, land use and FERC permits were estimated at $1,000,000 for the Aero CT plant and $1,500,000 for the Frame CT plant.

3.6 Land Costs

Costs of property for the siting of the CONE CT plants were obtained by contacting real estate agencies in south New Jersey, Maryland and northern Illinois. The current average cost for New Jersey property is $20,000 per acre, for Maryland property, $40,000 per acre and for northern Illinois property, $40,000 per acre.

The Wood Group provided a plot plan for each CONE CT plant. The plant proper foot print for the Aero CT plant was 3.25 acres while the plant proper foot print for the Frame CT plant was 6.75 acres. A land buffer area was added surrounding plant proper foot print equal to 8 times the plant proper foot print. The total purchased property for the Aero CT plant was 29.25 acres while the total purchased property for the Frame CT plant was 60.75 acres.

3.7 Interest During Construction

Interest during construction ("IDC") was determined based on the construction and monthly draw down schedules provided by The Wood Group. An interest rate of 3.50% was utilized for the calculation of IDC.

3.8 Owner's Contingency

An owner's contingency was added to the total project capital cost of 2.5% of the plant proper engineering, procurement and construction cost.

Details of the CT plant scope, capital costs, schedule, startup and annual O&M costs, plant performance and plant drawings provided by the Wood Group may be found in the attached Addendum No. 1. The Wood Group qualifications, experience and references may be found in the attached Addendum No. 2. The capital cost buildup for the Frame CT plant and the Aero CT plant may be found on Table 3 and Table 4, respectively.

Table 3

FRAME CT CAPITAL COST
BY REGION

PJM Region	New Jersey		Maryland		Illinois	
	$000	$/kW	$000	$/kW	$000	$/kW
Plant Proper EPC	$124,648	$370.9	$125,293	$372.8	$126,528	$376.5
Electric Interconnect	$7,482	$22.3	$7,482	$22.3	$7,482	$22.3
Gas Interconnect	$6,978	$20.8	$6,978	$20.8	$6,978	$20.8
Equipment Spares	$2,000	$6.0	$2,000	$6.0	$2,000	$6.0
Owners Contingency	$3,116	$9.3	$3,132	$9.3	$3,163	$9.4
Mobilization and Startup	$3,498	$10.4	$3,498	$10.4	$3,498	$10.4
Land Purchase	$1,212	$3.6	$2,424	$7.2	$2,424	$7.2
Development Expenses	$1,500	$4.5	$1,500	$4.5	$1,500	$4.5
Legal Fees	$750	$2.2	$750	$2.2	$750	$2.2
Interest During Construction	$3,825	$11.4	$3,842	$11.4	$3,874	$11.5
Air, EIS, Land Use & FERC Permits	$1,500	$4.5	$1,500	$4.5	$1,500	$4.5
Emissions Reductions Credits	$125	$0.4	$125	$0.4	$50	$0.1
Total Project Cost	$156,636	$466.1	$158,525	$471.7	$159,749	$475.3

Table 4

AERO CT CAPITAL COST

PJM Region	New Jersey	
	$000	$/kW
Plant Proper Contract	$66,681	$708.3
Electric Interconnect	$2,073	$22.0
Gas Interconnect	$1,974	$21.0
Equipment Spares	$554	$5.9
Owners Contingency	$1,667	$17.7
Mobilization and Startup	$1,692	$18.0
Land Purchase	$586	$6.2
Development Expenses	$1,200	$12.7
Legal Fees	$600	$6.4
Interest During Construction	$1,528	$16.2
Air, EIS, Land Use & FERC Permits	$1,000	$10.6
Emissions Reductions Credits	$41	$0.4
Total Project Cost	$79,597	$845.5

4.0 Plant Performance

4.1 Plant Net Capacity and Heat Rate

Strategic utilized GE Energy Services GateCycle power plant performance software to determine the performance of the CONE CT plant at ambient temperatures from 20° F to 100° F. The performance evaluation also included detailed determinations of the plant parasitic loads for CT inlet air cooling, SCR cooling air and the balance of plant loads. Table 5 and Table 6 below summarize the plant performance for the Frame CT and Aero CT plants, respectively.

Table 5

PJM CONE CT PLANT PERFORMANCE
TWO GE FRAME 7FA CT UNITS WITH CT INLET AIR CHILLING TO 50 F

AMBIENT AND OTHER OPERATING CONDITIONS									
Ambient Temperature (F)	**20.0**	**30.0**	**40.0**	**50.0**	**60.0**	**70.0**	**80.0**	**90.0**	**100.0**
Relative Humidity (%)	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Electric Chiller Status	Off	Off	Off	Off	On	On	On	On	On
CT Inlet Air Temperature (F)	20.0	30.0	40.0	50.0	50.0	50.0	50.0	50.0	50.0
Chiller System Efficiency (kW/Ton)	NA	NA	NA	NA	0.80	0.80	0.80	0.80	0.80
SCR Cooling Air Flow (Lbs/Hr)	625,000	625,000	625,000	625,000	625,000	625,000	625,000	625,000	625,000
SCR Inlet Temperature (F)	950.3	957.6	965.8	973.8	975.1	976.3	977.2	978.0	978.6
PLANT GROSS CAPACITY									
CT 1 Gross Capacity (MW)	183.323	180.938	177.701	174.464	174.464	174.464	174.464	174.464	174.464
CT 2 Gross Capacity (MW)	183.323	180.938	177.701	174.464	174.464	174.464	174.464	174.464	174.464
Plant Gross Capacity (MW)	366.646	361.876	355.401	348.927	348.927	348.927	348.927	348.927	348.927
PLANT PARASITIC LOADS									
CT 1 Chiller System Load (kW)	0	0	0	0	-567	-1,569	-3,091	-4,954	-7,264
CT 2 Chiller System Load (kW)	0	0	0	0	-567	-1,569	-3,091	-4,954	-7,264
CT 1 SCR Cooling Air Fan Load (MW)	-0.502	-0.513	-0.524	-0.535	-0.546	-0.557	-0.569	-0.581	-0.594
CT 2 SCR Cooling Air Fan Load (MW)	-0.502	-0.513	-0.524	-0.535	-0.546	-0.557	-0.569	-0.581	-0.594
BOP Parasitic Load (kW)	1,953	1,953	1,953	1,953	1,953	1,953	1,953	1,953	1,953
PLANT NET CAPACITY									
Net Capacity (MW)	**363.689**	**358.897**	**352.401**	**345.905**	**344.749**	**342.723**	**339.654**	**335.904**	**331.257**
PLANT FUEL CONSUMPTION AND HEAT RATE									
CT 1 Fuel (MMBTU/Hr) (LHV)	1,721.0	1,697.7	1,670.7	1,643.5	1,643.5	1,643.5	1,643.5	1,643.5	1,643.5
CT 2 Fuel (MMBTU/Hr) (LHV)	1,721.0	1,697.7	1,670.7	1,643.5	1,643.5	1,643.5	1,643.5	1,643.5	1,643.5
Total Plant Fuel (MMBTU/Hr) (LHV)	3,441.9	3,395.4	3,341.4	3,287.1	3,287.1	3,287.1	3,287.1	3,287.1	3,287.1
Total Plant Fuel (MMBTU/Hr) (HHV)	3,810.2	3,758.7	3,698.9	3,638.8	3,638.8	3,638.8	3,638.8	3,638.8	3,638.8
Net Plant Heat Rate (BTU/kWh) (HHV)	**10,476**	**10,473**	**10,496**	**10,520**	**10,555**	**10,617**	**10,713**	**10,833**	**10,985**
CT Only Gross Heat Rate (BTU/kWh) (LHV)	9,388	9,383	9,402	9,421	9,421	9,421	9,421	9,421	9,421

Table 6

PJM CONE CT PLANT PERFORMANCE
TWO GE LM 6000 CT UNITS WITH CT INLET AIR CHILLING TO 50 F

AMBIENT AND OTHER OPERATING CONDITIONS									
Ambient Temperature (F)	**20.0**	**30.0**	**40.0**	**50.0**	**60.0**	**70.0**	**80.0**	**90.0**	**100.0**
Relative Humidity (%)	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Electric Chiller Status	Off	Off	Off	Off	On	On	On	On	On
CT Inlet Air Temperature (F)	20.0	30.0	40.0	50.0	50.0	50.0	50.0	50.0	50.0
PLANT GROSS CAPACITY									
CT 1 Gross Capacity (MW)	50.484	50.848	50.466	49.701	49.358	49.358	49.358	49.358	49.358
CT 2 Gross Capacity (MW)	50.484	50.848	50.466	49.701	49.358	49.358	49.358	49.358	49.358
Plant Gross Capacity (MW)	100.968	101.696	100.932	99.402	98.716	98.716	98.716	98.716	98.716
PLANT PARASITIC LOADS									
CT 1 Chiller System Load (kW)	0	0	0	0	-163	-451	-889	-1,425	-2,089
CT 2 Chiller System Load (kW)	0	0	0	0	-163	-451	-889	-1,425	-2,089
BOP Parasitic Load (kW)	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774
PLANT NET CAPACITY									
Net Capacity (MW)	**99.194**	**99.922**	**99.158**	**97.628**	**96.616**	**96.040**	**95.164**	**94.092**	**92.763**
PLANT FUEL CONSUMPTION AND HEAT RATE									
CT 1 Fuel (MMBTU/Hr) (LHV)	422.4	427.6	429.0	424.0	421.1	421.1	421.1	421.1	421.1
CT 2 Fuel (MMBTU/Hr) (LHV)	422.4	427.6	429.0	424.0	421.1	421.1	421.1	421.1	421.1
Total Plant Fuel (MMBTU/Hr) (LHV)	844.8	855.3	858.0	848.1	842.1	842.1	842.1	842.1	842.1
Total Plant Fuel (MMBTU/Hr) (HHV)	935.2	946.8	949.8	938.8	932.3	932.3	932.3	932.3	932.3
Net Plant Heat Rate (BTU/kWh) (HHV)	**9,428**	**9,475**	**9,579**	**9,617**	**9,649**	**9,707**	**9,796**	**9,908**	**10,050**
CT Only Gross Heat Rate (BTU/kWh) (LHV)	8,367	8,410	8,501	8,532	8,531	8,531	8,531	8,531	8,531

4.2 NOx Emissions Controls

The Frame CT plant utilized dry low NOx ("DLN") combustor technology to control NOx at 9 PPM exiting the CT while firing natural gas. While firing No. 2 oil, water injection is used to control the NOx level at 42 PPM. Selective Catalytic Reduction ("SCR") technology was employed to further reduce NOx to 2.5 PPM exiting the stack.

The Aero CT plant utilized water injection technology to control NOx at 25 PPM exiting the CT while firing natural gas. While firing No. 2 oil, the NOx level is controlled at 42 PPM. Selective Catalytic Reduction ("SCR") technology was employed to further reduce NOx to 2.5 PPM exiting the stack.

4.3 Ancillary Services

Both CONE CT plant configurations are capable of supplying reactive power as an ancillary service. No additional capital cost is included for this service as leading power factor capability is standard design for the electric generators. The Aero CT plant is capable of black start services and the cost of black start equipment has been included in the capital cost. Black start capability is not included in the Frame CT plant as the unit is not started via a separate motor driven hydraulic system but utilizes the generator winding as a motor to start the unit using electric from the system.

5.0 Annual Fixed Operating Expenses

5.1 Operations and Maintenance Staffing

The Wood Group operations division provided assistance in determining the O&M staffing of the CONE CT plants. The staffing profile for the Frame CT plant and Aero CT plant are summarized in Table 7 and Table 8, respectively.

A 37% benefits burden has been added to the base hourly rate as well as 20% overtime hours above the base 2,080 hours at a time and one half hourly rate. This results in a 2004 fully loaded annual labor expense of $1,206,494 or $100,541 per person per year for the Frame CT plant. The 2004 fully loaded annual labor expense of for the LM 6000 plant is $675,678 or $96,525 per person per year.

Table 7

FRAME PLANT STAFFING

PLANT WORK FORCE						
Shift Number	**1**	**2**	**3**	**4**	**Swing**	**Total**
Direct Management						
Facility Manager	1					1
Operations						
O&M Supervisor	1					1
Shift Supervisor	1	1	1	1		4
A Operator	1	1	1	1	0	4
B Operator	0	0	0	0	0	0
Maintenance						
Maintenance Supervisor	0					0
Toolroom/Warehouse	0					0
Mechanic/Welder	0					0
Electrician/I&C	1					1
Administrative						
Secretary/Administration	1					1
Accounting/Purchasing	0					0
TOTAL LABOR						12

Table 8

AERO PLANT STAFFING

PLANT WORK FORCE						
Shift Number	**1**	**2**	**3**	**4**	**Swing**	**Total**
Direct Management						
Facility Manager	1					1
Operations						
O&M Supervisor	0					0
Shift Supervisor	0	0	0	0		0
A Operator	1	1	1	1	0	4
B Operator	0	0	0	0	0	0
Maintenance						
Maintenance Supervisor	0					0
Toolroom/Warehouse	0					0
Mechanic/Welder	0					0
Electrician/I&C	1					1
Administrative						
Secretary/Administration	1					1
Accounting/Purchasing	0					0
TOTAL LABOR						7

5.2 Contract Parts and Labor

The Wood Group provided the annual contract parts and labor expenses for both the Frame CT plant and the Aero CT plant, which were $232,000 and $205,000, respectively.

5.3 Insurance Expenses

Overall power plant annual insurance premiums were estimated to be 1.0% of the assets being insured. In the CONE CT study insurance was extended to the plant proper, the electric interconnection, the gas interconnection and capitalized spare parts. Coverage included general liability, property, boiler and machinery and business interruption. This amounts to approximately $1.4 Million annual premium for the Frame CT plant and $713,000 annual premium for the Aero CT plant. Guidelines for the determination of insurance premiums were provided by Marsh Insurance, Inc.

5.4 Property Tax

Property taxes were determined for each region-- New Jersey, Maryland and Illinois-- by obtaining public information on actual taxes paid by recently constructed power plants. This information was obtained from FERC filings or directly from the township or county tax assessors. These rates for power plants were compared with statutory tax rates in the counties and townships where the plants were constructed as well as surrounding counties and townships. In all cases the power plant tax rates were lower then the statutory rates indicating that development/enterprise zone tax relief was made available or payments in lieu of taxes ("PILOT") were negotiated. The averages of the actual tax rates incurred by the power plants surveyed in each region were used in this study. For New Jersey the tax rate was $2.53 per $1,000 of assessed value, for Maryland the tax rate was $4.50 per $1,000 of assessed value and for Illinois the tax rate was $2.09 per $1,000 of assessed value. The assessed value was determined to be all fixed assets based on the plant proper construction capital cost and all interconnection costs plus net current assets which would include capitalized spare parts. In many townships and counties property taxes are only assessed against the value of the buildings and property not power generation equipment values. This also contributed to reduced property tax expenses.

5.5 General and Administrative Expenses

General and administrative expense cover any technical, legal, accounting and permitting fees incurred on an annual basis. G&A expenses were estimated at $161,000 for the Frame CT plant and $157,000 for the Aero CT plant.

The annual fixed O&M expenses for the first year of operation for the Frame CT plant and the Aero CT plant are summarized on the following Table 9 and Table 10, respectively.

Table 9

FRAME CT FIRST YEAR ANNUAL FIXED O&M EXPENSES BY REGION

PJM Region	New Jersey		Maryland		Illinois	
	$000	$/MW-Year	$000	$/MW-Year	$000	$/MW-Year
Site O &M Labor	$1,268	$3,772	$1,344	$3,998	$1,470	$4,375
O&M Contract Parts & Labor	$232	$689	$232	$689	$232	$689
Electric Purchases	$200	$595	$200	$595	$200	$595
Training-Employee Expenses	$74	$220	$74	$220	$74	$220
O & M Management Fee	$250	$744	$250	$744	$250	$744
Property, Machinery, B I Insurance	$1,411	$4,199	$1,418	$4,218	$1,430	$4,255
G&A	$161	$478	$161	$478	$161	$478
Property Taxes	$395	$1,177	$713	$2,121	$333	$991
Total	$3,991	$11,874	$4,390	$13,064	$4,150	$12,348

Table 10

AERO CT FIRST YEAR ANNUAL FIXED O&M EXPENSES

PJM Region	New Jersey	
	$000	$/MW-Year
Site O &M Labor	$710	$7,540
O&M Contract Parts & Labor	$205	$2,174
Electric Purchases	$100	$1,062
Training-Employee Expenses	$44	$462
O & M Management Fee	$250	$2,655
Property, Machinery, B I Insurance	$713	$7,571
G&A	$157	$1,667
Property Taxes	$201	$2,135
Total	$2,379	$25,268

6.0 Financial Criteria

6.1 Proforma Analysis

A twenty (20) year after tax discounted cash flow ("ATDCF") economic model was used to determine the real levelized and nominal levelized revenue requirements for the CONE CT project. Revenue requirements covered capital recovery, annual fixed O&M expenses and earn the target internal rate of return ("IRR") for the investor/owner. The mid-year convention was used to account for revenues and expenses incurred continuously throughout each year in the 20-year project evaluation. This methodology for evaluating power generation investments is the most commonly used by owners and developers. Accordingly, the financial results of this study will be consistent with the financial results obtained by developers when applying the CONE CT study capital costs, annual O&M expenses and financial criteria. The model only accounted for the capital costs to construct the plant and annual fixed operation and maintenance ("O&M") expenses over the 20-year project life. It includes fixed revenue, annual fixed O&M expense, debt service, depreciation, income taxes and after tax cash flow. Variable operating expenses such as fuel and variable operations and maintenance expenses ("VOM") where not included in the model.

6.2 Financial Criteria

Target Internal Rate of Return ("IRR")

A target IRR of 12% was chosen for the proforma evaluation and is based on achieving this IRR over a 20 year project life. Applying this 12% discount rate to the net present value ("NPV") of the 20 year after tax cash flow steam, including the equity investment in year one, the NPV will be zero. This investment hurdle rate represents a mature and properly functioning capacity market, which provides appropriate and reasonably stable capacity revenues. Concentric Energy Advisors, Inc. used a 12% target IRR for the CONE study for ISONE. Strategic has reviewed this report and agrees with the basis of the 12% target IRR.

Debt to Equity Ratio

A 50/50 debt to equity ratio was assumed in the proforma model evaluation. This ratio is consistent with the financial structure of a creditworthy integrated electric utility company or independent power company ("IPP"). This would be a reasonable financial structure for a CONE CT project.

Debt Term and Interest Rate

Consistent with the financial structure of a creditworthy integrated electric utility company a long term, 20-year, bond with an interest rate of 7.0 % was used in the proforma model. A mortgage style loan was used which provides for increasing principal payment and decreasing interest payments over the loan term.

Tax Depreciation

The federal tax code allows for CT only power plants to utilize Modified Accelerated Cost Recovery System ("MACRS") over a 15 year tax life on the qualifying portions of the total project cost.

Federal and State Income Taxes

A 35.0% federal income tax rate was used in the proforma model. The state tax rate for New Jersey was 9.0 %, Maryland, 7.0% and Illinois 7.3%.

Escalation

An annual escalation rate of 2.5% was assumed for all fixed expenses over the entire project life.

Reporting of Revenue Requirements

Revenue requirements are presented in $/MW-Year and $/MW-Day for the year 2004, 2006 and total nominal levelized. The 2004 value represents the current revenue requirements of the CONE CT assuming the annual revenue requirements and fixed O&M expenses escalate at 2.5% annually over the project life. The 2006 value represents the first year of operation with the 2004 revenue requirement escalated at 2.5% annually for the two years between 2004 and 2006. The total nominal levelized value represents constant, non-escalating annual revenues over the 20-year project life beginning in 2006 having the same NPV as the 20-year annual revenue requirements escalating at 2.5% starting in 2006.

6.3 Proforma Evaluation Methodology

Initially an estimated real levelized (escalating at 2.5%) annual revenue requirement was input into the proforma model. Next the project capital cost and 2004 estimates of fixed O&M expenses were input into the proforma model and allowed to escalate at 2.5% annually to 2006, the first year of operation, and for the 20-year project life. Included with these expenses were MACRS tax depreciation and debt interest payments. The difference between revenues and expenses provided the annual taxable income to which the federal income tax and appropriate state taxes were applied. This yielded after tax income. To the after tax income line the loan principal payments were subtracted and depreciation was added back to determine annual after tax cash flow. The equity placement of 50% of the total project cost was added as a negative cash flow on January 1, 2006 of the first operating year while annual after tax cash flow was assigned a mid-year convention of July 1 for each year in the project life. This 20-year after tax cash flow stream was used to calculate IRR via the MS Excel function XIIR. The real levelized annual revenue requirement input was adjusted until the target 12.0% IRR was achieved.

PJM requested Strategic to determine the non-escalating or nominal levelized annual revenue requirements for the CONE CT project under the same financial criteria. The nominal levelized value represents constant, non-escalating annual revenues over the 20-year project life beginning in 2006 having the same NPV as the 20-year revenue requirements escalating at 2.5% starting in 2006.

7.0 PJM CONE Comparison to ISONY and ISONE CONE Studies

7.1 ISONY Study Overview

The New York ISO retained Levitan & Associates, Inc. located in Boston to determine the CONE generator for three regions of the New York ISO. These regions were New York City, Long Island and the rest of state ("ROS"). For making meaningful comparisons New York ROS region only was compared to the PJM CONE CT results.

Levitan relied upon DMJM+ Harris, an engineering firm with gas turbine experience in New York City and Long Island, to provide power plant capital costs, start up, testing and spare parts costs, owner's development costs and plant staffing levels and other fixed O&M expenses. Levitan's in house experience contributed to interconnection costs, start up, testing and spare parts costs, owner's development cost and property taxes. Levitan's report was completed and issued in August 2004.

Levitan, as did Strategic, focused on the GE LM 6000 Aero CT and the GE Frame 7FA Frame CT technologies in their evaluation. Each technology was evaluated employing a two CT plant configuration. The plant design for NYISO was natural gas only, included SCR for NOx control but did not include turbine inlet air-cooling. Plant capacity ratings in the Levitan study used ISO conditions at 59° F. Strategic rated the CONE CT plant capacity at 92° F consistent with the PJM summer plant capacity rating procedures.

7.1 ISONE Study Overview

The New England ISO had two CONE CT studies performed. e-Acumen, Inc. completed a study in June 2002 and Concentric Energy Advisors, Inc. completed the most recent study in August of 2004.

e-Acumen relied upon four separate studies of hypothetical marginal CT power plants. e-Acumen obtained the results of simple cycle CT power plant studies performed by developers of combined cycle power plants in the New England region. Evaluating a hypothetical marginal CT power plant was part of the risk analysis performed by the developers of these combined cycle power plants. All the CT studies employed the GE Frame 7FA units. e-Acumen used the weighted average cost of capital expressed in $/kW and fixed O&M expenses expressed in $/kW-Year to determine their study Frame CT plant's capital cost and fixed O&M expenses. To determine the fixed revenue requirements e-Acumen used the average of the four studies' financial criteria. A comparison of the various studies' financial criteria can be found in Table 14.

