

## SECTION J

### J01 MOTSU Electric Distribution System

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## J01 MOTSU Utilities System

### J01.1 MOTSU Overview

The Military Ocean Terminal Sunny Point (MOTSU) is located in Sunny Point, North Carolina, on the Cape Fear River within Brunswick County, and due south of Wilmington on the North Carolina coast.

The primary mission of MOTSU is the distribution of ordnance for United States Military operations throughout the world.

Electrical power is distributed at 13.2/22.8 kV throughout the Installation.

### J01.2 Electric Distribution System Description

## **J01.2.1 Electric Distribution System Fixed Equipment Inventory**

MOTSU electrical distribution system consists of all appurtenances physically connected to the distribution system from the point where the electrical utility transmission system enters the Installation and Government ownership currently starts, to the points of demarcation. The system includes, but is not limited to, transformers, overhead and underground circuits, protective devices, lightning protection, utility and street and site lighting poles, switches, street and site lighting fixtures, emergency generator sets, and other ancillary equipment. The actual inventory of items sold will be established in the Bill of Sale at the time the system is transferred. Fixed inventory is described in J01.2.1.2. The Government makes no representation that the inventory is accurate. The contractor shall base its proposal on site inspections, and other pertinent data, and to a lesser degree to the fixed inventory list furnished. Under no circumstances shall the contractor be entitled to any service charge adjustments based on the accuracy of the inventory specified in J01.2.1.2.

Specifically excluded from the electrical system privatization are:

- ?? Outdoor lighting mounted on buildings.
- ?? Electrical facilities located on the load side of demarcation points.
- ?? Lightning protection devices mounted on buildings and poles not associated with the electrical distribution system or street or site lighting.

### **J01.2.1.1 Description**

Electric power is provided to MOTSU by Carolina Power and Light Company (CP&L), and is primary metered at 22.8 kV on the incoming utility service pole adjacent to the MOTSU switching station.

Power is distributed inside the facility at 13.2/22.8 kV, and transformed to user voltages at each point of consumption.

### **J01.2.1.2 Inventory**

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

**Table 1  
Fixed Inventory  
MOTSU Electric Distribution System**

#### **Switches**

<b>Switching Station</b>	<b>Quantity</b>	<b>Approximate Year of Construction</b>
27 kV, 3-pole, gang operated, air break switch	1	1973

27 kV automatic recloser switch (not operational)	1	1973
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### Conductors

Overhead Circuits	AWG	Length (circuit ft)	Approximate Year Placed in Service
3ph, 4w, 22.8kV	2	30,500	1969-1984
3ph, 4w, 22.8kV	4	40,100	1969-1984
3ph, 3w, 22.8kV	2	2,200	1969-1984
2ph, 2w, 22.8kV	4	40,800	1969-1984
2ph, 2w, 22.8kV	2	15,800	1969-1984
1ph, 1w, 13.2kV	4	9,750	1969-1984
3ph, 4w, Secondary	2	600	1969-1984
3ph, 3w, Secondary	6	4,700	1969-1984
2w, Street Light	4	3,400	1969-1984
2w, Street Light	6	23,200	1969-1984

<b>Underground Circuits</b>	<b>AWG</b>	<b>Length (ft)</b>	<b>Approximate Year Placed in Service</b>
3ph, 4w, Secondary	350	150	1973-1984
3ph, 3w, Secondary	4/0	600	1973-1984
3ph, 3w, Secondary	2/0	700	1973-1984
3ph, 3w, Secondary	1	500	1973-1984
2w, Street Light	10	2,200	1973-1984

### **Transformers**

<b>Transformers</b>	<b>Nom kVA</b>	<b>Qty.</b>	<b>Year Placed in Service</b>
3-Phase	500	4	1973-1984
3-Phase	300	4	1973-1984
3-Phase	150	1	1973-1984
3-Phase	75	2	1973-1984
3-Phase	37.5	3	1973-1984
3-Phase	25	1	1967
1-Phase	75	4	1973-1984
1-Phase	50	18	1973-1984
1-Phase	37.5	6	1973-1984
1-Phase	25	20	1967-1984
1-Phase	15	36	1978-1982
1-Phase	10	45	1981-1984
1-Phase	5	29	1967-1984

### **Utility Poles**

<b>Utility Poles</b>	<b>Height (ft)</b>	<b>No.</b>	<b>Year Placed in Service</b>
Pole and Xarm	55	1,200	1996

### **Generators**

<b>Size (KW)</b>	<b>Quantity</b>	<b>Approximate Year Placed in Service</b>
300	1	1971
250	1	1998
180	1	1991
150	1	1991
60	2	1971 & 1998
25	1	1998

## **J01.2.2 Electrical Distribution System Non-Fixed Equipment and Specialized Tools Inventory**

Table 2 lists other ancillary equipment (Spare Parts). No specialized vehicles or tools are included in the sale. Offerors shall field verify all equipment prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment.

