

**ATTACHMENT J3**

# **Tulsa International Airport (ANG) Electric Distribution System**

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# **J3 Tulsa International Airport (ANG) Electric Distribution System**

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## **J3.1 Tulsa International Airport (ANG) Overview**

The 138<sup>th</sup> Fighter Wing (FW) of the Oklahoma Air National Guard (OANG) occupies 81 acres on the Tulsa International Airport, located approximately 7 miles northeast of downtown Tulsa, Oklahoma. The unit currently flies the F-16 Falcon. The 138<sup>th</sup> FW occupies 15 administrative, 24 industrial, and 5 services buildings totaling approximately 327,000 square feet. There are two construction projects in progress that when complete (both estimated to be complete by Jan 2002) will increase the base's building square footage by 32,500 square feet. There are currently 328 full-time personnel and unit-training drills conducted once each month result in a surge of up to a total of 1150 personnel.

## **J3.2 Electric Distribution System Description**

### **J3.2.1 Electric Distribution System Fixed Equipment Inventory**

The Tulsa International Airport (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, switches, switchgear, and manholes. 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
- Ballfield Lights

#### **J3.2.1.1 Description**

Power is provided by AEP-Public Service Company of Oklahoma and enters the base and is metered at one location. It is delivered and distributed at 13.2 kilovolts (kV) through an underground radial system. The primary distribution system consists of approximately 7,000 linear feet of 3-phase, 3-wire circuits in conduit; 3,300 linear feet of 1-phase, 1-wire circuits in conduit; and 1,500 linear feet of 3-phase, 4-wire direct buried circuits. Circuits are buried at an average depth of three feet and are

marked with tracer wire. Multiple branches feed 24 three-phase, pad-mounted transformers ranging from 112.5 to 1500 kVA and 3 single-phase pad-mounted transformers ranging from 25 to 100 kVA. The system includes 12 utility manholes, three underground switches, and one main entry switchgear. Base personnel indicate the capacity of the current system is adequate for present and future needs.

### J3.2.1.2 Inventory

**Table 1** provides a general listing of the major electric distribution system fixed assets for the Tulsa International Airport (ANG) electric distribution system included in the sale.

**TABLE 1**  
Fixed Inventory  
Electric Distribution System Tulsa International Airport (ANG)

Item	Size	Quantity	Unit	Approximate Year of Construction
<b>Underground Circuits (in conduit)</b>	AWG			
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 CU	288	LF	1990
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 CU	114	LF	1997
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 CU	52	LF	1989
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 CU	180	LF	1994
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 CU	163	LF	1996
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 CU	650	LF	1985
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 CU	114	LF	1977
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 CU	47	LF	1995
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 AL	75	LF	1998
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 AL	690	LF	1975
<b>3 ph, 3 wire conductor, 15 kV</b>	#2 AL	3587	LF	1990
<b>3 ph, 3 wire conductor, 15 kV</b>	#1/0	210	LF	1982
<b>3 ph, 3 wire conductor, 15 kV</b>	#2	752	LF	1995
<b>3 ph, 3 wire conductor, 15 kV</b>	#350	75	LF	1995
<b>1 ph, 1- wire ground, 15 kV</b>	#2 CU	114	LF	1977
<b>1 ph, 1- wire ground, 15 kV</b>	#2 CU	690	LF	1975
<b>1 ph, 1- wire ground, 15 kV</b>	#2 CU	650	LF	1985
<b>1 ph, 1- wire ground, 15 kV</b>	#2 CU	163	LF	1996
<b>1 ph, 1- wire ground, 15 kV</b>	#2 CU	180	LF	1994
<b>1 ph, 1- wire ground, 15 kV</b>	#2 CU	643	LF	1995
<b>1 ph, 1- wire ground, 15 kV</b>	#6 CU	827	LF	1995
<b>1 ph, 1- wire ground, 15 kV</b>	#6 CU	52	LF	1989