Detailed plant design information was not available in the e-Acumen report. Accordingly, it is not known if the plant included dual fuel capability, SCR for NOx control or turbine inlet air-cooling. Plant capacity ambient rating conditions were also not known.

In conducting their study for ISONE, Concentric Energy Advisors, Inc. reached out to developers, AE firms, equipment suppliers, environmental firms, investors, gas supply and transmission companies and state and federal environmental officials to obtain cost data. Detailed information obtained formed the basis of the cost estimates. Summary quality information was used to check their final results.

Concentric, as did Levitan and Strategic, focused on the GE LM 6000 Aero CT and the GE Frame 7FA Frame CT technologies for their evaluation. However, Concentric evaluated a single unit Frame CT plant. Concentric evaluated a two unit Aero CT plant as did Levitan and Strategic. The ISONE plant design included natural gas and distillate fuel capability, SCR for NOx control but did not include turbine inlet air-cooling. Plant capacity ratings used ISO conditions at 59° F. Concentric concluded that the Frame CT plant should be used as the CONE CT plant as it yields the lowest fixed revenue requirements. Since the Concentric study utilized only one Frame 7FA unit, Strategic provided the single CT plant results and adjusted the costs to reflect a two unit Frame CT power plant to make a more direct comparison to the Strategic, Levitan and e-Acumen results.

7.2 Profroma Comparison Conclusions

The Strategic economic proforma model yielded the same $/MW-Year revenue requirements as Levitan, e-Acumen and Concentric when the same capital costs, fixed O&M expenses and financial criteria were utilized. It can then be concluded that all study proformas were comparable and consistent in structure.

7.3 Study Comparison Results

Table 11 provides a detailed comparison of the capital costs of each study. The largest cost variances centered on equipment cost estimates, construction labor and interconnection costs.

Table 11

CONE CT ISO COMPARISON
FRAME CT PLANT CAPITAL COSTS

(Using Concentric Cost Categories)

PLANT/SITE CHARACTERISTICS					
ISO	**PJM**	**NY**	**NE**	**NE**	**NE**
Source	**Strategic**	**Levitan**	**Concentric**	**Concentric**	**e-Acumen**
Location	**New Jersey**	**ROS**	**Maine**	**Maine**	**Multiple**
CT Technology	Frame x 2	Frame x 2	Frame x 1	Frame x 2	Frame
Environmental Controls	with SCR	with SCR	with SCR	with SCR	NA
Fuel Capability	Dual	Gas	Dual	Dual	NA
Capacity- (MW)	336.1	336.5	170.0	340.0	198.5
Site Size (Acres)	60.61	NA	5	10	NA
INSTALLATION ($000)					
Equipment (Including CT and SCR Delivered to Site)	$83,056	$118,000	$38,600	$77,200	NA
Pipeline & Transmission Interconnection	$14,537	$14,211	$11,100	$22,200	NA
Non-Labor EPC (Plus Inventory, Startup & Testing)	$37,285	$38,555	$22,500	$45,000	NA
Owner's (Permitting, Legal, Community Support, Fees)	$7,700	$15,084	$4,700	$7,050	NA
Construction Labor	$9,730	$15,606	$13,206	$26,412	NA
Project Contingency	$3,116	$0	$3,806	$7,611	NA
Per Acre Land Cost	$20	$0	$250	$250	NA
Land and Land Rights	$1,212	$0	$1,250	$2,500	NA
Total Capital Costs - Depreciable Portion	$155,424	$201,456	$93,912	$185,473	NA
Total Capital Costs - Non-Depreciable Portion (Land)	$1,212	$0	$1,250	$2,500	NA
Total Capital Costs	**$156,636**	**$201,456**	**$95,162**	**$187,973**	**$82,030**
Total Capital Costs ($/kW)	**$466.04**	**$598.68**	**$559.77**	**$552.86**	**$413.25**

Table 12 provides a detailed comparison of the annual fixed O&M expenses. The largest expense variances centered primarily on property taxes.

Table 12

CONE CT ISO COMPARISON
FRAME CT PLANT FIXED O&M EXPENSES

FIXED O&M EXPENSES ($000)					
ISO	**PJM**	**NY**	**NE**	**NE**	**NE**
Source	**Strategic**	**Levitan**	**Concentric**	**Concentric**	**e-Acumen**
Location	**New Jersey**	**ROS**	**Maine**	**Maine**	**Multiple**
CT Technology	Frame x 2	Frame x 2	Frame x 1	Frame x 2	Frame
Labor - Location Cost	$1,268	$0	$435	$870	NA
Property Tax Rate ($/$000 Value)	$2.52	$25.96	$15.00	$15.00	$14.99
Value Used for Property Taxes	$156,511	$201,456	$95,162	$187,973	$82,030
Total Annual Property Taxes	$395	$5,229	$1,427	$2,820	$1,230
Other (Insurance, Materials, G&A Etc.)	$2,328	$1,487	$1,670	$3,340	$1,824
Total Fixed O&M	**$3,991**	**$6,717**	**$3,532**	**$7,030**	**$3,054**
Total Fixed O&M ($/kW-Year)	**$11.87**	**$19.96**	**$20.78**	**$20.68**	**$15.39**
RESULTS					
Total Capacity Payment ($/kW-Year)	**$58.752**	**$87.000**	**$87.220**	**$86.296**	**$73.810**
Capital Capacity Payment ($/kW-Year)	**$46.878**	**$67.040**	**$66.441**	**$65.621**	**$58.425**

Table 13 provides a detailed reconciliation of the Strategic, Concentric and Levitan study capital costs and fixed O&M expenses expressed in $/kW-Year.

Table 13

CONE CT ISO COMPARISON
FRAME CT PLANT
RECONCILIATION OF REVENUE REQUIREMENTS

RECONCILIATION ($/kW-Year)			
ISO	**NE**	**PJM**	**NY**
Source	**Concentric**	**Strategic**	**Levitan**
Location	**Maine**	**NJ**	**ROS**
CT Technology	Frame x 2	Frame x 2	Frame x 2
Total Capacity Payment ($/kW-Year)	**$86.296**	**$58.752**	**$87.000**
Equipment	$2.044	$0.000	($11.629)
Pipeline & Transmission Interconnection	($2.675)	$0.000	$0.108
Non-Labor EPC	($2.693)	$0.000	($0.423)
Owner's Costs	$0.227	$0.000	($2.457)
Construction Labor	($5.824)	$0.000	($1.955)
Project Contingency	($1.569)	$0.000	$1.037
Land and Land Rights	($0.450)	$0.000	$0.403
Total Capital Adjustments	($10.940)	$0.000	($14.915)
Operating Labor	$1.171	$0.000	$3.768
Total Annual Property Taxes	($7.132)	$0.000	($14.367)
Other (Insurance, Materials, G&A Etc.)	($2.976)	$0.000	$2.498
Total O&M Adjustments	($8.937)	$0.000	($8.100)
Total Adjustments	**($19.877)**	**$0.000**	**($23.015)**
Other Aggregate Financial Adjustments	($7.667)	$0.000	($5.233)
Adjusted Capacity Payment ($/kW-Year)	**$58.752**	**$58.752**	**$58.752**

Table 14 provides a detailed comparison of each study's financial criteria. Note that the use of levelized principal payments increases revenue requirements by $3.00/kW-Year.

Table 14
CONE CT ISO COMPARISON
FINANCIAL CRITERIA

ISO	**PJM**	**NY**	**NE**	**NE**
Source	**Strategic**	**Levitan**	**Concentric**	**e-Acumen**
Annual Inflation Rate	2.5%	3.0%	2.5%	2.5%
Federal Income Tax Rate	35.00%	35.00%	35.00%	35.00%
State Income Tax Rate	9.00%	7.50%	9.38%	7.00%
Total Effective Income Tax Rate	40.85%	39.88%	41.10%	39.55%
Equity Percent	50%	50%	50%	50%
Debt Percent	50%	50%	50%	50%
Cost of Debt	7.00%	7.50%	7.00%	8.78%
Debt Term	20	20	20	15
After-Tax Internal Rate of Return	12.0%	12.5%	12.0%	14.13%
Debt Structure	Mortgage	Fixed Principal	Fixed Principal	Mortgage
Interest Rate During Construction	3.5%	5.0%	3.5%	NA
Project Life	20	20	20	15
MACRS Tax Life - Years	15	15	15	15

8.0 PJM CONE CT Development Schedule

8.1 Schedule Overview

The entire development of a greenfield CT plant from initial concept through site selection, interconnection studies, environmental permits, construction to commercial operation is estimated to be four (4) years.

An owner/developer considering the construction of a CT based power plant would begin by evaluating multiple plant sites. Concurrently with the site selection process the owner/developer would be conducting conceptual plant design and engineering. Key factors in this evaluation are proximity of high pressure natural gas supply, high voltage substations and power transmission lines, water supply, interconnection costs, equipment transportation, air emission thresholds, property cost and local property taxes. The selection of a site is estimated to take nine (9) months. Multiple sites may be evaluated concurrently with multiple PJM Interconnection Feasibility Studies being conducted.

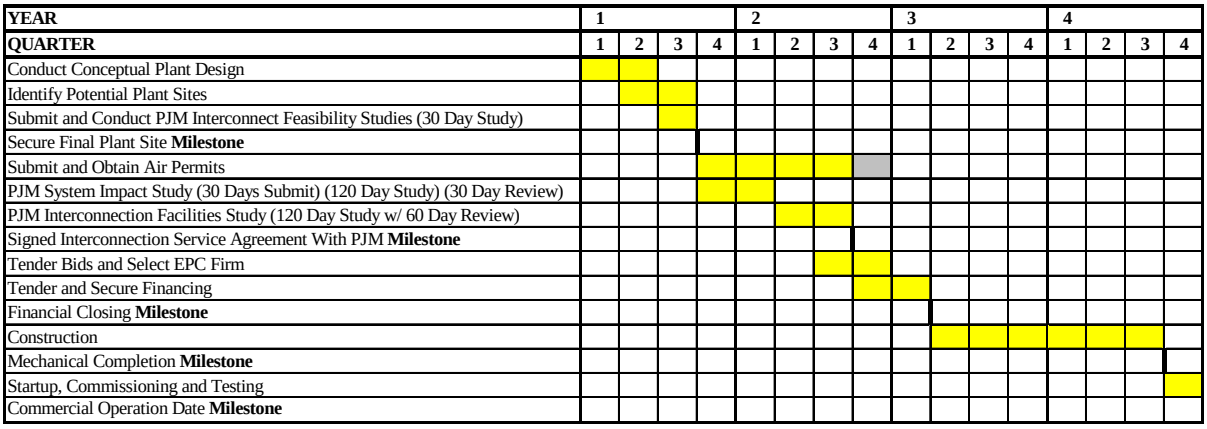
Once a site is selected the property may be purchased or secured with an executed purchase option. Environmental permit applications would be prepared and submitted. The permit approval process, which would include public hearings, is estimated to take twelve (12) months but could extend to eighteen (18) months depending on site complexity and the results of public hearings. Concurrently with the permit process the PJM System Impact Study and the Generation and Transmission Interconnection Facilities Study would be completed. Each study is completed by PJM within a four (4) month period. See Figure 3 below for a Gant Chart on the overall development schedule.

During the permit process the owner/developer would conduct a competitive bidding process for the plant engineering, procurement and construction ("EPC") and select the EPC firm. During this period the owner/developer would also be arranging for the placement of debt and equity for the plant financing. This would include a construction loan and term loan. Financing and approved permits would have to be in place prior to a "Notice to Proceed" given to the EPC firm.

The construction of the Frame CT plant is estimated to take eighteen (18) months to mechanical competition. Three (3) months is estimated for commissioning, startup and testing of the power plant prior to the commercial operation date.

Figure 3

PJM CONE CT PROJECT SCHEDULE



9.0 Cost of Recently Constructed CT Projects

9.1 Overview

Using the information available in recent FERC filings for reactive revenues, technical, capital cost and financial information was obtained on nine (9) CT plants which have achieved commercial operation between June 2001 and July 2003. The average capacity of the CT plants is 532 MW and seven of the plants utilized the GE Frame 7FA or the Siemens-Westinghouse equivalent F technology. All plants incorporated multiple CT units, with the capacity of all nine plants totaling 4,800 MW.

9.2 Capital Cost Comparison

The capital cost information obtained from the FERC reactive filings may be found in Table 15 below. The average all-in project capital cost for these power plants was $399.92/kW. The design of these plants did not include SCR emissions controls and duel fuel capability which adds $40.00/kW and $11.00/kW, respectively, for an adjusted capital cost of $450.92/kW. This capital cost compares closely with the CONE regional cost range found in Table 2 and Table 15 of $466.04/kW to $475.30/kW.

Table 15
Recently Constructed CT Plants
Capital Cost Comparison

PJM CONE CT						
Project Name	**Location**	**Owner**	**CT Type**	**Capacity (MW)**	**Capital ($)**	**Cost ($/kW)**
PJM CONE CT	NJ	NA	GE Frame 7FA	336	$156,636,000	**$466.04**
PJM CONE CT	Maryland	NA	GE Frame 7FA	336	$158,527,000	**$471.67**
PJM CONE CT	Illinois	NA	GE Frame 7FA	336	$159,749,000	**$475.30**
FERC FILINGS OF PJM MEMBER FRAME CT PLANTS						
Project Name	**Location**	**Owner**	**CT Type**	**Capacity (MW)**	**Capital ($)**	**Cost ($/kW)**
Rock Springs	Rising Sun, MD	ConEd	GE Frame 7FA	335	$145,908,555	$435.55
Ocean Peaking	Lakewood, NJ	ConEd	GE Frame 7FA	330	$135,110,335	$409.43
Duke Lee County	Lee County, IL	Duke	GE Frame 7EA	640	$254,293,000	$397.33
Rock Springs	Rising Sun, MD	Dominion	GE Frame 7FA	336	$140,604,453	$418.47
Rolling Hills	Wilkesville, Ohio	Dynegy	Siemens-Westinghouse 501F	973	$351,742,000	$361.50
Armstrong	Armstong, Co., PA	Dominion	GE Frame 7FA	600	$234,404,000	$390.67
Pleasants	St. Mary's, WV	Dominion	GE Frame 7FA	300	$119,985,000	$399.95
Twelvepole Creek	Wayne Co., WV	Reliant	GE Frame 7EA	458	$175,520,025	$383.25
Riverside	Catlettsburg, KY	Dynergy	Siemens-Westinghouse 501F	820	$326,178,000	$397.78
Total/Average				532	$1,883,745,368	**$399.32**

9.3 Weighted Average Cost of Capital Comparison

The financial structure of recently constructed CT projects was also obtained from the FERC reactive filings and may be found in Table 16 below. The financial structure of the CONE CT using 50% debt at 7.0% interest rate and 50% equity at a target IRR of 12.0% yields a weighted average cost of capital ("WACC") of 9.5%. The average financial structure of the same nine CT projects listed in Table 16 compares closely with that of the CONE CT. The average debt amount was 49.5% at a rate of 7.3%. The average equity amount was 50.5% at a rate of 11.4%. The overall WACC of all nine projects is 9.25%. This is very close to the 9.5% WACC used in the CONE CT financial structure.

Table 16

Recently Constructed CT Plants
Weighted Average Cost of Capital Comparison

FERC FILINGS OF PJM MEMBER FRAME CT PLANTS									
Project Name	**Location**	**Owner**	**Debt %**	**Debt Rate**	**Preferred %**	**Preferred Rate**	**Equity %**	**Equity Rate**	**Project WACC**
Rock Springs	Rising Sun, MD	ConEd	49.40%	7.63%	4.60%	4.89%	46.00%	11.50%	9.28%
Ocean Peaking	Lakewood, NJ	ConEd	23.60%	7.26%	3.09%	8.42%	73.31%	9.60%	9.01%
Duke Lee County	Lee County, IL	Duke	52.89%	8.10%	5.50%	8.16%	41.60%	12.50%	9.93%
Rising Sun	Rising Sun, MD	Dominion	77.03%	6.42%	0.00%	0.00%	22.97%	10.00%	7.24%
Rolling Hills	Wilkesville, Ohio	Dynegy	54.00%	7.70%	0.00%	0.00%	46.00%	13.50%	10.37%
Armstrong	Armstrong, Co., PA	Dominion	48.00%	7.37%	7.10%	6.57%	44.90%	11.00%	8.94%
Pleasants	St. Mary's, WV	Dominion	48.00%	7.37%	7.10%	6.57%	44.30%	11.00%	8.88%
Twelvepole Creek	Wayne Co., WV	Reliant	46.15%	7.94%	6.41%	6.55%	47.44%	11.75%	9.66%
Riverside	Catlettsburg, KY	Dynegy	46.15%	5.73%	6.41%	5.50%	47.44%	11.75%	8.57%
Average/Total			49.47%	7.28%	4.47%	5.18%	46.00%	11.40%	9.10%

Addendum No. 1

Wood Group Capital Cost Estimates

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Section 2.0 Cost for Electrical and Gas Interconnect

Section 3.0 Adder Black Start Capability

Section 4.0 Adder for No. 2 Diesel Firing

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Section 6.0 Schedule

Section 7.0 Cost of Start Up Services

Section 8.0 Annual Cost of O&M Services

Section 9.0 Performance Tables and Curves

Section 10.0 Drawings

Section 1.0 Capital Cost Estimates

The Capital Cost Estimates for Proxy No. 1 (two each GE LM 6000 Gas Turbine Generator Packages) and Proxy No. 2 (two each GE Frame VII FA Gas Turbine Generator Packages) are attached. These cost estimates are based on the following assumptions along with the plants as described on the drawings located in Section 10.

1.1 Location – The location for the plants is estimated to be in Pennsylvania and New Jersey.
1.2 Organized Labor – The cost estimates are based on utilizing Union Labor.
1.3 Work Week – The cost estimates are based on a 50 hour work week
1.4 Freight – Freight for both the Gas Turbine Packages and the Balance of Plant equipment is included.
1.5 Sales Tax – Sales Tax is included for the BOP equipment but not the Gas Turbine Packages. Sales Tax can be added to the cost estimates if you desire.
1.6 Mark Ups – Mark ups for the BOP is shown as 17%. This can range from 12% to 18%. Mark up for the EPC Contractor to furnish a performance wrap on the entire plant is shown as 7%. This can range from 7% to 10%.
Note: These markups can be adjusted if desired.
1.7 Capital Cost Breakdown – The Capital Cost Breakdown is presented in the WGPS Cost Estimating Form. This can be grouped as you desire.
1.8 The Cost Estimates for earthwork and concrete foundations are based on 1500 to 2000 psf soil with no rock or water.
1.9 The cost of any permits, local taxes, fees, etc. is not included.

See attached Cost Breakdowns for Proxy No. 1 and No. 2.

Wood Group Power Solutions, Inc.
Job Description: Two LM 6000's w/ SCR

Two GE LM6000's COST ESTIMATE
(1,000's)

Project Name:	**Strategic PJM Proxy Plant No 1**	**Date:**	**September 9, 2004**
Customer:	**Strategic Energy**	**Job No.**	**#0415 - 1**
Location:	**Pennsylvania**	**Est By:**	WTS
Bid Due Date:	**September 13, 2004**		

I - BALANCE OF PLANT

1.0 Civil - Structural		
1.1 Site Preparation	100	
1.2 Excavation - Fill	71	
1.3 Concrete Foundations	1,092	
1.4 Concrete Piers	-	
1.5 Paving Asphalt - Concrete	207	
1.6 Gravel - Sand	169	
1.7 Structural Steel	170	
1.8 Fencing	80	
1.9 Architectural Treatment	50	
	1,939	1,939
2.0 Buildings		
2.1 Various Bldgs	1,024	
	-	
	-	
	1,024	1,024
3.0 Mechanical		
3.1 Major Mechanical Equipment	8,838	
3.2 Pipelines	-	
3.3 Mechanical Subcontractor	1,635	
	10,473	10,473
4.0 Electrical		
4.1 Major Electrical Equipment	1,610	
4.2 Substation Equipment	1,669	
4.3 Plant Electrical Subcontractor	1,421	
4.4 Substation Subcontractor	341	
	5,042	5,042

Recap of Estimate Cont'd

5.0 Instrumentation		
5.1 Cems	260	
5.2 Plant Instrumentation	205	
	465	465
6.0 DCS System PBX and Public Address		
6.1 Hardware	170	
6.2 Software	197	
	367	367
7.0 Plant Erection		
7.1 Plant Erection	1,669	
	1,669	1,669
8.0 Equipment Rental		
8.2 Plant Equipment Rental	717	
	717	717
9.0 Painting	600	600
10.0 Transportation		-
10.1 Transportation BOP	903	
10.2 LM 6000's Gas Turbine to Job Site	600	
	-	
	1,503	1,503
11.0 Site Costs	300	300
12.0 Engineering		
12.1 EPC Eng Labor	795	
12.2 Local Eng/Arch Labor	40	
12.3 Eng Travel & Per Diem	52	
	886	886
13.0 Project Management		
13.1 Project Mgt Labor	1,236	
13.2 PM Travel & Per Diem	371	
	1,607	1,607

RECAP OF COST CONT'D

14.0 On Site Tech Reps			
14.1 GE	90 @ 2000	180	
14.2 SCR	60 @ 1500	90	
14.3 Chillers	30 @ 1500	45	
14.4 Water Treatment	15 @ 1500	23	
14.5 Fire H2o	15 @ 1500	23	
		361	361
15.0 Testing			
15.1 Concrete		35	
15.2 X-ray		55	
15.3 Environmental Emissions		25	
15.4 Environmental Noise		15	
15.5 Performance and Parasitic		90	
15.6 Black Start, Reliability		10	
15.7 Relay		30	
		260	260
16.0 Legal		30	30
17.0 Insurance		350	350
18.0 Contingency 3%		845	845
19.0 Project Finance Carrying Costs		-	-
	Total Cost of BOP		28,437
	Markup BOP	0.170	4,834
	Total BOP Sales Price w/ FRT		33,272

II - GAS TURBINE PACKAGE (2 Units)

2.1 Two ea GE LM 6000 Gas Turbine Generators w/o Freight w/o Sales Tax			29,000
2.2 Sales Tax		0.08	2,320
	Total Cost 2 Each LM6000		31,320
	Markup LM 6000's	0.07	2,192
	TOTAL SALES PRICE 2 Ea LM6000		33,512

III - TOTAL PLANT SALES PRICE 2 EA. LM6000 & BOP 66,784

Wood Group Power Solutions, Inc.
Job Description: Two GE VII FA's w/SCR

Two VII FA's COST ESTIMATE
(1,000's)

