

Terre Haute International Airport-Hulman Field (ANG) Electric Distribution System

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J10 Terre Haute International Airport-Hulman Field (ANG) Electric Distribution System

J10.1 Terre Haute International Airport-Hulman Field (ANG) Overview

The 181st Fighter Wing (FW) of the Indiana Air National Guard occupies 891.88 acres of leased land on the Terre Haute International Airport-Hulman Field, situated approximately five miles east of downtown Terre Haute, located in west central Indiana. The mission of the 181st FW is to provide trained personnel and equipment to protect life and property, and preserve the peace, order and public safety of the state of Indiana when directed by the Governor. The unit currently flies the F-16 Falcon. The 181st FW occupies 4 administrative, 23 industrial, and 4 services buildings totaling approximately 323,335 square feet with 275 full-time personnel. A unit training drill is conducted once a month and results in a surge of up to a total of 1250 personnel.

J10.2 Electric Distribution System Description

J10.2.1 Electric Distribution System Fixed Equipment Inventory

The Terre Haute International Airport-Hulman Field (ANG) 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, utility poles, ductbanks, meters, fuses and switches. 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:

?? Airfield Lighting.

?? Parking Lot Lights.

?? Street Lights

J10.2.1.1 Description

Power is provided by Cinergy and enters the base at one location. It is delivered and distributed at 12.47 (kV) through a delta radial-branched configuration system. The primary distribution system consists of approximately 1,300 linear feet of 3-phase, 3-wire overhead, 27,100 linear feet of 3-phase,

3-wire, 15 kV underground circuits in conduit and 1,400 linear feet of 3-phase, 3-wire, 15 kV underground circuits in ductbanks. The conduit and ductbanks are buried at an average depth of four feet and are both marked with tracer wire. Multiple branches feed five 3-phase dry type ventilated transformers ranging from 300 to 500 kVA, sixteen 3-phase oil filled transformers ranging from 150 to 750 kVA and seventeen 1-phase transformers ranging in size from 25 to 150 kVA. The system includes four 6 x 6 x 6 foot deep manholes, ten 4 x 4 x 3 foot deep manholes, one 10 x 20 x 12 foot deep concrete vault, 13 wood utility poles, 13 electric meters, 11 underground switches, 39 line fuses for underground switches, 12 overhead switches, and 24 line fuses for overhead switches. Base personnel indicate the capacity of the current system may not be adequate for present or future needs. The base experiences frequent loss of power on segments of the system due to demand overloads (see paragraph J10.11, Table 8).

J10.2.1.2 Inventory

Table 1 provides a general listing of the major electric distribution system fixed assets for the Terre Haute International Airport-Hulman Field (ANG) electric distribution system included in the sale.

TABLE 1

Fixed Inventory

Electric Distribution System Terre Haute International Airport-Hulman Field (ANG)

Item	Size	Quantity	Unit	Approximate Year of Construction
Ductbanks				
Two 4-inch conduits		360	LF	1972
Two 4-inch conduits		550	LF	1997
One 4-inch conduit		430	LF	1993
Underground Circuits	AWG			
3ph, 3w, 15 kV in conduit	#2	500	LF	1955
3ph, 3w, 15 kV in conduit	#2	2000	LF	1966
3ph, 3w, 15 kV in conduit	#2	3800	LF	1981
3ph, 3w, 15 kV in conduit	#2	1800	LF	2000
3ph, 3w, 15 kV in ductbank	#2	390	LF	1972
3ph, 3w, 15 kV in ductbank	#2	550	LF	1997
3ph, 3w, 15 kV in ductbank	#2	430	LF	1993
3ph, 3w, 15 kV in conduit	#6	3000	LF	1994
3ph, 3w, 15 kV in conduit	#6	10000	LF	1980
3ph, 3w, 15 kV in conduit	#6	6000	LF	1998
Overhead Circuits	AWG			
3ph, 3w, 15 kV	#2	1300	LF	1966
Transformers	Nom kVA			
3 ph, Dry type, ventilated, pad mounted	300	1	EA	1988

