

**BY ORDER OF THE SECRETARY  
OF THE AIR FORCE**



**AIR FORCE POLICY DIRECTIVE 90-17**

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**Special Management**

**ENERGY AND WATER MANAGEMENT**

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This Air Force Policy Directive implements Department of Defense Directive 4180.01, *DoD Energy Policy*; Department of Defense Directive 5134.15, *Assistant Secretary of Defense for Operational Energy Plans and Programs (ASD(OEPP))*; and Department of Defense Instruction 4170.11, *Installation Energy Management*. It establishes the Air Force's framework for energy and water resources management, to include both use and resilience of energy and water. This policy directive applies to all civilian employees and uniformed members of the Regular Air Force, Air Force Reserve, and Air National Guard. Refer recommended changes and questions about this publication to the office of primary responsibility using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through Major Command publications/forms managers. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule located in the Air Force Records Information Management System.

**SUMMARY OF CHANGES**

This document has been substantially revised and needs to be completely reviewed. Major changes include revisions to clarify energy and water resilience requirements. This document also incorporates new Air Force direction regarding the content and format of policy documents as they pertain to Air Force energy and water program policies.

**1. Overview.** This policy directive:

- 1.1. Establishes policy and assigns responsibilities for management of the Air Force energy and water programs.
- 1.2. Addresses activities and processes throughout the Air Force requiring energy or water. This includes research initiatives, infrastructure, aviation, ground vehicle, and equipment operations with potential energy or water impacts. These activities and processes can occur at both enduring and non-enduring locations.
- 1.3. Institutes the overarching approach that all energy and water projects should enhance mission assurance, improving energy and water resilience.

**2. Policy.** The Air Force will:

- 2.1. Ensure all energy and water projects improve resilience or enhance mission capability in some capacity. Additional factors, such as cost effectiveness and clean energy considerations, will be secondary to improving energy and water resilience.
- 2.2. Use accepted voluntary consensus standards for energy and water, unless the standard would result in a potential negative mission impact.
- 2.3. Develop and maintain overall approaches to energy and water resources management that identify, plan, and implement improvements in the way the Air Force uses energy and water.
- 2.4. Consider energy and water resilience improvements, efficiencies, and capabilities as a factor in requirements identification and budget development.
- 2.5. Provide favorable consideration to projects that improve energy and water resilience for assets critical to mission accomplishment.
- 2.6. Evaluate the resilience aspects of energy and water projects based on preventative and performance attributes.
- 2.7. Be able to provide the energy and water necessary to support critical missions independent of commercial infrastructure for 7 days or the time needed to relocate the mission, whichever is longer.
- 2.8. Improve the energy performance of installations, weapons systems, platforms, equipment, products, and military forces through direct and third-party investments, and research and development.
- 2.9. Install and use enterprise-wide energy and water data collection and management systems on Air Force installations. The systems should facilitate efforts to enhance resilience, reduce consumption, improve operations, and achieve greater effectiveness.
- 2.10. Collect operational energy data to inform operations and integrate into broader data and information technology strategic initiatives.
- 2.11. Diversify energy supplies and sources across the aviation, facility, and ground vehicle and equipment domains.
- 2.12. Diversify installation primary water sources and obtain back-up water sources, when feasible within Air Force mission, technical, and financial constraints.

- 2.13. Leverage alternative financing mechanisms to acquire on-site generation and fund energy and water resilience projects whenever practical.
- 2.14. Ensure any alternative fuels acquired for operational purposes are cost-competitive with traditional fuels and compatible with existing equipment and infrastructure.
- 2.15. Identify and use critical energy and water requirements in Air Force acquisition, planning, and programming processes.
- 2.16. Incorporate energy and water demand and logistics supportability into exercises and wargames.
- 2.17. View energy and water resources and requirements as central to combat mission readiness and critical to providing a strategic advantage.

### **3. Roles and Responsibilities.**

3.1. The Assistant Secretary of the Air Force for Installations, Environment and Energy (SAF/IE) serves as the Secretary of the Air Force's agent within the energy and water domains. This includes serving as the Air Force Senior Energy Official, which focuses on installation energy, and the Senior Operational Energy Official, which focuses on operational energy. In that capacity, SAF/IE will:

- 3.1.1. Establish and review Air Force energy and water strategies, policies, priorities, goals, and programs, including providing guidance for the Air Force when specific Department of Defense direction or guidance does not exist.
- 3.1.2. Approve exceptions to Air Force energy and water policies that arise due to mission requirements. Review exceptions to policy based on standardized processes.
- 3.1.3. Establish a structure to govern Air Force energy and water programs, and to resolve issues impacting more than one organization or functional area.
- 3.1.4. Conduct overall governance, oversight, and monitoring of Air Force progress towards meeting energy and water goals and objectives.
- 3.1.5. Represent the Air Force before other government organizations (to include, but not limited to, Congress, the Office of the Secretary of Defense, and other executive departments and agencies) on issues concerning Air Force energy and water programs and projects.
- 3.1.6. Provide guidance, direction and oversight for the use and allocation of energy and water-related special topic funds (i.e., funding not requested in the annual budget request).
- 3.1.7. Approve any exemptions to voluntary consensus standards for energy and water required due to mission needs.
- 3.1.8. Ensure all elements of the energy key performance parameter are properly addressed in operational capability requirements documents.

3.2. The Assistant Secretary of the Air Force for Acquisition, Technology and Logistics (SAF/AQ) will consider energy and water consumption and throughput throughout the acquisition lifecycle.

3.3. The General Counsel of the Air Force (SAF/GC) and The Judge Advocate General of the Air Force (HQ USAF/JA) will advise the Air Force on legal matters related to energy and water resource management in accordance with Headquarters Air Force Mission Directive 1-14.

