



Investing in Renewable Energy

Why it Matters

The Department of the Air Force is a leader in investing in alternative energies and is taking advantage of opportunities to incorporate renewable energy at Air Force and Space Force bases.

The Department of the Air Force (DAF) is working to ensure our installations are equipped with a full range of resilient, cyber-secure, and sustainable energy and water solutions to meet the substantial needs of mission critical functions. As such, DAF is changing its approach to future energy initiatives and is investing in renewable energy technologies that enhance installation energy resilience, while reducing greenhouse gas (GHG) emissions.

In alignment with its Climate Action Plan, DAF is working to reduce GHG emissions, achieve 100% carbon pollution-free (CFE) electricity by fiscal year (FY) 2030, and accomplish net-zero building emissions by FY 2046. To achieve these goals, DAF is prioritizing renewable energy technologies that enhance mission assurance and is continuing to research alternative energy opportunities that diversify our installation energy options while sending a “demand signal” to industry, which will need to supply those options for our use.

By The Numbers: Air & Space Force Renewable Energy

7.8% DAF electricity from
renewable sources

595,000 MWh of renewable
energy use

337 active renewable energy
projects in operation across
115 sites



Wind turbines at Warren Air Force Base, Wyoming face the wind coming across the high plains, providing electrical energy that goes directly into the base power grid.



DAF Renewable Energy Projects

In 2022, 7.8% of DAF electricity came from renewable sources. This includes installation energy projects that increase on-site generation capability and bolster installation resilience, as well as DAF renewable energy purchases from the commercial grid. Additionally, DAF is partnering with private industry to build renewable energy assets on underutilized DAF land that bolster the resilience of the commercial grid using Enhanced Use Leases (EULs). EULs help DAF monetize real property assets for re-investment into unfunded installation requirements that support mission growth and sustainability.

Renewable energy projects span solar, wind, biomass, and ground source heat pump efforts. For example, DAF generates 9 megawatts (MW) of wind energy at Cape Cod Air Force Station and 2MW at Francis E. Warren Air Force Base. DAF is also heavily invested in photovoltaic solar arrays. Below are a few examples of large-scale solar projects across our enterprise, which are providing either enhanced onsite energy resilience or grid resilience (through EULs), while reducing greenhouse gas emissions:

Location	Size (MW)	Year Completed	Type of Resilience (Installation energy resilience v grid resilience)
Edwards Air Force Base, CA	462.0	2022	Grid Resilience
Vandenberg Space Force Base, CA	28.2	2018	Installation Resilience
AF Plant 42 (Component of Edwards AFB), CA	20.0	2016	Grid Resilience
Joint Base McGuire-Dix-Lakehurst, NJ	20.0 (two arrays)	2017	Grid Resilience
Nellis Air Force Base, NV	18.8	2016	Grid Resilience
Joint Base San Antonio-Lackland, TX	18.4	2022	Installation Resilience
Davis-Monthan Air Force Base, AZ	16.4	2014	Grid Resilience
Nellis Air Force Base, NV	14.2	2008	Installation Resilience
Joint Base McGuire-Dix-Lakehurst, NJ	13.7	2012	Grid Resilience
Luke Air Force Base, AZ	10.0	2016	Grid Resilience

The Department of the Air Force Installation Energy Program is committed to developing and deploying policies and guidance to ensure the enterprise is prepared to deliver energy and water whenever and wherever it is needed.

For more information:

 safe.hq.af.mil/InstallationEnergy

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