Item	Size	Quantity	Unit	Approximate Year of Construction
3 ph, Dry type, ventilated, pad mounted	300	1	EA	1981
3 ph, Dry type, ventilated, pad mounted	500	1	EA	1990
3 ph, Dry type, ventilated, pad mounted	500	2	EA	1981
3 ph, Oil filled, pad mounted	150	4	EA	1966
3 ph, Oil filled, pad mounted	150	2	EA	1978
3 ph, Oil filled, pad mounted	225	1	EA	1997
3 ph, Oil filled, pad mounted	300	1	EA	1982
3 ph, Oil filled, pad mounted	300	1	EA	1994
3 ph, Oil filled, pad mounted	500	1	EA	1975
3 ph, Oil filled, pad mounted	500	1	EA	1985
3 ph, Oil filled, pad mounted	500	1	EA	1966
3 ph, Oil filled, pad mounted	500	2	EA	1997
3 ph, Oil filled, pad mounted	750	1	EA	1998
3 ph, Oil filled, pad mounted	750	1	EA	2001
1 ph, Oil filled, pad mounted	25	2	EA	1998
1 ph, Oil filled, pad mounted	25	4	EA	1997
1 ph, Oil filled, pad mounted	25	3	EA	1970
1 ph, Oil filled, pad mounted	50	2	EA	1980
1 ph, Oil filled, pad mounted	150	3	EA	1955
1 ph, Oil filled, pole mounted	25	3	EA	1969
Utility Poles	Height (ft)			
wood	35	13	EA	1966
Switches For Underground System	Type			
	2-way	6	EA	1955
	2-way	5	EA	1985
Switch Fuses For Underground System	(Rating)			
	15 Amps	3	EA	1970
	20 Amps	6	EA	1985
	70 Amps	6	EA	1985
	70 Amps	6	EA	1990
	100 Amps	3	EA	2000
	150 Amps	15	EA	1985

Item	Size	Quantity	Unit	Approximate Year of Construction
Switches For Overhead Lines	Type			
	600 A-L	9	EA	1966
	600 A-L	3	EA	1969
Switch Fuses For Overhead System	(Rating)			
	15 Amps	12	EA	1966
	15 Amps	3	EA	1969
	20 Amps	3	EA	1966
	30 Amps	3	EA	1966
	35 Amps	3	EA	1969
Vaults	Type			
10 ft X 20 ft X 12 ft deep	concrete	1	EA	1955
Manhole/handholes	Type			
6 ft X 6 ft X 6 ft	Pre-cast concrete	2	EA	1955
6 ft X 6 ft X 6 ft	Pre-cast concrete	2	EA	1966
4 ft X 4 ft X 3 ft	Pre-cast concrete	6	EA	1985
4 ft X 4 ft X 3 ft	Pre-cast concrete	3	EA	1984
4 ft X 4 ft X 3 ft	Pre-cast concrete	1	EA	1990
Electrical meters (see section J10.5.1 for details)				
		3	EA	1955
		1	EA	1964
		1	EA	1966
		2	EA	1981
		1	EA	1985
		1	EA	1992
		1	EA	1993
		1	EA	1994
		1	EA	1995
		1	EA	1997
Notes:				
AWG = American Wire Gauge				
EA = each				
LF = linear feet				
Nom kVA = nominal kilovolt -amperes				
ph = phase				
kV = kilovolts				
FT = feet				

Item	Size	Quantity	Unit	Approximate Year of Construction
w = wire				

J10.2.2 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

Electric Distribution System Terre Haute International Airport-Hulman Field (ANG)

Qty	Item	Make/Model	Description	Remarks
None				

TABLE 3

Specialized Vehicles and Tools

Electric Distribution System Terre Haute International Airport-Hulman Field (ANG)

Description	Quantity	Location	Maker
None			

J10.2.3 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

Electric Distribution System Terre Haute International Airport-Hulman Field (ANG)

Qty	Description	Remarks
1	Electrical Utility System Maps (electronic copy)	AutoCAD Release Version 2000

J10.3 Specific Service Requirements

The service requirements for the Terre Haute International Airport-Hulman Field (ANG) electric distribution system are as defined in the Section C Description/Specifications/Work Statement. The following requirements are specific to the Terre Haute International Airport-Hulman Field (ANG) electric distribution system and are in addition to those found in Section C. If there is a conflict between requirements described below and Section C, the requirements listed below take precedence over those found in Section C.

