



**ARMSTRONG FLIGHT  
PROCEDURAL  
REQUIREMENTS (AFPR)**

**Directive:  
Effective Date:  
Expiration Date:**

**AFPR-8570.1-001, Rev A  
August 9, 2021  
August 9, 2026**

**Compliance is mandatory**

**SUBJECT: Energy and Water Conservation**

**RESPONSIBLE OFFICE: Facilities Engineering & Logistics Management Branch**

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## **PREFACE**

### **P.1 Purpose**

The purpose of this directive is to minimize the use of electricity, natural gas, and water at the National Aeronautics and Space Administration (NASA) Armstrong Flight Research Center (AFRC, hereinafter referred to as Center), in Edwards, California. Conservation is required to address increasing utility costs, decreasing operating budgets, and reduce the associated budget risk to the Center's mission of flight research.

### **P.2 Applicability**

- a. This directive is applicable to all facilities and employees at the Center.

### **P.3 Authority**

- a. NASA Policy Directive (NPD) 8500.1, NASA Environmental Management
- b. NASA Procedural Requirement (NPR) 8553.1, NASA Environmental Management System
- c. NPR 8570.1, NASA Energy and Water Management Program

### **P.4 Applicable Documents and Forms**

- a. Energy Act of 2020
- b. Energy Independence and Security Act of 2007
- c. Energy Policy Act of 2005
- d. National Energy Conservation Policy Act of 1978
- e. Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis
- f. Office of Management and Budget Memorandum M-12-12 Section 3: Reduce the Footprint
- g. Armstrong Flight Research Center plan (AFPL)-8570.1-001, Energy and Water Conservation Plan

### **P.5 Measurement/Verification**

- a. Energy and water intensity will be reported annually to NASA Headquarters Environmental Management Division through the NASA Environmental Tracking System.

b. NASA Headquarters Environmental Management Division will verify compliance with this directive.

**P.6 Cancellation**

AFPR-8570.1-001, Baseline-3, dated July 7, 2016

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Digitally signed by DAVID MCBRIDE  
Date: 2021.08.09 10:53:44 -07'00'

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David McBride, Center Director  
Armstrong Flight Research Center

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## CHAPTER 1: RESPONSIBILITIES

### 1.1 Employees

- a. When available, purchases energy-consuming products/equipment that are Energy Star rated and/or designated by the Department of Energy - Federal Energy Management Program (FEMP) as energy efficient. Products/equipment that use one watt or less of energy when in standby mode are considered energy efficient.
- b. Removes office equipment (e.g., copiers, printers, scanners, faxes) from individual workspaces (contact the Center Help Desk at x6163 to schedule removals).
- c. Uses shared office equipment/multifunction devices located in designated areas.
- d. Removes kitchen appliances (e.g., refrigerators, microwaves, coffee pots, water kettles, toasters, toaster ovens) from individual workspaces.
- e. Uses shared (Energy Star rated) kitchen appliances located in designated break rooms.
- f. Shuts off desktop information technology (IT) peripherals (i.e., monitors and speakers, but NOT computers) over nights, off Fridays, weekends, and holidays.
- g. Shuts off lights and other energy-consuming equipment in their work area when they are not in use.
- h. Removes space heaters and fans from individual workspaces. The Center Energy and Water Conservation Program (EWCP) Manager may approve individual (Energy Star rated) space heaters and/or fans where limitations in the heating/cooling system result in areas that are warmer or colder than approved temperatures (no higher than 68 °F in the winter and no lower than 78 °F in the summer). Employees seeking approval to use space heaters and/or fans in their individual workspace shall email requests to the EWCP Manager.
- i. Branch Chiefs managing specialized areas (e.g., computer data centers) with temperature requirements documented in an industry or Agency standard may request an exemption to the Center's approved space heating and cooling temperatures (no higher than 68 °F in the winter and no lower than 78 °F in the summer). Branch Chiefs managing specialized areas in need of an exemption to the Center's approved space heating and cooling temperatures shall email requests, with the documented standard, to the EWCP Manager.
- j. Projects with mission-critical requirements that can only be met after hours or on a weekend, off Friday, or holiday may request an exception to the Center's approved space heating and cooling schedule (shut down from 5:00 PM weeknights to 5:00 AM weekdays and remaining off during weekends, off Fridays, and holidays). Branch Chiefs

managing projects in need of an exception to the Center's approved space heating and cooling schedule shall email facility support requirements to the Facilities Engineering & Logistics Management Branch, Lead Facility Operations Specialist no less than three working days prior to the required support day. Copy the EWCP Manager on the email.

## **1.2 Center Energy and Water Conservation Program Manager**

- a. Develops and implements energy and water conservation policy, plans, and initiatives to meet the requirements of Congress, the President, NASA, and the Center.
- b. Prepares and updates the Center Energy and Water Conservation Plan (AFPL-8570.1-001).
- c. Communicates energy and water conservation requirements and compliance status with Center management and staff.
- d. Communicates energy and water conservation training opportunities with Center management and staff.
- e. Ensures periodic assessment of Center facilities to identify energy and water conservation measures.
- f. Advocates for funding to implement energy and water conservation measures.
- g. Ensures energy and water conservation requirements are captured in facility construction, modification, and repair projects.
- h. Enters, tracks, and trends energy and water performance data in the NASA Environmental Tracking System (NETS).
- i. Serves as the Center member of the NASA Energy Efficiency Panel.
- j. Works with the Office of Procurement to establish utility supply agreements for electricity, natural gas, potable water, and wastewater treatment.
- k. Addresses requests for exemption to the Center's approved space heating and cooling temperatures (no higher than 68 °F in the winter and no lower than 78 °F in the summer).
- l. Addresses requests to place space heaters and/or fans in individual workspaces.

