ATTACHMENT J5

NAS Atlanta Electric Distribution System

TABLE OF CONTENTS

List of Tables

J5 NAS Atlanta Electric Distribution System

J5.1 Naval Air Station Atlanta Overview

Naval Air Station Atlanta (NAS Atlanta) occupies 139 acres of land located in northern Georgia between the cities of Marietta and Smyrna, approximately 16 miles northwest of downtown Atlanta. Collocated with NAS Atlanta are Dobbins ARB and Air Force Plant No. 6, an aircraft manufacturing plant located north of the base, which is leased and operated by Lockheed-Martin Aeronautical Systems Corporation. Dobbins ARB and Air Force Plant No. 6 have their own property, and are not situated within the 139 acres owned by the Navy. The base lies completely within Cobb County, Georgia.

The Windy Hill Marine Corps Training Site (Windy Hill Site), which is included in the privatization effort at NAS Atlanta, is located approximately 3 miles south from the base in the town of Smyrna, GA. Utility specific information for the Windy Hill electrical system is found in Attachment J9.

Size of the Base:	
NAS Atlanta	139 Acres
Total Acreage	139 Acres

The base owns, operates, and maintains approximately 92 buildings classified as commercial/industrial facilities, and another 10 buildings are for family housing as summarized below.

Location	**Commercial/Industrial Facilities**	**Family Housing Units**
NAS Atlanta	92	10

History

The Navy Department selected Fort Gordon in late 1940 for a new Naval Reserve Aviation Base. Contractors quickly turned what used to be an infantry training center during World War I into an airfield. The new base was officially commissioned and opened for business March 22, 1941, with a primary mission of training Navy and Marine Corps aviators. The base was officially designated U.S. Naval Air Station Atlanta in January 1943.

In April 1955, Congress appropriated more than $4 million to start building a new Naval Air Station at a more suitable location to allow longer runways. The site selected was a large military reservation jointly occupied by Dobbins Air Force Base and the Lockheed-Georgia Company, located between Marietta and Smyrna. The new air station was completed in April 1959. The Windy Hill site was acquired from the Air Force in October 1971.

Current Mission

NAS Atlanta trains and supports 3,846 Navy and Marine Corps Reservists assigned to more than two dozen aviation and non-aviation units. A cadre of more than 1,397 active duty military and civilian personnel provide this training and support.

Mission Statement

The mission statement of NAS Atlanta is: Provide readiness training for assigned active duty and selected reserve personnel while maintaining our full commitment to support the requirements of tenant commands and the fleet.

Educational Facilities

N / A

Future Changes

There are no new missions or planned changes identified that would significantly effect the current operations, support, personnel, or utility functions at NAS Atlanta. However, the base recently implemented a project that upgraded approximately 1300 LF of overhead line and installed electric boilers in several of the buildings. As a result of this, the total increased load is estimated at 2,000 kW. In addition, NAS Atlanta has planned a project to replace the remaining older overhead distribution system. Specifically, the project will replace the remaining overhead conductors and install a new neutral line throughout the system.

PROJECT NUMBER	PROJECT DESCRIPTION
R14-96	Replace overhead conductors and install new neutral line

J5.2 Electric Distribution System Description

J5.2.1 Electrical System Fixed Equipment Inventory

The NAS Atlanta electric distribution system consists of all appurtenances physically connected to the distribution system from the point in which the distribution system enters the Installation and Government ownership currently starts to the point of demarcation, defined by the Right of Way. The system may include, but is not limited to, transformers, circuits, protective devices, utility poles, ductbanks, switches, street lighting fixtures, and other ancillary fixed equipment. The actual inventory of items sold will be in the bill of sale at the time the system is transferred. The following description and inventory is included to provide the Contractor with a general understanding of the size and configuration of the distribution system. The Government makes no representation that the inventory is accurate. The Contractor shall base its proposal on site inspections, information in the technical library, other pertinent information, and to a lesser degree the following description and inventory. Under no circumstances shall the Contractor be entitled to any service charge adjustments based on the accuracy of the following description and inventory.