Although the duct banks are being turned over to the successful offeror, those ducts not currently used for electrical lines will be reserved for the exclusive use of the government. Additional ducts may be made available to the successful offeror at the discretion of the Contracting Officer.

J10.4 Current Service Arrangement

?? **Current Provider:** Cinergy

?? **Average Annual Usage (2000):** 5,340,000 kWh

?? **Maximum Monthly Usage:** 573,000 kWh (December)

?? **Minimum Monthly Usage:** 370,000 kWh (October)

?? **Peak Demand:** 1,214 kW (July)

J10.5 Secondary Metering

J10.5.1 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 J10.6 below.

TABLE 5

Existing Secondary Meters

Electric Distribution System Terre Haute International Airport-Hulman Field (ANG)

Meter Location including building number	Meter Description
Building 1 Main Hangar (Boiler Room)	Consumption, 1955
Building 1 Main Hangar (Transformer outside N/E corner of Boiler room)	Consumption for 440 Power to hangar & Building 10, 1995
Building 4 Motor Pool (Outside North end of Bldg.)	Consumption, 1955
Building 5 Fire Station (Inside North bay SW corner)	Consumption (Volt-Amps), 1955
Building 17 DRM Shop (Outside on transformer SE corner of Bldg.)	Consumption (Volt-Amps), 1964
Building 26 Weapons (Outside on transformer NE corner of Bldg.)	Consumption (Volt-Amps), 1966
Building 38 Avionics (Boiler Room North side of Bldg.)	Consumption (Volt-Amps), 1981
Building 40 Squadron Operations (North wall of boiler room)	Consumption (Volt-Amps), 1985
Building 53 POL Ops (Beside transformer NE of Bldg.)	Consumption (Volt-Amps), 1993
Building 54 Multi-Purpose (Outside on transformer SE corner of Bldg. 26)	Consumption (Volt-Amps), 1992
Building 61 Ammo Storage (On transformer behind Bldg.)	Consumption (Volt-Amps), 1994
Building 63 Med/Dining (Boiler room on switch gear)	Consumption (Volt-Amps), 1997
Building 200 Hush House (On transformer East, North side of Hush House)	Consumption (Volt-Amps), 1981

J10.5.2 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 J10.6 below.

TABLE 6

New Secondary Meters

Electric Distribution System Terre Haute International Airport-Hulman Field (ANG)

Meter Location	Meter Description
None	

J10.6 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 the person identified at time of contract award.
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 the person identified at time of contract award.
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 the person identified at time of contract award.
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 the person identified at time of contract award.

J10.7 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.

J10.8 Service Area

IAW Paragraph C.4 Service Area, the service area is defined as all areas within the Terre Haute International Airport-Hulman Field (ANG) boundaries.

J10.9 Off-Installation Sites

No off-installation sites are included in the sale of the Terre Haute International Airport-Hulman Field (ANG) electric distribution system.

J10.10 Specific Transition Requirements

IAW Paragraph C.13 Transition Plan, **Table 7** provides a listing of service connections and disconnections required upon transfer.

TABLE 7

Service Connections and Dis connections

Electric Distribution System Terre Haute International Airport-Hulman Field (ANG)

Location	Description
None	

J10.11 Government Recognized System Deficiencies

Table 8 provides a listing of system improvements that the Government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the Terre Haute International Airport-Hulman Field (ANG) 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 Renewals 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

Electric Distribution System Terre Haute International Airport-Hulman Field (ANG)

Project Location	Project Description
None	Although projects have been identified to correct the demand overload problem mentioned in paragraph J10.2.1.1, Government funding has not yet been set aside for this purpose. Prospective offerors should plan to correct these problems as part of the capital upgrades portion of their submittals.