## **1.3 Facilities Engineering & Logistics Management Branch**

- a. Advocates for, and implements construction of, Facilities Engineering & Logistics Management Branch projects that increase the sustainability of selected Center facilities and demolish older, high maintenance, high energy intensity facilities.

- b. Coordinates energy and water conservation projects with Center Management.
- c. Ensures the energy and water conservation requirements in the Facility Operations & Maintenance (O&M) contract Performance Work Statement are implemented.
- d. Reviews utility bills to verify the charges are appropriate.
- e. Sets space heating and cooling thermostats to maintain temperatures no higher than 68 °F in the winter and no lower than 78 °F in the summer.
- f. Programs space heating and cooling systems to shut down from 5:00 PM weeknights to 5:00 AM weekdays and remain off during weekends, off Fridays, and holidays (IT services are available at all times for teleworking employees).
- g. Minimizes energy and water use through the timely performance of facility/equipment maintenance and repair requirements.
- h. Repairs or replaces failed equipment/components with products that comply with Federal guidelines for energy and water efficiency.
- i. Addresses requests for exception to the Center's approved space heating and cooling schedule (shut down from 5:00 PM weeknights to 5:00 AM weekdays and remaining off during weekends, off Fridays, and holidays).

## **APPENDIX A: DEFINITIONS**

**Energy Efficiency Panel.** An Agency-level forum that supports development of Agency energy and water conservation policy and leadership strategy; recommends energy and water conservation initiatives; supports Center Directors in implementing NASA energy and water conservation policies through shared innovations and use of Energy Savings Performance Contracts, Utility Energy Services Contracts, Enhanced Use Leasing, and other alternative financing; develops consensus positions on energy and water conservation priorities, practices, and issues across Agency and Mission Directorate activities; and sponsors or conducts studies and assessments of energy and water conservation issues affecting NASA programs and activities.

**NASA Environmental Tracking System.** A NASA-developed, internet accessible database designed to meet reporting requirements of the Office of Management and Budget and other Federal agencies. Centers enter energy and water use data and report progress against established metrics for energy and water conservation and use of renewable energy.

**Sustainable Facility.** A facility that is designed, constructed, operated, and ultimately deconstructed and reused in a manner that minimizes its life-cycle cost, minimizes its impact on the natural environment, and maximizes the productivity of the employee work environment.

## **APPENDIX B: ACRONYMS**

|      |   |
|------|---|
| AFPD | Armstrong Flight Research Center Policy Directive |
| AFPL | Armstrong Flight Research Center Plan             |
| AFRC | Armstrong Flight Research Center                  |
| EWCP | Energy and Water conservation Program             |
| FEMP | Federal Energy Management Program                 |
| HVAC | Heating, Ventilation and Air Conditioning         |
| IT   | Information Technology                            |
| NASA | National Aeronautics and Space Administration     |
| NETS | NASA Environmental Tracking System                |
| NPD  | NASA Policy Directive                             |
| NPR  | NASA Procedural Requirements                      |
| O&M  | Operations & Maintenance                          |



**APPENDIX C: VERIFICATION MATRIX**

| PARAGRAPH     | REQUIREMENT   | COMPLIANT                | NON-COMPLIANT            |
|---------------|---|--------------------------|--------------------------|
| Section 1.1.h | Employees seeking approval to use space heaters and/or fans in their individual workspace shall email requests to the EWCP Manager.   | <input type="checkbox"/> | <input type="checkbox"/> |
| Section 1.1.i | Branch Chiefs managing specialized areas in need of an exemption to the Center's approved space heating and cooling temperatures shall email requests, with the documented standard, to the EWCP Manager.   | <input type="checkbox"/> | <input type="checkbox"/> |
| Section 1.1.j | Branch Chiefs managing projects in need of an exception to the Center's approved space heating and cooling schedule shall email facility support requirements to the Facilities Engineering & Logistics Management Branch, Lead Facility Operations Specialist no less than three working days prior to the required support day. | <input type="checkbox"/> | <input type="checkbox"/> |

## **APPENDIX D: ENERGY AND WATER CONSERVATION POLICY STATEMENT**

It is the policy of the Center to minimize the use of electricity, natural gas, and water. Conservation is required to address increasing utility costs and decreasing operating budgets. The purpose of this policy is to reduce budget risk to the Center's mission of flight research.

## Document History Log

This page is for informational purposes and does not have to be retained with the document.

### Baseline, 07-07-16

- New Document

### Baseline-1, 09-14-17

- Admin change
- Updated Baseline to Baseline-1
- AFPR-8570.1-001 renumbered in accordance with Center instruction.

### Baseline-2, Admin Change, 06-05-18

- Admin change
- Removed "13693" from Section P.5a. Measurement/Verification
- Removed "and triennial Environmental and Energy Functional Reviews" from Section P.5b.
- Updated document references and organizational codes to new nomenclature

### Baseline-3, Admin Change, 06-29-21

- Document Extended from 7-1-21 to 1-1-22 • Removed reference to cancelled document AFPD-8570.1-001, Energy and Water Conservation Policy

### Revision A, 08-09-2021

- Full document rewrite to reflect updated responsibilities.