



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Army Strategic Energy Goals

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Report Documentation Page

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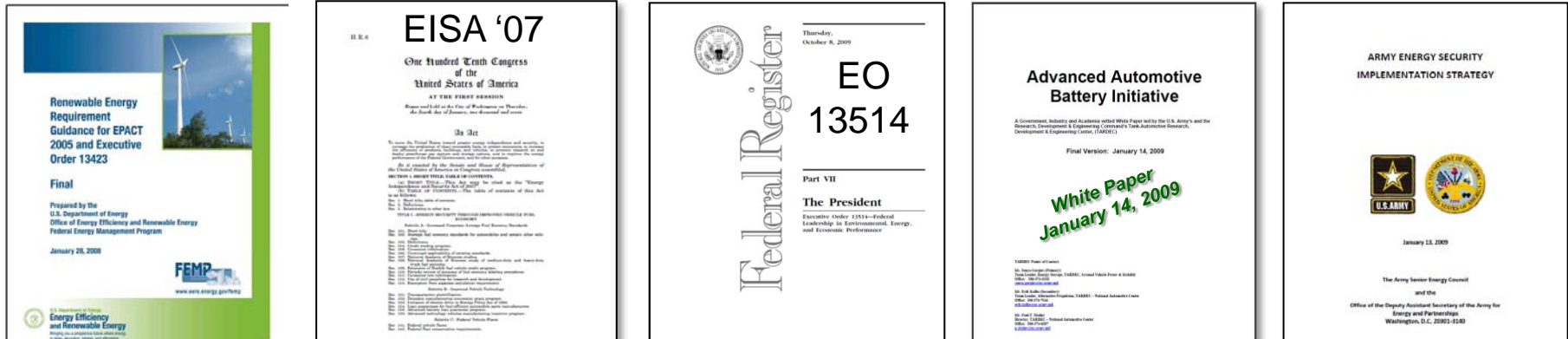
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Army Strategic Energy Security Goals

- Reduced energy consumption
- Increased energy efficiency across platforms and facilities
- Increased use of renewable / alternative energy

Installation & Forward Operating Base (FOB) “Net Zero” electrical power production strategy (generated = consumption)

Forthcoming Operational Energy Initial Capabilities Document



Meeting energy & power mandates, goals, and strategy requires understanding of the challenge

Alternative Fuels



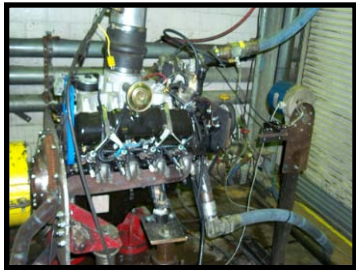
Fuel Evaluations

- Chemical Composition
- Physical properties
- Fuel system impacts



System Evaluations

- Fuel-system interactions
- System performance and durability
- Fuel specification inputs
- Suitability of fuel for use in Army equipment



