

ATTACHMENT J2

Dover AFB Natural Gas Distribution System

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J2 Dover AFB Natural Gas Distribution System

J2.1 Dover AFB Overview

Dover Air Force Base (AFB) is home to the 436th Airlift Wing (AW) and the 512th Air Force Reserve Airlift Wing. The installation is located in the center of the Delmarva Peninsula approximately 3 miles from downtown Dover, Delaware. Dover AFB provides the nation with airlift, airdrop, Special Operations capabilities, and Port Mortuary facilities. It has 17 tenant units including the Detachment 3, 373 TRS, Air Force Office of Special Investigations, Air Force Audit Agency, and the Defense Reutilization Management Office (DRMO). The 436th AW is an all C-5 wing that serves as the busiest Department of Defense (DoD) aerial port. The 512th AW recruits, trains, and equips military personnel to augment active duty operational forces worldwide. The economic impact of Dover AFB is over \$470 million on the local economy.

Dover AFB occupies approximately 3,900 acres (3,300 acres owned and 589 acres under grants). In December 1941 the Army Air Corps leased the Dover Municipal Airfield which would later become Dover AFB. In 1952, Dover AFB became part of the Military Transport Service flying C-54s, C124s, and C133s and was designated as a permanent installation which brought major expansion and construction to the Base. In 1966, the 436th Military Airlift Wing was activated at Dover AFB. The 512th Military Airlift Wing was activated at Dover AFB in July 1973. In 1992 the 436th was re-designated the 436th Airlift Wing under the Air Mobility Command and the 512th was re-designated the 512th Airlift Wing. Dover AFB has provided humanitarian airlift in time of disaster and military airlift when United States' forces were needed around the world.

The Base employs approximately 4,200 military, 1,200 civilians, and 2,500 reservists. It has two runways and 707 buildings. Approximately 227 buildings are industrial and administrative. The remaining 480 buildings are military family housing (MFH) consisting of approximately 1,500 housing units. The MFH is split into two neighborhood developments, Eagle Heights and Eagle Meadows. Eagle Heights is located on the western portion of the AFB. Eagle Meadows is located 4 miles southwest of the main Base. A church, elementary and middle school, plus a Community Area (Lodging, Swimming Pool, Shoppette, Chapel, Youth Center, and Housing referral office) are located northeast of the Eagle Heights MFH area. Utility systems in Eagle Heights and Eagle Meadows are excluded from the Utility Privatization process because the systems located there are included as part of the MFH privatization process. However, utility systems that serve the Community Area are included in this Utility Privatization RFP. More details are included in the section describing the specific transition requirements.

Within the next ten years, the Base mission is expected to remain stable. Due to safety and environmental constraints, much of the land on Dover AFB cannot be developed. Future development of the Base, if implemented, will occur largely through selective renovation of existing structures, demolition and redevelopment of existing sites, and consolidation.

J2.2 Natural Gas Distribution System Description

J2.2.1 Natural Gas Distribution System Fixed Equipment Inventory

The Dover AFB natural gas 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, pipelines, valves, regulators, and meters. 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 natural gas distribution system privatization are:

- Eagle Heights Housing area
- Approximately 14,000 feet of coated 6-inch steel gas-delivery-main and 9,500 feet of coated 4-inch steel main. The gas-delivery-main is owned and operated by Chesapeake Utilities Corporation.

J2.2.1.1 Description

Chesapeake Utilities Corporation supplies natural gas to Dover AFB through 6-inch and 4-inch diameter, coated steel pipe operating at 350 psig. Chesapeake Utilities Corporation delivers natural gas through six metering stations at four locations. These metering stations measure gas consumption and reduce the pressure from 350 psig to 35-40 psig for distribution to Base facilities. Regulators at each facility reduce pressure to approximately 5 psig.

The natural gas distribution system consists of polyethylene pipes installed between 1998 and 2003. In 1998, Dover AFB began a program to eliminate the use of fuel oil for space-heating and water-heating and replace it with natural gas. The majority of the gas piping has been installed, and the program was completed in 2001. The polyethylene pipes range in size from .75 to 6-inch diameter and are located at a range of 2 to 10 feet below ground surface, although the actual depth may vary. Tracer wires were installed above the polyethylene piping. Test stations have been installed at periodic intervals to enable a locating service to connect to the tracer wires and mark gas line locations. No odorization equipment exists on base.