Item	Size	Quantity	Unit	Approximate Year of Construction
<b>Underground Circuits (direct buried)</b>			LF	
<b>3 ph, 4-wire conductor, 15 kV</b>	#2	1120	LF	1987
<b>3 ph, 4-wire conductor, 15 kV</b>	#2	114	LF	1977
<b>3 ph, 4-wire conductor, 15 kV</b>	#2	288	LF	1990
<b>Transformers, 3-phase oil filled</b>	Nom kVA			
	112.5	2	EA	1994
	150	2	EA	1975
	150	1	EA	1980
	150	1	EA	1987
	150	1	EA	1989
	150	1	EA	1990
	150	1	EA	1994
	150	3	EA	1995
	225	1	EA	1982
	225	1	EA	1989
	225	1	EA	1993
	225	2	EA	1995
	300	1	EA	1977
	300	1	EA	1995
	500	1	EA	1996
	500	1	EA	1998
	750	1	EA	1980
	750	1	EA	1985
	1500	1	EA	1995
<b>Transformers, 1-phase oil filled</b>	Nom kVA			
	25	1	EA	1988
	100	1	EA	1994
	100	1	EA	1997
<b>Switches-Underground</b>	type			
	2-way	1	EA	1995
	3-way	2	EA	1995
<b>Switch Gear</b>	size			

Item	Size	Quantity	Unit	Approximate Year of Construction
<b>46 in L x 46 in W x 120 in H, Cat B, 5 Bays</b>	15000 V	1	EA	1995
<b>Manholes</b>	type			
<b>48 in L x 30 in W x 30 in H</b>	lightweight concrete	12	EA	1990
Notes:				
AWG = American Wire Gauge				
EA = each				
LF = linear feet				
ph – phase				
In = inch				
V = volts				
Nom KVA = Nominal Kilovolt -amperes				
Al = Aluminum				
Cu = copper				
KV = kilo -volts				

### J3.2.2 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 Tulsa International Airport (ANG)

Qty	Item	Make/Model	Description	Remarks
None				

**TABLE 3**

Specialized Vehicles and Tools

Electric Distribution System Tulsa International Airport (ANG)

Description	Quantity	Location	Maker
None			

### J3.2.3 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 Tulsa International Airport (ANG)

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

### J3.3 Specific Service Requirements

The service requirements for the Tulsa International Airport (ANG) electric distribution system are as defined in the Section C Description/Specifications/Work Statement.

### J3.4 Current Service Arrangement

**Current Provider:** AEP-Public Service Company of Oklahoma (PSO)

**Average Annual Usage (Year 2000):** 6,062,985 kWh

**Maximum Monthly Usage:** 652,050 kWh

**Minimum Monthly Usage:** 392,642 kWh

**Peak Demand:** 1,645 kW

### J3.5 Secondary Metering

#### J3.5.1 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 J3.6 below.

**TABLE 5**  
Existing Secondary Meters  
Electric Distribution System Tulsa International Airport (ANG)

Meter Location	Meter Description
None	

#### J3.5.2 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 J3.6 below.

**TABLE 6**  
New Secondary Meters  
Electric Distribution System Tulsa International Airport (ANG)

Meter Location and Building #	Meter Description
Building # 313 (AAFES)	3 phase kWh usage meter
Building # 035 (Star Base)	3 phase kWh usage meter

## **J3.6 Monthly Submittals**

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

1. Invoice (IAW paragraph 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 25<sup>th</sup> 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 25<sup>th</sup> 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 15<sup>th</sup> 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 25<sup>th</sup> of each month for the previous month. System efficiency reports shall be submitted to the person identified at time of contract award.

## **J3.7 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

## **J3.8 Service Area**

IAW Paragraph C.4 Service Area, the service area is defined as all areas within the Tulsa International Airport (ANG) boundaries.

## **J3.9 Off-Installation Sites**

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

## **J3.10 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 Disconnections  
Electric Distribution System Tulsa International Airport (ANG)

Location	Description
Lift Station #2 at Building 301	Control panel to be relocated to an outside location to be determined. The removal point is where the electrical secondary wiring attaches to the lift station control panel terminals.

### J3.11 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 Tulsa International Airport (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 Tulsa International Airport (ANG)

Project Location	Project Description
None	