Engine Evaluations

- Fuel ignitability
- Fuel combustion
- Performance / durability

Dual-Use Applications



Alternative Fuel Vehicles & Infrastructure



SANGB Hydrogen Filling Station

Advanced Mobile Microgrid



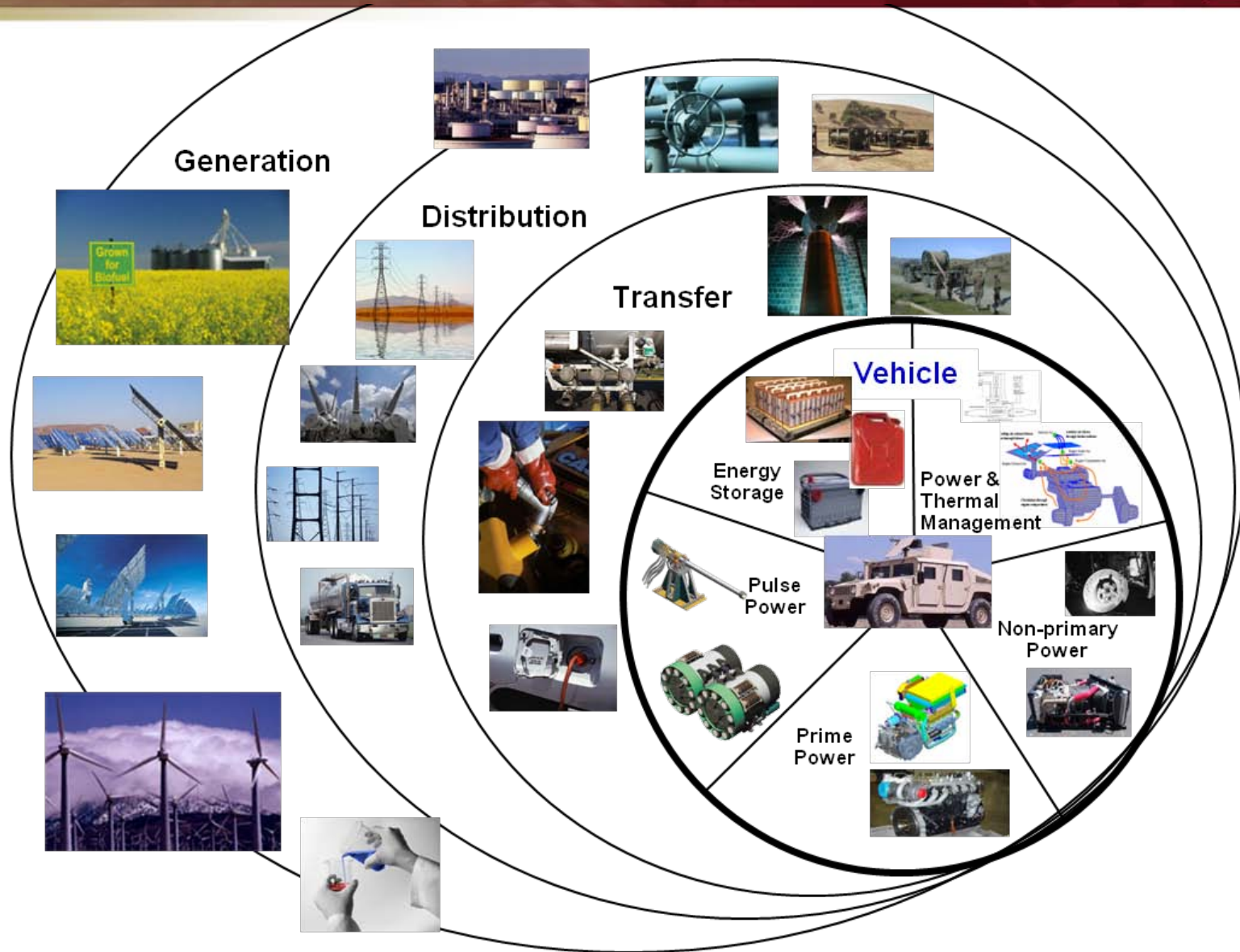
Domestic Manufacturing Capability



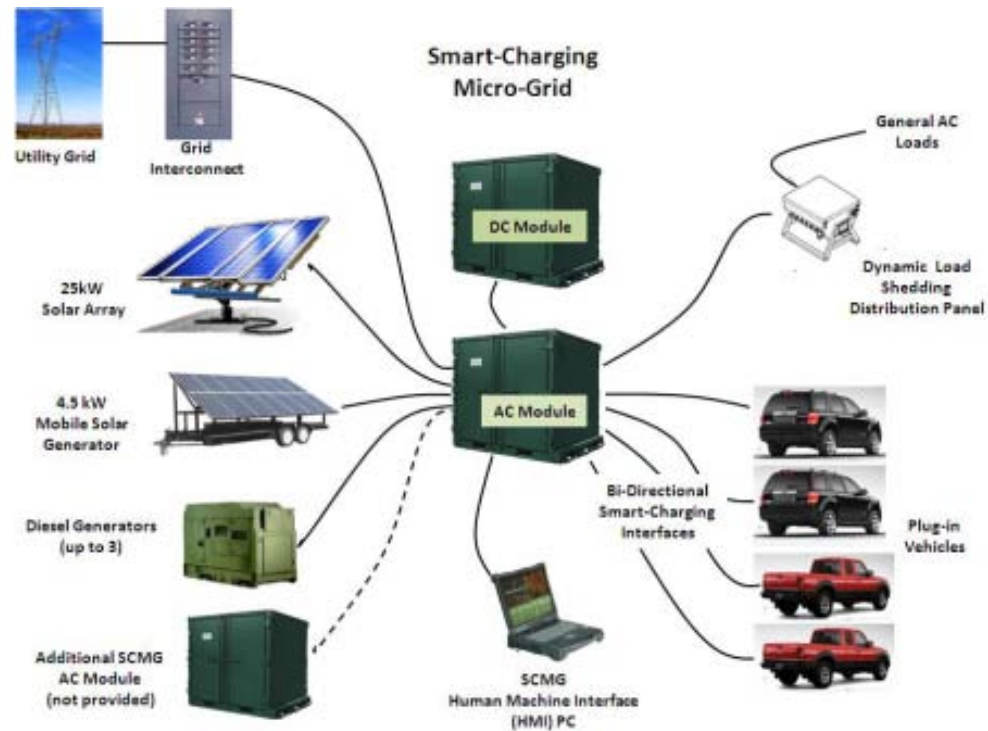
Advanced Automotive Batteries Enabler of Alternative Energy



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.