Project Name:	**Strategic PJM Proxy Plant No 2**	**Date:**	**September 9, 2004**
Customer:	**Strategic Energy**	**Quote No:**	**#0415 - 2**
Location:	**Pennsylvania**	**Est By:**	WTS
Bid Due Date:	**September 13, 2004**		

I - BALANCE OF PLANT

1.0 Civil - Structual

1.1 Site Preparation	150	
1.2 Excavation - Fill	172	
1.3 Concrete Foundations	1,608	
1.4 Concrete Piers	-	
1.5 Paving Asphalt - Concrete	252	
1.6 Gravel - Sand	171	
1.7 Structual Steel	290	
1.8 Fencing	103	
1.9 Architectual Treatment	0	
	2,747	2,747

2.0 Buildings

2.1 Various Bldgs	872	
	-	
	-	
	872	872

3.0 Mechanical

3.1 Major Mechanical Equipment	20,598	
3.2 Pipelines	-	
3.3 Mechanical Subcontractor (25,200hrs)	1,578	
	22,175	22,175

4.0 Electrical

4.1 Major Electrical Equipment	3,027	
4.2 Substation Equipment	3,953	
4.3 Plant Electrical Subcontractor	1,950	
4.4 Substation Substation Subcontractor	468	
	9,399	9,399

Recap of Estimate Cont'd

5.0 Instrumentation		
5.1 Cems	260	
5.2 Plant Instrumentation	500	
	760	760
6.0 DCS System, PBX and Public Address		
6.1 Hardware w/ Tel and Public Add Systm	214	
6.2 Software	186	
	400	400
7.0 Plant Erection		
7.1 Plant Erection	2,384	
	2,384	2,384
8.0 Equipment Rental		
8.2 Plant Equipment Rental	2,872	
	2,872	2,872
9.0 Painting	905	905
10.0 Transportation		-
10.1 Transportation BOP	1,349	
10.2 Transportation of GE VII FA's	1,200	
	-	
	2,549	2,549
11.0 Site Costs	599	599
12.0 Engineering		
12.1 EPC Eng Labor	1,332	
12.2 Local Eng/Arch Labor	105	
12.3 Eng Travel & Per Diem	76	
	1,513	1,513
13.0 Project Management		
13.1 Project Mgt Labor	2,130	
13.2 Travel & Per Diem	425	
	2,555	2,555

RECAP OF COST CONT'D

14.0 On Site Tech Reps			
14.1 GE erection and comn		3,000	
14.2 Control System	70 @ 2000	140	
14.3 Fire Water	30 @ 1500	45	
14.4 Water Treatment	15 @ 1500	23	
14.5 SCR	90 @ 1500	135	
		-	
		3,343	3,343
15.0 Testing			
15.1 Concrete		80	
15.2 Xray		120	
15.3 Environmental Emissions		45	
15.4 Environmental Noise		35	
15.5 Performance and Parasitic		150	
15.6 Black Start, Reliability		15	
15.7 Relay		30	
		475	475
16.0 Legal		50	50
17.0 Insurance and Bonds		500	500
18.0 Contingency 3%		1,700	1,700
19.0 Project Finance Carrying Costs		-	-
	Total Cost of BOP		55,797
	Markup BOP	0.170	9,486
	Total BOP Sales Price w/ FRT		65,283
II - Gas Turbine Package (2 Units)			
2.1 Two ea GE Frame VII FA Gas Turbine Generators w/o Freight w/o Sales Tax			52,000
	Markup on GTG's	0.07	3,640
	Total Sales Price 2 ea Frame VII FA's		55,640
III - Total Plant Sales Price 2ea Frame VII FA's & BOP			120,923

Wood Group Power Solutions, Inc.
Job Description: Two GE VII FA's w/SCR

Two VII FA's COST ESTIMATE
(1,000's)

Project Name:	**Strategic PJM Proxy Plant No 4**	**Date:**	**January 5, 2005**
Customer:	**Strategic Energy**	**Quote No:**	**#0415 - 2**
Location:	**Maryland**	**Est By:**	KKM
Bid Due Date:	**January 5, 2005**		

I - BALANCE OF PLANT

1.0 Civil - Structual

1.1 Site Preparation	150	
1.2 Excavation - Fill	172	
1.3 Concrete Foundations	1,608	
1.4 Concrete Piers	-	
1.5 Paving Asphalt - Concrete	252	
1.6 Gravel - Sand	171	
1.7 Structual Steel	290	
1.8 Fencing	103	
1.9 Architectual Treatment	0	
	2,747	2,747

2.0 Buildings

2.1 Various Bldgs	872	
	-	
	-	
	872	872

3.0 Mechanical

3.1 Major Mechanical Equipment	20,598	
3.2 Pipelines	-	
3.3 Mechanical Subcontractor (25,200hrs)	1,674	
	22,271	22,271

4.0 Electrical

4.1 Major Electrical Equipment	3,027	
4.2 Substation Equipment	3,953	
4.3 Plant Electrical Subcontractor	2,068	
4.4 Substation Substation Subcontractor	604	
	9,653	9,653

Recap of Estimate Cont'd

5.0 Instrumentation		
5.1 Cems	260	
5.2 Plant Instrumentation	500	
	760	760
6.0 DCS System, PBX and Public Address		
6.1 Hardware w/ Tel and Public Add Systm	214	
6.2 Software	186	
	400	400
7.0 Plant Erection		
7.1 Plant Erection	2,564	
	2,564	2,564
8.0 Equipment Rental		
8.2 Plant Equipment Rental	2,872	
	2,872	2,872
9.0 Painting	905	905
10.0 Transportation		-
10.1 Transportation BOP	1,349	
10.2 Transportation of GE VII FA's	1,200	
	-	
	2,549	2,549
11.0 Site Costs	599	599
12.0 Engineering		
12.1 EPC Eng Labor	1,332	
12.2 Local Eng/Arch Labor	105	
12.3 Eng Travel & Per Diem	76	
	1,513	1,513
13.0 Project Management		
13.1 Project Mgt Labor	2,130	
13.2 Travel & Per Diem	425	
	2,555	2,555

RECAP OF COST CONT'D

14.0 On Site Tech Reps				
14.1 GE erection and comn			3,000	
14.2 Control System	70 @ 2000		140	
14.3 Fire Water	30 @ 1500		45	
14.4 Water Treatment	15 @ 1500		23	
14.5 SCR	90 @ 1500		135	
			-	
			3,343	3,343
15.0 Testing				
15.1 Concrete			80	
15.2 Xray			120	
15.3 Environmental Emissions			45	
15.4 Environmental Noise			35	
15.5 Performance and Parasitic			150	
15.6 Black Start, Reliability			15	
15.7 Relay			30	
			475	475
16.0 Legal			50	50
17.0 Insurance and Bonds			500	500
18.0 Contingency 3%			1,700	1,700
19.0 Project Finance Carrying Costs			-	-
	Total Cost of BOP			56,328
	Markup BOP		0.170	9,576
	Total BOP Sales Price w/ FRT			65,904
II - Gas Turbine Package (2 Units)				
2.1 Two ea GE Frame VII FA Gas Turbine Generators w/o Freight w/o Sales Tax				52,000
	Markup on GTG's		0.07	3,640
	Total Sales Price 2 ea Frame VII FA's			55,640
	No. 2 Oil Capability Adder			3,749
III - Total Plant Sales Price 2ea Frame VII FA's & BOP				$ 125,293

Wood Group Power Solutions, Inc.
Job Description: Two GE VII FA's w/SCR

Two VII FA's COST ESTIMATE
(1,000's)

Project Name:	**Strategic PJM Proxy Plant No 3**	**Date:**	**January 5, 2005**
Customer:	**Strategic Energy**	**Quote No:**	**#0415 - 2**
Location:	**Chicago**	**Est By:**	KKM
Bid Due Date:	**January 5, 2005**		

I - BALANCE OF PLANT

1.0 Civil - Structual

1.1 Site Preparation	150	
1.2 Excavation - Fill	172	
1.3 Concrete Foundations	1,608	
1.4 Concrete Piers	-	
1.5 Paving Asphalt - Concrete	252	
1.6 Gravel - Sand	171	
1.7 Structual Steel	290	
1.8 Fencing	103	
1.9 Architectual Treatment	0	
	2,747	2,747

2.0 Buildings

2.1 Various Bldgs	872	
	-	
	-	
	872	872

3.0 Mechanical

3.1 Major Mechanical Equipment	20,598	
3.2 Pipelines	-	
3.3 Mechanical Subcontractor (25,200hrs)	1,827	
	22,424	22,424

4.0 Electrical

4.1 Major Electrical Equipment	3,027	
4.2 Substation Equipment	3,953	
4.3 Plant Electrical Subcontractor	2,515	
4.4 Substation Substation Subcontractor	604	
	10,100	10,100

Recap of Estimate Cont'd

5.0 Instrumentation		
5.1 Cems	260	
5.2 Plant Instrumentation	500	
	760	760
6.0 DCS System, PBX and Public Address		
6.1 Hardware w/ Tel and Public Add Systm	214	
6.2 Software	186	
	400	400
7.0 Plant Erection		
7.1 Plant Erection	2,980	
	2,980	2,980
8.0 Equipment Rental		
8.2 Plant Equipment Rental	2,872	
	2,872	2,872
9.0 Painting	905	905
10.0 Transportation		-
10.1 Transportation BOP	1,349	
10.2 Transportation of GE VII FA's	1,200	
	-	
	2,549	2,549
11.0 Site Costs	599	599
12.0 Engineering		
12.1 EPC Eng Labor	1,332	
12.2 Local Eng/Arch Labor	105	
12.3 Eng Travel & Per Diem	76	
	1,513	1,513
13.0 Project Management		
13.1 Project Mgt Labor	2,130	
13.2 Travel & Per Diem	425	
	2,555	2,555

RECAP OF COST CONT'D

14.0 On Site Tech Reps			
14.1 GE erection and comn		3,000	
14.2 Control System	70 @ 2000	140	
14.3 Fire Water	30 @ 1500	45	
14.4 Water Treatment	15 @ 1500	23	
14.5 SCR	90 @ 1500	135	
		-	
		3,343	3,343
15.0 Testing			
15.1 Concrete		80	
15.2 Xray		120	
15.3 Environmental Emissions		45	
15.4 Environmental Noise		35	
15.5 Performance and Parasitic		150	
15.6 Black Start, Reliability		15	
15.7 Relay		30	
		475	475
16.0 Legal		50	50
17.0 Insurance and Bonds		500	500
18.0 Contingency 3%		1,700	1,700
19.0 Project Finance Carrying Costs		-	-
	Total Cost of BOP		57,343
	Markup BOP	0.170	9,748
	Total BOP Sales Price w/ FRT		67,092
II - Gas Turbine Package (2 Units)			
2.1 Two ea GE Frame VII FA Gas Turbine Generators w/o Freight w/o Sales Tax			52,000
	Markup on GTG's	0.07	3,640
	Total Sales Price 2 ea Frame VII FA's		55,640
	No. 2 Oil Capability Adder		3,797
III - Total Plant Sales Price 2ea Frame VII FA's & BOP			126,528

Section 2.0 Cost for Electrical and Gas Interconnect

The cost estimate for the Electrical and Gas Interconnect is not included as we previously stated due to the extreme cost variance based on local factors. The Owner or someone knowledgeable as to local conditions is much better prepared to furnish this.

Section 3.0 Adder for Black Start Capability

The price adder for Black Start Capability for the two options is outlined below:

3.1	Black Start for Proxy No. 1 (two GE LM 6000's) Cost adder for Black Start utilizing 1 – 750 KW Generator	$ 463,000
3.2	Black Start for Proxy No. 2 (two GE Frame VII FA's) Cost adder for Black Start utilizing 3 – 3 MW Generators	$7,440,000

Section 4.0 Adder for No. 2 Diesel Firing

The price adder for equipping the plant with No. 2 diesel fuel capabilities is outlined below:

4.1 Dual fuel capabilities for Proxy No. 1 (two LM 6000's)
Cost adder for dual fuel $1,920,000

4.2 Dual fuel capabilities for Proxy No. 2 (two Frame VII FA's)
Cost adder for dual fuel $3,720,000

III. Cost Estimate for Black Start Capability

			Chicago	Maryland
3.1 Black Start for Proxy No. 1 2ea LM 6000's				
1ea 750 KW Diesel Generator		220		
1 lot Sw Gear		70		
1 lot Installation		80		
		370		
Mark Up	0.25	93		
Sales Price		463		
3.2 Black Start for Proxy No. 2 2ea Fr VIIFA's				
3ea 3 MW Diesel Generators		4800	4800	4800
3ea Sw Gr		900	900	900
3ea Installations		500	580	530
		6200	6280	6230
Mark Up	0.2	1240	1256	1246
Sales Price		7440	7536	7476

IV. Cost Estimate for No 2 Diesel Adder

4.1 Proxy No. 1 2ea LM 6000's				
1 lot Fuel Tank Pumps etc		450		
1 lot Installation		150		
2ea Dual Fuel Adder for GTG		1000		
		1600		
Mark Up	0.2	320		
Sales Price		1920		
4.2 Proxy No. 2 2ea FR VIIFA's				
1 Lot of Fuel Tanks Pumps etc		700	700	700
1 lot Installation		400	464	424
2ea Dual Fuel Adder for GTG		2000	2,000	2,000
		3100	3,164	3,124
Mark Up	0.2	620	632.8	624.8
Sales Price		3720	3,797	3,749

VI. Cost for Wood Group Start Up Services

5.1 The commissioning is included in the BOP pricing of the plant. This also includes the various Tech Reps.

Section 5.0 Construction Draw Down Financial Schedule

5.1 Proxy No. 1 (2ea LM6000 GTG's)

Month 1	10%
Month 2	3%
Month 3	2%
Month 4	2%
Month 5	14%
Month 6	6%
Month 7	3%
Month 8	3%
Month 9	15%
Month 10	2%
Month 11	25%
Month 12	5%
Month 13	3%
Month 14	2%
Month 15	5%

5.2 Proxy No. 2 (2ea Frame VII FA GTG's)

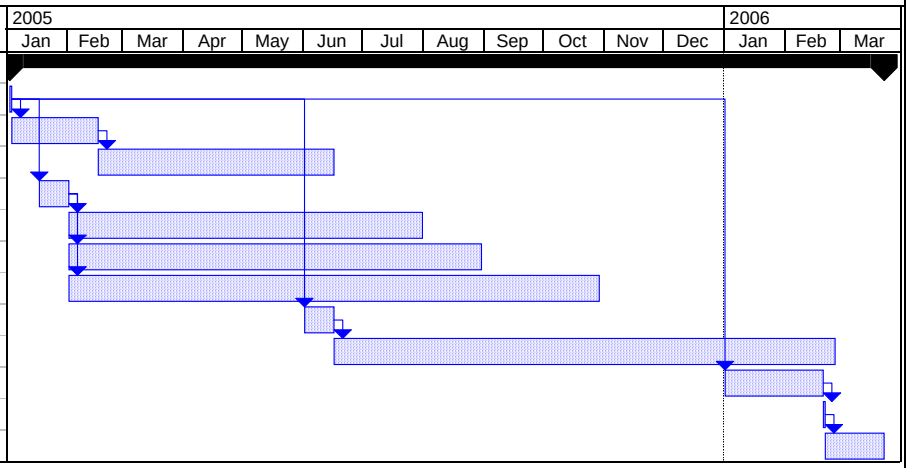
Month 1	10%
Month 2	3%
Month 3	2%
Month 4	2%
Month 5	10%
Month 6	10%
Month 7	3%
Month 8	3%
Month 9	10%
Month 10	2%
Month 11	10%
Month 12	5%
Month 13	8%
Month 14	6%
Month 15	2%
Month 16	7%
Month 17	2%
Month 18	5%

Section 6.0 Schedule

On the following pages please find schedules for Proxy No. 1 and Proxy No. 2.

Strategic PJM
Proxy No. 1 Peaker Plant
2 LM 6000 GTG's
WGPS Project #0415

ID	Task Name	Duration	Start	Finish
1	**Proxy No. 1 (2 LM 6000 GTG's)**	**445 days**	**Mon 1/3/05**	**Thu 3/23/06**
2	Contract Signed	1 day	Mon 1/3/05	Mon 1/3/05
3	Conceptual Engineering	44 days	Tue 1/4/05	Wed 2/16/05
4	Detailed Engineering	120 days	Thu 2/17/05	Thu 6/16/05
5	Procure Major Equipment	15 days	Tue 1/18/05	Tue 2/1/05
6	BOP Equipment to Site	180 days	Wed 2/2/05	Sun 7/31/05
7	SCR's to Site	210 days	Wed 2/2/05	Tue 8/30/05
8	LM 6000 GTG's to Site	270 days	Wed 2/2/05	Sat 10/29/05
9	Mobilize to Site	15 days	Thu 6/2/05	Thu 6/16/05
10	Construction	255 days	Fri 6/17/05	Sun 2/26/06
11	Commission and Startup	50 days	Mon 1/2/06	Mon 2/20/06
12	Sync to Grid	1 day	Tue 2/21/06	Tue 2/21/06
13	Plant Testing	30 days	Wed 2/22/06	Thu 3/23/06

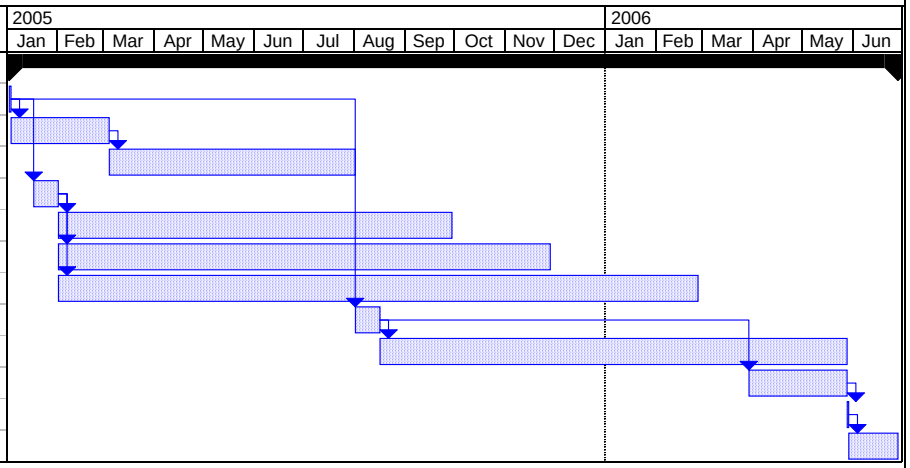


Project: \\Wgusokdc01\shareddata\Pro
Date: Mon 9/13/04

Task
Split
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Split
Rolled Up Milestone
Rolled Up Progress
External Tasks
Project Summary
External Milestone
Deadline

Strategic PJM
Proxy No. 2 Peaker Plant
2 Frame VII FA GTG's
WGPS Project #0415

ID	Task Name	Duration	Start	Finish
1	**Proxy No. 2 (2 Frame VII FA GTG's)**	**542 days**	**Mon 1/3/05**	**Wed 6/28/06**
2	Contract Signed	1 day	Mon 1/3/05	Mon 1/3/05
3	Conceptual Engineering	60 days	Tue 1/4/05	Fri 3/4/05
4	Detailed Engineering	150 days	Sat 3/5/05	Mon 8/1/05
5	Procure Major Equipment	15 days	Tue 1/18/05	Tue 2/1/05
6	BOP Equipment to Site	240 days	Wed 2/2/05	Thu 9/29/05
7	SCR's to Site	300 days	Wed 2/2/05	Mon 11/28/05
8	Frame VII FA GTG's to Site	390 days	Wed 2/2/05	Sun 2/26/06
9	Mobilize to Site	15 days	Tue 8/2/05	Tue 8/16/05
10	Construction	285 days	Wed 8/17/05	Sun 5/28/06
11	Commission and Startup	60 days	Thu 3/30/06	Sun 5/28/06
12	Sync to Grid	1 day	Mon 5/29/06	Mon 5/29/06
13	Plant Testing	30 days	Tue 5/30/06	Wed 6/28/06



Project: \\Wgusokdc01\shareddata\Pro
Date: Mon 9/13/04

Task	Summary	Rolled Up Progress	Deadline		
Split	Rolled Up Task	External Tasks			
Progress	Rolled Up Split	Project Summary			
Milestone	Rolled Up Milestone	External Milestone			

Section 7.0 Start Up Services

The cost of Start Up Services by Wood Group Powers Solutions is included in the Cost Estimates of Proxy No. 1 and Proxy No. 2.

