

PWS 6: UTILITIES AND ENERGY (INDIRECT)

1. Applicability

This Utilities and Energy PWS governs the operation and performance of the Contractor in the generation, measurement, distribution, and reporting of energy and utilities services only. The cost for natural gas, fuel oil, electricity, purchased steam, and potable water as well as labor, raw materials, and any subcontracts related to the operation of HSAAP utilities shall be charged to this PWS. Energy and utility services-related maintenance performance requirements will fall under the purview of the Maintenance PWS.

2. General Requirements

Contractor operation of Government-owned facilities or vehicles shall comply with the provisions of Federal, State, and Army requirements to the same extent as the Government would be required to comply if the Government operated the facilities or vehicles.

2.1. The Contractor shall comply with the current Army laws, policies, regulations, and Executive Orders pertaining to energy and utilities operations and management. This shall include establishing, maintaining, and implementing policies, objectives, priorities, and operating procedures in order to provide energy and utilities management and maintain compliance.

2.1.1. In support of the Holston Army Ammunition Plant (HSAAP) mission, the Contractor shall submit an ISO 50001 Execution Plan outlining the development of an ISO 50001-conforming Energy Management System (EnMS) for all activities located within the fenced areas of HSAAP. (CDRL A6-001)

2.2.1. The Energy Policy Act of 2005 (EPAc 2005) established a number of energy management goals for Federal facilities and fleets. Metering and reporting requirements under EPAc 2005 directs all federal building to be metered, in accordance with guidelines established, for the purpose of efficient energy use and reduction in the cost of electricity consumed. Further, advanced meters are to be utilized to provide centralized data and measurement of the consumption of electricity hourly. EPAc 2005 includes requirements surrounding Federal building performance standards regarding energy efficiencies.

2.2.2. The Energy Independence and Security Act of 2007 (EISA 2007) established energy management goals and requirements when signed on December 19, 2007. EISA 2007 also identifies metering as a requirement under public law. EISA 2007 requires all agencies to provide the same standard of metering as directed in EPAc 2005 to natural gas and steam. EISA 2007 reinforces the energy reduction goals for federal agencies. The three key

provisions enacted are the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard, and the appliance/lighting efficiency standards.

2.2.3. Executive Order 13990, Energy Act of 2020. This Executive Order contains the current federal energy goals and guidelines. The Contractor shall comply with this Executive Order where practicable as approved by the Army Staff and agreed upon together.

2.2.4. Department of the Army Memorandum, Sustainable Design and Development Policy Update. The Contractor shall comply with applicable provisions of the policy to the maximum extent practicable.

2.2.5. Department of the Army Memorandum, Energy and Water Goal Attainment Responsibility Policy for Installations. The Contractor shall comply with applicable provisions of the policy to the maximum extent practicable.

2.2. The Contractor shall provide a Certified Energy Manager which shall ensure facility compliance and implementation of effective risk management related to energy and utilities aspects present in the operation, mission activity, and special projects occurring at HSAAP. Assigned Contractor personnel shall oversee energy management within the scope of the Contractor's work activities at the HSAAP. The Contractor shall establish energy and utilities programs that effectively manage and ensure compliance to current Army, Federal, State, and Local regulations, and Executive Orders related to energy and utilities. The Contractor shall continually adapt programs impacted by any and all changes to applicable laws, regulations, Executive Orders, memorandums, and Department of Defense Instructions (DoDI) during the period of this contract.

2.2.1. The Contractor shall maintain a current list of HSAAP Energy and Utilities Services providers as well as providers for critical raw materials for utility operations. This and copies of all contracts held with the local utilities providers (natural gas, electricity, steam, fuel oil, and potable water) and providers for critical raw materials for utility operations shall be made available upon request. For natural gas supply, the Contractor shall only enter into natural gas supply agreements that significantly limit natural gas curtailment (Primary Firm reservation) to HSAAP and HSAAP shall be given priority during supply issues.

2.2.2. The Contractor's energy and utilities programs shall address how to proactively manage the energy costs associated with production, facility demand, and the facility distribution systems. The program should include, but not be limited to, the proper and lawful operation for generation, measurement, distribution, and point of use delivery of compressed air, electricity, steam, water, and wastewater sewage treatment with their associated collection and communication systems. The following objectives, subject to any applicable governing instructions, directives, standards, and regulatory requirements,

constitute specific Contractor performance requirements in the daily operation and management of the HSAAP Utilities, Energy, and Water Management program.