Base facilities located in the Community Area (Lodging, Swimming Pool, Shoppette, Chapel, Youth Center, and Housing referral office) will require a new gas feed to isolate this area from the Military Family Housing. The successful Contractor shall provide separate

service to buildings in the Community Area to ensure redundancy of system to minimize disruption of service to affected facilities in the event of a line failure. Natural gas service laterals connected to the Church and Youth Center shall also be privatized as part of this utility privatization process.

J2.2.1.2 Inventory

Table 1 provides a general listing of the major natural gas distribution system fixed assets for the Dover AFB natural gas distribution system included in the sale.

TABLE 1
Fixed Inventory
Natural Gas Distribution System Dover AFB

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
Main Base				
<u>Piping</u>				
Polyethylene Pipe	0.75	2,400	LF	1998
Polyethylene Pipe	1.25	900	LF	1998
Polyethylene Pipe	2	4,900	LF	1998
Polyethylene Pipe	4	6,100	LF	1998
Polyethylene Pipe	6	3,100	LF	1998
Polyethylene Pipe	.75	400	LF	2000
Polyethylene Pipe	2	13,200	LF	2000
Polyethylene Pipe	4	1,000	LF	2000
Polyethylene Pipe	4	1,000	LF	2002
Polyethylene Pipe	4	2,000	LF	2003
Polyethylene Pipe	.75	320	LF	2003
<u>Valves</u>				
Plastic Ball Valves	1.25	18	EA	1998
Plastic Ball Valves	2.0	2	EA	1998
Plastic Ball Valves	4.0	1	EA	1998
Plastic Ball Valves	1.25	1	EA	2000
Plastic Ball Valves	2.0	2	EA	2000
Plastic Ball Valves	4.0	1	EA	2000
Plastic Ball Valves	4.0	1	EA	2003
Plug Valves	.75	18	EA	1998

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
Plug Valves	2.0	6	EA	2000
<u>Regulators</u>				
Regulator	.75	22	EA	1998
Regulator	1.25	7	EA	1998
Regulator	1.5	2	EA	2000
Regulator	2.5	2	EA	1998
Regulator	4	5	EA	2000
<u>Gas Cock</u>				
Gas Cock	.75	39	EA	1998
Gas Cock	1.25	1	EA	2001
<u>Meters</u>				
Meter	1.5	3	EA	1998
Meter	1	1	EA	2000
Meter	1	1	EA	1998
Meter	4	8	EA	1998
Meter	2	14	EA	1998
Meter	3	1	EA	1998
Meter	1.25	1	EA	1998

Notes:

PE = Polyethylene

LF = Linear Feet

EA = Each

J2.2.2 Natural Gas 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

Natural Gas Distribution System Dover AFB

Qty	Item	Make/Model	Description	Remarks
None Identified				

TABLE 3
Specialized Vehicles and Tools
Natural Gas Distribution System Dover AFB

Description	Quantity	Location	Maker
None Identified			

J2.2.3 Natural Gas 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
Natural Gas Distribution System Dover AFB

Qty	Item	Description	Remarks
1	Map	Natural Gas Distribution System Plan View	None

J2.3 Specific Service Requirements

The service requirements for the Dover AFB natural gas distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Dover AFB natural gas 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.

- Contractor shall not commence any activities until any required permits are formally approved (e.g., construction), and shall immediately notify the Base of any contractor activity that may constitute a permit violation.
- Provide marks on the ground to show locations of natural gas distribution lines on an as needed basis as other entities request. Mark utilities in the field to show location and depth.
- The Contractor shall provide monthly meter reading reports in accordance with Paragraph J3.6, and that meet the following requirements:

The Contractor shall keep a meter book with monthly consumption and demand (if applicable) for each meter reading. Meter books shall also include building address or facility number, meter number, previous month reading, current month readings, multipliers for each meter, total monthly consumption, points of contact for meter questions, and procedure for converting meter reads into consumption (including

multipliers). The Government may provide a meter reading report format to be used for meter readings.

J2.4 Current Service Arrangement

Chesapeake Utilities Corporation provides the natural gas commodity to Dover AFB. The FY 2002 annual natural gas usage was 3,867,340 CCF for the total installation. The average monthly usage is 32,278 CCF with the peak month occurring in January 2002 with 676,680 CCF and the lowest usage occurring in July 2002 with 117,850 CCF. The total annual natural gas usage in 2002 excluding MFH was reported as 3,040,020 CCF.