Specifically excluded from the electric distribution system privatization are:

- Taxiway and parking apron edge markers
- Aircraft Parking Apron Area Lighting
- Generators, to include transfer panels and disconnect devices

J5.2.1.1 Description

Naval Air Station Atlanta receives electrical power from Georgia Power Company (GPC) via the GPC Substation (owned and operated by GPC). The GPC substation is located on the NAS Atlanta property immediately adjacent to NAS Atlanta's Main Switching Station and is supplied from a radial tap off of a 46 kV distribution line. The overhead electrical equipment from the Main Switching Station to the intersection of Halsey and Mitscher Blvd (approximately 1300 LF of distribution) was upgraded in 1999 with new poles, conductors, transformers, etc to include the installation of a new neutral wire. The base also installed a new S&C pad-mounted switch containing two (2) 600 Amp load interrupting switches and three (3) 600 Amp vacuum interrupters rated at 13.8 kv Nominal, 95 kV BIL, 12.5 kA symmetrical interrupters. The load interrupting switches are Kirk-key interlocked to allow transfer from the utility source to the 200 kW generator system. Georgia Power Company also installed one (1) new 5.25 MVA three phase transformer to replace the old 833 kVA transformers.

Power on the base is typically distributed across NAS Atlanta via three radial 12.47 kV feeders. The three feeders are designated as the (1) Hangar Circuit, (2) Pole Line Circuit, and (3) Pump House Circuit, respectively.

With the exception of the new equipment discussed above, typical construction methods for the Pole Line Circuit is overhead routed #4 AWG solid copper conductors on either conventional wood pole / wood cross-arm structures or concrete poles with insulated stand-off devices with no static wire or neutral. The transformers are double bushing type connected line-to-line, and lightning arresters are rated at 15 kV. Typical construction methods for the Hangar and Pump House Circuits consist of underground (1/0 AWG copper) conductors in conduit.

NAS Atlanta also pays for power supplied to other buildings located within the NAS Atlanta / Dobbins Air Reserve Base boundaries but geographically separated from the remainder of the NAS Atlanta owned main distribution system. These buildings consist of the Jet Engine Test Cell (Facility 1009) and the Ordnance Complex (Buildings 1033, 1034, 1035, 1036, and 1037). The NAS Atlanta maintenance personnel only perform O&M on the secondary power equipment at these facilities.

In addition to the main distribution equipment at NAS Atlanta, the replacement inventory includes the secondary equipment for Buildings 550, Jet Engine Test Facility, and Ordnance Complex and the primary / secondary equipment located at the Windy Hill Site.

J5.2.1.2 Inventory

Table 1 provides a general listing of the major electrical distribution system fixed assets for the NAS Atlanta electrical distribution system included in the sale.

TABLE 1
Fixed Inventory
Electrical Utility System, NAS Atlanta

Component Item	Size	Quantity	Unit of Measure	Material Type[1]	Approximate Year of Installation
Primary Overhead Circuits					
3ph, 4w, 15 kV Conductor	AWG #4/0	7	W. Mile	CU	1959
Primary Underground Circuits					
High Voltage Cable 3ph, 4w, 15 kV, In Conduit	AWG# 1/0	2,465	LF	CU	1959
Secondary Underground Circuits					
3ph, 3w, In Conduit	AWG 500 kcmil	9,550	LF	CU	1959
Electric Utility Poles					
Electric Utility Pole	25 ft.	2	EA	Wood	1959
Electric Utility Pole	35 ft.	2	EA	Wood	1959
Electric Utility Pole	40 ft.	35	EA	Wood	1959
Electric Utility Pole	45 ft.	26	EA	Wood	1959
Electric Utility Pole	50 ft.	1	EA	Wood	1959
Street Light Poles					
Light Pole	20 ft.	11	EA	AL	1959
Elevated Street Lights					
High Pressure Sodium	400 watt	50	EA		1985
Switching Station					
Switching Station w/ 200 linear feet of perimeter fence		1	EA		1979
Switchgear					
Disconnect switch, gang operated	15 kV	2	EA		1979
Protective Devices					
Fuses	<200 Amp	61	EA		1959