2.2.2.1. The Contractor shall reliably/safely generate and distribute steam and electricity via operating the Cogen. The Contractor shall maintain a load-shedding plan for implementation during periods of outside electrical supply issues and/or internal distribution issues, to minimize impacts to operations. Under periods of outside electrical supply issues and/or internal distribution issues, the Contractor shall enact its load-shedding plan to minimize impacts to operations.

2.2.2.2. The Contractor shall safely generate and distribute steam to support and provide a reliable supply to all facility and production operations.

2.2.2.3. The Contractor shall receive and reliably/safely distribute electricity to support facility and production operations. The Contractor shall manage the control and distribution of purchased electricity and electricity generated onsite, to provide a reliable supply to all facility and production operations.

2.2.2.4. The Contractor shall safely generate and distribute compressed air to support and provide a reliable supply to all facility and production operations.

2.2.2.5. The Contractor shall generate and distribute river/cooling water to support and provide a reliable supply to all facility and production operations. The Contractor shall test river water at a minimum, daily or as necessary, for acceptable pH and turbidity. The discharge of river water as cooling water in the production buildings shall be in compliance with Federal, State, and Local regulations and permits. The Contractor shall operate the river water storage reservoir.

2.2.2.6. The Contractor shall generate and distribute filtered water to support and provide a reliable supply to all facility and production operations. Filter water shall be treated as necessary (chlorine, sodium hypochlorite, aluminum sulfate, etc.). The Contractor shall test filtered water at a minimum, daily or as necessary, for acceptable pH, turbidity, and total free chlorine. Biological assessments via E-coli bacteriological tests shall be performed at a minimum, on a monthly basis. The Contractor shall retain water analysis test records for 48 months after completion of the tests or in accordance with regulatory requirements, whichever is longer. The Contractor shall operate the filter water storage reservoirs.

2.2.2.7. The Contractor shall receive and distribute potable water to support and provide a reliable/safe supply to all facility and production operations requiring potable water.

2.2.2.8. The Contractor shall collect, distribute, and treat sanitary and industrial sewage to reliably support facility and production operations and to maintain environmental compliance. These sewage treatment and collection systems shall be operated in accordance with the HSAAP National Pollutant Discharge Elimination System (NPDES) permit issued by the Tennessee Department of Environment and Conservation (TDEC). An operation log for the sewage treatment plant and the Industrial Waste Water Treatment Facility (IWWTF), which shall include monthly sewage inflow and discharge data, shall be maintained and available for review/inspection.

2.2.2.9. The Contractor shall operate the laundry facilities.

2.2.2.10. The Contractor shall provide heating and cooling required for all facility and production operations.

3. Communication, Support, Documentation & Permits

3.1. The Contractor shall notify the Army of any utilities service interruption event that would impact a production contract/delivery date that occurs within the bounds of the facility fence line within one hour of its original discovery by onsite/on scene personnel. Utilities service interruption events include, but are not limited to breakdowns in generation, measurement, distribution, or point of use delivery equipment that cause one hour or more of production operational downtime. The Contractor should always make the most conservative decision when choosing to inform the Government of utilities service interruption events as there is no penalty for timely notification of such events. Reported events that, upon further consideration, do not meet the loss of production downtime standard for a utilities services interruption event, may be retracted at any time by email notification to the local Army energy management staff. (CDRL A6-002)

3.1.1. In addition to initial notification of a utilities service interruption event, the Contractor shall develop a database system to log and track utilities service interruption events and remedies. The management of this database shall become part of the Contractor's ISO 50001 EnMS on the date this system declares conformance with the ISO 50001 standard. Upon Government request, the history of utilities service interruptions shall be provided by the Contractor.

