

Zero-Emission Vehicles: The Future of Fleet Mobility

By SAF/IEE Energy Team

The Department of the Air Force uses more than 75,000 vehicular assets to perform its mission at more than a hundred installations.

That is more than 75,000 opportunities to increase installation energy resilience, reduce military oil dependency, decrease operations and maintenance costs and align with the Biden Administration's greenhouse gas reduction target.

But the question remains, how do we accomplish this quickly in a coordinated effort across the enterprise?

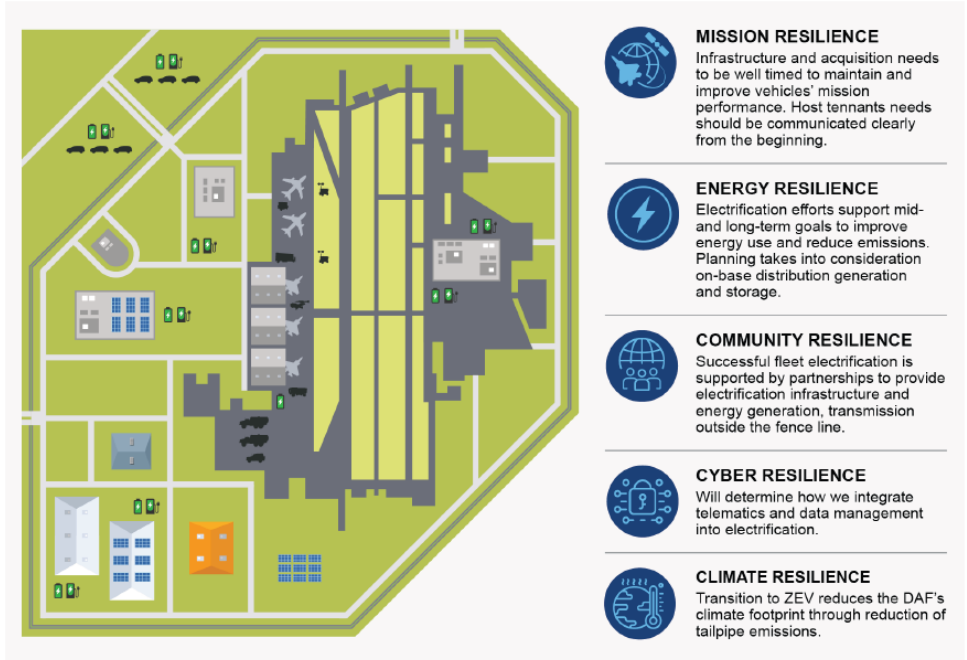
Historically, DAF vehicular assets have primarily relied on petroleum-based fuels supplied through DLA-Energy via a proven and reliable on-base fuel distribution network. But, requirements are changing and rapidly.

Industry, consumers, and now the President are steering the market towards zero-emission vehicles, or ZEVs, with the chance of reducing the availability of traditional petroleum powered vehicles in the future.

In response to Executive Order 14008, the DAF is working to develop policy and guidance for not only electrifying the non-tactical vehicle fleet but also creating a strategic energy resilience ecosystem where the fleet has the infrastructure it needs to successfully operate.

With this wave of innovation, DAF plans to leverage existing energy resilience efforts such as Installation Development Plans and Installation Energy Plans to develop a comprehensive and scalable approach to electrifying the vehicle fleet by the 2035 carbon pollution-free electricity goal. Ultimately, we hope to ensure the electric vehicle support equipment, or EVSE (e.g., charging stations), is available when and where the mission needs it.

The Office of the Assistant Secretary of the Air Force for Energy, Installations, and Environment is developing the planning processes at two pilot sites, Joint Base Andrews, Maryland, and Joint Base McGuire-Dix-Lakehurst, New Jersey. The



Enterprise Fleet Electrification Building Blocks			
Mission and Readiness	Goals & Timelines	Funding Mechanisms	Infrastructure Planning, Acquisition & Sustainment
Energy Resilience	Acquisition Models	Stakeholder Mapping & Coordination	Transaction Management & Accounting
Enterprise Data Management	Cyber Security	Leased vs Owned Vehicles	GOVs vs POVs
Maintenance Training & Manpower	Host/Tenant Arrangements	Fleet Use Cases	Legislative & Regulatory Requirements
Shared Assets	Partnerships	Privatization	Leadership

process, represented in the five-phased approach at right, considers various complex building blocks to lay the groundwork for the future fleets at all DAF installations.

The anticipated benefits of this demonstration include the enhanced ability for the Air Force to:

- Ensure the availability of, and required technology for, ZEVs meet the needs of

DAF vehicle requirements;

- Integrate ZEV planning with existing installation master planning and fleet management practices;
- Define enterprise standards for energy and cyber resilience to accompany installation-specific EVSE, such as charging stations;

- Identify acquisition strategies that leverage third-party financing approaches to reduce required DAF capital; and
- Identify and catalogue ZEV technology gaps for future research and development initiatives.

Installations and their missions are at the core of all energy resilience planning. It's imperative that we work together to address the intersecting elements that this approach considers and identify additional opportunities to accelerate our adoption of ZEVs. If your installation is interested in joining the transition to ZEVs, talk to us about how we can coordinate.

Contact Seema Aziz-Hall at seema.aziz-hall@us.af.mil or Douglas Tucker at douglas.tucker.4@us.af.mil.