Wood Group Power, Inc

Cost Plus O&M Estimates for a 2 X GE 7FA

Power Facility Located at NJ, United States for PJM

Six Year Summary

Annual Escalation 2.5%

Annual O&M	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Service Hours	750	750	750	750	750	750
Labor	$1,267,572	$1,299,261	$1,331,743	$1,365,036	$1,399,162	$1,434,141
Consumables	$68,946	$70,670	$72,436	$74,247	$76,103	$78,006
Chemicals & Water Treatment	$184,854	$189,475	$194,212	$199,068	$204,044	$209,145
Office & Administration	$58,500	$59,963	$61,462	$62,998	$64,573	$66,187
Training	$74,000	$75,850	$77,746	$79,690	$81,682	$83,724
Contract Services	$97,550	$99,989	$102,488	$105,051	$107,677	$110,369
Miscellaneous Operating Expenses	$25,676	$26,318	$26,976	$27,650	$28,341	$29,050
Maintenance & Minor Repairs	$65,214	$66,844	$68,515	$70,228	$71,984	$73,784
Insurance	$19,000	$19,475	$19,962	$20,461	$20,972	$21,497
Freight	$0	$0	$0	$0	$0	$0
Duties & Nationalization	$0	$0	$0	$0	$0	$0
Handling Charge	$57,474	$58,911	$60,384	$61,893	$63,441	$65,027
Other Costs & Credits	$0	$0	$0	$0	$0	$0
Operator Management Fee	$250,000	$256,250	$262,656	$269,223	$275,953	$282,852
Foreign Tax Adjustment on Fee	$0	$0	$0	$0	$0	$0
Sub-Total O&M Only	$2,168,786	$2,223,006	$2,278,581	$2,335,545	$2,393,934	$2,453,782
Gas Turbine Major Maintenance	$0	$0	$0	$0	$0	$0
Total O&M Costs	$2,168,786	$2,223,006	$2,278,581	$2,335,545	$2,393,934	$2,453,782

Mobilization Period (6 Month Period)	Cost
Labor Costs	$633,786
Hiring, Relocation, Administration & Support	$321,527
Equipment & Specialty Tools	$213,300
Office Equipment and Furnishings	$73,325
WGPO Provided Manuals	$86,000
Handling Charge	$42,988
Freight, Duties & Nationalization	$0
Insurance	$9,500
Operator's Fee with Tax Adjustment	$125,000
Total Mobilization Cost	$1,505,426

Estimated Initial Inventory	Cost
Initial Inventory	$2,000,000
Freight	$0
Duties & Nationalization	$0
Total Mobilization Cost	$2,000,000

Wood Group Power, Inc

Cost Plus O&M Estimates for a 2 X LM6000sc
Power Facility Located at NJ, United States for PJM
Six Year Summary

Annual Escalation 2.5%

Annual O&M	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Service Hours	750	750	750	750	750	750
Labor	$709,884	$727,631	$745,822	$764,467	$783,579	$803,169
Consumables	$35,456	$36,342	$37,251	$38,182	$39,137	$40,115
Chemicals & Water Treatment	$63,076	$64,653	$66,269	$67,926	$69,624	$71,365
Office & Administration	$52,000	$53,300	$54,633	$55,998	$57,398	$58,833
Training	$43,500	$44,588	$45,702	$46,845	$48,016	$49,216
Contract Services	$122,605	$125,670	$128,812	$132,032	$135,333	$138,716
Miscellaneous Operating Expenses	$43,757	$44,851	$45,972	$47,122	$48,300	$49,507
Maintenance & Minor Repairs	$46,657	$47,823	$49,019	$50,244	$51,501	$52,788
Insurance	$14,000	$14,350	$14,709	$15,076	$15,453	$15,840
Freight	$6,450	$6,611	$6,777	$6,946	$7,120	$7,298
Duties & Nationalization	$0	$0	$0	$0	$0	$0
Handling Charge	$40,705	$41,723	$42,766	$43,835	$44,931	$46,054
Other Costs & Credits	$0	$0	$0	$0	$0	$0
Operator Management Fee	$250,000	$256,250	$262,656	$269,223	$275,953	$282,852
Foreign Tax Adjustment on Fee	$0	$0	$0	$0	$0	$0
Sub-Total O&M Only	$1,428,090	$1,463,792	$1,500,387	$1,537,897	$1,576,344	$1,615,753
Gas Turbine Major Maintenance	$0	$0	$0	$0	$0	$0
Total O&M Costs	$1,428,090	$1,463,792	$1,500,387	$1,537,897	$1,576,344	$1,615,753

Mobilization Period (6 Month Period)	Cost
Labor Costs	$295,787
Hiring, Relocation, Administration & Support	$315,403
Equipment & Specialty Tools	$196,300
Office Equipment and Furnishings	$71,725
WGPO Provided Manuals	$72,000
Handling Charge	$44,260
Freight, Duties & Nationalization	$12,971
Insurance	$5,833
Operator's Fee with Tax Adjustment	$125,000
Total Mobilization Cost	$1,139,279

Estimated Initial Inventory	Cost
Initial Inventory	$535,000
Freight	$18,725
Duties & Nationalization	$0
Total Mobilization Cost	$553,725

Section 9.0 Performance Tables and Curves

On the following pages please find:

9.1 Performance Calculation Proxy Plant No. 1 (2- LM6000) and Plant No. 2 (2-Frame 7FA)

9.2 Proxy Plant No. 1, Power vs. Compressor Inlet Temperature, Chilled Inlet

9.3 Proxy Plant No. 1, Power Output vs. Heat Rate

9.4 Proxy Plant No. 2, Power vs. Compressor Inlet Temperature, Chilled Inlet

9.5 Proxy Plant No. 2, Heat Rate vs. Plant Output

Performance Calculations, PJM Strategic Energy
Project 0415
10-Sep-04

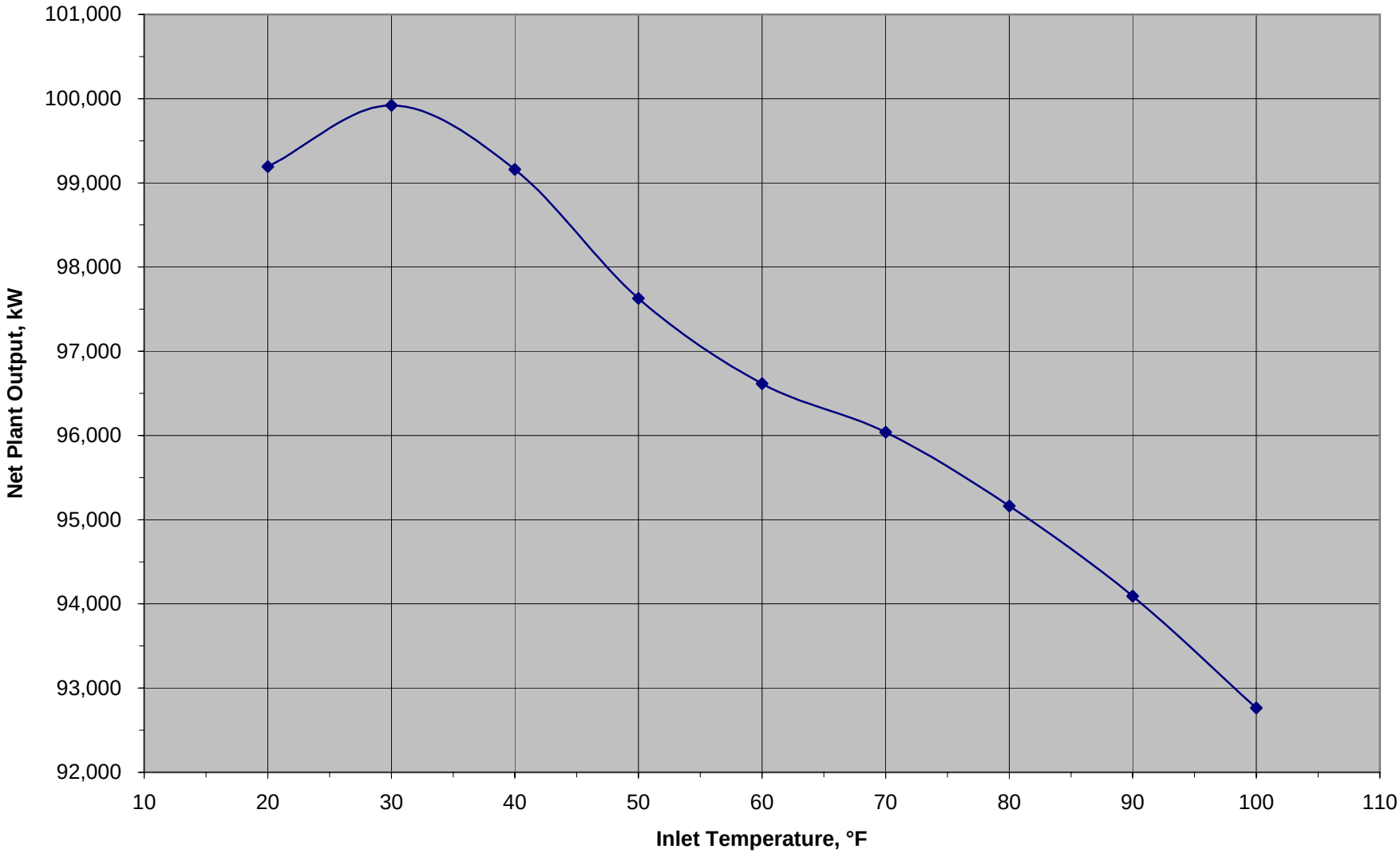
Proxy Plant No. 1 - 2 LM6000 in Simple Cycle, Chilled Inlet

Item	Temperature, °F								
	20	30	40	50	60	70	80	90	100
Output, Single unit, Kw	50,484	50,848	50,466	49,701	49,358	49,358	49,358	49,358	49,358
Heat rate, btu/kw	8,367	8,410	8,501	8,532	8,531	8,531	8,531	8,531	8,531
Plant Output, Gross, kW	100,968	101,696	100,932	99,402	98,716	98,716	98,716	98,716	98,716
Parasitic Load, kW,	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774
Chiller Load, Tons					408	1,128	2,223	3,563	5,223
Chiller Load, kW					326	902	1,778	2,850	4,178
Total Parasitic Load, kW	1,774	1,774	1,774	1,774	2,100	2,676	3,552	4,624	5,952
Net Plant Heat Rate, btu/kW	8,517	8,559	8,653	8,687	8,716	8,769	8,849	8,950	9,078
Net Plant Output,. kW	99,194	99,922	99,158	97,628	96,616	96,040	95,164	94,092	92,764

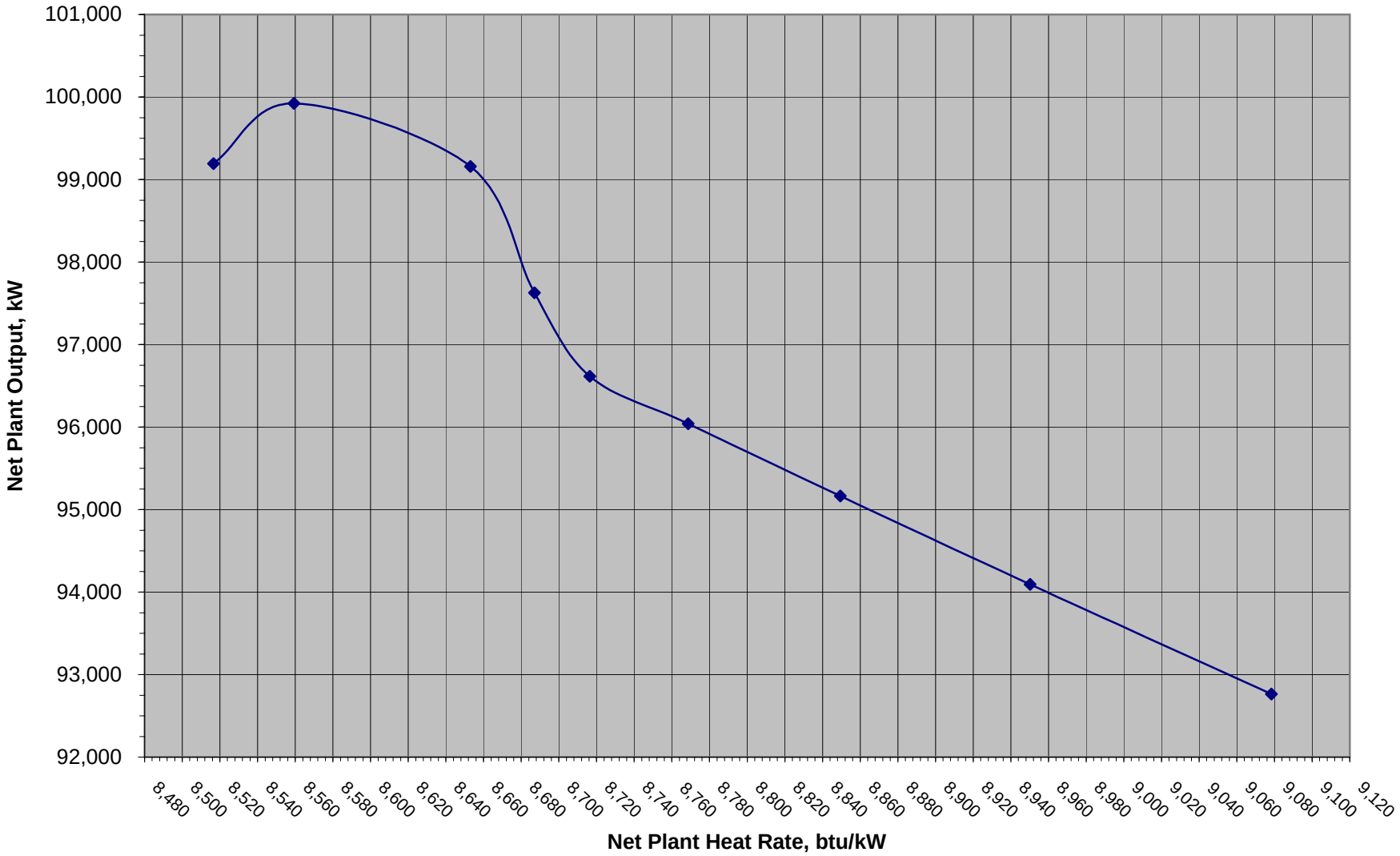
Proxy Plant No. 2 - 2 Frame 7FA in Simple Cycle, Chilled Inlet

Item	Temperature, °F								
	20	30	40	50	60	70	80	90	100
Output, Single unit, Kw	183,323	180,938	177,701	174,464	174,464	174,464	174,464	174,464	174,464
Heat rate, btu/kw	9,388	9,383	9,402	9,421	9,421	9,421	9,421	9,421	9,421
Plant Output, Gross, kW	366,646	361,876	355,402	348,928	348,928	348,928	348,928	348,928	348,928
Parasitic Load, kW,	1,953	1,953	1,953	1,953	1,953	1,953	1,953	1,953	1,953
Chiller Load, Tons					1,418	3,923	7,728	12,385	18,160
SCR Cooling Air Fan Load, kW	1,004	1,026	1,048	1,070	1,092	1,114	1,138	1,162	1,188
Chiller Load, kW					1,134	3,138	6,182	9,908	14,528
Total Parasitic Load, kW	2,957	2,979	3,001	3,023	4,179	6,205	9,273	13,023	17,669
Net Plant Heat Rate, btu/kW	9,464	9,461	9,482	9,503	9,535	9,592	9,678	9,786	9,924
Net Plant Output,. kW	363,689	358,897	352,401	345,905	344,749	342,723	339,655	335,905	331,259

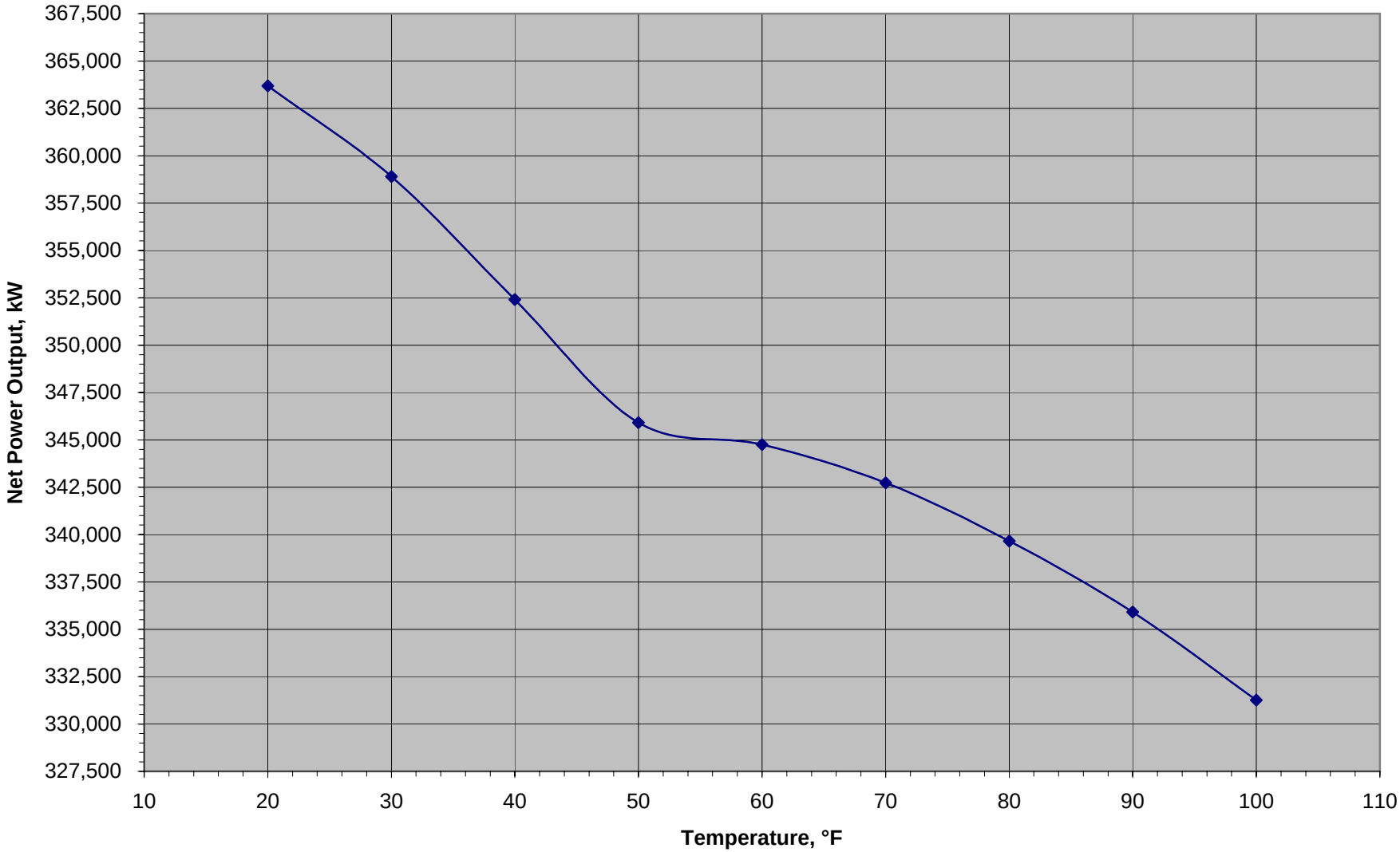
Proxy Plant No. 1- 2 LM6000PC, Power vs. Compressor Inlet Temperature, Chilled Inlet



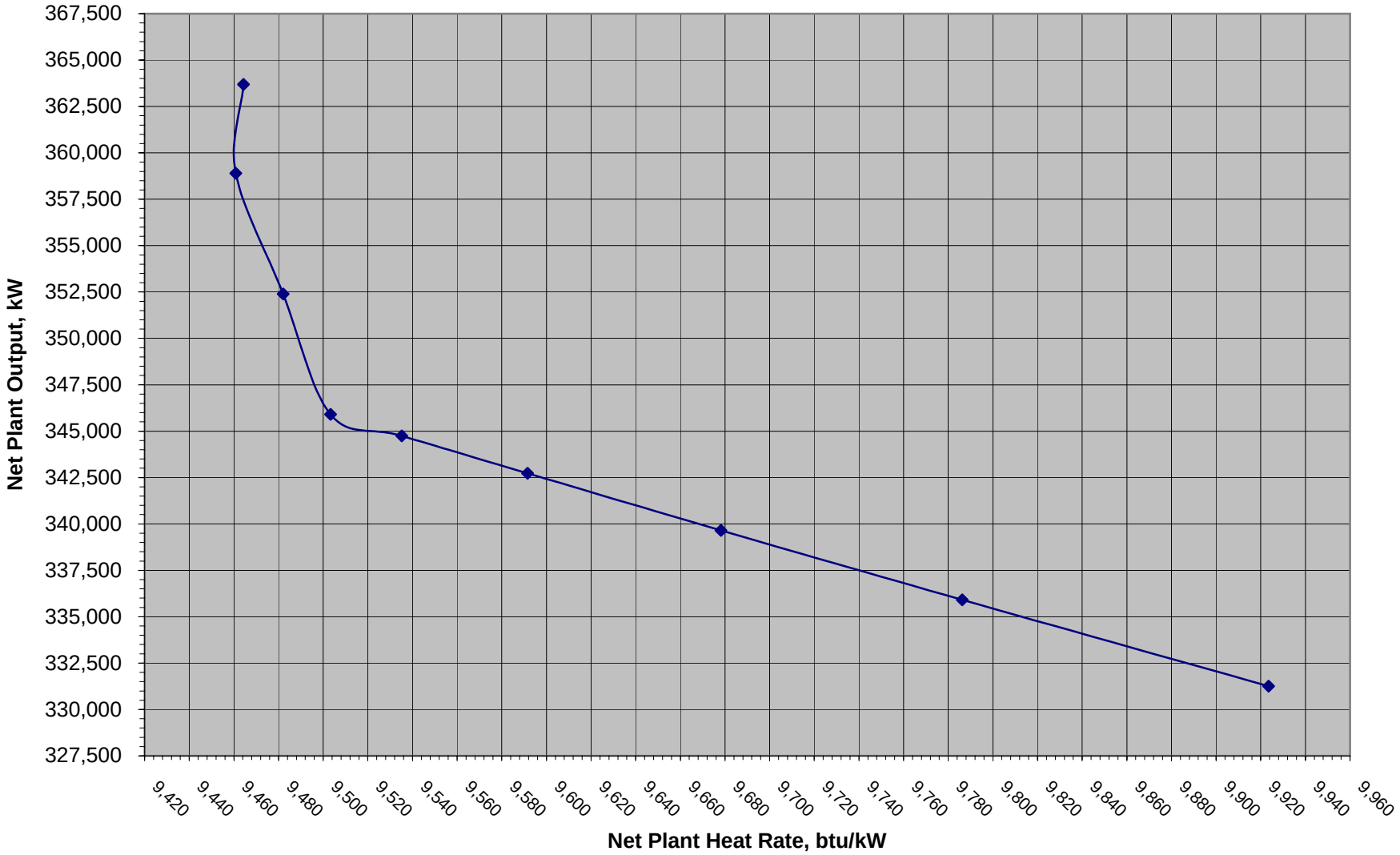
Proxy Plant No. 1 - 2 LM6000, Power Output vs. Heat Rate



Proxy Plant No. 2 - 2 Frame 7FA, Power vs. Compressor Inlet Temperature, Chilled Inlet