**Table 2**  
**Spare Parts**  
**MOTSU Electric Distribution System**

### **Spare Transformers**

<b>Transformers</b>	<b>Size (kVA)</b>	<b>Quantity</b>	<b>Approximate Year of Manufacture</b>
3-Phase	300	1	1975-1984
1-Phase	75	2	1975-1984
1-Phase	50	6	1975-1984
1-Phase	37.5	2	1975-1984
1-Phase	25	4	1975-1984
1-Phase	15	11	1975-1984
1-Phase	10	1	1975-1984

## **J01.2.3 Electrical Distribution System Manuals, Drawings, and Records**

Drawings of the electrical system, property cards, and utility bills that contain meter readings are available from MOTSU. The drawings that are provided are not 100 percent accurate, and are not considered to be all encompassing of the existing electrical system when the offerors are preparing their offer.

## **J01.3 Specific Service Requirements**

The successful contractor is expected to provide full service up to and including the established demarcation points. The contractor shall disconnect the main power supply to the base when winds exceed 50 mph in order to minimize damage to equipment. Total emergency power is furnished where needed by back up generators. The entire feed coming into the base is shut down. Meters are considered to be within the contractor's scope. Established demarcation points are described as follows:

- ?? Secondary Service Overhead - At the entrance to the main service panel.
- ?? Secondary Service Underground - At the entrance to the main service panel. Emergency Generator Sets - Primary side of transfer switch.

Ownership, operation, and maintenance of electrical facilities on the load side of these demarcation points would be the responsibility of the Government or separate contractor.

## **J01.4 Current Service Arrangement**

Transformer installations are configured in various secondary voltages. Standard secondary service is 120/240 volt. Three-phase service is available at 120/240 and 120/208.

Electricity consumption at MOTSU for 1998, 1999, and 2000 is as follows:

- ?? 1998 – 3,092,100 kilowatt-hours (kWh) with a peak demand of 359,400 kW between January 14 and February 13.
- ?? 1999 – 3,025,200 kilowatt-hours (kWh) with a peak demand of 394,200 kW between February 11 and March 6.
- ?? 2000 – 3,195,000 kilowatt-hours (kWh) with a peak demand of 436,500 kW between January 14 and February 15.

## **J01.5 Metering**

A single primary meter is located in an enclosed substation, which is adjacent to the MOTSU switching station. Primary metering is at 22.8 kV.

Six remote sites are metered separately:

- ?? Leland Interchange, 2 meters by CP&L
- ?? State Highway 133 and main entrance sign, 1 meter by CP&L
- ?? 50 Lakes Drive, 1 meter by CP&L
- ?? Boiling Springs Road, 1 meter by CP&L
- ?? Access Road, 1 meter by CP&L
- ?? Funston Road, 1 meter Brunswick Electric

Currently there are 32 secondary meter locations at MOTSU. None of these are used for the purpose of distributing the cost of electrical power consumption to other users.

Additional secondary meters may be required by MOTSU for internal billing for reimbursable power consumption, utility usage management, and energy conservation monitoring. The contractor shall assume full ownership and responsibility for all existing and future secondary meters.

## **J01.6 Submittals**

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

- ?? Invoice. The contractor's monthly invoice shall be presented in a format proposed by the contractor and accepted by the Government's Contracting Officer. Invoices shall be submitted by the 25<sup>th</sup> of each month for the previous month. Invoices shall be submitted to an address to be identified at time of award.

- ?? Outage Report. The contractor's monthly outage report will be prepared in the format proposed by the contractor and accepted by the Government's 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 an address to be identified at time of award.
- ?? Meter Reading Report. The monthly meter reading report shall show the current and previous month's 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 Government's 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 an address to be identified at time of award.
- ?? System Efficiency Report. If required, 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 an address to be identified at time of award.

## **J01.7 Government Recognized System Deficiencies**

There are no system deficiencies recognized at this time.

## **J01.8 Off-Site Installations**

CP&L also provides power to several remote sites:

- ?? Leland Interchange – night lighting and radio repeater.
- ?? State Highway 133 – railroad crossing signal and main entrance sign.
- ?? 50 Lakes Drive – railroad crossing signal.
- ?? Boiling Springs Road - railroad crossing.
- ?? Access Road – entrance sign.

Brunswick Electric Company supplies power to a remote railroad-crossing signal on Funston Road.

Table 3  
**Train Approach Signals**

<b>Location</b>	<b>Year Upgraded</b>
Funston Crossing	1981
State Highway 133	1996
Fifty Lakes Drive	1986
Boiling Springs Lake Road	1981

**All items listed in this section are assets included in this sale except for the radio repeater at the Leland Interchange, the main entrance sign on State Highway 133, and the entrance sign on the access road.**

## **J01.9 Specific Transition Requirements**

**Due to the fact that the existing hydraulic-operator recloser switch is not functional, it is recommended that the successful offeror perform a coordination study to determine the correct recloser and downstream fuse sizes and replace as needed.**