



## INTRODUCTION

The Department of the Air Force exists for one purpose – deter our nation's adversaries – and if called upon, fly, fight, and win across multiple air and space domains. Accomplishing our critical missions is no easy task. Tomorrow's battlefield is getting more and more complex. For over 75 years, Airmen and Guardians have remained on the leading edge of change, and have adapted, often under the most austere conditions, to be decisive when it counts.

In the past two decades, our natural environment has become more dynamic due to the effects of global climate change. Extreme weather events such as hurricanes, drought, flooding, and other natural disasters have shaped the international security environment and created humanitarian crises in greater numbers. Our installations have also been impacted by these changes. We cannot launch or recover aircraft on a flooded runway, nor can we operate from installations devastated by hurricanes and wildfires. Our bases are our power projection platforms and as those bases are increasingly impacted by the effects of climate change, adapting to these challenges will be critical to meet our national security obligations.

This Climate Campaign Plan implements our Climate Action Plan. It defines how we will achieve our broader goal to preserve a more resilient, combat-credible force. Our priorities are to maintain air and space dominance in the face of climate risks, ensure our decisions reflect an understanding of the impacts of climate on our mission, and build resilience by optimizing energy use and pursuing alternative energy sources. Consequently, this plan assigns activities, offices of primary responsibility, and timelines towards these priorities. We will monitor progress as part of our governance process and publish revisions to the Climate Campaign Plan, if required.

In the DNA of every Airman and Guardian is an imperative to adapt to our operating environment, deter potential adversaries, and if called upon, deliver air and space power to the joint fight. Ultimately, this Campaign Plan is about warfighting and responding at the point of effect for theater commanders – and we will be ready.

Fly, Fight, and Win! Semper Supra!

Dr. Ravi I. Chaudhary  
Assistant Secretary of the Air Force  
Energy, Installations & Environment





## TABLE OF CONTENTS

INTRODUCTION..... i

ASSUMPTIONS ..... 1

CROSS-CUTTING CAPABILITIES..... 1

GOVERNANCE ..... 2

CLIMATE ACTION PLAN OVERVIEW ..... 3

OBJECTIVE & KEY RESULT DETAILS..... 4

    PRIORITY 1 – MAINTAIN AIR AND SPACE DOMINANCE IN THE FACE OF CLIMATE RISKS..... 4

        Objective 1: Modernize Infrastructure and Facilities ..... 5

    PRIORITY 2 – MAKE CLIMATE-INFORMED DECISIONS ..... 11

        Objective 2.1: Develop a Climate-Informed Workforce ..... 12

        Objective 2.2: Integrate Security Implications of Climate Change into Department Strategy,  
        Planning, and Operations..... 14

        Objective 2.3: Incorporate Climate Considerations into Department Requirements, Acquisition, and  
        Supply Chain Processes..... 17

    PRIORITY 3 – OPTIMIZE ENERGY USE AND PURSUE ALTERNATIVE ENERGY SOURCES ..... 19

        Objective 3.1: Improve Operational Energy Intensity ..... 20

        Objective 3.2: Adopt Alternative Energy Sources..... 23

GLOSSARY..... 27

ACRONYMS ..... 28

REFERENCES..... 32





## ASSUMPTIONS

The Climate Campaign Plan (CCP) rests upon several key assumptions:

1. Carbon-free energy sources (including aviation fuel) will become more ubiquitous and affordable across the United States and at DAF operating locations worldwide.
2. The Defense Industrial Base will produce commodities and products through resilient supply chains to meet DAF mission needs.
3. DAF resourcing and resourcing priorities will remain consistent with the FY2023 Budget.
4. The effects of climate change will continue to alter the operating environment.

As we execute the CCP, we will continuously assess the accuracy of these assumptions and adjust our actions accordingly.

## CROSS-CUTTING CAPABILITIES

In addition to these assumptions, several cross-cutting enabling capabilities are foundational to achieving our key results.

1. **Data Collection and Analytics.** Primary amongst these cross-cutting enabling capabilities is the ability to access, collect, and analyze infrastructure and operational energy data from authoritative sources. Additionally, we need to leverage and hone our ability to analyze, predict, and project future climate parameters globally. One of the data sources is the 14th Weather Squadron. Their capabilities are critical to the Joint Force as it collects, protects, and exploits authoritative climate data to optimize military and intelligence operations and planning. Nearly every action in our CCP relies upon the collection and analysis of data from various cross-functional sources. This cross-cutting capability faces several challenges which must be overcome:
  - 1.1. DAF data from the business, warfighting, and geospatial domains are managed in functional stovepipes, which limit access and cross-functional sharing and collaboration necessary to mitigate threats hindering the DAF and DoD missions.
  - 1.2. Knowledge levels vary regarding how to interpret and apply climate considerations into relevant processes, plans, and decisions. We need to ensure an appropriate knowledge base for required analytics and application of complex concepts.
  - 1.3. The DAF has not systematically retained sortie-level data on fuel use. This data gap may lead to systemic flaws in understanding operational energy use, especially if there are a concentration of data gaps within specific airframes.
  - 1.4. The DAF does not have automated processes or systems for collecting infrastructure (facilities and utilities) energy data, resulting in time- and manpower-intensive manual data collection. Without automated processes, informed decision-making using modern technology (such as location intelligence, artificial intelligence, and machine learning) will not be possible and will hinder progress on many of the CCP actions.
2. **Partnerships.** Execution of the CCP requires strong partnerships—no single entity can successfully mitigate and adapt to the direct and indirect effects of climate change. The DAF will continue to collaborate with the Office of the Secretary of Defense, Sister Services, National Guard Bureau, Combatant Commands, other Federal Agencies, the private sector, academia, state and local organizations, and allies and partners to seek synergies in resourcing and expertise in areas of shared interest.





## Department of the Air Force Climate Campaign Plan

---

- 2.1. Partnerships with state and local governments can open the door to leveraging non-Defense Federal and state grants and other resources with mutually beneficial value. This is especially true for improvements to energy infrastructure since DAF installations do not generate their own energy except in isolated cases. Other examples include the Strategic Environmental Research and Development Program, Environmental Security Technology Certification Program, and the National Defense Center for Energy and Environment programs. These latter programs focus on technology assessment and demonstration but can produce results beneficial for the DAF and non-DoD stakeholders.
- 2.2. We will work with our allies and partners to strengthen international collaboration on climate change through military-to-military engagements and bilateral and multilateral agreements. Not only will these efforts leverage partner technological advancement and investments, but cooperation with allies will also increase interoperability during contingency operations across the spectrum of military operations.

### GOVERNANCE

Governance of the DAF climate change program, to include monitoring progress on and revisions to the CCP, will occur within the construct of the Senior Leader Climate (SLC) Forum. A charter for the SLC Forum was signed in September 2022 and established the scope, membership, and roles and responsibilities. In summary, the SLC Forum is responsible for:

- Providing oversight and monitoring of the DAF's climate change efforts
- Ensuring climate-related actions are coordinated and consistent with DAF policy
- Setting direction and priorities relative to climate-related objectives
- Providing guidance to inform climate working group priorities
- Assuring consistent climate-related communication

The charter also established two primary working groups: the DAF Climate Action Team and the DAF Climate Resource Integration Team.

- The DAF Climate Action Team (CAT) executes the activities necessary to achieve the goals and objectives set forth by the SLC Forum and is comprised of at least one Action Officer (AO) from all SLC Forum members and other AOs as necessary for successful DAF CAP objective or key result execution.
- The DAF Climate Resource Integration Team (CRIT) coordinates and communicates across the Planning, Programming, Budgeting, and Execution (PPBE) process to ensure development and presentation of the DAF climate-related budget are accurate, consistent, and transparent. The team also coordinates responses to queries from the Office of the Secretary of Defense organizations and outside parties relative to the DAF's climate-related budget. Membership includes financial action officers from appropriate organizations to address PPBE activities as determined by the DAF Climate Budget Team Lead on an as-needed basis.