Electric Meters						
1ph & 3ph 120-480v			6	EA		1959
Manholes						
Manholes		6'x10'x7'	7	EA	Brick	1959
Transformers, Single Phase						
Single Phase		10 kVA	1	EA	Pole Mount	1973
Single Phase		15 kVA	7	EA	Pole Mount	1965
Single Phase		25 kVA	13	EA	Pole Mount	1973
Single Phase		37.5 kVA	8	EA	Pole Mount	1986
Single Phase		50 kVA	19	EA	Pole Mount	1973
Single Phase		75 kVA	1	EA	Pole Mount	1976
Single Phase		100 kVA	4	EA	Pole Mount	1964
Single Phase		75 kVA	3	EA	Pole Mount	1999
Transformers, Three Phase						
Three Phase		75 kVA	1	EA	Pad Mount	1960
Three Phase		150 kVA	1	EA	Pad Mount	1970
Three Phase		150 kVA	1	EA	Pad Mount	1999
Three Phase		225 kVA	2	EA	Pad Mount	1982
Three Phase		300 kVA	3	EA	Pad Mount	1980
Three Phase		300 kVA	1	EA	Pad Mount	1999
Three Phase		500 kVA	2	EA	Pad Mount	1978
Three Phase		500 kVA	1	EA	Pad Mount	1999
Three Phase		750 kVA	1	EA	Pad Mount	1985
Three Phase		1000 kVA	2	EA	Pad Mount	1983
Three Phase		1500 kVA	1	EA	Pad Mount	1999

Legend
LF – Linear Feet KVA – Kilovolt-Amperes
EA – Each AWG – American Wire Gauge
AL-Aluminum Ph – Phase
CU-Copper

Notes:
1. Drawings furnished by Naval Air Station do not always indicate material types. Some material types have been assumed and may not necessarily reflect the actual material in place.

J5.2.2 Electric Distribution System Non-Fixed Equipment and Specialized Tools

Table 2 lists other ancillary equipment (spare parts) and **Table 3** lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment, vehicles, and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment, vehicles, and tools.

TABLE 2
Spare Parts
Electrical System, NAS Atlanta

Part #	Description	Quantity
P655781-NTD	TRANSFORMER, 15 KVA, 12000 / 120 / 240	2
----------	TRANSFORMER, 25 KVA, 12470 / 7200 Y	1
N690149-YAX	TRANSFORMER, 50 KVA, 12000 / 120 / 240	1
----------	TRANSFORMER, 25 KVA, 12000 / 277 / 480 Y, TYPE 338	2
----------	TRANSFORMER, 25 KVA, 12000 / 120 / 240	6
----------	TRANSFORMER, 15 KVA, 12000 / 120 / 240	1
M772178YDRA	TRANSFORMER, 25 KVA, 12000 / 120 / 240	3
----------	PRIMARY FUSE CUTOUT	7
----------	LIGHTNING ARRESTOR	6
----------	ASSORTED INSULATORS AND POLELINE HARDWARE	-

TABLE 3
Specialized Vehicles and Tools
Electrical System, NAS Atlanta

Description	Quantity	Location	Maker
None			

J5.2.3 Electric Distribution System Manuals, Drawings, and Records

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 4
Manuals, Drawings, and Records
Electrical System, NAS Atlanta

Qty	Item	Description	Remarks
	None		

J5.3 Specific Service Requirements

The service requirements and standards for the NAS Atlanta electrical distribution system are as defined in the Section C, *Description/Specifications/Work Statement,* and Section H, *Special Contract Provisions*. The following requirements are specific to the NAS Atlanta electrical distribution system and are in addition to those found in Sections C or H. If there is a conflict between requirements described below and Sections C or H, the requirements listed below take precedence over those found in Sections C or H.