Proxy Plant No. 2 - 2 Frame 7FA, Heat Rate vs. Plant Output

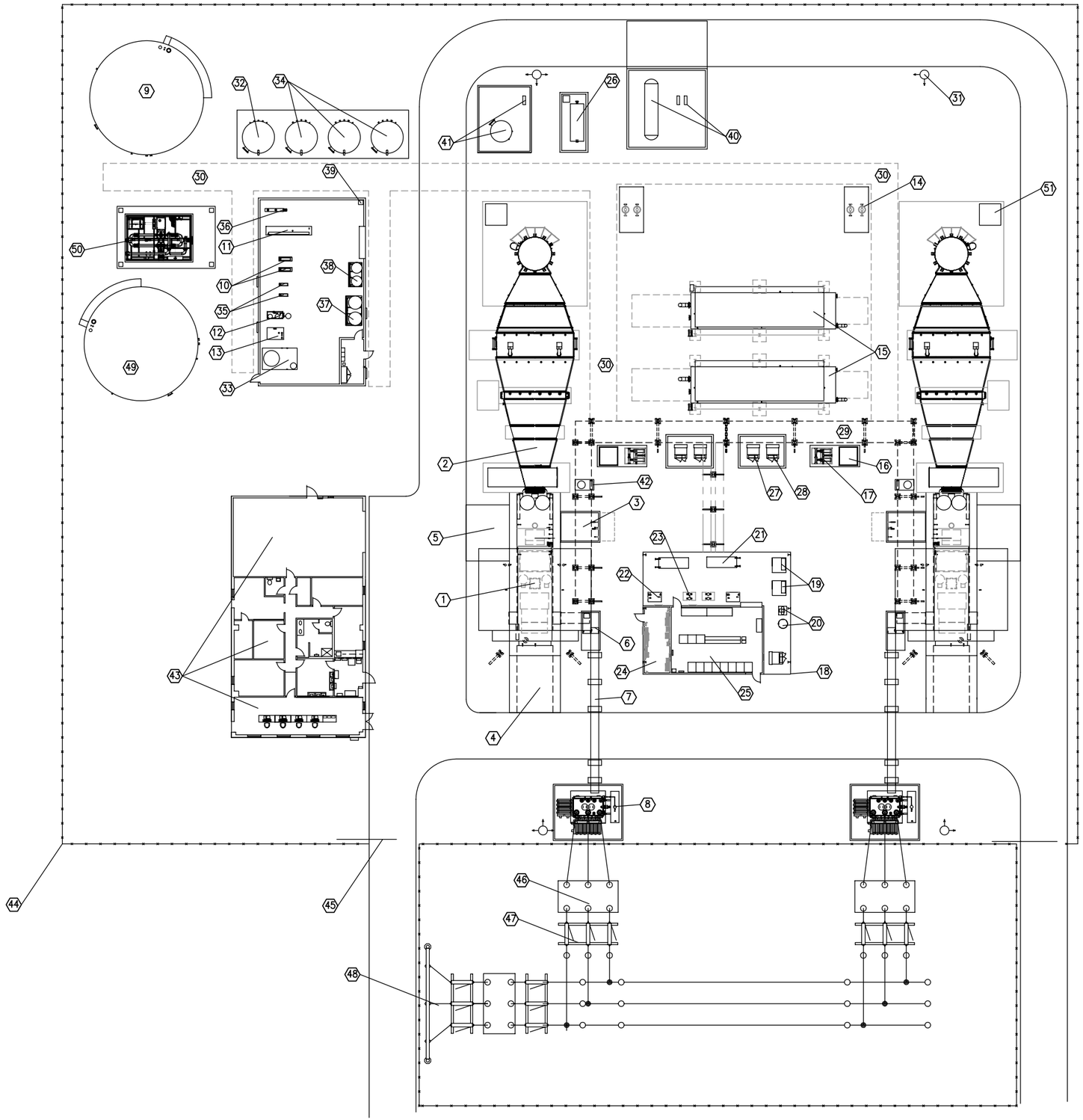


Section 10.0 Drawings

Drawing Number	Title
415-10-100 Sh 1	Plot Plan Proxy No. 1
415-10-200 Sh 1	Plot Plan Proxy No. 2
415-50-100 Sh 1	Process Flow Diagram LM6000's
415-50-100 Sh 2	Process Flow Diagram LM6000's
415-50-200 Sh 1	Process Flow Diagram Frame VII FA's
415-50-200 Sh 2	Process Flow Diagram Frame VII FA's
415-60-100 Sh 1	One Line Diagram LM6000's
415-60-100 Sh 2	One Line Diagram LM6000's
415-60-100 Sh 3	One Line Diagram LM6000's
415-60-200 Sh 1	One Line Diagram Frame VII FA's
415-60-200 Sh 2	One Line Diagram Frame VII FA's
415-60-200 Sh 3	One Line Diagram Frame VII FA's

LEGEND OF SYMBOLS:

1. LM6000 GAS TURBINE GENERATORS
2. SCR
3. AUX SKIDS
4. GEN REMOVAL PADS
5. TURBINE REMOVAL PADS
6. 15 KV SWITCHGEAR
7. 15 KV CABLE TRAY
8. STEP-UP TRANSFORMERS
9. RAW WATER TANK (500,000 GALS)
10. RAW WATER FORWARDING PUMPS
11. RO UNIT
12. SOFTENER SKID
13. EDI SKID
14. FUEL GAS / FILTER SKIDS
15. CHILLER / COOLING TOWER ASSEMBLIES
16. CHEMICAL INJECTION SKIDS
17. LUBE OIL COOLING SKIDS
18. CONTROL / UTILITY BUILDING
19. AIR COMPRESSOR PACKAGE
20. DRYER & RECEIVER TANK
21. WATER INJECTION SKIDS
22. SPRINT SKIDS
23. DEMIN FILTER SKIDS
24. BATTERY ROOM (BATTERIES & CHARGERS)
25. TCP / MCC AREA
26. OILY WATER SEPARATOR
27. AUX TRANSFORMERS (480 V)
28. AUX TRANSFORMERS (4160 V)
29. PIPE RACKS
30. PIPE WAYS
31. LIGHT POLES
32. RO STAORAGE TANK (21,000 GALS)
33. RO FORWARDING PUMPS
34. DEMIN STORAGE TANK (3 – 21,000 GALS)
35. DEMIN FORWARDING PUMPS
36. IN LINE FILTER SKID
37. MULTI MEDIA SKID
38. ACTIVIATED CARBON SKID
39. EYE WASH STATION
40. AMMONIA STORAGE & OFF LOAD AREA (15,000 GALS)
41. WASTE OIL TANK & OFF LOAD PUMP (5,000 GALS)
42. CONDENSATE TANK & PUMP
43. CONTROL ROOM, OFFICE AREA, & WAREHOUSE
44. FENCE
45. GATE
46. SF6 BREAKER
47. DISCONNECT
48. DEADEND TOWER
49. FIREWATER TANK (350,000 GALS)
50. FIREWATER SKID
51. CEMS



DRAWN	LES	9/8/04	
CHECK			
DESIGN			
PROJ ENGR			
PROJ MGR			
QA MGR			
SCALE	1"=20'	SIZE	E

WOOD GROUP POWER SOLUTIONS, INC

GENERAL ARRANGEMENT PLOT PLAN
2 LM-6000S W/ SCR
STRATEGIC PJM PROXY PLANT NO. 1
PHILADELPHIA PENNSYLVANIA

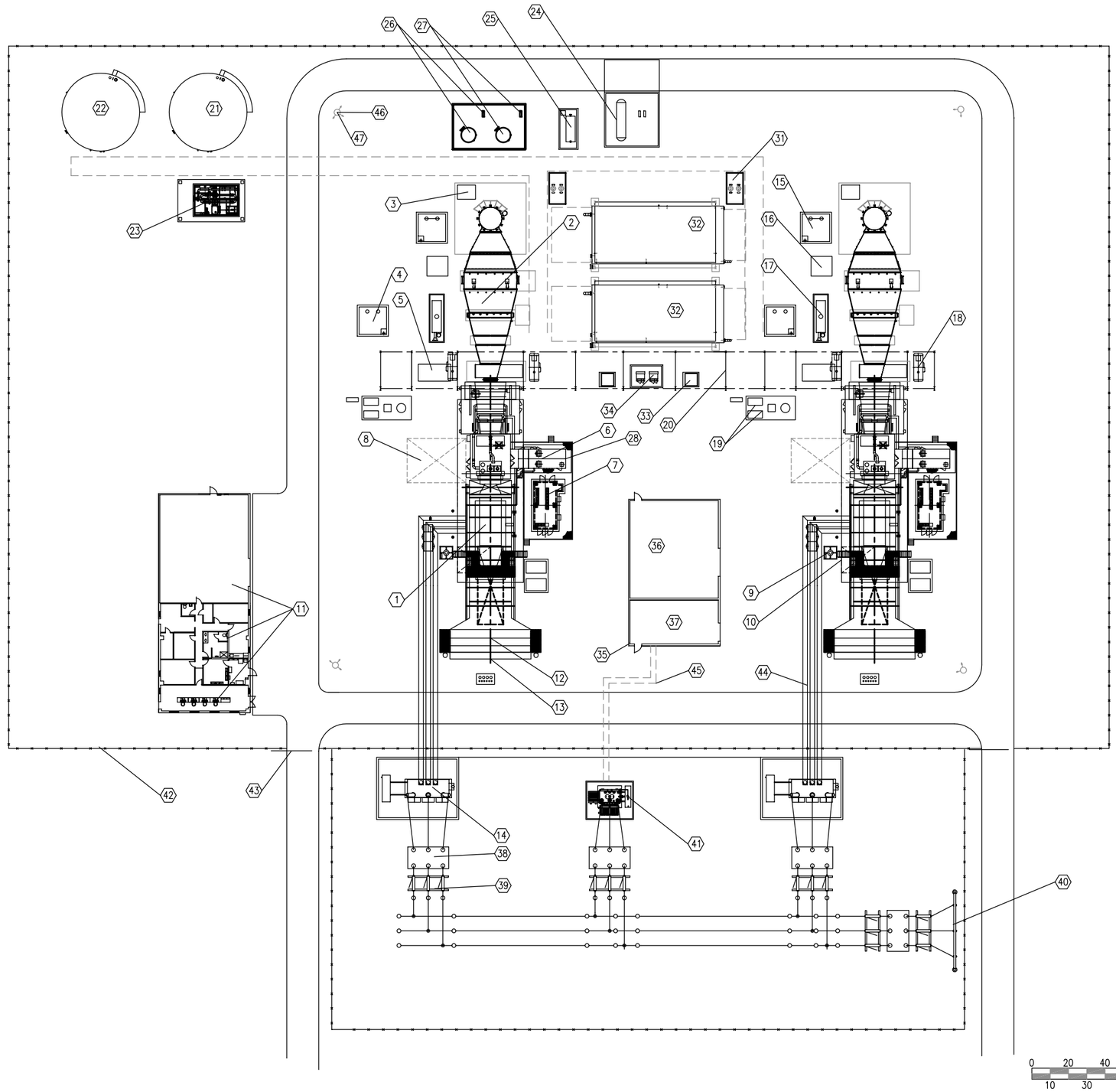
JOB. NO.	DWG NO.	SH NO.	REV
0415	10-100	1	A

NO.	DATE	BY	CHK'D	APP'D	DESCRIPTION
					REVISIONS

WOOD GROUP

SYMBOLS LEGENDS

1. GE FRAME 7
2. SCR
3. CEMS
4. OILY WATER SUMP
5. WATER WASH SKID
6. ACCESSORY MODULE
7. PEECC
8. ROTOR REMOVAL AREA
9. COOLER REMOVAL AREA
10. ROTOR REMOVAL AREA
11. CONTROL , OFFICE & WAREHOUSE BUILDING
12. REMOVABLE WALL PANEL
13. CTG AIR INLET
14. STEP-UP XFMR
15. WASTE WATER SUMP
16. GAS FILTER SKID
17. GAS HEATER
18. CO2 TANK
19. AIR COMPRESSORS
20. PIPE RACK
21. FIRE WATER TANK (350,000 GALS)
22. RAW WATER STORAGE (500,000 GALS)
23. FIRE WATER SKID W/ SHED
24. AMMONIA STORAGE & OFF LOAD AREA (15,000 GALS)
25. OILY WATER SEPARATOR
26. WASTE OIL TANK & OFF LOAD PUMP (5,000 GALS)
27. WASTE WATER TANK & OFF LOAD PUMP (5,000 GALS)
28. FIN FANS FOR LUBE OIL COOLING
29. SURGE TANK
30. COOLING WATER FORWARDING PUMPS
31. NATURAL GAS FILTER / SCRUBBER
32. CHILLER / COOLING TOWER ASSEMBLY
33. CHEMICAL INJECTION
34. AUX TRANSFORMER
35. UTILITY BUILDING
36. PUMP ROOM & MISC EQUIPMENT
37. ELECTRICAL ROOM
38. SF6 BREAKER
39. DISCONNECT
40. DEAD END TOWER
41. AUX TRANSFORMER
42. FENCE
43. GATE
44. ISO PLASE BUS
45. UNDERGROUND DUCT BANK
46. 1000 WATT LIGHTS
47. 50' LIGHT POLES



WOOD GROUP POWER SOLUTIONS, INC

GENERAL ARRANGEMENT PLAN
2 GE FRAME 7FA W/ SCR
STRATEGIC PJM PROXY PLANT NO. 2
PHILADELPHIA PENNSYLVANIA

JOB. NO.	0415
DWG NO.	10-200
SH NO.	1
REV	A
DRAWN	LES
CHECK	
DESIGN	
PROJ ENGR	
PROJ MGR	
QA MGR	
SCALE	1"=30'
SIZE	E
9/12/04	

NO.	DATE	BY	CHK'D	APP'D	DESCRIPTION
					REVISIONS

WOOD GROUP

LUBE OIL COOLER
LUBE OIL COOLER
200 HP HYDRAULIC START
AQUEOUS AMMONIA MAKE-UP
1-3
CONTINUED ON SHT 2
3"
BY GE
BY GE
BY GE
AIR INLET
150 KW 10 HP AIR BLOWERS
CEMS
LM6000 GAS TURBINE GTG-100
48 MW GENERATOR
CONDENSATE TO CT BASIN
10.18 MMSCFD
3-1
FUEL GAS SUPPLY
10.18 MMSCFD
3-2
CONTINUED ON SHT 2
1" SS
1.5" SS
1" SS
W-2"-SS-118-XXX
EXCESS DEMIN WATER RETURN
1-2
CONTINUED ON SHT 2
W-4"-CS-100-XXX
W-12"-CS-100-XXX
W-12"-CS-100-XXX
SPRINT PUMP 10 HP
WATER INJECTION BOOSTER PUMPS 75 HP
55 GPM
30 GPM
FILTER
85 GPM
W-4"-CS-100-XXX
W-4"-SS-118-XXX
DEMIN WATER SUPPLY
1-1
CONTINUED ON SHT 2
LUBE OIL COOLER
LUBE OIL COOLER
200 HP HYDRAULIC START
AQUEOUS AMMONIA MAKE-UP
1-4
CONTINUED ON SHT 2
3"
BY GE
BY GE
BY GE
AIR INLET
150 KW 10 HP AIR BLOWERS
CEMS
LM6000 GAS TURBINE GTG-200
48 MW GENERATOR
CONDENSATE TO CT BASIN
9.73 MMSCFD
1.5" SS
1" SS
1" SS
W-12"-CS-100-XXX
W-12"-CS-100-XXX
SPRINT PUMP 10 HP
WATER INJECTION BOOSTER PUMP 75 HP
55 GPM
30 GPM
FILTER
85 GPM
W-4"-CS-100-XXX
W-4"-CS-100-XXX
W-3"-100-CS-XXX
EVAP
CHILLER 2,500 TONS
COOLING TOWERS 2 - FANS
COOLING TOWER BASIN
CHILLER CIRCULATION WATER PUMPS 3300 GPM
CHILLER COOLING WATER PUMPS 4700 GPM
E-100
CHEMICAL INJECTION STORAGE
W-3"-100-CS-XXX
LUBE OIL COOLING WATER PUMPS 200 GPM 7.5 HP
EVAP
CHILLER 2,500 TONS
COOLING TOWERS 2 - FANS
COOLING TOWER BASIN
CHILLER COOLING WATER PUMPS 4700 GPM
CHILLER CIRCULATION WATER PUMPS 3300 GPM
E-200
CHEMICAL INJECTION STORAGE
3"
W-3"-100-CS-XXX
LUBE OIL COOLING WATER PUMPS 200 GPM 7.5 HP
W-3"-100-CS-XXX
CONTINUED ON SHT 2
1-3
1-6
CONTINUED ON SHT 2
COOLING TOWER BLOWDOWN
D-3"-PVC-205-XXX
COOLING TOWER MAKE UP 120 GPM
W-3"-PVC-205-XXX

WOOD GROUP POWER SOLUTIONS, INC
PHILADELPHIA PENNSYLVANIA

PROCESS FLOW DIAGRAM
LM6000 UNITS GTG-100, GTG-200,
STRATEGIC PJM PROXY PLANT NO. 1

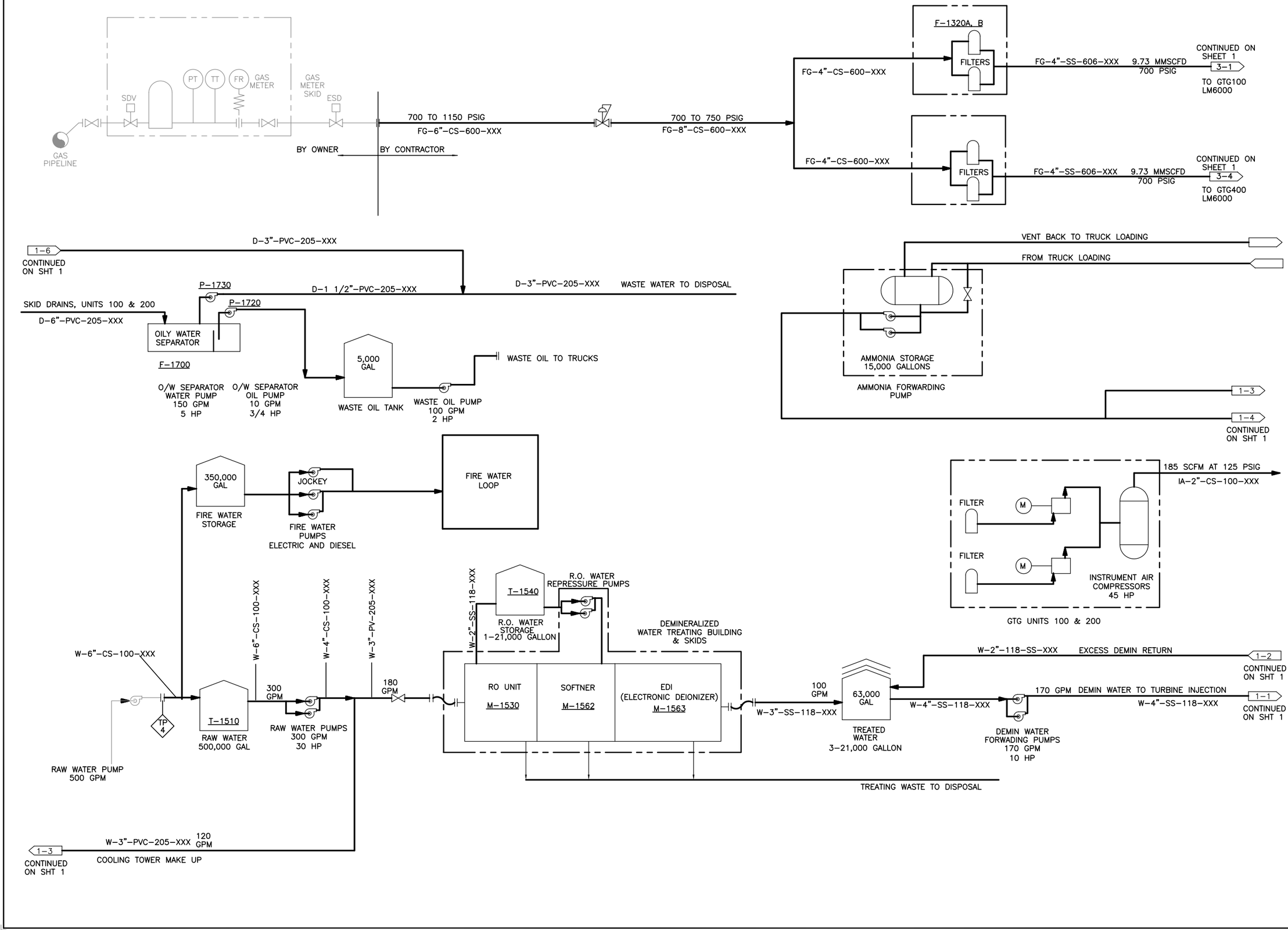
JOB. NO.	DWG NO.	SH NO.	REV
0415	50-100	1	A