The SLC Forum charter will be reviewed annually for currency, and any proposed updates will be coordinated by the SLC Forum Chair (SAF/IE) with the members before approval. Any member of the SLC Forum may propose amendments to the charter. Amendments may be necessary as the scope and responsibilities of the SLC Forum change over time.





## CLIMATE ACTION PLAN OVERVIEW

DAF overall goal:

**The department is resilient to the effects of climate change and preserves a combat-credible force that can compete, deter, and win against pacing threats.**

The department will address the challenges and risks presented by climate change through the implementation of three climate priorities: (1) Maintain air and space dominance in the face of climate risks; (2) Make climate-informed decisions; and (3) Optimize energy use and pursue alternative energy sources.

### PRIORITY 1 – MAINTAIN AIR AND SPACE DOMINANCE IN THE FACE OF CLIMATE RISKS

#### Goals:

- Department installations are resilient to the effects of climate change to sustain a combat-credible force and enable global power projection.
- Decreased department contribution to future climate risk via the reduction of greenhouse gas emissions.

### PRIORITY 2 – MAKE CLIMATE-INFORMED DECISIONS

#### Goals:

- Department is equipped with the knowledge, skills, and abilities to mobilize, deploy, and sustain a combat-credible force globally in the face of climate threats.
- An established culture of incorporating climate change considerations across our processes, plans, and decisions to build a more climate resilient force while also reducing future climate risk.

### PRIORITY 3 – OPTIMIZE ENERGY USE AND PURSUE ALTERNATIVE ENERGY SOURCES

#### Goals:

- Reduced demand on the department's logistics and sustainment tail and improved ability to sustain a combat-credible force in support of integrated deterrence.
- Decreased department contribution to future climate risk via the reduction of greenhouse gas emissions.





## OBJECTIVE & KEY RESULT DETAILS

Details on the DAF CAP objectives and key results follow, including stakeholders, actions, performance metrics, drivers and requirements, baseline, and outcomes. Action Office of Primary Responsibility (OPR) is the same as the key result OPR unless otherwise noted.

-----

### PRIORITY 1 – MAINTAIN AIR AND SPACE DOMINANCE IN THE FACE OF CLIMATE RISKS

#### Objective 1: Modernize Infrastructure and Facilities

- **KR 1.1:** Targeted investments to improve base resilience, starting with \$36 million in fiscal year (FY) 23 and increasing to \$100 million per year by FY27.
  - **KR 1.2:** Framework established to evaluate the effects of climate change at department installations to inform resourcing and basing processes by FY24.
  - **KR 1.3:** Department of the Air Force Severe Weather and Climate Hazard Screening and Risk Assessment Playbook fully implemented at installations requiring an Installation Development Plan in accordance with Department of the Air Force Instruction 32-1015, by the end of FY26, with identified climate hazards and risks incorporated into planning and project development processes.
  - **KR 1.4:** Energy Resilience Readiness Exercises executed at 35 installations by the end of FY27, with results used to inform installation investments and facilitate mission execution from energy-efficient and climate-resilient bases.
  - **KR 1.5:** Installation Energy Plans completed for installations requiring an Installation Energy Plan in accordance with Department of the Air Force Instruction 90-1701, by FY23, with identified projects submitted to compete for funding starting in FY24.
  - **KR 1.6:** Department of the Air Force’s installations portfolio is net-zero emissions by FY46, including a 50 percent emission reduction from 2008 levels by FY33.
- 





Department of the Air Force Climate Campaign Plan

Objective 1: Modernize Infrastructure and Facilities

KR 1.1: Targeted investments to improve base resilience, starting with \$36 million in fiscal year (FY) 23 and increasing to \$100 million per year by FY27.

OPR: SAF/IEE

OCRs: AF/A4C; SF/S4O; AFRC/A4C; NGB/A4; AFIMSC/IZ; AFIMSC/RM; AFCEC/CF; AFCEC/CN; AFCEC/CP

EXTERNAL PARTNERS: N/A

ACTIONS

Action	Action ECD
1.1.1 Establish definition/criteria for what is an investment that improves base resilience to ensure consistent application across portfolio	31 Jul 23
1.1.2 Incorporate base resilience investment definition/criteria into business rules for the submission and prioritization of Military Construction (MILCON), Unspecified Minor Military Construction (UMMC), Energy Resilience and Conservation Investment Program (ERCIP), Facilities Sustainment, Restoration, and Modernization (FSRM), and third-party investments	31 Dec 23
1.1.3 Assess FY23 investments and consider updates to future funding targets (overall target and within specific funding streams), if warranted	1 Dec 23
1.1.4 Annually assess investments through MILCON, UMMC, ERCIP, FSRM, and alternate/third party avenues to determine how much meets the definition of a base resilience investment	30 Oct 27

PERFORMANCE METRIC

Base resilience projects funded vs Investment targets

DRIVERS / REQUIREMENTS

- 2022 National Defense Strategy (NDS)
- 2022 Secretary of the Air Force (SecAF) Operational Imperatives
- 10 USC §2864 (Master plans for major military installations)
- DAF Infrastructure Investment Strategy (I2S)
- AF/A4 Basing and Logistics Strategy Priority 3 and 4

BASELINE

- FY23 funding target

OUTCOME

- Increased facility and infrastructure resilience to severe weather and climate change





**Department of the Air Force Climate Campaign Plan**

**KR 1.2: Framework established to evaluate the effects of climate change at department installations to inform resourcing and basing processes by FY24.**

<b>OPR:</b> SAF/IE Strategic Climate Integration	<b>EXTERNAL PARTNERS:</b> NA
<b>OCRs:</b> SAF/FM; SAF/IEI; SAF/IEE; AF/A3W; AF/A4C; AF/A4P (ISP); SF/S4O; AFIMSC/IZS; AFIMSC/RM; AFCEC/CP; AFCEC/CZ; MAJCOMs; FLDCOMs	

**ACTIONS**

Action	Action ECD
1.2.1 Confirm relevant resourcing and basing process(es) and determine ideal decision-making touchpoints and information requirements	1 Jul 23
1.2.2 Establish framework that utilizes consistent, transparent, and credible weather and climate data/information for installation climate change effects evaluation	1 Jul 23
1.2.3 Test framework results against resourcing and basing process touchpoints and information requirements, and adjust, as necessary	1 Aug 23
1.2.4 Finalize framework	1 Sep 23
1.2.5 Identify necessary policy and/or guidance to ensure consistent framework application	30 Sep 23

**PERFORMANCE METRIC**

- Completed framework

**DRIVERS / REQUIREMENTS**

- 2022 NDS
- DoDD 4715.21
- CJCSI 3810.01G
- AFPD 15-1

**BASELINE**

- Existing resourcing process(es)
- Existing basing process(es)
- Strategic Basing Site Survey template
- 14<sup>th</sup> Weather Squadron data sources for climate/hydrology monitoring, analysis, prediction, and projection capabilities
- Extreme weather/climate currently addressed within comprehensive planning, construction standards/pricing, and weather days data
- Existing sources of data and information, including:
  - Resources listed in Severe Weather/Climate Hazard Playbook
  - Input from other Objective 1 key results

**OUTCOMES**

- Established framework that utilizes consistent, transparent, and credible weather and climate data/information for installation climate change effects evaluation, with results informing resourcing and basing processes
- Improved alignment between climate change effects evaluation and risk mitigation project development







## Department of the Air Force Climate Campaign Plan

**KR 1.3: Department of the Air Force Severe Weather and Climate Hazard Screening and Risk Assessment (SWCH) Playbook fully implemented at installations requiring an Installation Development Plan in accordance with Department of the Air Force Instruction 32-1015, by the end of FY26, with identified climate hazards and risks incorporated into planning and project development processes.**

**OPR:** AF/A4C

**OCRs:** SAF/IE Strategic Climate Integration; SAF/IEI; AF/A3W; AF/A4CF; SF/COO; AFCEC/CPD; AFECEC/PPP; AFCEC/CZ

**EXTERNAL PARTNERS:** Academia, Industry

### ACTIONS

Action	Action ECD
1.3.1. Establish SWCH Playbook implementation completion criteria	30 Jun 23
1.3.2. Publish updated SWCH Playbook	31 Oct 23
1.3.3. Appropriate DAFIs updated and published to support SWCH Playbook completion	31 Dec 24
1.3.4. Installations requiring Installation Development Plan (IDP) fully implement updated SWCH Playbook	30 Sep 26