3.2. The Contractor shall identify and document within 60 days of discovery any utility deficiencies and establish and implement (where required) plans to bring the facility into compliance. Energy and utility services-related maintenance performance requirements (reliable source of energy and infrastructure) will fall under the purview

of Maintenance PWS. The Government shall be notified of any energy and utilities deficiencies, and be provided with the Contractor's corrective action and/or improvement plan prior to implementation. For deficiencies and corrective plans delivery instructions see CDRL DI-MGMT-80501. (CDRL A6-003)

3.2.1. Utility deficiencies can be defined, but not limited to, utility infrastructure and/or equipment that causes outages and concern for reliability; discovered code and/or safety violations; environmental regulation and/or permit violations; improperly installed and maintained equipment, etc.

3.3. The Contractor shall comply with energy and utilities project documents as required, to correct existing or potential violations of Federal, State, or Local energy and/or utilities laws, regulations, Executive Orders, and Army Regulations. Energy and utilities project documents, at minimum, shall include project name, project number, compliance required date, environment, energy, and/or utilities regulatory requirement, appropriate fund code, Fiscal Year (FY) of requirement, estimated dollar amount of requirement, phased or out-year requirements, and project installation Point of Contact (POC). Project documentation shall be submitted to the Government for review prior to submission to the designated program official or electronic source.

3.3.1. The Contractor shall provide applicable data supporting base operations and mission-related energy and utilities project requirements to the Government as part of the Production Based Support (PBS) Call Letter submission as covered under PWS 1.

3.3.2. The Contractor shall support the identification of energy and utilities requirements within PBS and facilities modernization requirements by responding to the annual PBS Call Letter. The Contractor shall ensure potential impacts to the energy and utilities plans are adequately communicated to Government personnel involved in requirement planning and execution.

3.3.3. The Contractor shall input applicable data to the Army Energy and Water Reporting System (AEWRS) for energy and utilities requirements. AEWRS is an automated (web based) system for collecting installation data to be submitted to Defense Utilities Energy Reporting System and AEWRS web address is: <https://aewrs.hqda.pentagon.mil/aewrs/>. Data inputs shall include the following items: Facility data for all non-petroleum fuels, liquefied gases, and petroleum fuels used to support facilities; Annual Building factor data; and Water consumption data. Additionally, the Contractor shall comply with the AEWRS reporting schedule, including the submission of Energy consumption and cost data monthly; submission of water consumption and cost data on a quarterly basis; and submission of facility building factors and water data on an annual basis. AEWRS requires a Common Access Card (CAC) for access. The Contractor can request assistance with AEWRS entries from the Government

Staff if the Contractor staff has challenges receiving a CAC card but the intent is to have this as a Contractor function. (CDRL A6-004)

3.4. The Contractor shall develop appropriate energy and utilities training plans to ensure competency and understanding of personnel involved in facility operations impacting energy and utilities compliance and conservation. In the event of an energy or utilities violation, the Contractor shall enact corrective measures to address the violation. At a minimum, the Contractor shall identify training shortfalls that may have contributed to the violation. Any shortfalls identified shall be identified within the Contractor's deficiency and corrective action plan to prevent future occurrences.

3.5. The Contractor shall monitor the energy and utilities performance of all sub-contractors, tenants, and lessees working on HSAAP to ensure conformance of Executive Orders and applicable energy policies. This shall apply from the date of award of this PWS going forward and the Contractor does not have to retro-actively change current contracts/agreements. All new contracts/agreements/extensions shall comply. Deficiencies identified related to sub-contractors, tenants, and lessee work activities shall be recorded and incorporated under the Contractor's plan to address energy and utilities deficiencies submitted under section 3.2.

3.6. The Contractor shall provide assistance to the Government Staff when preparing responses to energy and utilities data calls, as needed. Support requests may include the following: project/liability requirements and planning exercises; narrative summation of past, present, and proposed energy and utilities initiatives and/or activities at the HSAAP; and identification of energy and utilities source reduction and improvement measures.

3.7. The Contractor shall assist higher headquarters Government personnel in reviewing plant operations (and those of its sub-contractors and tenants) located at HSAAP for the purpose of determining operational effect on the energy and utilities programs. The Contractor shall aid in the determination of whether stated operations maintain compliance to Federal, State, and Local laws and regulations, Executive Orders, and Army regulations involving energy security. The reviews or visits will be coordinated through the Commander or Plant Commander's Representative and be conducted at the direction of the Plant Commander or Commander's Representative.