DRAWN	RWC	9/8/04	
CHECK			
DESIGN			
PROJ ENGR			
PROJ MGR			
QA MGR			
SCALE	NONE	SIZE	E

NO.	DATE	BY	CHK'D	APP'D	DESCRIPTION
A	9/9/04	RWC			ISSUED FOR TSD

REVISIONS

WOOD GROUP



WOOD GROUP POWER SOLUTIONS, INC

PROCESS FLOW DIAGRAM
UTILITIES - WATER, AIR, WASTE HANDLING
STRATEGIC PJM PROXY PLANT NO. 1
PHILADELPHIA PENNSYLVANIA

JOB. NO.	0415
DWG NO.	50-100
SH NO.	2
REV	A
SIZE	E
SCALE	NONE
DRAWN	RWC
CHECK	
DESIGN	
PROJ ENGR	
PROJ MGR	
QA MGR	

NO.	DATE	BY	CHK'D	APP'D	DESCRIPTION
A	9/8/04	RWC			ISSUED FOR TSD

REVISIONS

WOOD GROUP

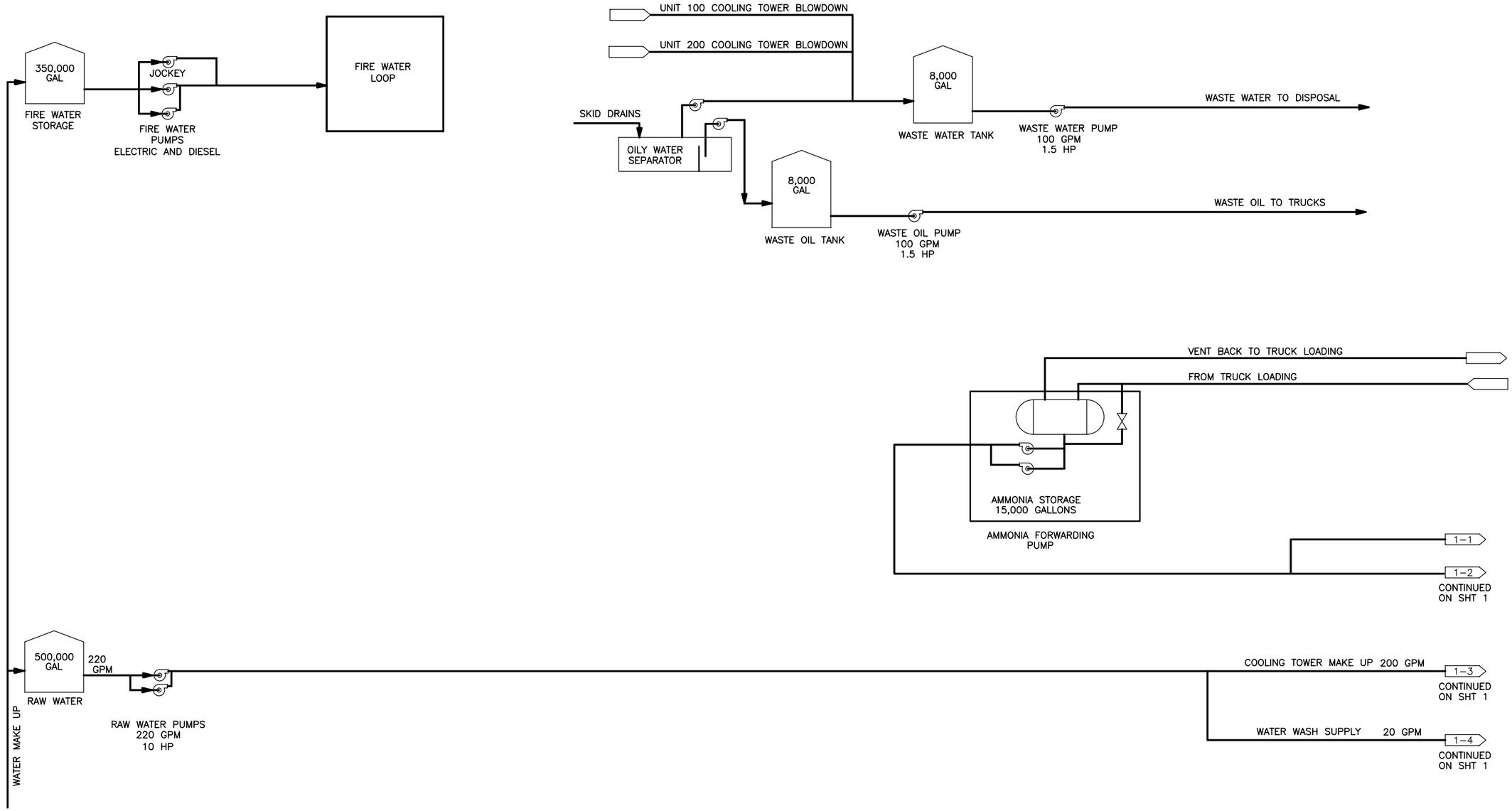
FILTERS
FILTERS
12"
LUBE OIL COOLER
LUBE OIL COOLER
1000 GPM
COOLING WATER FIN FANS 4–15 HP
COOLING WATER PUMPS 20 HP
COOLING WATER SURGE TANK
AIR INLET
TEMPERING AIR BLOWERS 700 HP
320 KW 25 HP AIR BLOWERS
AQUEOUS AMMONIA MAKE–UP
1–1
CONTINUED ON SHT 2
GE FRAME 7F GAS TURBINE GTG–100
170 MW GENERATOR
CEMS
LUBE OIL COOLER
LUBE OIL COOLER
1000 GPM
COOLING WATER FIN FANS 4–15 HP
COOLING WATER PUMPS 20 HP
COOLING WATER SURGE TANK
AIR INLET
TEMPERING AIR BLOWERS 700 HP
320 KW 25 HP AIR BLOWERS
AQUEOUS AMMONIA MAKE–UP
1–2
CONTINUED ON SHT 2
GE FRAME 7F GAS TURBINE GTG–200
170 MW GENERATOR
CEMS
8"
42.8 MMSCFD
8"
42.8 MMSCFD
WATER WASH PUMP SKID 20 HP
FILTER
FILTER
WATER SUPPLY
AQUEOUS AMMONIA MAKE–UP
1–4
CONTINUED ON SHT 2
BLOWDOWN TO DISPOSAL
EVAP
CHILLER 6,700 TONS
COOLING TOWERS 6 – FANS
COOLING TOWER BASIN
CHILLER CIRCULATION WATER PUMPS 7000 GPM
CHILLER COOLING WATER PUMPS 12,600 GPM
E–100
CHEMICAL INJECTION STORAGE
BLOWDOWN TO DISPOSAL
EVAP
CHILLER 6,700 TONS
COOLING TOWERS 6 – FANS
COOLING TOWER BASIN
CHILLER CIRCULATION WATER PUMPS 7000 GPM
CHILLER COOLING WATER PUMPS 12,600 GPM
E–200
CHEMICAL INJECTION STORAGE
ESD
86 MMSCFD
350 PSIG
12"
86 MMSCFD
350 PSIG
FR
GAS METER
METERING STATION (BYOTHERS)
GAS PIPELINE
6"
COOLING TOWER MAKE UP
1–3
CONTINUED ON SHEET 2

WOOD GROUP POWER SOLUTIONS, INC
PHILADELPHIA PENNSYLVANIA
PROCESS FLOW DIAGRAM
GE FRAME 7F PLANT GTG100, GTG200
STRATEGIC PJM PROXY PLANT NO. 2
JOB. NO. 0415
DWG NO. 50–200
SH NO. 1
REV A
SIZE E
9/8/04
DRAWN
CHECK
DESIGN
PROJ ENGR
PROJ MGR
QA MGR
SCALE NONE

NO.	DATE	BY	CHK'D	APP'D	DESCRIPTION
A	9/8/04	RWC			ISSUED FOR TSD

REVISIONS

WOOD GROUP



WOOD GROUP POWER SOLUTIONS, INC

PROCESS FLOW DIAGRAM

GE 7F SIMPLE CYCLE PLANT, WATER SUPPLY

STRATEGIC PJM PROXY PLANT NO. 2

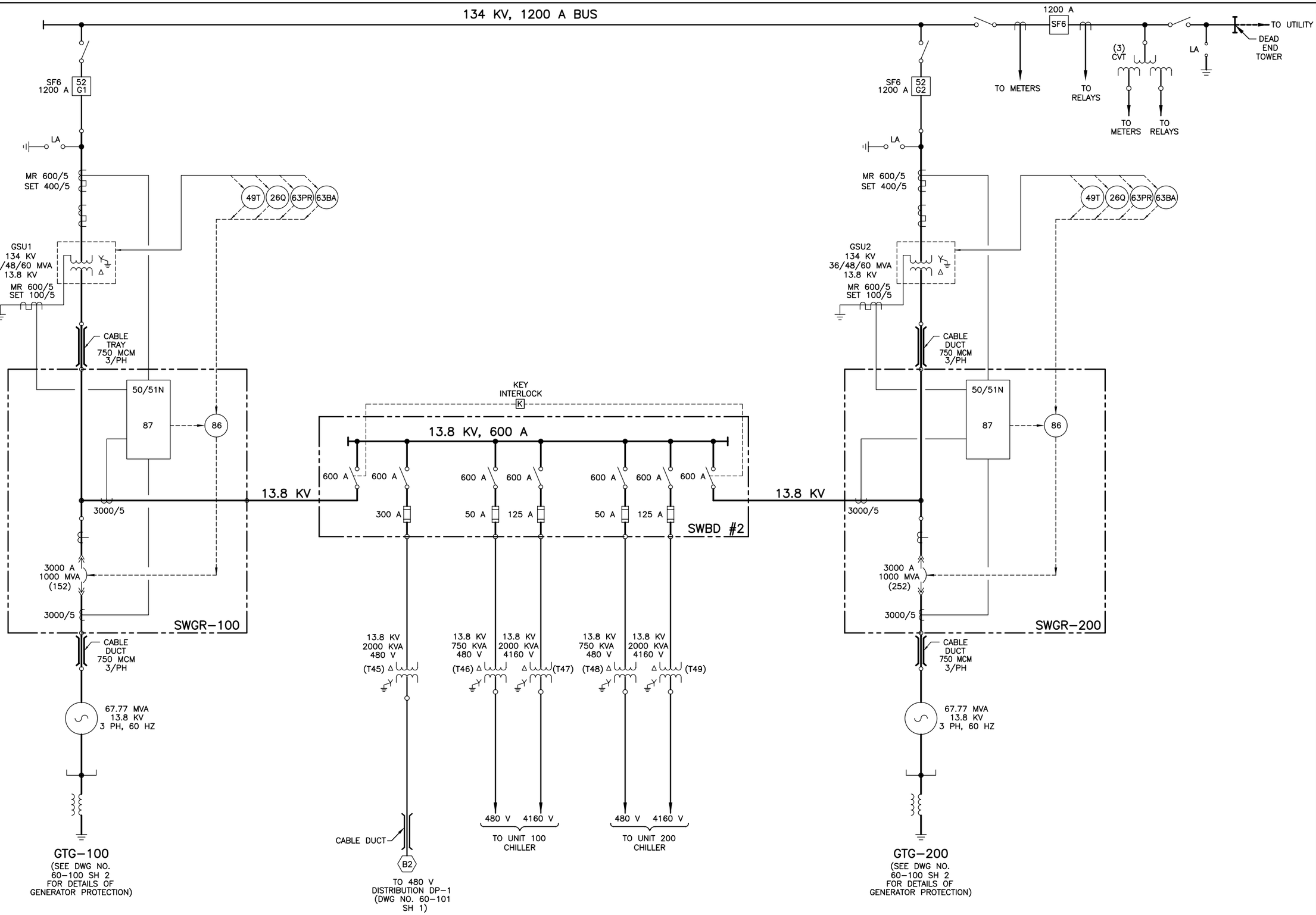
PHILADELPHIA PENNSYLVANIA

JOB. NO. 0415 | DWG NO. 50-200 | SH NO. 2 | REV A

DRAWN | CHECK | DESIGN | PROJ ENGR | PROJ MGR | QA MGR | SCALE NONE | SIZE E | 9/8/04

NO.	DESCRIPTION	DATE	BY	CHK'D	APP'D
	REVISIONS				

WOOD GROUP



WOOD GROUP POWER SOLUTIONS, INC
PHILADELPHIA PENNSYLVANIA

ONE LINE DIAGRAM
LM–6000 UNIT 100 & UNIT 200
STRATEGIC PJM PROXY PLANT NO. 1

JOB NO.	DWG NO.	SH NO.	REV
0415	60–100	1	A

DRAWN	CHECK	DESIGN	PROJ ENGR	PROJ MGR	QA MGR	SCALE	SIZE
SL						NONE	E

NO.	DESCRIPTION	DATE	BY	CHK'D	APP'D
	REVISIONS	9/08/04			

WOOD GROUP

TO
STEP TRANSFORMER
GSU

13.8 KV, 3000 A, SWITCHGEAR BUS

TO AUXILIARY POWER
SEE DWG NO.
60-101 SH 1

86G
K84
CBCS1
K85

VT (2)
14400:120

DIGITAL GENERATOR PROTECTION (DGP)

94G1 — 24T, 32, 40-1, 40-2, 46T
94G — 51V, 59, 64G, 87G
74A — 24T, 32, 40-1, 40-2, 46T
74CR — SELFTEST, CRITICAL
74B — 24B, 46A, 27, 81U, 81O
74NC — SELFTEST, NON-CRITICAL

CT (3)
3000:5

15KV
3000A
1000MVA
52G

52GB

86G

CUSTOMER
REMOTE
86 TRIP

K96
K95
BVX2
BFX
K75
K114
SL1
SL2
SY
25A
B
DSM
15/25

VT (2)
14400:120

TO 87T

3000:5

(SUPPLIED AS PART
OF G.E. PACKAGE)

(SUPPLIED AS PART
OF G.E. PACKAGE)

86G
90
R

INITIATE NORMAL
SHUTDOWN

DCS

K114
BVX1

LA (3)
SC (3)
0.25 MF

EVX
4-20mA
74
PMG
64
(RGF)
EAX
4-20mA

GTG
67.77 MVA
13.8 KV
PF=0.8
3PH, 60 HZ
Xd=248%
X'd=21.4%
X"d=15.3%
T1
(T4)
T2
(T5)
T3
(T6)

GEN
FIELD

EXC
FIELD

SRP
WX
DMMF
RS232
4-20mA

NETCON
5000

CT (3)
3000:5

CCCT (1)
3000:5

CT (1)
3000:5

TURBINE
VIB
FPP
FUEL
RTD'S

TG
7967:120/240
25KVA

RG
1.44 OHMS
166.67A
10 SECONDS

LEGEND:

BFX-TRANSDUCER, BUS FREQUENCY (RUNNING)
BVX-TRANSDUCER, BUS VOLTAGE (1=INCOMING) (2=RUNNING)
CBCS1-SWITCH, CIRCUIT BREAKER CONTROL "52G"
CCCT-TRANSFORMER, CROSS CURRENT COMPENSATION
CT-TRANSFORMER, CURRENT
DCS-DISTRIBUTED CONTROL SYSTEM
DGP-DIGITAL GENERATOR PROTECTION SYSTEM
DMMF-METER, DIGITAL MULTI-FUNCTION
DSM(15/25)-SYNCHRONIZER, AUTO SPEED-VOLTAGE MATCHING
EAX-TRANSDUCER, EXCITER FIELD CURRENT
EVX-TRANSDUCER, EXCITER FIELD VOLTAGE
EXC-EXCITER
FPP-PANEL, FIRE PROTECTION
FUEL-CONTROL, FUEL
GTG-GAS TURBINE GENERATOR
K75-RELAY, GTG BUS SYNCHRONIZER ENABLE (52-1)
K84-RELAY, CIRCUIT BREAKER CLOSE (52G)
K85-RELAY, CIRCUIT BREAKER TRIP (52G)
K95/96-RELAY, DEAD BUS (SWITCHGEAR BUS A)
K114-RELAY, DSM GEN SENSE ENABLE
LA-ARRESTOR, LIGHTNING
PMG-GENERATOR PERMANENT MAGNET
R-RESISTOR
RG-RESISTOR, GROUNDING
RTD-DETECTOR, RESISTANCE TEMPERATURE
SC-CAPACITOR, SURGE
SL#-LAMPS, SYNCHRONIZING
SRP-SENSOR, REAL POWER
SY-METER, SYNCHROSCOPE
TG-TRANSFORMER, GROUNDING
VIB-MONITOR, VIBRATION
VT-TRANSFORMER, VOLTAGE
WX-TRANSDUCER, WATT
24T-RELAY, OVER EXCITATION, GENERATOR VOLTS/HERTZ
25A,B-RELAY, SYNC-CHECK
27-RELAY, UNDERVOLTAGE
32-RELAY, DIRECTIONAL POWER (ANTI-MOTORING)
40-RELAY, FIELD (EXCITATION LOSS)
46-RELAY, CURRENT UNBALANCE
51V-RELAY, TIME OVERCURRENT, VOLTAGE RESTRAINED
52G-AC CIRCUIT BREAKER, GENERATOR
59-RELAY, OVERVOLTAGE
64(RGF)-RELAY, GROUND FAULT
64G-RELAY STATOR GROUNDING
74-RELAY ALARM
81O/U-RELAY, OVER/UNDER FREQUENCY
86*-RELAY, CUSTOMER LOCKOUT
86G-RELAY, LOCKOUT (SHOWN RESET), GENERATOR
94-RELAY, TRIP

WOOD GROUP POWER SOLUTIONS, INC
PHILADELPHIA, PENNSYLVANIA

TYPICAL GENERATOR PROTECTION
LM-6000
STRATEGIC PJM PROXY PLANT NO. 1

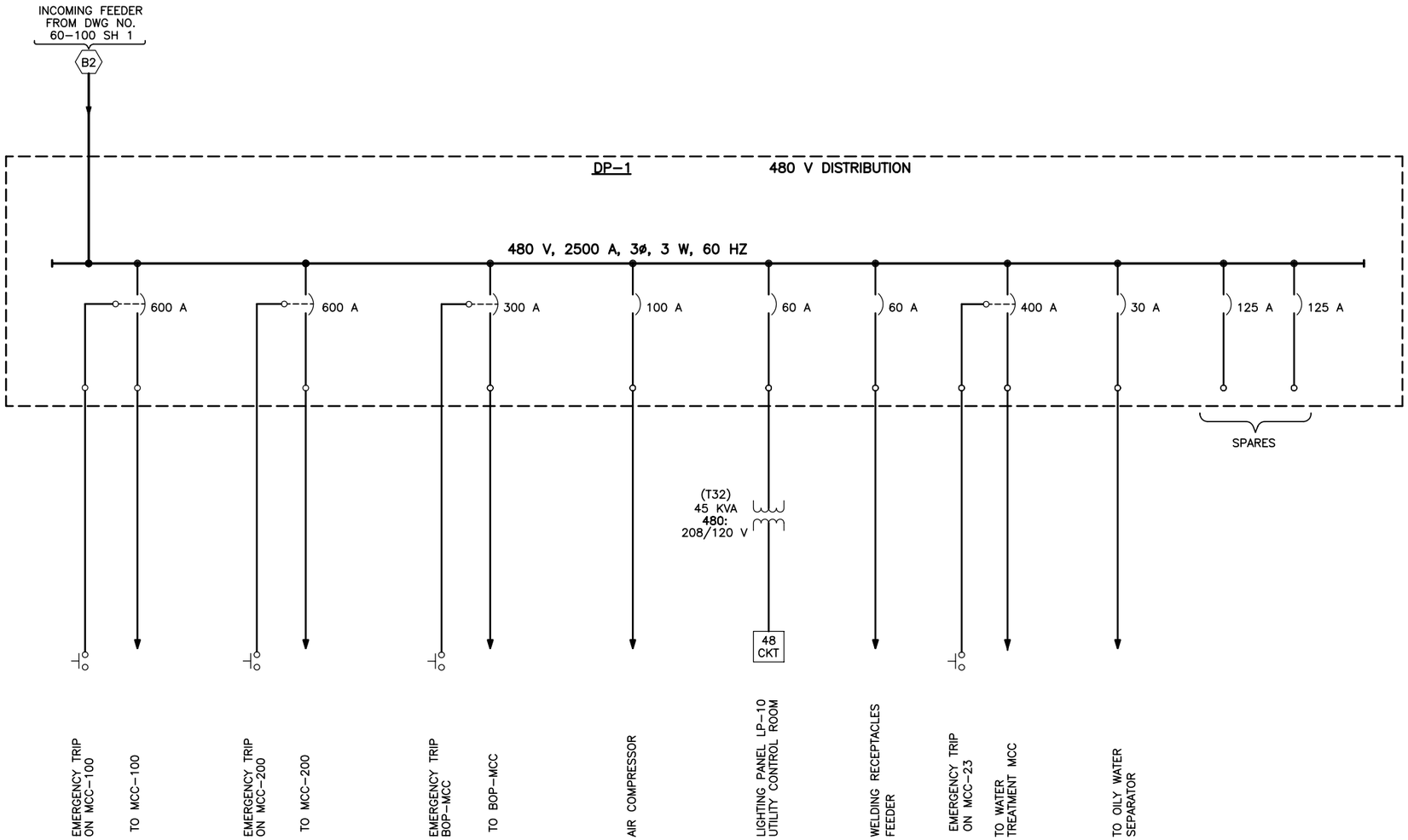
JOB. NO. 0415 | DWG NO. 60-100 | SH NO. 2 | REV A

DRAWN SL | CHECK | DESIGN | PROJ ENGR | PROJ MGR | QA MGR | SCALE NONE | 9/08/04 | SIZE E

NO.	DATE	BY	CHK'D	APP'D	DESCRIPTION

REVISIONS

WOOD GROUP



REFERENCE DRAWINGS:

60-100 SH 1 – ONE LINE DIAGRAM OVERALL SYSTEM

LEGEND:

- 1 – COMBINATION STARTER (BREAKER WITH MOTOR OVER LOADS)
  - SCHEMATIC NO.
- 1 – COMBINATION CONTACTOR (BREAKER NO MOTOR OVER LOADS)
  - SCHEMATIC NO.
- HOA – HAND-OFF-AUTO SWITCH
- 1 – MOTOR
  - HORSEPOWER (HP)
- R – INDICATING LIGHT
  - COLOR
- TCP – TURBINE CONTROL PANEL
- MOTOR SPACE HEATER
- XX – DRAWING CONTINUATION POINT

WOOD GROUP POWER SOLUTIONS, INC

ONE LINE DIAGRAM
480 V DISTRIBUTION
STRATEGIC PJM PROXY PLANT NO. 1
PHILADELPHIA PENNSYLVANIA

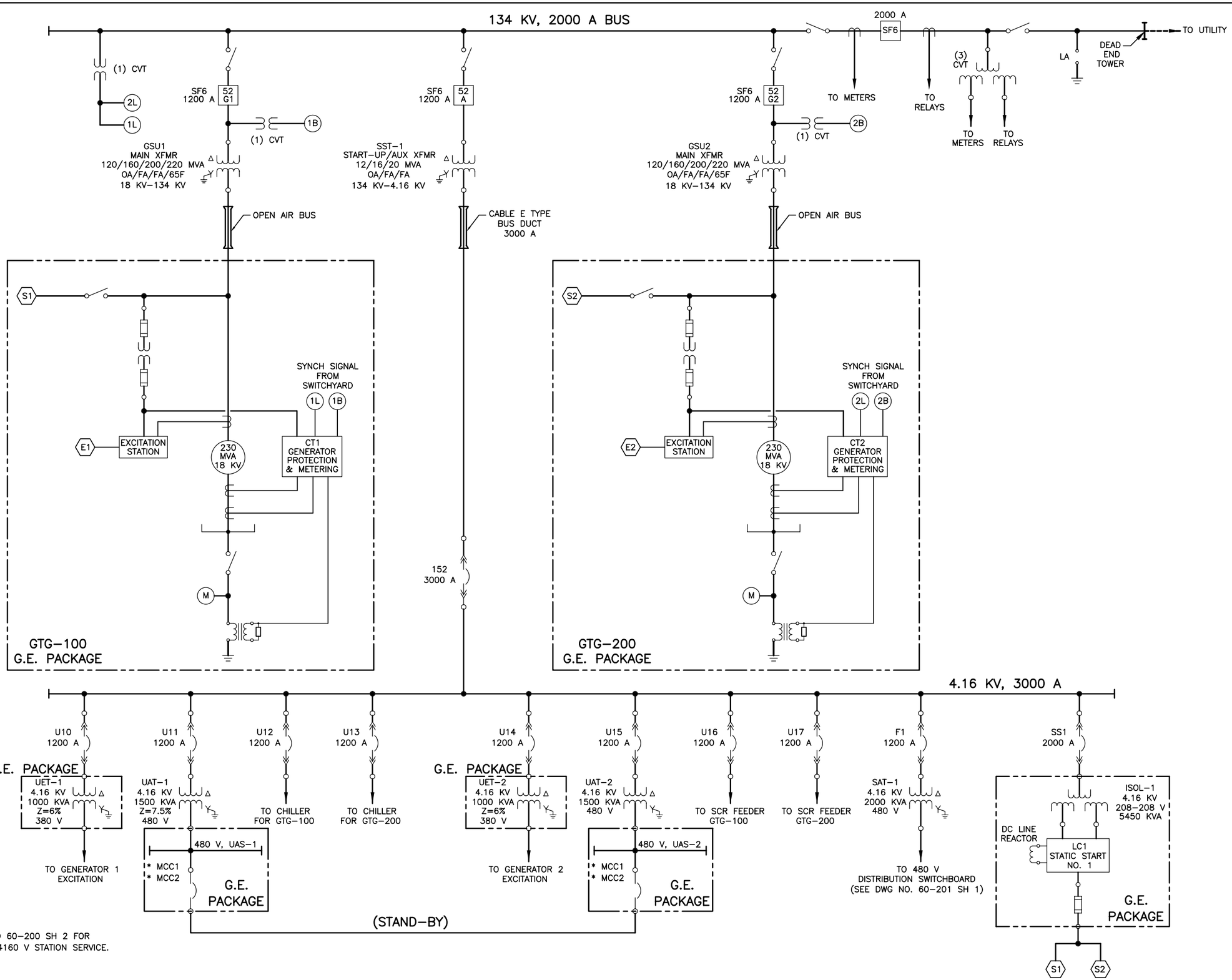
JOB. NO. 0415 | DWG NO. 60-100 | SH NO. 3 | REV A

DRAWN SL | CHECK | DESIGN | PROJ ENGR | PROJ MGR | QA MGR | SCALE NONE | 9/08/04 | SIZE E

NO.	DATE	BY	CHK'D	APP'D	DESCRIPTION

REVISIONS

WOOD GROUP



NOTES:

– SEE DWG NO 60–200 SH 2 FOR DETAILS OF 4160 V STATION SERVICE.