### PERFORMANCE METRICS

- Full SWCH Playbook implementation (# and %)
- Updated Installation Composite Constraints in Comprehensive Planning Platform (CPP) (# and %)
- Active Installation Mission Sustainment Teams (IMSTs) and/or Installation Emergency Management Working Group (IEMWG) at installations (# and %)
- Mission Sustainment Risk Reports (# and %)
- Planning Actions in CPP that integrate/reference severe weather and climate resilience (#, trend analysis)
- Installation Climate Resilience Plan (ICRP) completion (# and %)

### DRIVERS / REQUIREMENTS

- EO 14008; EO 14057
- 10 USC § 2864
- UFC 2-100-01; UFC 3-201-01
- AFI 32-1015; AFI 90-2001; AFI 90-1701
- AFD 90-20
- AFMAN 32-7003

### BASELINE

- Playbook Phases 1 & 2 complete (Dec 20)
- Initial analysis of SWCH Playbook Phase 3 guidance completed

### OUTCOME

- Identified climate hazards and risks incorporated into planning and project development processes through the Comprehensive Planning Platform (CPP)





Department of the Air Force Climate Campaign Plan

KR 1.4: Energy Resilience Readiness Exercises executed at 35 installations by the end of FY27, with results used to inform installation investments and facilitate mission execution from energy-efficient and climate-resilient bases.

OPR: AF/A4C

OCRs: DAFIA/IR; AF/A30; SF/COO; SF/S40; AFCEC/CN; AFCEC/CP; MAJCOMs; FIELDCOMs; Installations

EXTERNAL PARTNERS: Military Departments; DoD Agencies; Industry

ACTIONS

Action	Action ECD
1.4.1 Schedule and program five Energy Resilience Readiness Exercises (ERREs) per year over FY23-FY27 to validate operational capability, requirements, and investment needs	FY27
1.4.2 Produce DAF lessons learned report	FY27
1.4.3 Leverage ERRE findings for installation-level project prioritization	FY25

PERFORMANCE METRICS

- Number of completed ERREs (# / FY; Total)
- Percentage of ERRE-identified gaps adjudicated within five years (per installation)

DRIVERS / REQUIREMENTS

- 10 USC §2920
- 2022 NDS
- DAFI 90-1701

BASELINE

- Baseline is FY2020
- In accordance with DAF scope criteria, the DAF completed 2 ERREs in FY20, 4 ERREs in FY21, and 5 ERREs in FY22

OUTCOMES

- Validated mission readiness during adverse conditions, including those caused by climate impacts
- Verified backup generation configuration and assessed technical performance of energy, water, and communication systems in the event of an outage
- Identified backup power capability gaps between the installation infrastructure and mission requirements
- Identified infrastructure improvement opportunities to ensure operational mission readiness





Department of the Air Force Climate Campaign Plan

KR 1.5: Installation Energy Plans completed for installations requiring an Installation Energy Plan in accordance with Department of the Air Force Instruction 90-1701, by FY23, with identified projects submitted to compete for funding starting in FY24.

OPR: SAF/IEE

OCRs: AF/A4C; AFIMSC/IZ; AFCEC/CN; AFCEC/CF; AFCEC/CP; AFCEC/CZ; MAJCOMs; FLDCOMs; Installations

EXTERNAL PARTNERS: Military Departments; DoD Agencies; Industry

ACTIONS

Action	Action ECD
1.5.1 Update Department of the Air Force Instruction 90-1701 for inclusion of climate-informed attributes reflecting Federal, DoD, and DAF climate priorities	FY23
1.5.2 Execute required Installation Energy Plans for FY23*	FY23
1.5.3 Submit comprehensive climate-informed energy project(s) for FY24 informed by findings identified in a completed Installation Energy Plan	FY24

\* Efforts underway to conduct Installation Energy Plans at installations beyond the DAFI 90-1701 requirement

PERFORMANCE METRICS

- Number of Completed Installation Energy Plans (Total / FY)
- Number of Climate-Informed Projects Submitted by FY24 (Total / FY)

DRIVERS / REQUIREMENTS

- 10 USC § 2864
- 2022 NDS
- FY20 National Defense Authorization Act (NDAA) Sec. 2801
- EO 14057 Sec. 209
- DAFI 90-1701

BASELINE

- The DAF completed 51 Installation Energy Plans by end of FY22

OUTCOMES

- Established framework to implement comprehensive climate-informed decisions into future energy resilience projects
- Identified avenues in installation planning to deliver mission energy and water with inclusion of climate threats





**Department of the Air Force Climate Campaign Plan**

**KR 1.6: Department of the Air Force’s installation portfolio is net-zero emissions by FY46, including a 50 percent emission reduction from 2008 levels by FY33.**

**OPR:** SAF/IEE  
**OCRs:** AF/A4C; SF/S4O; AFIMSC/IZB; MAJCOMs; FLDCOMs; AFCEC/CN; AFCEC/CP; AFCEC/CFTP; AFCEC/CZTQ; Installations

**EXTERNAL PARTNERS:** Military Departments; DoD Agencies; Industry

**ACTIONS**

Action	Action ECD
1.6.1 Establish the framework for achieving net-zero emissions across the DAF installation portfolio	FY24
1.6.2 Achieve 50 percent emissions reduction from 2008 levels	FY33
1.6.3 Track emissions reduction progress	Continuous
1.6.4 Achieve a net-zero installation portfolio by FY46	FY46

**PERFORMANCE METRIC**

- Greenhouse Gas Emissions Reduced (Percent)

**DRIVERS / REQUIREMENTS**

- FY22 NDAA Sec. 319
- EO 14057 Sec. 205
- DAFI 90-1701

**BASELINE**

- Baseline is 2008

**OUTCOMES**

- Finalized net-zero framework, making progress toward net-zero emissions across installation portfolios
- Data-informed progress toward DAF emissions reductions
- Reduced greenhouse gas emissions through fleet and facilities electrification





## PRIORITY 2 – MAKE CLIMATE-INFORMED DECISIONS

### Objective 2.1: Develop a Climate-Informed Workforce

- **KR 2.1.1:** Climate considerations integrated into department professional military education curriculum by FY24.
- **KR 2.1.2:** Climate considerations integrated into department technical and continuing education curriculum by FY24.

### Objective 2.2: Integrate Security Implications of Climate Change into Department Strategy, Planning, and Operations

- **KR 2.2.1:** Climate considerations, security language, and goals incorporated in Air Force and Space Force concept development and Air Force Major Command and Space Force Field Command operational plans and campaign plans starting in FY24.
- **KR 2.2.2:** Climate considerations incorporated into department Title 10 wargames starting in FY23.
- **KR 2.2.3:** Potential effects and security implications of climate change included in engagements with allies and partner nations starting in FY23.