3.4. The Deputy Chief of Staff for Operations (AF/A3) will:

3.4.1. Integrate guidance to ensure operational and exercise plans address energy and water requirements for Air Force air, space, and cyberspace operations.

3.4.2. Provide SAF/IE with the operations-related information required to govern and oversee energy and water resource management activities related to Air Force operations.

3.4.3. Assist in addressing energy and water risks and vulnerabilities to critical missions, assets, and capabilities, and provide continuity planning for mission assurance.

3.5. The Deputy Chief of Staff for Logistics, Engineering and Force Protection (AF/A4) will:

3.5.1. Develop procedures and objectives to address and manage energy and water consumption, throughput, and requirements for Air Force installations.

3.5.2. Provide SAF/IE with the information required to govern and oversee energy and water resource management activities related to the AF/A4 portfolio.

3.6. The Deputy Chief of Staff for Strategy, Integration and Requirements (A5) will support SAF/IE to ensure operational capabilities and acquisition documents address energy and water requirements, where applicable.

3.7. All Headquarters Air Force directorates will:

3.7.1. Incorporate energy and water resilience and productivity requirements into policies, guidance, programs, procedures, and practices in the organization's portfolio, as appropriate.

3.7.2. Support the energy and water governance structures.

3.8. Air Force Installation and Mission Support Center will:

3.8.1. Execute facility energy and water programs, plans, and policies.

3.8.2. Coordinate with Headquarters Air Force, major commands, and installations to ensure consistent information and application, and to assess installation energy and water distribution, consumption and risks to identify potential investment opportunities.

3.8.3. Provide guidance on project development, utility recommendations, requirements validation, capabilities oversight and resource advocacy, budgeting and execution funding.

3.8.4. Develop standardized processes for the facility energy program.

3.9. Major command, Air National Guard, and direct reporting unit commanders will:

- 3.9.1. Develop and execute programs and plans within their mission and responsibilities that support Air Force energy and water policies and strategies. Consult with organizations that manage energy- and water-related programs to ensure any identified impacts to their missions are evaluated and addressed.
- 3.9.2. Assess operational energy use and risks to identify investment opportunities and efficiency measures that can enhance capability and mission success.
- 3.9.3. Support energy and water governance structures, with an emphasis on the mission of the respective organization.
- 3.9.4. Identify potential incompatibilities with Air Force energy or water policies that occur due to mission requirements or situations with significant financial impacts.
- 3.9.5. Provide information to Headquarters Air Force for policy development and oversight.
- 3.9.6. Manage execution of non-facility energy projects and activities (i.e., those related to operations, ground vehicles, equipment, logistics, and depot maintenance).
- 3.9.7. Promulgate facility energy and water portfolio requirements for their installations.
- 3.9.8. Promote total energy and water awareness throughout their organization.

BARBARA M. BARRETT  
Secretary of the Air Force

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

Department of Defense Directive 4180.01, *DoD Energy Policy*, 16 April 2014

Department of Defense Directive 5134.15, *Assistant Secretary of Defense for Operational Energy Plans and Programs (ASD(OEPP))*, 17 May 2011

Department of Defense Instruction 4170.11, *Installation Energy Management*, 11 December 2009

Air Force Manual 33-363, *Management of Records*, 1 March 2008

Headquarter Air Force Mission Directive, *General Counsel and The Judge Advocate General*, 29 December 2016

***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*

***Terms***

**Energy**—Any usable power, including, but not limited to, electricity, power, and heat produced from coal, petroleum products, steam, natural gas, propane, military operational fuels and propellants, alternative fuels, and alternative and renewable energy sources, such as solar, wind, geothermal, and nuclear.

**Energy Management**—The process of developing, executing, and overseeing plans, programs, and initiatives to achieve energy goals and objectives across all functional areas.

**Energy Resilience**—The ability to avoid, prepare for, minimize, adapt to, and recover from anticipated and unanticipated energy disruptions in order to ensure energy availability and reliability sufficient to provide for mission assurance and readiness, including mission essential operations related to readiness, and to execute or rapidly reestablish mission essential requirements.

**Facility Energy**—Energy consumed in any building, structure, or other property (including any applicable fixtures) owned or operated by, or constructed or manufactured and leased to, the federal government where the majority of energy use is devoted to the heating, cooling, lighting, ventilation, or to service the water heating energy load requirements of the facility.

**Installation Energy**—The energy used to power all facilities located on military installations and enduring locations, as well as fuel for the non-tactical fleet vehicles used at those locations and the energy consumed in manufacturing, maintenance, and other processes.

**Operational Energy**—Energy required for training, moving, and sustaining military forces and weapons platforms for military operations. The term includes energy used by tactical power systems, generators, and weapons platforms. Within the Air Force, operational energy is considered to be the energy required to operate aviation assets and aerospace ground equipment supporting those assets.

**Preventative attributes**—The resilience aspects of energy and water projects that describe how a system plans for a crisis in advance.

**Performance attributes**—The resilience aspects of energy and water projects that describe how a system performs in the event of a crisis.

**Voluntary Consensus Standards**—Technical specifications for products or processes that are developed by standards-setting bodies. For example, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (commonly referred to as ASHRAE) develops many of the accepted technical criteria focused on building systems, energy efficiency, indoor air quality, and refrigeration.

**Water Resilience**—The reliable ability to access an adequate quantity and quality of water to meet mission requirements, while also mitigating water-related risks to mission success.

**Water Resources Management**—The process of developing, executing, and overseeing plans, programs, and initiatives to achieve water resources goals and objectives across all functional areas.