J5.3.1 Replacing Overhead Electric with Underground Electric

The Contractor shall replace existing electrical overhead system equipment with new underground service when the existing system undergoes a major repair project during the normal renewal process or when new electrical distribution facilities are added to the system, unless to do so would cause the Contractor to violate any applicable law or regulation or would be inconsistent with sound utility operational practices.

For each project, the Contractor shall provide the project scope and a lump-sum cost estimate to provide underground electrical distribution with cost differences for each option, if any, clearly identified. The estimated project costs shall include the direct cost for labor, materials, equipment, supplies, and purchased services, which may be burdened by applying standard administration, engineering, and supervisory overhead rate(s) and margins. It shall also include life cycle costs for operation and maintenance of the electrical distribution system for each option. The Government will not be responsible for any cost of system expansion or service connection that does not directly benefit the Government.

J5.3.2 THREAT Compliance

The Contractor must comply with all THREAT conditions that may exist prior to arrival or arise while on base. The Contractor is advised that THREAT conditions can vary daily at the base. The Contractor is further advised that THREAT conditions may cause delays in access.

J5.4 Current Service Arrangement

Naval Air Station Atlanta receives electrical power from Georgia Power Company (GPC) via the GPC Substation (owned and operated by GPC). The GPC substation is located on the NAS Atlanta property immediately adjacent to NAS Atlanta's Main Switching Station and is supplied from a radial tap off of a 46 kV distribution line. The GPC Substation was upgraded in 1999 with the installation of a new 5.25 MVA three-phase transformer. GPC owns, maintains, and reads the master meter.

J5.4.1 Historical Electrical Demand

According to electrical consumption and billing records provided, the usage for FY 98 at NAS Atlanta is as shown in the table below.

NAS Atlanta FY 98 Electrical Usage Data

NAS Total Annual Consumption	9,202,283 kWH
NAS Average Daily Consumption	25,212 kWH
NAS Peak Demand (June 1998)	1,844 kW

The electrical usage records for NAS Atlanta included information for FY 98 only. However, based on usage data for FY96 found in other reports (Utility System Assessment completed in June 1997), annual consumption has increased approximately 5%.

J5.4.2 Electrical System Capacity

Per FY 98 billing records, the peak demand (1,844 kW, .86PF) was recorded in June 1998. It is estimated that the new substation equipment will be loaded at less than 75% (assuming worst case scenario of peak load of 3400 KW, .90 PF).

J5.5 Secondary Metering

J5.5.1 Existing Secondary Meters

Table 5 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings for all secondary meters IAW Paragraph C.3 and J1.6 below.

TABLE 5
Existing Secondary Meters
Electrical System, NAS Atlanta

Utility System	Meter Quantity	Facility ID	Facility Name/Description
Electric	1	N/A	Station Main
Electric	1	B1	Hangar
Electric	1	B1	SE Corner
Electric	1	B1	Tire Shop
Electric	1	B2	ATT
Electric	1	B3	PSD
Electric	1	B5	VA 205
Electric	1	B9	LOX
Electric	1	B8	Security
Electric	2	B30	Supply
Electric	1	B34	Pump House
Electric	1	B38	GSE
Electric	1	B53	Bldg-BOQ
Electric	1	B53	Take Two
Electric	1	B54	Fence Area
Electric	1	B60	Galley
Electric	1	B63	BEQ
Electric	1	B64	Child Care
Electric	1	B65	Marines-BEQ
Electric	1	B70	PW
Electric	1	B71	Boiler H
Electric	1	B77	Mech./PW
Electric	1	B78	MWR
Electric	1	B81	Exchange
Electric	1	B142	Bowling Alley
Electric	1	B200	Gate House
Electric	1	B201	ITT
Electric	1	B202	Plane
Electric	1	B250	VANS
Electric	1	B251	Pest Control
Electric	1	B300	VR 46
Electric	1	B350	Engine Shop
Electric	1	B351	Sewage Pump Station*
Electric	1	B352	Ops.
Electric	2	B353	AIMD
Electric	1	B400	Fitness
Electric	1	B402	MWR