### Objective 2.3: Incorporate Climate Considerations into Department Requirements, Acquisition, and Supply Chain Processes

- **KR 2.3.1:** Energy Key Performance Parameters incorporated in weapon system capability requirements in accordance with the Joint Capabilities Integration and Development System Manual.
  - **KR 2.3.2:** Effects of climate change identified for select supply chains by end of FY23 with risk mitigation approaches informed by the end of FY24.
- 





**Department of the Air Force Climate Campaign Plan**

**Objective 2.1: Develop a Climate-Informed Workforce**

**KR 2.1.1: Climate considerations integrated into department professional military education curriculum by FY24.**

<p><b>OPR:</b> AF/A1D  <b>OCRs:</b> SAF/IE Strategic Climate Integration; AF/A3W; SF/S1D; AETC; STARCOM; DAF Career Field Managers; other DAF CAP key result owners</p>	<p><b>EXTERNAL PARTNERS:</b> TBD</p>
---	--------------------------------------

**ACTIONS**

Action	Action ECD
2.1.1.1 Develop DAF Climate Literacy Implementation Plan*	FY24 Q2
2.1.1.2 Execute the Professional Military Education (PME) component of the DAF Climate Literacy Implementation Plan	FY24 Q4

\* DAF Climate Literacy Implementation Plan includes PME, technical, and continuing education components (KR 2.1.2)

**PERFORMANCE METRICS**

- Percent of identified curriculum gaps filled
- Percent of workforce in identified courses
- OSD(P&R)-led climate literacy pulse check results (potentially annually)

**DRIVERS / REQUIREMENTS**

- EO 14008, EO 14057
- DoD Climate Adaptation Plan
- DoDD 4715.21
- DoDI 1322.35 Military Education
- CJCSI 3810.01G
- AFD 15-1

**BASELINE**

- OSD(P&R)-led 2022 Pulse Check results
- Identified gaps after completion of gap analysis

**OUTCOME**

- Culture where Airmen and Guardians possess the knowledge, skills, and abilities to understand the implications of climate change and know when, where, and why to apply that knowledge and understanding to support mission accomplishment and duty responsibilities





Department of the Air Force Climate Campaign Plan

**KR 2.1.2: Climate considerations integrated into department technical and continuing education curriculum by FY24.**

**OPR:** AF/A1D

**OCRs:** SAF/IE Strategic Climate Integration; SF/S1D; AETC, STARCOM; DAF Career Field Managers; other key result owners

**EXTERNAL PARTNERS:** TBD

**ACTIONS**

Action	Action ECD
2.1.2.1 Develop technical and continuing education component of DAF Climate Literacy Implementation Plan*	FY24 Q3
2.1.2.2 Execute the Develop technical and continuing education component of the DAF Climate Literacy Implementation Plan	FY24 Q4

\* DAF Climate Literacy Implementation Plan includes PME (KR 2.1.1) and technical, and continuing education components

**PERFORMANCE METRICS**

- Percent of identified technical or continuing education gaps filled
- Percent of workforce in identified courses
- OSD(P&R)-led climate literacy pulse check results (potentially annually)

**DRIVERS / REQUIREMENTS**

- EO 14008, EO 14057
- DoD Climate Adaptation Plan
- DoDD 4715.21
- DoDI 1322.35 Military Education
- Results of PME/Accessions Gap Analysis

**BASELINE**

- OSD(P&R)-led 2022 pulse check results (Jan 23)
- Identified gaps after completion of gap analysis

**OUTCOME**

- Culture where Airmen and Guardians possess the knowledge, skills, and abilities to understand the implications of climate change and know when, where, and why to apply that knowledge and understanding to support mission accomplishment and duty responsibilities





**Department of the Air Force Climate Campaign Plan**

**Objective 2.2: Integrate Security Implications of Climate Change into Department Strategy, Planning, and Operations**

**KR 2.2.1: Climate considerations, security language, and goals incorporated in Air Force and Space Force concept development and Air Force Major Command and Space Force Field Command operational plans and campaign plans starting in FY24.**

<b>OPRs:</b> AF/A5S; SF/S5B; SF/S5S <b>OCRs:</b> AF/A3	<b>EXTERNAL PARTNERS:</b> none
---	--------------------------------

**ACTIONS**

Action	Action ECD
2.2.1.1 – Introduce climate considerations into concept development	FY23 Q4
2.2.1.2 – Introduce climate considerations into operational and campaign plans	FY23 Q4

**PERFORMANCE METRIC**

- Percent of operational plans / campaign plans modified with climate considerations

**DRIVERS / REQUIREMENTS**

- 2022 NDS
- CJCSI 3810.01G
- AFD 15-1
- AF/A5S - Concept development and strategic focus is a key baseline for building climate considerations in exercises, operational plans, and campaign plans across the DAF

**BASELINE**

- A5S will integrate climate considerations into key exercises, concept designs, operational plans, and campaign plans. Once a baseline is established A5S will work across DAF to incorporate any findings into future plans

**OUTCOME**

- Identifying and incorporating climate considerations into concept development, operational plans, and campaign plans will provide notional enhancements the DAF can build upon. As climate considerations are gradually incorporated and results are captured the focus will fundamentally shift from “bolted on” to “baked in” when developing future capabilities







Department of the Air Force Climate Campaign Plan

KR 2.2.2: Climate considerations incorporated into Department Title 10 wargames starting in FY23.

OPRs: AF/A5I; SF/S5B

OCRs: SAF/IEN; AF/A3W

EXTERNAL PARTNERS: NA

ACTIONS

Action	Action ECD
2.2.2.1 Incorporate climate considerations into Global Engagement 24	FY24 Q1
2.2.2.2 Incorporate climate considerations into Futures Game 25	FY25 Q2

PERFORMANCE METRIC

- Assess effectiveness of wargame climate considerations annually to ensure results are captured and built upon

DRIVERS / REQUIREMENTS

- CJCSI 3810.01G
- AFPD 15-1
- AF/A5/7 Mission Directive establishes requirement for wargaming in support of strategy, concept, and capability development and assessment

BASELINE

- Global Engagement 21/22, centered on a Northern Europe scenario in 2032, included military activity in the Arctic/"High North" and produced a subset of insights with regard to Blue and Red northern access, activity, and potential implications thereof

OUTCOME

- Incorporation into wargames of best feasible representations of the physical environments for potential future combat operations will bolster fidelity and credibility of the game insights that inform assessments of planned or required future concepts and capabilities for the Air Force





**Department of the Air Force Climate Campaign Plan**

**KR 2.2.3: Potential effects and security implications of climate change included in engagements with allies and partner nations starting in FY23.**

<p><b>OPR:</b> SAF/IAP  <b>OCRs:</b> SAF/IAN; SAF/IAR; SAF/IE Strategic Climate Integration; AF/A3W</p>	<p><b>EXTERNAL PARTNERS:</b> All internal and external partners associated with KLEs; NGB</p>
---	---

**ACTIONS**

Action	Action ECD
2.2.3.1 Include potential effects and security implications of climate change, tailored to individual countries or regions, in 50% of preparation packages for Key Leader Engagements (KLE) with allies and partners identified in the International KLE Strategic Framework and/or International Engagement Plan	FY24 Q2
2.2.3.2 Integrate climate change considerations into the International Engagement Plan	FY24 Q3 (Completed)
2.2.3.3 Include climate change information and topics for identified countries in the International KLE Strategic Framework	FY23 Q4

**PERFORMANCE METRICS**

- Number of KLE preparation products that include potential effects and security implications of climate change
- Climate change considerations and processes included in the International Engagement Plan
- Climate change considerations and topics included in International KLE Strategic Framework for selected countries

<p><b>DRIVERS / REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>▪ 2022 NDS</li> <li>▪ 2022 SecAF Operational Imperatives</li> <li>▪ CJCSI 3810.01G</li> <li>▪ AFPD 15-1</li> </ul>	<p><b>BASELINE</b></p> <ul style="list-style-type: none"> <li>▪ International Engagement Plan</li> <li>▪ CY23-24 International Strategic KLE Framework</li> </ul>
--	---

**OUTCOME**

- Key leaders engage with allies and partners to solidify areas where cooperation with the DAF can address the potential effects and security complications associated with climate change





**Department of the Air Force Climate Campaign Plan**

**Objective 2.3: Incorporate Climate Considerations into Department Requirements, Acquisition, and Supply Chain Processes**

**KR 2.3.1: Energy Key Performance Parameters (KPPs) incorporated in weapon system capability requirements in accordance with the Joint Capabilities Integration and Development System Manual.**

<b>OPR:</b> AF/A5D <b>OCRs:</b> SAF/AQR, SAF/IEN, AF/A5/7; all AF Weapon Systems Lead Agents / MAJCOMs working operational requirements	<b>EXTERNAL PARTNERS:</b> NA
--	------------------------------