WOOD GROUP POWER SOLUTIONS, INC
PHILADELPHIA PENNSYLVANIA

SYSTEM ONE LINE DIAGRAM
FRAME VII FA GTG–100 AND GTG–200
STRATEGIC PJM PROXY PLANT NO. 2

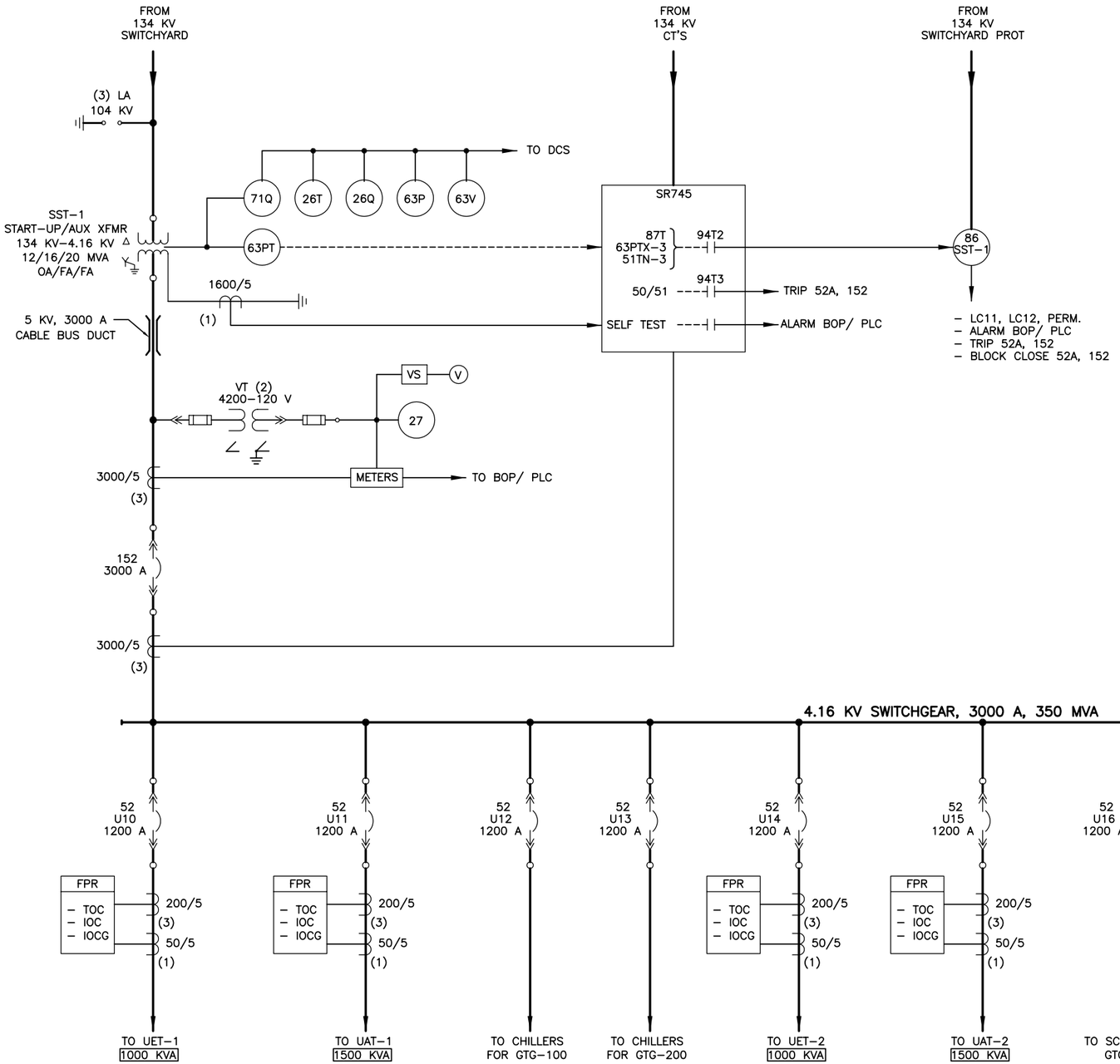
JOB. NO. 0415 | DWG NO. 60–200 | SH NO. 1 | REV A

DRAWN SL | CHECK | DESIGN | PROJ ENGR | PROJ MGR | QA MGR | SCALE NONE | 9/08/04 | SIZE E

REVISIONS

NO.	DESCRIPTION	DATE	BY	CHK'D	APP'D

WOOD GROUP



NOMENCLATURE:

V	– VOLMETER
A	– AMMETER
VS	– VOLTMETER SWITCH
AS	– AMMETER SWITCH
VT	– VOLTAGE TRANSFORMER
UAT (1, 2)	– UNIT AUXILIARY TRANSFORMER
UET (1, 2)	– UNIT EXCITATION TRANSFORMER
SAT (1, 2)	– STATION AUXILIARY TRANSFORMER
ISOL (1, 2)	– STATIC START ISOLATION TRANSFORMER

RELAY LEGEND:

FPR	– FEEDER PROTECTION MULTI–LIN MDP012DA
MPR	– MOTOR PROTECTION RELAY MULTI–LIN 269
25B	– HOT BUS TRANSFER SYNCH CHECK RELAY
26Q	– LIQUID TEMPERATURE ALARM RELAY
26T	– LIQUID TEMPERATURE TRIP RELAY
27	– UNDERVOLTAGE RELAY
50/51	– TIME OVERCURRENT SR–745
51N	– TRANSFORMER NEUTRAL OVERCURRENT SR–745
63P	– TRANSFORMER TANK PRESSURE ALARM
63PT	– TRANSFORMER FAULT PRESSURE RELAY
63PTX	– TRANSFORMER FAULT PRESSURE AUX. RELAY SR–745
63V	– TRANSFORMER VACUUM ALARM
71Q	– TRANSFORMER LIQUID LEVEL ALARM
86SST–1,2	– LOCK–OUT RELAY TYPE LOR
87SST–1, 2	– TRANSFORMER DIFFERENTIAL RELAY SR–745

NOTES:

1. MPR IS MULTI–FUNCTION MOTOR PROTECTIVE RELAY AND CONSISTS OF THE FOLLOWING PROTECTIVE FUNCTIONS:
   – OVERLOAD
   – PHASE IMBALANCE
   – OPEN PHASE
   – GROUND FAULT
   – OVER TEMPERATURE
2. FPR IS MULTI–FUNCTION FEEDER PROTECTIVE RELAY AND CONSISTS OF THE FOLLOWING PROTECTIVE FUNCTIONS:
   – TOC: TIME OVERCURRENT
   – IOC: INSTANTANEOUS OVERCURRENT
   – IOCG: INSTANTANEOUS GROUND FAULT PROTECTION.

WOOD GROUP POWER SOLUTIONS, INC
PHILADELPHIA PENNSYLVANIA

SYSTEM ONE LINE DIAGRAM
4160 V STATION SERVICE
STRATEGIC PJM PROXY PLANT NO. 2

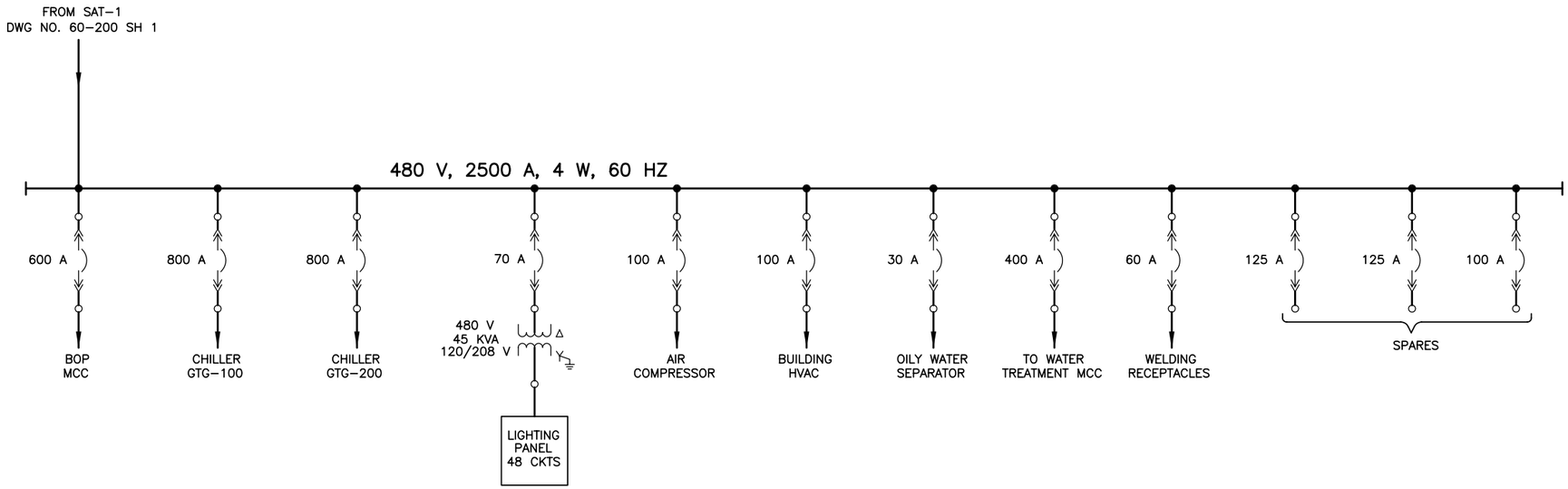
JOB NO. 0415 | DWG NO. 60–200 | SH NO. 2 | REV A

DRAWN SL | CHECK | DESIGN | PROJ ENGR | PROJ MGR | QA MGR | SCALE NONE | 9/08/04 | SIZE E

REVISIONS

NO.	DATE	BY	CHK'D	APP'D	DESCRIPTION

WOOD GROUP



WOOD GROUP POWER SOLUTIONS, INC

400 V ONE LINE DIAGRAM
BALANCE OF PLANT (BOP)
STRATEGIC PJM PROXY PLANT NO. 2
PENNSYLVANIA

PHILADELPHIA
JOB. NO. 0415
DWG NO. 60-200
SH NO. 3
REV A

DRAWN SL 9/08/04
CHECK
DESIGN
PROJ ENGR
PROJ MGR
QA MGR
SCALE NONE
SIZE E

REVISIONS

NO.	DATE	BY	CHK'D	APP'D	DESCRIPTION

WOOD GROUP

Addendum No. 2

Wood Group Qualifications, Experience and References

QUALIFICATIONS, EXPERIENCE AND REFERENCES

QUALIFICATIONS:

John Wood Group PLC is an international energy services company with $2.2 billion sales, employing more than 14,000 people worldwide and operating in 36 countries. The Group has three Businesses - Engineering & Production Facilities, Well Support, and Gas Turbine Services - providing a range of engineering, production support, maintenance management, and industrial gas turbine overhaul and repair services to the oil & gas, and power generation industries worldwide.

The **Well Support** group continued international expansion programs and in 2002 contributed revenues of $360 million.

The **Engineering & Production Facilities** group employs over 2,500 engineers in the Houston, Texas area. They also have significant off-shore deep water facilities engineering and design support responsibilities. In 2002 WG Engineering & Production Facilities increased revenues to $993 million.

Wood Group Gas Turbine Services is a leading independent provider of maintenance, repair and overhaul services for light industrial, aero-derivative, and heavy industrial gas turbines, steam turbines, generators, and other high-speed rotating equipment, including pumps and compressors. WG Gas Turbine Services also repairs gas turbine accessories and components for industrial and aero customers. Gas Turbine Services significantly increased its 2002 revenues to $352 million.

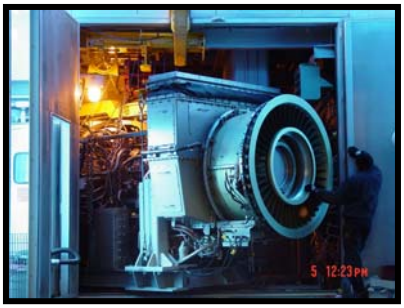
Wood Group Power Solutions, Inc. (WGPS) is a subsidiary of Wood Group Gas Turbine Services. Our mission is to provide turnkey EPC services to customers.

WGPS provides turnkey services for the power generation industry, having successfully completed work for Rural Electric Cooperatives, Municipalities, and Investor Owned Utilities. Experience within our company totals over 40 years in the power generation industry. The staff has been involved in many national and international projects (some as large as 300MW) that include the installation of large gas turbines to serve as prime movers for base load generation, cogeneration, and peaking service. WGPS employees have participated in the installation of over 23 GE LM5000 or LM6000 gas turbine generator units. This includes test stands for GE in Houston and TransCanada Turbines in Canada. WGPS' services vary from initial feasibility studies through preparation of detailed equipment specifications and procurement to the supervision of installation and commissioning.

On the following pages you will find brief descriptions of projects in which WGPS' staff has participated as the EPC contractor.

PROJECT HISTORY:

Project:	**Pribbenow Mine Power Project**
Client:	Drummond Ltd.
Date:	November 2003 to May 2004
Location:	La Loma Cesar, Colombia S.A.
Equipment:	LM6000 and LM2500
Megawatts:	67 MW
Scope of Work:	WGPS provides turbines, Balance of Plant equipment, installation, start-up, and commissioning for the turbine on a turnkey contract basis.



Project:	**TCT Test Cell**
Client:	TransCanada Turbines
Date:	2003
Location:	Calgary, Alberta Canada
Equipment:	LM6000 PC & PA
Megawatts:	±40 MW
Scope of Work:	Incorporate into existing commercial plant; skids, quick connects, and software systems to allow TCT to test refurbished turbines once a week. (2 day period)

Project: **OMPA – Ponca City Unit #4**

Client: Oklahoma Municipal Power Authority (OMPA)

Date: 2003

Location: Ponca City, Oklahoma USA

Equipment: The installation of one (1) LM6000 next to an existing unit along with associated control systems with associated balance of plant equipment.

Megawatts: 42 MW

Scope of Work: WGPS provides the turbine, Balance of Plant equipment, installation, start-up, and commissioning for the turbine on a turnkey contract basis.

RECENT PROJECTS – LM2500, LM5000 AND LM6000 EXPERIENCE:

Date	Client	Project	Location	Equipment	MW	Scope of Work
2004-2005	Drummond Co	Pribbenow Mine Phase 2	Colombia	Two (2) GE LM6000 gas turbine generators	90	Turnkey engineering, design, construction, start-up and commissioning for turbine generators and balance of plant systems all integrated into owners existing system.
2004	Duro Felguera S.A. Energia	Fiumesanto Power Project	Italy	Two (2) GE LM6000 50 Hz gas turbine generators, DCS System, balance of plant equipment		50 Hz Conversion, engineering, procurement, and delivery to Port of Houston
2002	Williams	Williams-Hazleton Power Project	Hazleton, PA	Three (3) GE LM5000 simple cycle gas turbine generators with associated control systems with associated balance of plant systems including 69kV step-up transformer and utility tie-in.	105	Turnkey engineering, design, construction, start-up and commissioning for turbine generators and balance of plant systems all integrated into owners existing system.

Date	Client	Project	Location	Equipment	MW	Scope of Work
2002	City of Burbank CA	Burbank Power Project	Burbank, CA	One (1) GE LM6000 PC 45MW simple cycle gas turbine generators with associated control systems, chillers, cooling towers, SCR, fuel gas compressors and balance of plant systems.	45	Turnkey engineering, design, construction, start-up and commissioning for turbine generators and balance of plant systems integrating with existing owner's power plant facility.
2000	Oklahoma Gas and Electric (OG+E)	Horseshoe Lake Power Project	Harrah, OK	Two (2) GE LM6000 PC 45MW simple cycle gas turbine generators with associated control systems, chillers, cooling towers, inlet heating boilers, etc.	90	Balance of plant detail design, engineering, procurement, construction, installation and commissioning for turbine generators and balance of plant systems.
2000	Cornerstone, Grady County and Three Notch Rural Electric Cooperatives	SOWEGA Power Project	Baconton, GA	Two (2) GE LM6000 PC 45MW simple cycle gas turbine generators with associated control systems, chillers, cooling towers, pipe header system for six (6) units and balance of plant systems.	90	Turnkey engineering, design, construction, start-up and commissioning for turbine generators and balance of plant systems with dual fuel capability, firewater system, and demin water supplied by truck mounted water treatment.
2001	Cornerstone and Coral Energy	Baconton Power Project	Baconton, GA	Four (4) GE LM6000 PC 45MW simple cycle gas turbine generators with associated control systems, chillers, cooling towers, inlet heating boilers, water treatment, and auxiliary bus	180	Included the dismantling of three (3) units in Argentina, packaging for shipment to U.S., turnkey engineering, design, construction, reassembly of gas turbine generator packages on site start-up and commissioning for turbine generators and balance of plant systems including the required 230KV substation extension. A new owner supplied fourth unit was also installed.

Client	Location	Description
Stewart & Stevenson / Guam Power Authority	Guam Island	Two (2) GE LM2500 22 MW simple cycle gas turbine generators with associated 34KV substations, water treatment, fuel treatment, and control systems. Included Balance of Plant detailed design procurement and construction.
Brown-Boveri / Colt / Canadian U.L.	Canada	One (1) Brown-Boveri 42MW generator, base load. Included all installation engineering and supervision for plant only.
Public Service Company of Oklahoma	Oklahoma	Three (3) Worthington 70MW peaking power and base loaded generators, installed in three (3) locations. Performed feasibility studies, prepared purchase specifications and bid evaluation, along with conceptual installation engineering in association with Fern.
General Electric	Florida	Twelve (12) GE Frame 7, 60MW generators, base loaded, preparation of construction specifications and bid documents to solicit large general contractor bids in association with Fern.
Worley / Mobil Oil Company	North Sea	Three (3) GE Frame 5, 25MW generators, base loaded, in one (1) location. Preparation of feasibility studies and electrical design for large Mobil Beryl "C" offshore platform.
Ruston / Petro Peru	Peru – Petro-Peru Pipeline	Sixteen (16) packaged generation stations consisting of two (2) each Ruston TB turbine generators with associated 5KV switchgear and substation. Responsibility included total turnkey engineering and construction of modules, housing, switchgear, and substations along with procurement and project management.
Gulf Oil / Chevron	Cabinda-Angola	Power Generation Module weighing 480 tons consisting of two (2) Solar Centaur 2.5 MW gas turbines with all ancillaries. Responsibilities included complete engineering, procurement, fabrication, testing, and load-out of the 480 ton module.
Client	Location	Description
HRSG PROJECT EXPERIENCE:		
Anderson Lithograph, Inc.	Los Angeles, California	Completed the commissioning and start up of a combined cycle 5.2 MW gas turbine power plant with Allison KB5, 3.5 MW, HRSG with supplementary burner, 1.7 MW steam turbine, 1100 tons absorption chilling, chilled water / steam process system, SCR, substation and DCS control system with CEMS. Scope of work included detailed engineering, procurement, and construction.
Stewart & Stevenson / UNOCAL Oil Company	California – Ventura	One (1) Allison 501 KB5 3.5 MW gas turbine with waste heat boiler to furnish process heat to UNOCAL Roncon Plant (Crude Treating, CO2 Processing, LTS, and Gas Compression). Responsibilities included turnkey design, procurement, and installation of the power plant.
Abu Dhabi Petroleum	Persian Gulf	Five (5) GEC EASI 1 and 2, 13 MW and 26 MW generators with waste heat boilers, baseload, in three (3) locations. Performed feasibility studies, complete installation, engineering, procurement, project management, and commissioning.
Solar / Dansk Boreselskab	North Sea – "Gorm Field" Denmark	Design and procurement of Balance of Plant for three (3) 900 ton modules including power generation, gas compression, and gas re-injection. The power generation module consisted of four (4) Solar 2.6 MW turbine-driven generator sets with waste heat boilers. The

Client	Location	Description
		gas compression module consisted of five Solar 3600 HP turbine-driven compressors with waste heat boilers. The gas re-injection module consisted of two (2) Nuevo Pignone 6000 HP turbine-driven compressors.
Williams Company / Agrico	Oklahoma	One (1) GE Frame 3 turbine-driven compressor with waste heat boiler. Responsibility included complete engineering, procurement, and construction of the cogeneration plant.
Stewart & Stevenson / Daquing Petroleum Company	China – Daquing	Twelve (12) Allison 501 gas turbines driving high pressure injection water pumps with waste heat boilers. Responsibilities included site survey, complete feasibility studies with preliminary design and bills of material for four (4) water injection stations.
Stewart & Stevenson / Qinghai Petroleum Company	China – Qinghai	Five (5) Allison 501 gas turbines driving pipeline pumps with waste heat boilers and associated ancillaries. Responsibilities included detailed feasibility studies, technical meetings, preliminary design, and bills of materials for complete pump station.
Joint Venture of Central & South West Utility and Ark Energy	California – Bakersfield	Upgrade one (1) 37 MW LM5000 gas turbine to 50 MW. Includes modification of waste heat boiler, STIG steam injection into gas turbine, new computerized gas turbine control system, new safety systems, and new balance of plant control system. Responsibilities included turnkey design, procurement and installation.
FRAME PROJECT EXPERIENCE:		
Hitachi / PRWRA	Puerto Rico	Twenty one (21) GE Frame 5 20MW peaking power and base load generators installed in five (5) locations. Scope of project included all design engineering, installation supervision and commissioning for turbine generators and substations (13.8KV to 138KV) in association with Fern.
Hitachi	San Salvador	One (1) GE Frame 5 20 MW generator base loaded. Included all installation engineering, project management and commissioning for plant and associated substation in association with Fern.
Hitachi / GE / Cadafe	Venezuela	One (1) GE Frame 7, 55MW and two GE Frame 5, 20MW generators, base loaded, in three (3) locations. Included complete installation engineering for plants, substations, transmission lines, with associated relay coordination, supervisory and carrier equipment in association with Fern.

