

*The Department of the Air Force's mission-driven installation energy plan (IEP) process integrates applicable installation- and higher-level strategic guidance, plans, and policies into a holistic roadmap to help an installation work constructively towards its energy assurance goals.*



## Installation Energy Plans

### Why it Matters

With the increased prevalence of large-scale natural disasters and the recognized threat of physical and cyber-attacks on our utilities, coordinating installation planning for energy and water resilience has never been more important. To address these threats, the Department of the Air Force (DAF) is developing IEPs to employ strategies to improve installation energy and water resilience. By planning for the future, the DAF is better equipped to identify and execute energy and water projects to achieve mission assurance.

### Key Focus Areas

IEPs will address Air and Space Force installation missions, existing plans (e.g., Installation Master Plan), particular circumstances, priorities and constraints. They will include:

- Avenues for and means to meet projected future energy and water demands to achieve mission assurance
- Alignment of goals set by Congress
- Concerns that hinder stakeholders' cooperation on energy and water management including industrial control system and cybersecurity



An aerial view of Edwards Air Force Base, one of the original seven pilot installations with an IEP completed in FY 2019. Photo courtesy of DoD.

# Installation Energy Plans

## Process and Scorecard

An Installation Energy Plan (IEP) creates a decision-making framework to assist installations in achieving their energy goals and ensuring that energy and water resilience is sufficient to meet critical mission assurance requirements. The IEP incorporates input from mission owners, installation planners, engineers, and other key stakeholders; includes long-range plans for energy resilience capabilities; ensures available and reliable utilities for each of the installation's critical missions; and defines energy requirements to maintain mission during power/water outage events.

As part of the IEP, installations receive mission resiliency scorecards which are a visual representation of the installation's energy resilience posture. The scorecard's dart charts indicate progress towards meeting each of the 5Rs of Resilience as well as the overall resilience of the installation. Each installation has different mission capabilities and threats, so the scorecards will be specific to the unique aspects of that installation. For this reason, numerical scores cannot be compared among installations, as each installation has unique resilience requirements.

The IEP is a living document which will be updated yearly and rewritten every 5 years. The Office of the Assistant Secretary of the Air Force (Installations, Environment & Energy) is working with the Air Force Office of Energy Assurance (OEA) to ensure IEPs incorporate key findings from mission exercises and tools, like Energy Resilience Readiness Exercises and Crown Jewels Analysis, to improve the comprehensiveness of the plan. Overall, IEPs will identify, track, and adjust requirements (initiatives) to advance the energy goals of the installation.

### The 5Rs of Resilience

**Robustness**  
*Can the energy and water systems withstand a variety of scenarios?*

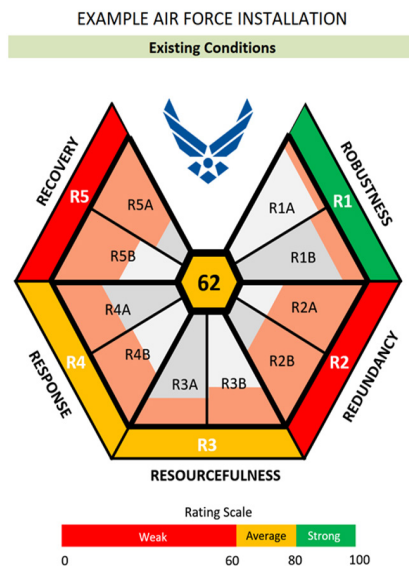
**Redundancy**  
*Are there multiple alternative systems and sources to avoid single points of failure?*

**Resourcefulness**  
*Is energy efficiently managed and delivered?*

**Response**  
*Is the installation prepared to respond to an emergency or disruption?*

**Recovery**  
*How quickly can the installation restore normal conditions?*

THREATS ADDRESSED	PROBABILITY - SEVERITY
Earthquake	Low - Low
Tsunami	Low - Low
<b>Malicious - Cyber</b>	<b>Moderate - High</b>
Malicious - Physical	Moderate - Moderate
Utility Blackout	Low - Moderate
Winter Storm	Low - Low
<b>High Winds</b>	<b>High - High</b>
<b>Flooding - Minor</b>	<b>High - High</b>
<b>Flooding - Major</b>	<b>Moderate - High</b>
Volcanic Eruption	Low - Low
<b>EMP</b>	<b>Moderate - High</b>
<b>Lightning</b>	<b>High - Moderate</b>
Wildfire - Major	Low - Low
Environmental Corrosion	Moderate - High



Mission Resiliency Scorecards depict an installation's rating for each resilience attribute. The IEP identifies specific strategies an installation can apply to move into the green levels of the scorecard for all five attributes.

The Department of the Air Force is taking a resilience-focused approach to future energy and water projects concentrated on providing strategic agility for missions and installations.

**For more information:**

- [safie.hq.af.mil/InstallationEnergy](https://safie.hq.af.mil/InstallationEnergy)
- [AirForceEnergy](#)
- [@AFEnergy](#)