**ACTIONS**

Action	Action ECD
2.3.1.1 AF Futures’ Capability Development Guidebooks updated to direct need for Energy KPP and / or Energy Supportability Analysis (ESA) for all AF-sponsored Joint Capabilities Integration and Development System (JCIDS) documents	31 Jan 23 (Complete)
2.3.1.2 AF Requirements Gatekeeper requirements document review, staffing, and validation processes updated to ensure inclusion of appropriate Energy KPPs and / or ESAs in all AF-sponsored requirements documents using JCIDS joint validation processes	31 Jan 23 (Complete)
2.3.1.3 AF/A5D Requirements Solution Pathway Review checklist updated to include consideration for inclusion of Energy KPPs and / or ESAs, as well other JCIDS-Mandated Performance Attributes, as deemed appropriate and / or necessary for programs using the JCIDS-exempt Middle Tier of Acquisition authorities under DoDI 5000.80	1 Feb 23 (Complete)
2.3.1.4 AF/A5/7 to ensure requirements sponsors notify the Air Force Operational Energy Office (SAF/IEN) once a Materiel Development Decision has been made to facilitate initial data gathering for the Energy Supportability Analysis, which is to be conducted during the Analysis of Alternatives to inform the Energy KPP of materiel capability solutions, or justify an approved waiver of the need to include an Energy KPP as appropriate, prior to Milestone A	1 May 23 (Complete)

**PERFORMANCE METRICS**

- Process changes complete and incorporated and distributed in AF Futures’ Capability Development Guidebooks
- As accomplished for the OSD Operational Energy Annual Report, SAF/IEN track and quantify ESA and Energy KPP implementation, and qualitatively assess effectiveness and impact

**DRIVERS / REQUIREMENTS**

- 30 Oct 2021 Manual for the Operation of the Joint Capabilities Integration and Development System
- 2016 NDAA Section 800 – Middle Tier of Acquisition
- DoDI 5000.85 Major Capability Acquisition
- DoDI 5000.80 Operation of the Middle Tier of Acquisition
- Deputy Secretary of Defense Memo on Energy Supportability

**BASELINE**

- Current Air Force Future’s Capability Development Guidebooks – these Guidebooks provide the AF’s requirements sponsors guidance on the required content (to include Energy KPPs and / or ESAs) for program requirements documents, and are regularly reviewed and updated by AF/A5D to address and include updated procedures

**OUTCOME**

- A5D requirements documentation and review processes (Guidebooks, Solution Pathway Checklist, and Document Staffing Checklists) updated, and AF requirements enterprise at HAF, MAJCOMs, and Direct Reporting Units (DRUs) informed and aware of the need to conduct an Energy Supportability Analysis as part of their requirements efforts





Department of the Air Force Climate Campaign Plan

**KR 2.3.2: Effects of climate change identified for select supply chains by end of FY23 with risk mitigation approaches informed by the end of FY24.**

<b>OPR:</b> SAF/AQD <b>OCRs:</b> AFSC/420 SCMS; AFMC/A4R; SAF/IE Strategic Climate Integration; AF/A3W; AFIMSC/IZS	<b>EXTERNAL PARTNERS:</b> None
---	--------------------------------

**ACTIONS**

Action	Action ECD
2.3.2.1 Identify and verify available data sources	FY23 Q2 (Complete)
2.3.2.2 Select appropriate supply chains for analysis	FY23 Q3
2.3.2.3 Conduct a small-scale assessment on select supply chains	FY23 Q4
2.3.2.4 Inform risk mitigation approaches	FY24 Q1
2.3.2.5 Develop cost estimate to scale an enterprise capability	FY24 Q3

**PERFORMANCE METRIC**

Tracking increased visibility of climate-related risk events in the DAF supply chain

**DRIVERS / REQUIREMENTS**

- EO 14008
- CJCSI 3810.01G
- AFD 15-1
- AFI 63-101/21-101

**BASELINE**

- Air Force Civil Engineer Severe Weather/Climate Hazard Screening and Risk Assessment Playbook Apr 2020 – initial installation risk assessment completed Dec 2020
- GeoSCRIM Initial Supplier Climate Risk Assessment completed Jul 2022
- Ongoing supply chain risk management enhancements to policy

**OUTCOMES**

- Identified potential climate risks for select supply chains to prove GeoSCRIM is an appropriate tool for enterprise capability
- As appropriate, climate considerations evolved as part of supply chain risk management policy





## PRIORITY 3 – OPTIMIZE ENERGY USE AND PURSUE ALTERNATIVE ENERGY SOURCES

### Objective 3.1: Improve Operational Energy Intensity

- **KR 3.1.1:** Operational energy intensity of Air Force flying missions increased 5 percent by FY27 and 7.5 percent by FY32 through standardized use of aircraft drag reduction technologies, modern software scheduling tools, and enhanced engine sustainment practices.
- **KR 3.1.2:** Development and testing of a full-scale blended wing body prototype completed by FY27.

### Objective 3.2: Adopt Alternative Energy Sources

- **KR 3.2.1:** Completed successful pilot of drop-in compatible sustainable aviation fuel at two operational Air Force locations by FY26, where 10 percent of all purchased aviation fuels consist of sustainable aviation fuel blends at the same or less cost than traditional aviation fuel. The pilot project will validate operational, infrastructure, and logistical requirements for blending and quality control in the use of sustainable aviation fuel.
  - **KR 3.2.2:** Completed successful pilot of micro-reactors by FY28 to demonstrate viability of this technology as a feasible alternative energy source.
  - **KR 3.2.3:** 100 percent carbon pollution-free electricity on a net annual basis by FY30, including 50 percent 24/7 carbon pollution-free electricity.
  - **KR 3.2.4:** 100 percent zero-emissions non-tactical vehicle acquisitions by FY35, including 100 percent zero-emission light-duty vehicle and aircraft support equipment acquisitions by FY27 and FY32, respectively.
- 





Objective 3.1: Improve Operational Energy Intensity

**KR 3.1.1:** Operational energy intensity of Air Force flying missions increased 5 percent by FY27 and 7.5 percent by FY32 through standardized use of aircraft drag reduction technologies, modern software scheduling tools, and enhanced engine sustainment practices.

<b>OPR:</b> SAF/IEN <b>OCRs:</b> SAF/CN; SAF/IA; SAF/SA; SAF/AQP; SAF/AQQ; SAF/AQR; AFLCMC; AFRL; MAJCOMs	<b>EXTERNAL PARTNERS:</b> Industry; Allies & Partners
--	--

**ACTIONS**

Action	Action ECD
3.1.1.1 Complete drag reduction projects on legacy USAF aviation platforms	31 Dec 24
3.1.1.2 Incorporate detergent into engine wash and evaluate nucleated foam on USAF aviation platforms	30 Jul 24
3.1.1.3 Implement optimized mission planning tools, technology, and incentive programs	30 Sep 24

**PERFORMANCE METRIC**

- Lethality (e.g., the unit output or mission activity) per gallon. Example metrics: actual ton miles per gallon, offload per gallon, test events per gallon, time on station per gallon, simulated/actual weapons released per gallon, collections per gallon, pilots (B-course equivalent) per gallon, and syllabus events per gallon

Metric	Operational Energy Intensity Improvement
<b>Lethality per gallon (aggregate)</b>	<b>X%</b>
Ton Miles/gal	X%
Sortie Effective/gal	X%
Weight load factor/gal	X%
Pallet load factor/gal	X%
Offload/gal	X%
Training events/gal	X%
RAP sortie/gal	X%
Weapons released/gal	X%
Weapons released incl simulated/gal	X%
Collections/gal	X%
Time on station/gal	X%
Syllabus events/gal	X%
Test events/gal	X%
Flying hours/gal	X%
B-class equivalent pilots/gal	X%





## Department of the Air Force Climate Campaign Plan

### DRIVERS / REQUIREMENTS

- 2022 NDS
- 2022 SecAF Operational Imperatives
- EO 14008: *Tackling the Climate Crisis at Home and Abroad*
- DoD Climate Adaptation Plan
- Declaration of Intention – Global Air Forces Climate Change Collaboration (GAFCCC) - July 2022
- The Air Force Operational Energy Annual Report contains additional details on the status and mission impact of near-term operational energy initiatives