Electric	2	B403	Hobby
Electric	1	B404	RST
Electric	2	B450	Fuels
Electric	1	B550	Med
Electric	1	B550A	Med AF
Electric	1	B655	Safety
Electric	1	B1009	PRW CHK
Electric	1	B1101	Marines
Electric	1	B1107	Storage Warehouse
Electric	1	B1108	Vehicle Shop
Electric	1	B1112	Storage Warehouse
Electric	1	B50	Housing A
Electric	1	B51	Housing B
Electric	1	B52	Housing C
Electric	1	B52	Housing D
Electric	1	B52	Housing E
Electric	1	B61	Housing F
Electric	1	B61	Housing G
Electric	1	B62	Housing H
Electric	1	B62	Housing I
Electric	1	B62	Housing J

*Read Parshall Flume

J5.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 6**. New secondary meters shall be installed IAW Paragraph C.13, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3 and J1.6 below.

TABLE 6
New Secondary Meters
Electrical System, NAS Atlanta

Meter Location	Meter Description
None	

J5.6 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following:

1. Invoice (IAW G.2). The Contractor's monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be

submitted by the 25th of each month for the previous month. Invoices shall be submitted to:

Name: Budget Assistant (Code 803)
Address: Naval Air Station Atlanta
1000 Halsey Ave
Marietta, Georgia 30060
Phone number: 770-919-6519

2. Outage Report. The Contractor's monthly outage report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to:

Name: Budget Assistant (Code 803)
Address: Naval Air Station Atlanta
1000 Halsey Ave
Marietta, Georgia 30060
Phone number: 770-919-6519

3. Meter Reading Report. The monthly meter reading report shall show the current and previous month readings for all secondary meters. The Contractor's monthly meter reading report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Meter reading reports shall be submitted by the 15th of each month for the previous month. Meter reading reports shall be submitted to:

Name: Budget Assistant (Code 803)
Address: Naval Air Station Atlanta
1000 Halsey Ave
Marietta, Georgia 30060
Phone number: 770-919-6519

4. System Efficiency Report. If required by Paragraph C.3, the Contractor shall submit a system efficiency report in a format proposed by the Contractor and accepted by the Contracting Officer. System efficiency reports shall be submitted by the 25th of each month for the previous month. System efficiency reports shall be submitted to:

Name: Budget Assistant (Code 803)
Address: Naval Air Station Atlanta
1000 Halsey Ave
Marietta, Georgia 30060
Phone number: 770-919-6519

J5.7 Energy Saving Projects

IAW Paragraph C.3, Requirement, the following projects have been implemented on the distribution system by the Government for energy conservation purposes:

None

J5.8 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the NAS Atlanta boundaries.

J5.9 Off-Installation Sites

NAS Atlanta also owns, operates, and maintains a small area of distribution at the Windy Hill Marine Corps Training Site located south of the base in the town of Smyrna. Utility specific information for the Windy Hill electrical system is found in Attachment J9.

J5.10 Specific Transition Requirements

IAW Paragraph C.13, Transition Plan, **Table 7** lists service connections and disconnections required upon transfer.

TABLE 7
Service Connections and Disconnections
Electrical System, NAS Atlanta

Location	Description
None	

J5.11 Government Recognized System Deficiencies

Table 8 provides a listing of the system improvements that the government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the NAS Atlanta electric distribution system. If the system is sold, the Government will not accomplish these planned improvements. The Contractor shall make a determination as to its actual need to accomplish and the timing of any and all such planned improvements. Capital upgrade projects shall be proposed through the Capital Upgrades and Renewal and Replacements Plan process and will be recovered through Schedule L-3. Renewal and Replacement projects will be recovered through Sub-CLIN AB.

TABLE 8
System Deficiencies
Electrical System, NAS Atlanta

Project Location	Project Description
NAS Atlanta	Replace overhead conductors, poles, crossarms, switchgear, etc. and install new neutral line on remaining overhead system..