- Installation of microgrid at Schofield Barracks, tied to critical infrastructure
 - Photovoltaic array
 - Dedicated electric vehicle charging
 - Grid connected
 - Conventional generator for extended backup power
 - Advanced stationary energy storage
 - Load management
- AC architecture
- Microgrid scheduled to be operational in August 2010
- Data collection and operational support for one year



TARDEC

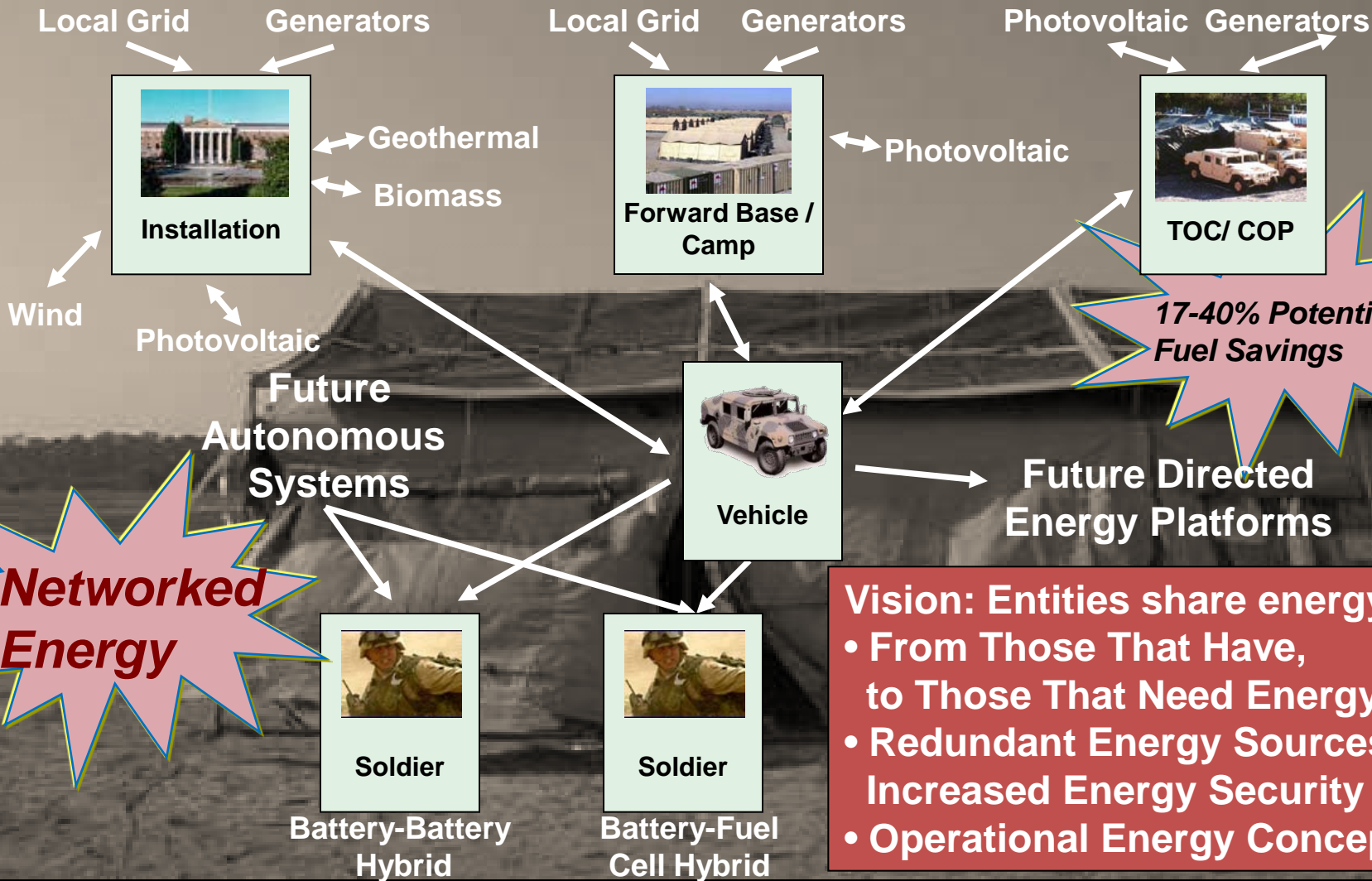
- Approved plan to procure an additional micro-grid for installation in Hawaii
 - Side-by-side architecture comparison
 - Incorporation of heavier weight class vehicles
 - Increased impact of transportation demands on infrastructure due to increased charging power requirements and larger on-board energy storage
- Partnership with the Corps of Engineers on modeling micro-grid performance

Army-wide

- Renewed and strengthened partnership across RDECOM components in the areas micro-grid and intelligent energy management

DOD-wide

- Expected upcoming efforts to coordinate similar efforts across the services under the Energy and Power Community of Interest



Improving energy capability through holistic power sharing - you're in the fight...!