

Air Force Enterprise Energy Dashboard

The NDCEE developed, demonstrated, and determined the effectiveness of an interactive energy dashboard to collect and report on energy based on the United States Air Force's (USAF's) Energy Plan. The dashboard can be adapted to other military services.

Problem Statement

The USAF must reduce energy consumption and increase the portion of their energy that is renewable to meet a variety of Federal, Department, and Service energy goals. The USAF has many steps to satisfy the increasing number of energy goals. At the enterprise level, the USAF has established a comprehensive program and policy lead by the Office of the Deputy Assistant Secretary (Energy) (SAF/IEN). The USAF Energy Plan is the operational framework for communicating goals, objectives, and metrics and guiding overall energy management across all functional domains within the USAF. To position the USAF to meet current and emerging energy goals, an interactive analytical and reporting capability was needed to provide a common site picture and function with the USAF domain at large.

Technology Description

The Air Force Enterprise Energy Dashboard (Dashboard) is sponsored by SAF/IEN, and is designed to provide common-sight views of energy performance throughout the USAF and provide access to valuable energy resources. The Dashboard leverages the flexibility and accessibility of Microsoft Office SharePoint®, which resides on the Air Force Network Integration Center (AFNIC) Enterprise Information Services (EIS) site, and is accessible by all authenticated USAF users. The Dashboard supports the following focus areas:

- **Key Performance Indicators (Scorecard)** – Provides senior leaders and other Dashboard users with a visual snapshot of overall performance towards USAF Energy Plan goals.
- **Metrics** – Provides consistent views and access to data for sixteen metrics that measure aviation, facility, and ground vehicle energy performance.
- **Library of Knowledge** – Provides a robust and searchable collection of energy documents, energy policies, definitions, and acronyms.
- **Energy Initiatives** – Tracks the funding status of energy initiatives advocated for by the USAF Energy Governance Structure.
- **Energy Investments** – Identifies the historic, current, and planned USAF energy investment portfolio and allows users to filter, slice-and-dice, and visualize portfolio data as needed.
- **Schedule** – Displays an anticipated schedule of recurring USAF energy governance, management, and reporting activities to ensure on-time execution.
- **Research, Development, Test & Evaluation Status** – Tracks the progress and anticipated transition of USAF energy research and development.
- **Energy Governance Workspace** – Provides the components of the USAF Energy Governance Structure with a user-friendly interface for organizing, sharing, and maintaining information.



Homepage/Interface



Ground Vehicles Metric page example



DoD Executive Agent
Office of the Assistant
Secretary of the Army for Installations,
Energy and Environment

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Environmental, Safety, Occupational Health, and Energy (ESOHE) and Cost Benefits

- **ESOHE Benefit.** The Dashboard will provide users with the energy data and resources to make informed strategies to reduce energy consumption.
- **Cost Benefit.** The tool allows the USAF to collect and analyze critical metrics and identify opportunities for energy reduction and cost saving. The Dashboard provides cross-functional views of the USAF's energy management performance, which highlights areas that need additional investments. The Dashboard also reduces the amount of man-hours required to update and maintain energy metrics that were otherwise created locally.

Technology Benefits

- Is available to all USAF Common Access Card (CAC) holders
- Leverages available information from authoritative sources
- Provides improved energy management reporting, transparency, granularity, and collaboration

Technology Limitations

- Unable to create a Non-classified Internet Protocol Router to Secret Internet Protocol Router connection to provide direct input to the Chief of Staff's Senior Leadership Dashboard
- Metric maturity is categorized as either Level 1: manual updates, Level 2: bulk data upload, or Level 3: system to system communication. Level 3 metric maturity has not been achieved due to complications in approving system to system communication
- Space is a concern for maintaining historical data
- Training is required for dashboard users

Accomplishments

- Dashboard is accessible to any Airman with a CAC; metrics are being used by Air Staff and Major Command personnel to build their own energy briefings
- Each metric is supported with the metric calculation process and specific policies and documents that drive the need for that metric
- Views for ground vehicle energy metrics are being used to update the Air Force Chief of Staff's Senior Leadership Dashboard
- More than 2,100 energy definitions and acronyms have been added to the Library of Knowledge
- Demonstrated the Dashboard at a variety of industry and DoD specific conferences and events, including: GovEnergy, the Pentagon Energy Security Event, and the U.S. Army and Air Force Energy Forum
- Trained the entire SAF/IEN office on Dashboard capabilities and gathered feedback throughout development process
- Dashboard highlighted by the Under Secretary of the Air Force in the Air Force's FY13 budget certification brief to the Assistant Secretary of Defense/Operational Energy Plans and Programs

Technology Transition Opportunities

Dashboard technology can be adapted for other Services, and is scalable to include other metrics such as greenhouse gas emissions.

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The Enterprise Energy Dashboard provides energy awareness at all levels of an organization – from senior leaders looking across the enterprise, to Major Command or Base Commanders, to functional-level stakeholders evaluating energy within a specific domain.