LIST OF KEY PERSONNEL:

Wood Group Power Solutions' management team consists of:

David Whisenhunt	President
W.T. Stewart	Vice President
Kent McAllister	VP Turnkey Sales
Craig DeWees	VP Operations
Lee Fields	Sr. Project Manager
Ron Carr	Sr. Process/Mechanical Consultant
JD Patten	Sr. Electrical Engineering Consultant
Bob Eynon	Sr. Civil/Structural Engineering Consultant
Les Pry	Engineering Manager
Kathryn Baulis	Controller
Lisa Angleton	Project Administrator
Brandi Tracy	Marketing/Office Management

This key management team is supplemented with staff personnel. In addition, a portion of WGPS' detailed engineering is subcontracted to EDG International, Inc. (EDG) of Tulsa, Oklahoma. Like WGPS, EDG is located in Tulsa, Oklahoma. The staff of WGPS and EDG has worked together for over 40 years providing detailed engineering and project management.

PROJECT EXPERIENCE:

For Wood Group Power Solutions, Inc there are several recent LM6000 projects, which have been successfully completed by our team, that demonstrate our turnkey EPC contract capability.

Drummond Ltd. – Pribbenow Mine Project

Wood Group Power Solutions, Inc. signed this $30 million EPC contract with Drummond Ltd. to provide a 65 MW power plant designed to generate electricity for the company's expanded coal mining operations in northern Colombia.

Under the contract, WGPS is responsible for the design, procurement, installation and commissioning of the power plant, consisting of one General Eelctric LM6000PC gas turbine and one General Electric LM2500 gas turbine, at the Pribbenow Coal Mine in Colombia's Cesar Coal Basin. Drummond Ltd has the mining rights to Pribbenow and supplies its coal to the electric utility industry worldwide. The project achieved commercial operation during the second quarter of 2004.




OMPA – Ponca City Unit #4

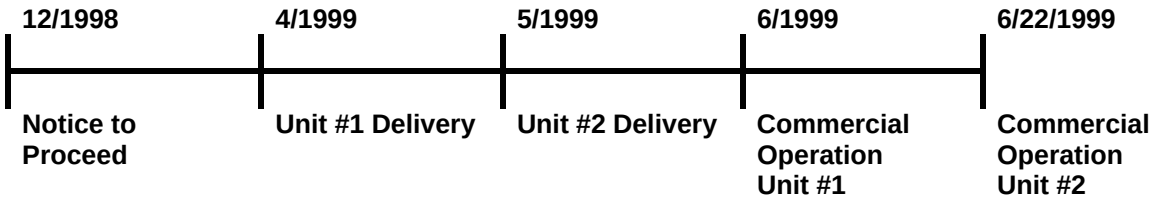
Wood Group Power Solutions, Inc. signed an EPC turnkey contract in September 2002 to provide a 42 MW power plant in Ponca City, Oklahoma. The contract with Oklahoma Municipal Power Authority (OMPA), valued at $17 million dollars, was to provide and install one Norway Packaged LM6000 PC E-Sprint gas turbine and Balance of Plant equipment to be interconnected with their existing LM6000 unit #2. WGPS also provided engineering, construction, and start-up services with commercial operation scheduled for May 15, 2003. The engineering began immediately following contract signing, with site mobilization and construction beginning in late October 2002. The Norway LM6000 equipment arrived at site in mid December during one of the worst winters experienced in Oklahoma in 50 years. "Although the weather elements were not in our favor during December, January and February, our construction team and subcontractors strived to maintain the schedule. Because of the extra effort put forth by everyone, we overcame the 22 days lost to weather and we will make the commercial operation date" said Craig DeWees, V.P. Operations for WGPS. As of April 25, 2003 the project is completing the start-up and commissioning phase on schedule and will make the May 15, 2003 commercial operation date. The project is expected to be complete by June 1, 2003.

SOWEGA Power Project

During the winter of 1999 and spring of 2000 we contracted for the SOWEGA Project, located in Baconton, Georgia, shown below that was the 1st phase of a 6 unit project. The project included Balance of Plant infrastructure (pipe header, liquid fuel unloading and storage, firewater system with storage, raw water wells and storage, buildings), chiller systems, duel fuel to each turbine, inlet air heating, plant DCS system, demineralized water storage and provision for two trailer mounted demineralized water treatment. This project was developed by Cornerstone Power Services and their partners, two Rural Electric Cooperatives. SOWEGA was a $12.5 million contract. The project budget and schedule were successfully met.

SOWEGA Power Project
2 GE LM6000 GTG's installed in Baconton, Georgia.

SOWEGA Project Timeline:

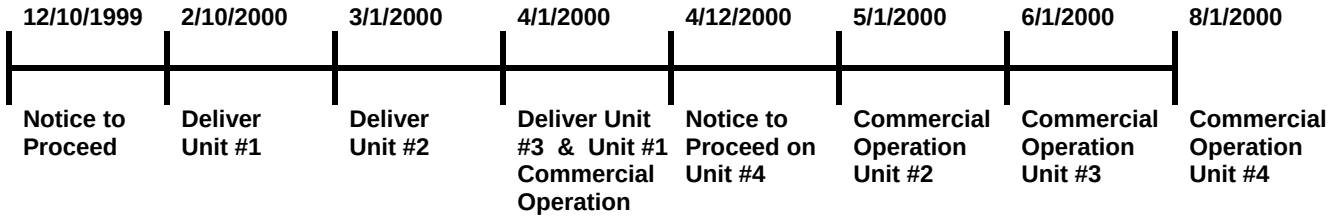


Baconton Power Project

During the next year 2000 and 2001, under two contracts with Baconton Power, we agreed to expand the plant by adding four units for a total cost of $22 million. CornerStone Power Services and Coral Energy, a division of Shell Oil, were the developers and Owners of this expansion project. Our first activity involved dismantling and packing for shipment during October and November of 2000 three (3) GE LM6000 PA GTG's installed in Argentina and relocated them to the U.S. for Stewart & Stevenson. The units were converted from 50Hz to 60Hz, and installed in Baconton where we assisted GE in upgrading the turbines to PC Sprint. The installation included adding chiller systems, connecting piping from the header system to each unit and expanding the BOP electrical system as well as 230KV switchyard. The final fourth unit was added with an April 12, 2001 Notice to Proceed.

Baconton Power Project
4 GE LM6000 GTG's installed in Baconton, Georgia.

Baconton Project Timeline:



SOWEGA & Baconton Projects Owner's Reference Letter:

CornerStone Power LLC

5500 Oakbrook Parkway
Suite 130
Norcross, Georgia 30093

Telephone 770-242-5720
Fax 770-242-1545

April 16, 2003

To Whom It May Concern

Dear Sirs,

We are pleased to provide the following reference for the Wood Group staff. Cornerstone has developed over 290 MW of Simple Cycle Peaking Power Projects over the last four years. Our developments have been based around the General Electric LM 6000 Gas Turbine Generator sets, of which we have installed six during this time period. We contracted with EDG of Tulsa, OK to perform EPC work on all of these projects.

Many of the individuals who now are part of the Wood Group staff were heavily involved in completion of all of these LM 6000's, with EDG. The individuals involved in the projects were as follows:

W.T. Stewart
Kent McAllister
Craig DeWees
Bob Middaugh
Ron Carr
Les Pry

We were pleased with the ability of the group to perform on a fast track. Our first project was a Greenfield development of two LM 6000's which broke ground in mid February 1999 and was commercial in June of that same year. The second project added three LM 6000's to the same site and went commercial in July of 2000, and a third project added one LM 6000 to the same site in August of 2000. Each project had its own challenges and each was completed on a very short schedule.

These individuals showed a willingness to cooperate with the owners particularly during the construction and commissioning phase of the project. They were also very cooperative in a performance dispute with a cooling tower, and worked well with us and other vendors to resolve the issue.

They showed the ability to properly coordinate various trades during the construction phase to effectively utilize the work force in a safe manner.

All in all we were pleased with the product that we received, and would certainly consider the Wood Group as strong candidate to provide EPC work on our next project.

Sincerely,

Stephen D. Howard, P.E.
Senior Vice President

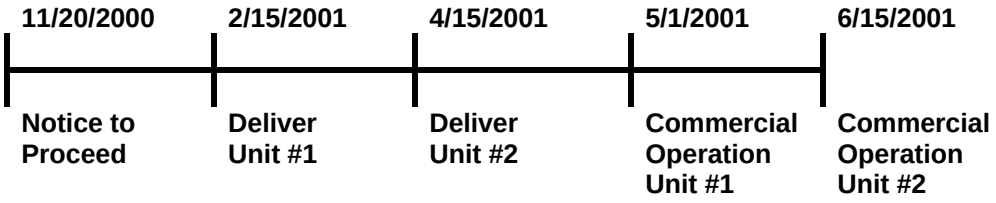
SDH:sh

OG+E – Horseshoe Lake Power Project

During the winter of 2000 and spring of 2001, we contracted with Oklahoma Gas & Electric to provide turnkey EPC services for the installation and balance of plant services for two GE LM6000 PC GTG's for their Horseshoe Lake Power Project located in Harrah, Oklahoma site. Due to poor soil conditions, we had to remove 4 ft. of soil and reinstall it with compaction and limestone treatment. Our portion of this project included Balance of Plant, installation of the owner provided GSU's, and a ½ mile demineralized water pipeline installation underwater to the existing power plant supply. Balance of Plant equipment included a chiller system, inlet air boiler, complete plant winterization (piping heat tracing, water pumps inside buildings, etc.), demineralized water storage and fuel gas regulator/filter skids.

The project was started after the contract was signed November 10, 2000. Foundations were poured shortly after a December 2000 snow. The $12 million project was completed on time and on budget.

Horseshoe Lake Project Timeline:



Horseshoe Lake Project Owner's Reference Letter:

May 16, 2005

Kent McAllister
VP Turnkey Sales
Wood Group Power Solutions, Inc.
10820 East 45th Street, Suite 100
Tulsa, Oklahoma 74146-3803

Ref: Letter of Recommendation

Dear Kent,

I am writing this letter of recommendation for the former employees of EDG International, Inc. (EDG) which has since formed Wood Group Power Solutions, Inc. This letter briefly describes the project and the working relationship between OGE and EDG Inc.

The site developed was for two LM6000 PC units, complete with balance of plant equipment to be remotely operated from the main station. The schedule for construction of the units was a short duration. Construction dirt-work began mid-November 1999 with first firing of the jets expected May 1 and June 1, 2000. The May 1 target was met and the second unit was ahead of deadline by 5 days.

EDG was selected for several reasons: cost competitiveness, innovative approaches to equipment placement, and their willingness to work with us to meet deadlines. Bob Middaugh's knowledge of the Stewart and Stevens (S&S) machinery and his willingness to share information of potential problems and suggested solutions with the machinery and services from S&S also factored into the decision. .

Cooperation and coordination between EDG and others involved in the project was excellent. Each day during construction a tailboard conference was called with all workers to discuss activities for the day, projected schedule and safety concerns. The crews had opportunities to voice safety concerns and planned activities in the daily meeting. There were no medical attention accidents to any contractor during the construction of these units. Once a week there was a coordination meeting when all parties active in the project (OGE, S&S etc.), discussed completed activities, planned activities, areas of concern and possible solutions to those concerns.

Both EDG QC and OGE's inspection group conducted construction quality control.. Workmanship was as expected for this type of plant. EDG took extra steps to make certain quality was in the product being delivered. No workmanship issue or workmanship warrantee claim has arisen since demobilization of the crews. Balance of plant equipment was quality, name brand equipment.

I have been informed by the Stewart & Stevens Project Manager that this was one of his best projects at that time. I believe this was largely due to EDG's ability, cooperation, and willingness to get the job done.

Should future opportunities present, OGE would seek services from the Wood Group.

If you should have any questions, please feel free to contact me.

David J. Nunez
Supt. Engineering
Power Supply Service
OGE Electric

Williams-Hazleton Power Project

After several months of studying several options for the owner, in June 2001 we executed a $10 million turnkey EPC contract with Williams Energy Services to add three (3) GE LM 5000 gas turbine generator peaking units to their Williams-Hazleton Power Project. The owner relocated the units from China. Our Scope of Work included working inside their existing facility to clear space, provide utility interconnects, expand plant DCS system, provide BOP facilities and electrical switch yard, transformers and switchgear to connect into the 69KV grid. The project was built and mechanically complete on schedule and on budget. The plant commercial operation was delayed due to the Owner's air permit but is presently operational.

Hazleton Project Timeline:

6/2001	11/10/2001	12/20/2001	1/10/2002	1/20/2002	2/20/2002	5/30/2002
Notice to Proceed	Unit #1 Delivery	Unit #2 Delivery	Unit #1 Mechanical Complete*	Unit #3 Delivery	Unit #2 Mechanical Complete*	Unit #3 Mechanical Complete*

*Owner did not have air permit to operate.

Letter from Owner's Project Manager for the Hazleton Project:

April 17, 2003

To Whom It May Concern:

Subject: Hazelton Power Project
EPC Contractor Performance

As Project Manager for Williams Company for the installation of the power generation facility addition at Hazleton, I was very satisfied with the performance of the present Wood Power Solutions, Inc. personnel assigned to the project.

Key individuals included the following:

W.T. Stewart
Craig DeWees
Lee Fields
John Lopez
Jessica Baker

These individuals are now with the Wood Group Power Solutions and were responsible for the success of the Hazleton Project. The project EPC Contract was administered in a very professional manner. Exceptional communications existed between Williams and Lee Fields, the EPC Contractors Project Manager. Key to the success was the upfront planning, scheduling of manpower, administration of QA/QC and Safety and focus on quality workmanship. The project was completed on schedule. There were no QA/QC or Safety issues associated with the project. Commercial operations, however, was delayed because of Air Permits which were Williams responsibility. The facility now has its Air Permit and is commercial.

I personally enjoyed the opportunity to work with this group of people.

Greg Grooms
Project Manager – Hazleton Project
Williams Energy Services, Inc.

REFERENCES:

The representative plants, Ponca City Unit #4, SOWEGA, Baconton, Horseshoe Lake, and Williams-Hazleton involved at least three of our Key Personnel as we performed turnkey EPC services. Below you will find reference information regarding said projects:

Project	Contact Name	Telephone#
Drummond	Alan Perks	(205) 384-2331
TCT Test Cell	Pete Watson	(403) 219-8641
Vineland	Rich Albosta	(973) 753-0104
SOWEGA	Bud Stacy	(770) 242-5720
Baconton	Bud Stacy	(770) 242-5720
OG+E	David Nunez	(405) 553-3099
Hazleton	Greg Grooms	(918) 706-2992

Addendum No. 3

Strategic Energy Services, Inc. Qualifications and Experience

Proven Results

Numerous clients have been successfully supported by Strategic. A partial listing of clients includes the following companies:

ABB Energy Ventures, Inc.

Advanced Energy Systems, Inc.

Air Products and Chemical, Inc.

Atlantic Thermal Systems, Inc.

Aquila Corporation

ArcLight Capital Partners, LLC.

Bioenergy Development Corporation

Catalyst Energy Corporation

Comision De Regulacion De Energia Y Gas ("CREG") Republica De Colombia

Commonwealth Electric Company

Delta Power Company, LLC.

DG Energy Solutions, LLC.

El Paso Electric Company

Exelon Capital Partners, LLC.

General Electric Capital Corporation

Gregory Power Partners, LLC.

Hill International, Inc.

Liberty Power Latin America LP

Mobil Power, Inc.

Novion, Inc.

Ontario Hydro International, Inc.

PEPCO Energy Services, Inc.

PJM Interconnection, LLC

Sun Oil Company

Toronto District Heating Corporation

Trigen Energy Corporation

Unicom Enterprises, Inc.

University of Pennsylvania

Professional Services

Strategic located midway between Philadelphia and New York City operates as a unique energy firm providing services in the following areas:

- Utilities Asset Management & Optimization
- Project Economic and Financial Evaluation
- Energy System Planning and Management
- Energy Technology Investment Due Diligence
- Combined Heat and Power ("CHP") Development
- CHP, District Heating and Cooling Cycle Studies
- GE GateCycle Heat & Material Balances
- Gas Turbine Inlet Air Cooling Evaluation
- Low Temperature Thermal Energy Storage
- Energy Conservation Audits
- Distributed Generation Project Development
- District Heating and Cooling Project Development

Strategic provides domestic and international services to independent power, financial institutions, regulators, governments, district heat & cooling companies, CHP, thermal energy producers, consumers. Services are provided at any phase of a project.

- Operations and Asset Management
- Energy Project Appraisal and Feasibility Analysis
- Energy Project Condition Assessment
- Operative Contract Development and Negotiation
- Environmental Permitting Overview
- EPC Contract Assistance and Selection
- Energy Project Identification
- Services to Independent System Operators (ISO)

Client service is **Strategic's** key objective. **Strategic** acts as an extension of an organization enhancing the effectiveness of their staff for the short or long term. **Strategic's** broad experience provides valuable creative input immediately upon request mitigating risk and maximizing the bottom line.

Contact:

Raymond Pasteris

Strategic Energy Services, Inc.

430 Trend Road

Yardley, Pennsylvania 19067

Phone: 215-736-8170 Fax: 215-736-8171

email: rpasteris@strategicenergy.com

strategic

Strategic Energy Services, Inc.

Strategic located between Philadelphia and New York City operates as a unique professional services firm to independent power, district energy and energy consumers.

Raymond M. Pasteris

Raymond M. Pasteris is President of Strategic Energy Services, Inc., a professional services firm, which he founded in 1993 to provide project development services to energy producers and consumers worldwide. Mr. Pasteris has over thirty years of domestic and international experience with all phases of engineering, operations and development of energy projects. He has lead energy project development in Argentina, Canada, China, Colombia, the Czech Republic, Peru, Viet Nam, the United Kingdom, as well as the United States.

Previously, from 1990 to 1993, he served as Vice President of Development for United Thermal Corporation, the largest publicly held, independent district heating company in North America. Mr. Pasteris was responsible for project development, contract negotiations, equipment selection and economic evaluations of energy projects. Concurrently he also served as Vice President of Engineering and was responsible for managing corporate engineering, capital budgets and risk management.

From 1986 to 1990 Mr. Pasteris served as General Manager of Cogeneration for Catalyst Energy Corporation a publicly held independent power company, headquartered in New York City. Mr. Pasteris was responsible for all operational, commercial and financial activities of three operating cogeneration projects and one hydroelectric project totaling 51 MW electric capacity, 150 Million BTU per hour of thermal energy and $17 million in annual revenue. Mr. Pasteris also was responsible for facility modifications to improve performance and the management of 42 on site employees.

From 1974 to 1986 Mr. Pasteris served as a senior engineer for Mobil Corporation and developed cogeneration projects for Mobil's operating affiliates worldwide. Activities included field survey of processing facilities to identify cogeneration opportunities, developing power plant configurations to match facility energy requirements for steam and power, performing capital cost estimates, and presenting economic feasibility for executive approval. His efforts resulted in the construction of four cogeneration projects totaling 200 MW at four Mobil refineries.

Mr. Pasteris developed and taught courses in Industrial Water Treatment, for engineers and operators from industries and water utilities in the Chicago area, at Joliet Junior College, Joliet, Illinois.

He is a Licensed Professional Engineer in the State of Illinois and a member of IEEE, USCHPA, ASHRAE and a founding member and Vice-Chairman of the Turbine Inlet Cooling Association.

Mr. Pasteris received a Bachelor of Science in Chemical Engineering in 1975 from the University of Illinois.

Past Services Provided

Independent Power and Cogeneration Industry

IPP Optimization and Strategic Energy Plan

- Build GateCycle model of a 400 MW two on one GE Frame 7FA Combined Cycle Plant.
- Evaluated economics of overnight part load operation of the GTG's and STG.
- Evaluated economics of the shutdown of the STG overnight.
- Provided CycleLink offline GateCycle interface for real-time plant optimization by operators.

Cogeneration Project Request for Proposal Response

- Selected technical power cycle configuration to meet industrial steam and power demands.
- Performed cogeneration project heat and material balances.
- Performed project capital cost estimate and soft cost estimates.
- Performed project proforma analysis and determined steam and power price and structure.
- Generated final technical and commercial proposal on behalf of the client.
- Client currently exclusively developing 11 MW power project with host industry start-up in 2002.

Cogeneration Project Feasibility Study

- Selected the technical power cycle configurations to meet district steam demands.
- Performed cogeneration project heat and material balances.
- Performed project EPC cost estimates and soft cost estimates.
- Performed project proforma analysis and determined steam and power price and structure.
- Generated a final technical and commercial report.

Acquisition of Existing Industrial Cogeneration Project

- Performed financial evaluation to establish project value for the acquiring company.
- Performed technical evaluation to determine future project up side potential for client.
- Generated final technical and commercial proposal on behalf of the client.
- Client was selected to the short list of bidders.

Cost of New Entry CT Plant Evaluation for PJM

- Performed technical evaluation to establish project performance, capital and O&M fixed costs.
- Performed financial evaluation to determine fixed revenue requirements of new entry CT plant.
- Conducted numerous presentations to PJM member generators.

Past Services Provided

District Heating and Cooling Industry

EPC Bid Evaluation

- Performed a life cycle economic evaluation of six (6) competitive EPC bids for a 22,000 Ton and 250MMBTU/Hr district heating and cooling plant.
- Evaluation included determining all electric, fuel, water, chemical and O&M expenses.
- Provided a final report ranking the bidders on a project life cycle cost NPV basis.

Convention Center Heating and Cooling Plant RFP Response (50 MMBTU/Hr Heating-10,500 Tons Cooling 4 MW Electric Peak Shave)

- Selected the technical heating and cooling cycle configurations to meet convention center demands.
- Performed heating and cooling project heat and material balances.
- Performed project EPC cost estimates and soft cost estimates.
- Performed project proforma analysis and determined heating and cooing price and structure.
- Assisted in final RFP response preparation and follow up question by Convention Center Authority.
- Client was awarded contract of 20-year energy supply services. Scheduled for 2003 startup.

Services Provided to Governments

Country Regulatory Review Regarding Cogeneration

- Conducted a comprehensive review of current and proposed regulations regarding cogeneration and self-generation for the country of Colombia's Commission for the Regulation of Energy and Gas.
- Submitted a final report of recommendations for implementation into new or modified regulations.

US Trade and Development Agency Funding Proposal

- Developed and submitted proposal to obtain TDA funding for a feasibility study for a cogeneration project in Europe on behalf of our client.
- Approval was obtained for $350,000 of TDA funding to perform the feasibility study.

Oil Refining Industry

Cogeneration Project Proposal Bid Evaluation

- Performed life cycle economic and financial evaluation of seven (7) competitive third party developer bids for a nominal 100 MW cogeneration project.
- Evaluation included a detailed analysis of the electric and steam price and structure expenses for each proposal over the project life.
- Provided a final report ranking the bidders on a project life cycle basis.