4. Facilities Use

4.1. The Contractor shall perform all activities and operations to achieve and maintain energy and utilities conservation. The Contractor Certified Energy Manager shall ensure effective management and oversight of the Contractor's energy and utilities conservation program. Energy efficient motors and equipment shall be utilized in any replacement or new procurement activity. When replacement

equipment is planned for in plant improvements in areas identified as Significant Energy Users, documentation shall be provided of energy efficiency with comparable equipment and/or calculations to indicate any increases or decrease in energy demands. The Contractor shall have an active energy conservation and energy management program that reports and measures progress on an annual basis. Progress towards energy reduction efforts shall be accomplished in part through the identification of future projects that reduce energy consumption. (CDRL A6-005)

4.2. The Contractor shall support and maintain an Installation Energy and Water Plan (IEWP) conformant to the Army's Installation Energy and Water Strategic Plan (December 2020) as well as the requirements in this PWS. The additional requirements from this PWS for these plans, shall be addressed in separate sections of these plans. This plan shall analyze and outline critical mission requirements, assess energy and water baseline conditions, and develop a prioritized approach for both projects, and operations and maintenance activities that improve energy and water resilience. The Contractor steam trap maintenance and replacement program details, to include current performance, future improvements, and projected performance, shall be included in the Installation Energy Strategic Plan. The Installation Energy Strategic Plan shall also provide a list of critical raw materials and any onsite inventories required for utility operations for Government comment. The Contractor shall maintain an onsite inventory of fuel oil to cover the facility steam demand in case of a loss of natural gas supply. Minimum inventory and other related requirements are in the subsections below. The Contractor shall describe in the Installation Energy Strategic Plan, the planned steam plant maintenance runs using fuel oil and high-level fuel oil turnover approach/plans, including duration and estimated fuel oil consumption. The Contractor shall describe in the Installation Energy Strategic Plan, its operational plans for the small steam boilers in the Area B Acids Area. The IEWP shall be reviewed and updated (as needed), but at a minimum, on an annual basis. These plans shall be submitted for Government approval 90 days after contract award. Any updates to these plans shall be submitted for Government approval. (CDRL A6-005)

4.2.1 The Contractor shall purchase fuel oil, at a minimum, in accordance with the below schedule and dollar amounts (excluding profit and or any indirect allocations). The schedule below starts once the Contractor receives operational control of HSAAP. Supply agreements cannot be used in lieu of the onsite minimum fuel oil inventory requirements but are encouraged for quick delivery of additional fuel oil if required. The Government has assumed fuel oil turnover is required every three years. The Contractor shall maintain the quality and condition of the fuel oil inventory with the onsite equipment available. The Contractor is responsible for any costs (labor, materials, etc.) associated with maintaining the quality and condition the fuel oil inventory. The Contractor can recommend adjustment to the onsite fuel oil inventory contractual requirement or actual onsite inventory, but this recommendation does not relieve the Contractor of the contractual requirements nor guarantee additional fuel oil or funding for,

will be provided. If the Government approves an adjustment to the contractual requirement for fuel oil purchases, which results in actual fuel oil costs being less than the PWS requirement, the Contractor agrees to provide consideration in the amount of the cost delta. Consideration could take the form of energy related projects or major maintenance activities valued at the amount of the cost delta.

Year	Fuel Oil Inventory Purchase Requirement (\$'s)
Year 1	\$ 320,500
Year 2	
Year 3	
Year 4	\$ 350,200
Year 5	
Year 6	
Year 7	\$ 382,600
Year 8	
Year 9	
Year 10	\$ 418,100

4.2.2 Fuel oil inventory turnover shall be managed by the Contractor and shall be in compliance with permit allowances and contract requirements. The Contractor shall submit an addendum to the Installation Energy Strategic Plan when the onsite fuel oil inventory, or a portion of, is proposed for turnover and replacement for Government approval. In this addendum, the Contractor shall provide at a minimum, current inventory and age, current direct cost of fuel oil, amount of turnover planned, dates of past and proposed turnovers, dates and quantities of past fuel oil usage (outside of turnovers), and the replacement delivery details and timeline(s). (CDRL A6-005)

4.2.3 If a loss of natural gas supply occurred, which required the use of fuel oil for steam generation, the Contractor shall notify the Government by submitting an addendum to the Installation Energy Strategic Plan and provide the impact to the fuel oil inventory as well as any recommendations, in general or to adjust turnover plans. (CDRL A6-005) The Government cannot guarantee additional fuel oil or funding for, will be provided. All Contractor purchases satisfying the fuel oil requirement shall become Government property at time of final delivery onsite.