### BASELINE

- Enhance mission execution and combat capability
- Mission specific baselines for improvement are based on FY20 performance data; significant opportunity to fund low-cost high-reward initiatives to enhance mission execution

### OUTCOME

- Improved readiness and combat capability, decreased supply chain risk, informed operational plans, lowered greenhouse gas (GHG) emissions





Department of the Air Force Climate Campaign Plan

**KR 3.1.2: Development and testing of a full-scale blended wing body prototype completed by FY27.**

**OPR:** SAF/IEN

**OCRs:** SAF/AQR; SAF/AQQ; AF/A5/7

**EXTERNAL PARTNERS:** Industry; NASA; Allies & Partners

**ACTIONS**

Action	Action ECD
3.1.2.1 Select industry-partner for BWB Prototype development	15 Apr 23
3.1.2.2 Execute prototype build, fly and test	30 Sep 27

**PERFORMANCE METRICS**

- Perform technical evaluations of multiple industry-partner BWB conceptual designs and prototype project plan, including partner investment strategy
- Select industry partner for prototype detailed design, build, and fly
- Prototype detailed design verification
- Prototype manufacturing readiness verification
- Prototype flight readiness verification
- First flight
- Complete initial flight testing

**DRIVERS / REQUIREMENTS**

- 2022 NDS
- 2022 SecAF Operational Imperatives
- EO 14008: Tackling the Climate Crisis at Home and Abroad
- DoD Climate Adaptation Plan
- Declaration of Intention – Global Air Forces Climate Change Collaboration (GAFCCC) - Jul 22

**BASELINE**

- Enhance mission execution and combat capability
- Member of OSD Operational Energy Sub-working Group
- Ultra-efficient aircraft: 30 years of research and development, but no significant initiatives or achievements at scale to date; significant opportunity to improve combat capability/efficiency

**OUTCOME**

- Improved readiness and combat capability, decreased supply chain risk, informed operational plans, and lower GHG emissions







Department of the Air Force Climate Campaign Plan

Objective 3.2: Adopt Alternative Energy Sources

KR 3.2.1: Completed successful pilot of drop-in compatible, sustainable aviation fuel at two operational Air Force locations by FY26, where 10 percent of all purchased aviation fuels consist of sustainable aviation fuel blends at the same or less cost than traditional aviation fuel. The pilot project will validate operational, infrastructure, and logistical requirements for blending and quality control in the use of sustainable aviation fuel.

OPR: SAF/IEN

OCRs: AF/A4L (AFPET); AFLCMC; NGB; MAJCOMs

EXTERNAL PARTNERS: Industry; Defense Logistics Agency (DLA) Energy

ACTIONS

Table with 2 columns: Action, Action ECD. Rows include: 3.2.1.1 Establish DAF SAF Workgroup to perform SAF evaluation & develop pilot program criteria (1 Dec 23), 3.2.1.2 Develop SAF site survey template and evaluation program to understand current/project SAF supply chain to prioritize top 10 locations for SAF pilot evaluation (15 Mar 24), 3.2.1.3 Identify technical guidance requirements for aviation and ground systems use of SAF with Program Offices and Program Managers/Equipment Specialists (1 Dec 24), 3.2.1.4 Evaluate and down select two primary and one alternate location for SAF pilot evaluation (15 May 26)

PERFORMANCE METRICS

- % of SAF available to meet global aviation fuel demand
% differential between traditional aviation fuel standard fuel price and SAF product
# of SAF fuel products approved for DAF use by weapon systems
% of DAF locations within 100 miles of approved SAF production or distribution sites that meet daily demand rate

DRIVERS / REQUIREMENTS

- EO 14008: Tackling the Climate Crisis at Home and Abroad
DoD Climate Adaptation Plan
Declaration of Intention – Global Air Forces Climate Change Collaboration (GAFCCC) - July 2022
The Air Force Operational Energy Annual Report contains additional details on the status and mission impact of near-term operational energy initiatives

BASELINE

- Current level of SAF use
Level of global SAF availability
Current SAF cost
Weapon system approvals for SAF use

OUTCOME

- Completed successful pilot of drop-in compatible sustainable aviation fuel at two operational Air Force locations by FY26 where 10 percent of all purchased aviation fuels consist of sustainable aviation fuel blends at the same or less cost than traditional aviation fuel





Department of the Air Force Climate Campaign Plan

**KR 3.2.2: Completed successful pilot of micro-reactors by FY28 to demonstrate viability of this technology as a feasible alternative energy source.**

<b>OPR:</b> SAF/IEE <b>OCRs:</b> AFCEC/CN; Installations	<b>EXTERNAL PARTNERS:</b> DLA Energy; Nuclear Regulatory Commission (NRC); Department of Energy (DOE); Idaho National Laboratory (INL); State and Local Communities
---	---

**ACTIONS**

Action	Action ECD
3.2.2.1 Assist DLA Energy to select vendor and execute contract for a commercially owned and operated nuclear micro-reactor to assure feasible mission energy continuity	FY25
3.2.2.2 Oversee execution of construction and pilot phase	FY28
3.2.2.3 Synthesize the capability of micro-reactors for energy resilience of national security infrastructure in Report to the Congressional Armed Services Committees	FY28

\* Subject to change in response to acquisition timeline.

**PERFORMANCE METRIC**

- Available CFE from a commercially owned & operated nuclear micro-reactor (in Megawatts)

**DRIVERS / REQUIREMENTS**

- FY19 NDAA Sec. 327
- EO 13972
- 2022 NDS (Sec. VIII, "Strengthen Resilience and Adaptability")

**BASELINE**

- Baseline is FY2021
- DAF is coordinating with DLA Energy to execute a firm-fixed price power purchase agreement under 10 U.S.C 2922a with a third-party developer. The developer will own, operate, and maintain the micro-reactor and deliver zero-emission electricity on Air Force property in exchange for long-term purchase of the generated energy

**OUTCOMES**

- Developed methodology and lessons learned for suitability of micro-reactors to meet national security infrastructure and Federal CFE goals
- Completed Report to the Congressional Armed Services Committees describing capability of micro-reactors for energy resilience of national security infrastructure
- Calendar Year 27: Micro-reactor is operational and shows successful demonstration of NRC-licensed and inherently safe micro-reactor at a military installation





Department of the Air Force Climate Campaign Plan

**KR 3.2.3: 100 percent carbon pollution-free electricity on a net annual basis by FY30, including 50 percent 24/7 carbon pollution-free electricity.**

**OPR:** SAF/IEE

**OCRs:** AF/A4C; SF/S40; MAJCOMs; FLDCOMs; AFIMSC/IZB; AFIMSC/RM; AFCEC/CN; AFCEC/CP; AFCEC/CF; AFCEC/CZTQ; Installations

**EXTERNAL PARTNERS:** DLA Energy; NRC; DOE, INL; State and Local Communities; DoD Agencies; Electric Utilities

**ACTIONS**

Action	Action ECD
3.2.3.1 Determine baseline acquisitions of CFE across the Department of the Air Force	FY25
3.2.3.2 Implement projects to deliver 24/7 CFE to DAF installations, capable of supporting all mission energy resilience requirements	FY28*
3.2.2.3 Measure progress of alternative energy technologies to support long-term mission energy resilience	FY30

\* Subject to change in response to acquisition timeline

**PERFORMANCE METRIC**

- Available CFE (Percent / FY)

**DRIVERS / REQUIREMENTS**

- EO 14057 Sec. 203
- 2022 NDS

**BASELINE**

- The DAF identified a micro-reactor pilot site and coordinated with DLA Energy to release an RFP in FY22
- The DAF kicked-off the geothermal pilot in partnership with Defense Innovation Unit (DIU) in FY22

**OUTCOME**

- Annual understanding of DAF progress toward the transition to 100 percent CFE





**Department of the Air Force Climate Campaign Plan**

**KR 3.2.4: 100 percent zero-emissions non-tactical vehicle acquisitions by FY35, including 100 percent zero-emission light-duty vehicle and aircraft support equipment acquisitions by FY27 and FY32, respectively.**

