Army Power and Energy

Deputy Assistant Secretary of the Army
Energy and Sustainability

Mr. Richard Kidd

16 September 2014
The Army is addressing **energy security** through a comprehensive program to ensure that we have **assured access** to **reliable supplies** of energy and the ability to protect and **deliver sufficient energy to meet mission-essential requirements**.

- **Soldier:**
  - Lightening soldier power loads
  - Agility and self-reliance through advanced portable power systems, lighter batteries, universal charging devices and water purifiers

- **Vehicles:**
  - Utilizing alternative fuels, hybrid and electric systems
  - Improving efficiency and extending engine life
  - Includes tactical (air and ground) vehicles and non-tactical vehicles

- **Basing:**
  - Improving installation fuel, water and energy efficiency
  - Net Zero strategy
  - Diversity of supply through renewable energy enhancing energy security
  - Energy Initiatives Task Force
Installation Energy

- Largest facility energy consumer in the Federal Government – $1.3B (FY13).
- Established Net Zero Initiative to demonstrate integrated design principals that will ensure the Army of tomorrow has the same access to energy, water, land and natural resources as the Army of today.
- Formed the Energy Initiatives Task Force to develop large scale renewable energy projects that will help strengthen energy security while supporting the Army’s energy goals.
- Utilizing third party financing to improve efficiency on Army installations. The Army has most robust ESPC program in entire Federal government.

Through technology and policies we are reducing our energy footprint. We will provide flexibility and resiliency by developing alternatives and adaptable capabilities.
Army Energy Outlook

Energy Efficiency May Lower Baseline by 30%

Remaining Electric Consumption

NDAA Renewable Energy Requirement
25% by 2025 or 2,500,000 MWh

Major Issues for Army Large-Scale Renewable Energy Projects:

- Declining Budgets/Incentive Leverage
  
  Need for private financing

- Specialized Expertise
  
  Requires financial, regulatory, environmental and real estate expertise

- Enterprise Strategy
  
  To define the most efficient path to reach Army goals

NDAA Renewable Energy Requirement:

- 25% by 2025
- 2,500,000 MWh

Path to Compliance:

- National Defense Authorization Act:
  
  25% by 2025

- 6% Progress in FY 2012
  
  from 194 different projects

Assistant Secretary of the Army (Installations, Energy & Environment)
Army Large-Scale Renewable Energy Projects

Location: Ft. Irwin, CA
Project: 15 MW Solar
Business/Acquisition Model: Competitive PPA through DLA

Location: Tooele Army Depot, UT
Project: 18 MW Solar
Business/Acquisition Model: Competitive Lease

Location: Ft. Huachuca, AZ
Project: 18 MW Solar
Business/Acquisition Model: GSA Areawide Contract through TEP

Location: Ft. Drum, NY
Project: 28 MW Biomass
Business/Acquisition Model: PPA Notice of Intent to Award to ReEnergy Holdings LLC

Location: Redstone Arsenal, AL
Project: Up to 18000 MW hours per year Solar
Business/Acquisition Model: MATOC PPA

Location: Schofield Barracks, HI
Project: 50 MW Biodiesel
Business/Acquisition Model: Lease with HECO

Location: Ft. Stewart, GA
Project: 18 MW Solar
Business/Acquisition Model: Competitive lease in conjunction with the GA Power Advanced Solar Initiative (ASI)

Project: 90 MW Solar
Business/Acquisition Model: GSA Areawide Contract through GA Power

Contributing >30% Towards Army’s 1 GW Goal

Assistant Secretary of the Army (Installations, Energy & Environment)
Other Army Renewable Energy Projects

• In addition to the EITF the Army develops small scale renewable energy projects through both appropriated funds and third party financing

• Energy Conservation Investment Program – 2.7MW in FY13

• Energy Savings Performance Contracts – 8.6 MW in FY13

ECIP - Two 1.1 MW Solar Arrays, Fort Hunter Liggett

ECIP - 170 KW Photovoltaic Solar Power System, New Jersey National Guard Joint Training and Training Development Center

ESPC - 4.1 MW Solar Array White Sands Missile Range

ESPC - Three 275kW Wind Turbines, Fort Buchanan

Assistant Secretary of the Army (Installations, Energy & Environment)
Third Party Financing

Energy Savings Performance Contracts (ESPC) / Utilities
Energy Services Contracts (UESC) and Utilities Privatization (UP)

- Private Companies / Servicing Utilities provide initial private capital investment to execute projects
- For ESPCs & UESCs, repayment is from realized energy savings paid from Utilities Services Program funds
- Army has most robust ESPC program in Federal government & improving – Exceeded goal for Presidents Challenge
- More ESPC’s and UESC’s were awarded Dec 11-Dec 13 ($498M) than in any two years of the program

**ESPC:**
- Over 180 task orders/ 75 installations
- >6.6 Trillion BTU Energy Savings per year
- $1.32 Billion of Private sector investments
- $400 Million more in development

**UESCs:**
- Over 360 task orders/ 45 installations
- > 3.8 Trillion BTU Energy Savings per year
- $568 Million in Private sector investments
- $100 Million more in development

**UP:**
- 144 UP awards made through FY13, a net present value cost avoidance of $2.0 billion.
- 86% of utility systems evaluated.
- All new, major UP investments are amortized

**3rd Party Investment in Million of Dollars**

Assistant Secretary of the Army (Installations, Energy & Environment)
Net Zero is a holistic management approach to bring the overall consumption of energy, water, and waste on installations down to an effective rate of zero by using the principles of integrated design to appropriately manage resources.

Through such efforts as reducing demand, increasing efficiency, producing renewable energy, using graywater, re-purposing materials, and expanding recycling and energy recovery...consumption of resources can be reduced to an effective rate of zero.

Assistant Secretary of the Army (Installations, Energy & Environment)