4.3. Metering of utilities (i.e. electric, natural gas, steam, and water) is the preferred method of determining utility usage and billing for tenants, operations, or selling of utilities. Metering, as described in EAct 2005 and EISA 2007, is required for any facility greater than 29,000 square feet or when the electrical and/or natural gas costs exceeds \$35K (per utility feed) per year for the facility. Advanced meters shall

be utilized that have the capability to measure and record hourly data and communicate the data to a remote location for use in an energy management system. The Contractor shall provide metering support (site locations and utilities usage gap reduction analysis support) for metering of utilities funded by Army centralized funding. New meters required by EAct 2005 and EISA 2007 (i.e. new facilities, increase utility utilization) but not represented in the 2012 US Army Corps of Engineer Site Surveys are not the responsibility of the Contractor in the case of existing facilities. Whenever metering is not feasible, alternate methods shall be developed using engineering principles. The Contractor shall provide metering for facilities outside the scope of EAct 2005 and EISA 2007 when practical. The cost of metering will be separately funded and is not to be included in the cost of the product.

4.4. The Contractor shall maintain the HSAAP utility maps and Geographical Information System (GIS) and/or in accordance with performance requirements under the purview of Property PWS.

DOCUMENT SUMMARY LIST

Holston Army Ammunition Plant Utilities and Energy PWS 6

Document Number (Contract Reference) Applicable Tailoring	Solicitation/Contract Number/ Procurement Title Document Title	Document Date Document Category
Department of the Army Memorandum (PWS: para 2.2.4)	Sustainable Design and Development Policy Update	January 17, 2017 Cat 1
Department of the Army Memorandum (PWS: para 2.2.5)	Energy and Water Goal Attainment Responsibility Policy for Installations	January 13, 2017 Cat 1
Energy Policy Act of 2005 (EPAAct 2005) (PWS, para 1.1)	Management of energy goals for Federal facilities and fleets	Current Rev Cat 0
Energy Independence and Security Act of 2007 (EISA 2007) (PWS, para 1.2)	Management of energy goals and requirements	Current Rev Cat 0
Executive Order 13990, Energy Act of 2020 (PWS, para 1.3)	Federal energy goals and guidelines	Current Rev Cat 0
DI-MGMT-80501 (CDRL A6-003) (PWS, para 3.2)	Notification of Corrective Actions (Utility deficiencies)	Current Rev Cat 2
Ammunition Production Base Support (PBS) Call Letter, AR 700-90 (PWS, para 3.3.1)	PBS project submission	Current Rev Cat 2
Army Energy and Water Reporting System (AEWRS), AR 420-1 (CDRL A6-004) (PWS, para 3.3.3)	Input of applicable data (collection of installation energy and utilities requirements)	Current Rev Cat 2
Department of the Army Strategic Plan (CDRL A6-005) (PWS, para 4.2)	Army's Installation Energy and Water Strategic Plan	December 2020 Cat 1

Category Codes:

Category 0. Unless otherwise specified in the solicitation, contract, or contract modifications, all documents are for guidance and information only.

Category 1. The requirements contained in the directly cited document are

contractually applicable to the extent specified. Unless otherwise specified in the solicitation, contract, or contract modifications, all requirements contained in reference and subsequently referenced documents are contractually for guidance and information only.

Category 2. The requirements contained in the directly cited document and the reference documents identified in the directly cited document are contractually applicable to the extent specified. Unless otherwise specified in the solicitation, contract, or contract modifications, all requirements contained in subsequently referenced documents within reference documents are contractually for guidance and information only.

Category 3. Unless otherwise specified in the solicitation, contract, or contract modifications, all requirement contained in the directly cited document and all reference and subsequently referenced documents are contractually applicable to the extent specified.