<p><b>OPR:</b> SAF/IEE  <b>OCRs:</b> AF/A4C; AF/A4LR; SF/S4O; AFMC/A4M; AFRL/F2EP; AFCEC/CNS; 441<sup>st</sup> VSCOS</p>	<p><b>EXTERNAL PARTNERS:</b> Council on Environmental Quality; General Services Administration (GSA); DOE</p>
--	---

**ACTIONS**

Action	Action ECD
3.2.4.1 Assess opportunities for fleet electrification vehicle eligibility and potential risks to mission, force, and security	FY23
3.2.4.2 Develop guidance for ZEV and electric vehicle support equipment (EVSE) acquisitions and availability	FY23
3.2.4.3 Transition non-tactical vehicle fleet to 100 percent ZEV acquisitions	FY27
3.2.4.4 Transition to 100 percent zero-emission aircraft support equipment acquisitions	FY32

**PERFORMANCE METRICS**

- DAF installations with available EVSE (Percent)
- Number of leased and owned ZEVs (Total / FY)
- Number of EVSE charging ports (Total / FY)
- Number of Make-Ready completed (Total / FY)

**DRIVERS / REQUIREMENTS**

- 2022 NDS
- EO 14008 Sec. 205
- EO 14057 Sec. 204

**BASELINE**

- Baseline is FY2021
- The DAF is executing the initial phases of the pilot project underway, *“Comprehensive and Scalable Approach to Electrifying the DAF’s Vehicle Fleet”*
- The DAF is developing *“The Department of the Air Force Fleet Electrification Framework”* for installation use
- The DAF is on track to execute all phases of the pilot project underway, *“Comprehensive and Scalable Approach to Electrifying the DAF’s Vehicle Fleet”* with DLA Energy to release an RFP

**OUTCOMES**

- Reduced greenhouse gases via fleet electrification
- Diversified energy/fuel supply for installation fleet and support equipment





## GLOSSARY

**Adaptation:** Adjustment in natural or human systems in anticipation of or response to a changing environment in a way that effectively uses beneficial opportunities or reduces negative effects. (DoD Directive 4715.21, Climate Change Adaptation and Resilience, August 31, 2018)

**Climate Change:** Variations in average weather conditions that persist over multiple decades or longer that encompass increases and decreases in temperature, shifts in precipitation, and changing risk of certain types of severe weather events. (DoD Joint Publication 1)

**Climate-Literate:** An understanding of future climate conditions and risks to inform strategies, plans, and operations. (Department of Air Force working definition)

**Carbon Pollution-Free Electricity:** Electrical energy produced from resources that generate no carbon emissions, including marine energy, solar, wind, hydrokinetic (including tidal, wave, current, and thermal), geo-thermal, hydroelectric, nuclear, renewably sourced hydrogen, and electrical energy generation from fossil resources to the extent there is active capture and storage of carbon dioxide emissions that meets U.S. Environmental Protection Agency requirements. 24/7 Carbon Pollution-Free Electricity occurs when carbon pollution-free electricity is procured to match actual electricity consumption on an hourly basis and produced within the same regional grid where the energy is consumed. (Executive Order 14057, Catalyzing Clean Energy Industries and Jobs through Federal Sustainability)

**Non-Tactical Vehicles:** Any commercial motor vehicle, trailer, material handling or engineering equipment that carries passengers or cargo acquired for administrative, direct mission, or operational support of military functions. All DoD sedans, station wagons, carryalls, vans, and buses are considered “non-tactical.” (DoD Instruction 4500.36, Acquisition, Management, and Use of Non-Tactical Vehicles (NTVs))

**Operational Energy Intensity:** Measurement of lethality (e.g., the unit output or mission activity) per gallon. Example metrics: actual ton miles per gallon, offload per gallon, test events per gallon, time on station per gallon, simulated/actual weapons released per gallon, collections per gallon, pilots (B-course equivalent) per gallon, and syllabus events per gallon.

**Resilience:** Ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions. (DoD Directive 4715.21, Climate Change Adaptation and Resilience, August 31, 2018)

**Right-sized:** A “right-sized” installation portfolio optimizes infrastructure quantity and quality to assure combat readiness and protect our operational capability, enabling multi-domain missions across the full spectrum of operations. (Department of Air Force Basing and Logistics Flight Plan, Civil Engineer Annex, January 2020)





## ACRONYMS

**AETC** - Air Education Training Command  
**AF** - Air Force  
**AF/A1D** - Air Force Director of Force Development  
**AF/A3** - Air Force Deputy Chief of Staff, Operations  
**AF/A3O** - Air Force Director of Operations  
**AF/A3W** - Air Force Director of Weather  
**AF/A4** - Air Force Deputy Chief of Staff for Logistics, Engineering and Force Protection  
**AF/A4C** - Air Force Director of Civil Engineers  
**AF/A4CF** - Air Force Director of Civil Engineers, Facilities Division  
**AF/A4CP** - Air Force Director of Civil Engineers, Installation Strategy and Plans Division  
**AF/A4L** - Air Force Director of Logistics  
**AF/A4LR** - Air Force Director of Logistics, Logistics Readiness Division  
**AF/A4P** - Air Force Director of Resource Integration  
**AF/A5** - Air Force Deputy Chief of Staff for Strategy Integration and Requirements  
**AF/A5D** - Air Force Director of Integration and Innovation  
**AF/A5I** - Air Force Director of Operational Capability Requirements  
**AF/A5S** - Air Force Director of Strategic Plans, Programs, and Requirements  
**AF/A5/7** - Air Force Futures  
**AFCEC** - Air Force Civil Engineer Center  
**AFCEC/CF** - Air Force Civil Engineer Center, Facility Engineering Directorate  
**AFCEC/CFTP** - Air Force Civil Engineer Center, Facility Engineering Directorate, Standards and Evaluation Branch  
**AFCEC/CN** - Air Force Civil Engineer Center, Energy Directorate  
**AFCEC/CNS** - Air Force Civil Engineer Center, Energy Directorate, Special Programs (NCR)  
**AFCEC/CP** - Air Force Civil Engineer Center, Planning and Integration Directorate  
**AFCEC/CPD** - Air Force Civil Engineer Center, Planning and Integration Directorate, Program Development & Investment Division  
**AFCEC/CPP** - Air Force Civil Engineer Center, Planning and Integration Directorate, Comprehensive Planning Division  
**AFCEC/CZ** - Air Force Civil Engineer Center, Environmental Directorate  
**AFCEC/CZTQ** - Air Force Civil Engineer Center, Environmental Directorate, Environmental Quality Technical Support Branch  
**AFI** - Air Force Instruction  
**AFIMSC** - Air Force Installation and Mission Support Center  
**AFIMSC/IZ** - Air Force Installation and Mission Support Center, Installation Support Directorate  
**AFIMSC/IZB** - Air Force Installation and Mission Support Center, Installation Engineering Division  
**AFIMSC/IZS** - Air Force Installation and Mission Support Center, Mission Activity Integration Division  
**AFIMSC/RM** - Air Force Installation and Mission Support Center, Resource Management Directorate  
**AFLCMC** - Air Force Life Cycle Management Center  
**AFLCMC/LP** - Air Force Life Cycle Management Center, Propulsion Directorate  
**AFMAN** - Air Force Manual  
**AFMC** - Air Force Material Command





## Department of the Air Force Climate Campaign Plan

---

**AFMC/A4M** - Air Force Materiel Command, Directorate of Logistics, Civil Engineering, Force Protection, and Nuclear Integration, Division of Maintenance

**AFMC/A4R** - Air Force Materiel Command, Directorate of Logistics, Civil Engineering, Force Protection, and Nuclear Integration, Division of Logistics Readiness