J2.5 Secondary Metering

J2.5.1 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 J2.6 below.

TABLE 5
Existing Secondary Meters
Natural Gas Distribution System Dover AFB

Meter Location	Meter Description
<u>Main Base</u>	
945	Roots Meter, model #118175, 4"
922	Roots Meter, model #3M175, 2"
918	Roots Meter, model #3M175, 2"
643	Rockwell International Meter, model #R-273, 1"
626	Rockwell International Meter, model #R-273, 1"
617	Equimeter, model #EC3000, 4"
617	Equimeter, model #EC3001, 4"
617	Equimeter, model #EC3002, 4"
617	Equimeter, model #EC3003, 4"
714	Roots Meter, model #118175, 4"
706	Roots Meter, model #16M175, 4"
150	Roots Meter, model #3M175, 2"
270	Roots Meter, model #8C175, 2"
270	Roots Meter, model #8C175, 2"
124	Roots Meter, model #8C175, 2"

268	Roots Meter, model #3M175, 2"
266	Roots Meter, model #3M175, 2"
101	Roots Meter, model #3M175, 2"
102	Roots Meter, model #67S, 1 1/2"
211	Roots Meter, model #RC415, 1 1/2"
222	Roots Meter, model #8C175, 2"
215	Roots Meter, model #RC415, 1 1/2"
116	Invensys Meter, model #G-098, 4"
264	Roots Meter, model #8C175, 2"
1301	Roots Meter, model #5M175, 3"
801	Roots Meter, model #15C175, 2"
Schools	Roots Meter, model #7M175, 2"
479	Rockwell International Meter, model #AL425, 1-1/4"
3499	Roots Meter, model #15C175, 2"

J2.5.2 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 J2.6 below.

TABLE 6
New Secondary Meters
Natural Gas Distribution System Dover AFB

Meter Location	Meter Description
At the point where the new connection is made to the Chesapeake Utilities distribution line to provide new service to the Community Area (Lodging, Swimming Pool, Shoppette, Chapel, Youth Center, and Housing referral office) adjacent to Eagle Heights MFH.	Provide a meter that meets the requirements of Chesapeake Utilities Corporation.

J2.6 Monthly Submittals

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

1. Invoice (IAW Section G.2 of the RFP). 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: 436 CES/CEC
Address: 600 Chevron Ave., Dover AFB, 19902
Phone number: (302) 677-6447

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: 436 CES/CEC
Address: 600 Chevron Ave., Dover AFB, DE, 19902
Phone number: (302) 677-6447

3. **Meter Reading Report.** The monthly meter reading report shall show the current and previous month readings for all identified 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: 436 CES/CEC
Address: 600 Chevron Ave., Dover AFB, DE, 19902
Phone number: (302) 677-6447

4. **Leak Detection Report.** The Contractor shall submit a leak detection report in the format proposed by the Contractor and accepted by the Contracting Officer. The Contracting Officer will determine the frequency of the report based on Government requirements. Leak detection reports shall be submitted to:

Name: 436 CES/CEC
Address: 600 Chevron Ave., Dover AFB, DE, 19902
Phone number: (302) 677-6447

J2.7 Energy Saving Projects

IAW Paragraph C.3, Requirement, the following projects have been implemented by the Government for conservation purposes.

None.

J2.8 Service Area

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

J2.9 Off-Installation Sites

No off-installation sites are included in the sale of the Dover AFB natural gas distribution system.

J2.10 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
Natural Gas Distribution System Dover AFB

Location	Description
Natural gas lines serving the Community Area (Lodging, Swimming Pool, Shoppette, Chapel, Youth Center, and Housing referral office) located in the area north and east of the Eagle Heights MFH area.	Contractor to provide separate service to buildings in the Community Area to ensure redundancy of system to minimize disruption of service to affected facilities in the event of a line failure. Cut and cap the gas lines connecting to MFH as needed to isolate the new feed to the Community Area from the gas system that will be privatized under separate contract as part of the MFH system. Install meters and regulators as required by Chesapeake Utilities Corporation to allow gas quantities consumed by buildings in the Community Area to be measured in the future. Perform work in accordance with applicable codes and requirements of Chesapeake Utilities Corporation.

J2.11 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 Dover AFB natural gas distribution system. If the utility 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 Replacement 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
Natural Gas Distribution System Dover AFB

Project Location	Project Description
The government has no recognized system deficiencies.	