**AFPD** - Air Force Policy Directive

**AFPET** - Air Force Petroleum Agency

**AFRC/A4C** - Air Force Reserve Command, Civil Engineer Division

**AFRL** - Air Force Research Laboratory

**AFRL/F2EP** - Air Force Research Laboratory Future Force Energy and Power office

**AFSC** - Air Force Sustainment Center

**AFSOC** - Air Force Special Operations Command

**BWB** - Blended Wing Body

**CAP** - Climate Action Plan

**CAPE** - Cost Assessment & Program Evaluation

**CAT** - Climate Action Team

**CCP** - Climate Campaign Plan

**CFE** - Carbon Pollution-Free Electricity

**CJCSI** - Chairman of the Joint Chiefs of Staff Instruction

**CPP** - Comprehensive Planning Platform

**CRIT** - Climate Resource Integration Team

**CY** - Calendar Year

**DAF** - Department of the Air Force

**DAFI** - Department of the Air Force Instruction

**DIU** - Defense Innovation Unit

**DLA** - Defense Logistics Agency

**DoD** - Department of Defense

**DoDD** - Department of Defense Directive

**DoDI** - Department of Defense Instruction

**DOE** - Department of Energy

**DRU** - Direct Reporting Unit

**ECD** - Estimated Completion Date

**EO** - Executive Order

**ERCIP** - Energy Resilience and Conservation Investment Program

**ERRE** - Energy Resilience Readiness Exercises

**ESA** - Energy Supportability Analysis

**EVSE** - Electric Vehicle Support Equipment

**FG** - Futures Game

**FLDCOMs** - Field Commands

**FSRM** - Facilities Sustainment, Restoration, and Modernization

**FY** - Fiscal Year

**GAFCCC** - Global Air Forces Climate Change Collaboration

**GE** - Global Engagement

**GeoSCRIM** - Geospatial Supply Chain Risk Identification & Monitoring

**GHG** - Greenhouse Gases

**GSA** - General Services Administration

**HAF** - Headquarters Air Force

**I2S** - Infrastructure Investment Strategy

**ICRP** - Installation Climate Resilience Plan





## Department of the Air Force Climate Campaign Plan

---

**IDP** - Installation Development Plan  
**IEMWG** - Installation Emergency Management Working Group  
**IMST** - Installation Mission Sustainment Team  
**INL** - Idaho National Laboratories  
**ISP** - Installation Support Panel  
**JCIDS** - Joint Capabilities Integration and Development System  
**KLE** - Key Leader Engagements  
**KPP** - Key Performance Parameters  
**KR** - Key Result  
**MAJCOM** - Major Commands  
**MILCON** - Military Construction  
**MSRR** - Mission Sustainment Risk Reports  
**MTA** - Middle Tier Acquisition  
**NASA** - National Aeronautics and Space Administration  
**NDAA** - National Defense Authorization Act  
**NDS** - National Defense Strategy  
**NGB** - National Guard Bureau  
**NGB/A4** - National Guard Bureau, Logistics and Installations Directorate  
**NRC** - Nuclear Regulatory Commission  
**OCR** - Office of Coordinating Responsibility  
**OPR** - Office of Primary Responsibility  
**OSD** - Office of the Secretary of Defense  
**OSD(P&R)** – Under Secretary of Defense for Personnel & Readiness  
**PME** - Professional Military Education  
**PPBE** - Program, Planning, Budget, and Execution  
**RFP** - Request for Proposal  
**SAF** - Secretariat of the Air Force  
**SAF/AQ** - Assistant Secretary of the Air Force for Acquisition, Technology & Logistics  
**SAF/AQD** - Deputy Assistant Secretary of the Air Force for Logistics and Product Support  
**SAF/AQP** - Assistant Secretary of the Air Force for Acquisition, Technology & Logistics, Global Power Program  
**SAF/AQQ** - Assistant Secretary of the Air Force for Acquisition, Technology & Logistics, Global Reach Program  
**SAF/AQR** - Assistant Secretary of the Air Force for Acquisition, Technology & Logistics, Science, Technology and Engineering Program  
**SAF/CN** - Air Force Chief Data Officer  
**SAF/FM** - Assistant Secretary of the Air Force for Financial Management and Comptroller  
**SAF/IA** - Secretary of the Air Force International Affairs  
**SAF/IAN** - International Affairs, Engagements Directorate  
**SAF/IAP** - International Affairs, Policy and Programs Directorate  
**SAF/IAPS** - International Affairs, Policy and Programs Directorate, Strategy and Plans Division  
**SAF/IAR** - International Affairs, Regional Affairs Directorate  
**SAF/IE** - Assistant Secretary of the Air Force for Energy, Installations & Environment  
**SAF/IEE** - Deputy Assistant Secretary of the Air Force for Environment, Safety, and Infrastructure  
**SAF/IEI** - Deputy Assistant Secretary of the Air Force for Installations  
**SAF/IEN** - Deputy Assistant Secretary for Operational Energy  
**SCMS** - Supply Chain Management Squadron  
**SecAF** - Secretary of the Air Force







## Department of the Air Force Climate Campaign Plan

---

**SES** - Senior Executive Service  
**SF** - Space Force  
**SF/COO** - Deputy Chief of Space Operations  
**SF/S1D** - Space Force Education, Training & Development  
**SF/S4O** - Space Force Mission Sustainment  
**SF/S5B** - Space Force Futures and Integration  
**SF/S5S** - Space Force Strategy and Plans  
**SLC** - Senior Leader Climate  
**STARCOM** - Space Training and Readiness Command  
**SWCH** - Severe Weather and Climate Hazards  
**TBD** - To Be Determined  
**UMMC** - Unspecified Minor Military Construction  
**USAF** - United States Air Force  
**USC** - United States Code  
**UFC** - Unified Facilities Criteria  
**VSCOS** - Vehicle Support Chain Operations Squadron  
**ZEV** - Zero-Emission Vehicles





## REFERENCES

1. U.S. Government Documents
  - a. *10 USC 2864 - Master plans for major military installations*
  - b. *10 USC 2920 - Energy resilience and energy security measures on military installations*
  - c. Executive Order 13972: *Promoting Small Modular Reactors for National Defense and Space Exploration*, Jan 21
  - d. Executive Order 14008: *Tackling the Climate Crisis at Home and Abroad*, Jan 21
  - e. Executive Order 14057: *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, Dec 21
  - f. National Defense Authorization Act for Fiscal Year 2022, Public Law No. 117-81
  - g. National Defense Authorization Act for Fiscal Year 2020, Public Law No. 116-92
  - h. National Defense Authorization Act for Fiscal Year 2019, Public Law No. 115-232
  - i. National Defense Authorization Act for Fiscal Year 2016, Public Law No. 114-92
2. DoD Documents
  - a. *2022 National Defense Strategy*, Oct 22
  - b. CJCSI 3810.01G: *Meteorological and Oceanographic Support*, Mar 23
  - c. CJCSI 5123.01I: *Charter of the Joint Requirements Oversight Council and Implementation of the Joint Capabilities Integration and Development System*, Oct 21
  - d. *Department of Defense Climate Adaptation Plan*, Sep 21
  - e. DoDD 4715.21: *Climate Change Adaptation and Resilience*, Jan 16; Change 1, Aug 18
  - f. DoDI 1322.35, Volume 1: *Military Education: Program Management and Administration*, Apr 22
  - g. DoDI 5000.80: *Operation of the Middle Tier of Acquisition (MTA)*, Dec 19
  - h. DoDI 5000.85: *Major Capability Acquisition*, Nov 21
3. Department of the Air Force Documents
  - a. 2022 Secretary of the Air Force Operation Imperatives
  - b. AF/A4 Basing and Logistics Strategy Priorities, 22
  - c. AFI 32-1015: *Integrated Installation Planning*, Jan 21
  - d. AFI 63-101/20-101: *Integrated Life Cycle Management*, Nov 21
  - e. AFI 90-2001: *Mission Sustainment*, Jul 19
  - f. AFPD 90-20: *Mission Sustainment*, Apr 19
  - g. AFMAN 32-7003: *Environmental Conservation*, Apr 20
  - h. AFPD 15-1: *Weather Operations*, Nov 19
  - i. DAFI 90-1701: *Installation Energy and Water Management*, Dec 20
  - j. Department of the Air Force Infrastructure Investment Strategy, Jan 19
  - k. Department of the Air Force Severe Weather and Climate Hazard Screening and Risk Assessment Playbook, Nov 22

