ENgErgY INITIALIvES TASK FORCE

Securing Army installations with energy that is clean, reliable and affordable

NCvSL 2013 Spring Forum

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Regional Environmental and Energy Office-Western

4 May 2013
Army Installations’ Changing Roles

- Today’s military installations are playing an ever increasing role in theater operations such as UAV patrols, and in energy security.
  - Installations are also playing an increased role in disaster and other community relief efforts

- Installations are increasingly susceptible to a fragile electrical grid.
  - Many Army installations are at the end of the distribution line, further increasing their exposure
Army Energy Consumption and Investment

United States
98,079 Trillion Btu

Federal Government
1,096 Trillion Btu (FY09)

DoD
819 Trillion Btu

U.S. Army
189 Trillion Btu

- Facilities
- Vehicles & Equipment (Tactical & Non-tactical)

Army FY 2011 Energy Budget
$5B

FY 2011 Army Energy Expenditures

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Fuel</td>
<td>$3.7B</td>
</tr>
<tr>
<td>Facility Energy</td>
<td>$1.3B</td>
</tr>
</tbody>
</table>

Army Power and Energy

Basing
- Installation
- Contingency
- Net Zero Installations
- Contingency Basing
- Smart & Green Energy
- Mini Grid Power Plants
- Adv. Mobile Medium Power Sources
- Insulated Tents/Spray Foam
- Renewable Energy Program Plan
- ARNG Energy Lab (Schools)
- LED & Electroluminescent Lighting
- Shower Water Reuse System
- Expeditionary Water Packaging
- Water From Air System
- System Integration Lab - Ft Devens
- Solar, Wind, Geothermal Power

Soldier
- Rucksack Enhanced Portable Power
- Expeditionary Energy
- Soldier Power Manager
- Nett Warrior

Vehicles
- Tactical
- Non Tactical
- Tactical Fuels Manager Defense
- Smart-Charging Micro Grids
- Vehicle-to-Grid (Fort Carson, CO)
- Alternative Fuels
- Low Speed Electric Vehicles
- Hybrid Electric Vehicles
- Hybrid Truck Users Forum (TARDEC)
- Hydrogen Fuel Cell Vehicles
- Improved Turbine Engine Program

OSD Operational Energy Strategy
- Senior Energy & Sustainability Council
- Energy Initiatives Task Force
- Army Energy Security Initiatives
- Net Zero Strategy

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As of March 14, 2013
Army Energy Outlook

**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*

**Energy Efficiency May Lower Baseline by 30%**

**Remaining Electric Consumption**

**NDAA Renewable Energy Requirement**

25% by 2025 or 2,500,000 MWh

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**0%**

**5%**

**10%**

**15%**

**20%**

**25%**

**30%**


**Total Energy in Megawatt Hours**

**NDAA 2010:**

25% by 2025

**7% Progress in 2012**

**Current Army Performance**

**NDAA Requirement**

**Total Energy in Megawatt Hours**

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

4 May 2013

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Energy Initiatives Task Force (EITF) established on September 15, 2011. EITF to serve as the central management office for partnering with Army installations to implement cost-effective, large-scale, renewable energy projects, leveraging private sector financing.

- Projects greater than 10MW
- Solar, Wind, Biomass/WTE and Geothermal technologies
- Will use existing DoD land-use and third-party financing authorities

Projects focused on enhancing installation energy security and access to power

Private sector investment originally estimated at $7B

DoD announces commitment to deploy 3 GW of renewable energy projects by 2025 on April 11, 2012
Balanced Enterprise Approach

EITF seeks to create a balanced pipeline of opportunities that will serve three driving principles:

- **Energy Security**
  - Surety (access)
  - Survailability (resilience)
  - Supply (alternative resources)
  - Sufficiency (adequacy for missions)
  - Sustainability
  - 24x7 supply for critical assets
  - Price Stability

- **Mandates**
  - NDAA - 25% by 2025
  - EPAct - 7.5% renewable electricity consumption by 2013
  - EO 13514 - 34% GHG reduction by 2020

- **Economic Benefits**
  - In-kind revenue
  - Reduced/stable energy bills
  - Cost avoidance

As of March 14, 2013
The EITF is producing a process for developing large-scale renewable energy projects that is **clear, consistent and transparent**.

**Phase 1: Initial Assessment**
- "Identify and Prioritize Opportunities"
  - Target: 90 Days
  - Current: 1-3 years

**Phase 2: Project Validation**
- "Develop an Opportunity Into a Project"
  - Target: 90-180 Days

**Phase 3: Acquisition**
- "Securing a Binding Agreement"
  - Target: .5-1 Years
  - Current: 1-3 Years

**Phase 4: Building Infrastructure**
- "Constructing Assets; Structuring Services"
  - Target: 1-3 Years

**Phase 5: O&M and Closure**
- "Manage the Operation and Transition to Closure"
  - Target: 10-30 years

**EITF Risk Assessment**
- USACE, DLA

**Acquisition Partners**
- MICC

**Mgt Partners**
- EITF Project Life Cycle Management
**Project Risk Assessment Template**

*Project Risk Factors are reviewed on a weekly basis to identify roadblocks and key issues for successful project development*

| Mission/Security | • How does project enhance energy security on host and surrounding installations?  
|                  | • What are the possible impacts to Installation operations or tenant missions?  
|                  | • Has the project been approved by Installation, Army HQ, and DoD staffs?  
| Economics        | • What is the estimate of the baseline capital cost?  
|                  | • What is the value of any RECs or other incentives?  
|                  | • What is the predicted resource? Has it been validated?  
|                  | • What is existing utility rate and alternative tariffs?  
|                  | • What are the impacts of the project to the POM?  
| Real Estate      | • What is the Real Estate approach and what authority is being used?  
|                  | • Has the project received required BLM approvals?  
|                  | • Is the project consistent with the Installation Master Plan?  
| Regulatory       | • What are the regulatory limits for interconnection, net-metering?  
|                  | • What is the status of getting required PUC approvals?  
| Off-Take         | • Will the installation consume all electricity generated?  
|                  | • What is the status of state RPS and other incentives to drive external demand?  
|                  | • If power is to be sold off the installation, have off-takers been identified?  
|                  | • Can the utility wheel power to other potential off-takers?  
| Integration      | • Is there sufficient line and substation capacity? What upgrades are required?  
|                  | • Are flow studies are required? What is the status?  
|                  | • Is the system upgradeable for smart grid and energy storage technologies?  
| NEPA             | • What are the major NEPA issues?  
|                  | • Which parties will implement NEPA and what is the timeline?  
| Acquisition      | • What is acquisition strategy and timeline to implement?  
|                  | • What performance risks are there with the developer or other partners?  

As of March 14, 2013  

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EITF Enabling Authorities

The EITF will leverage existing Congressional authorities to meet renewable energy goals:

- Contracts for energy or fuel for military installations (10 USC 2922a)
- Lease Authority (10 USC 2667)
- Acquisition of Utility Services (FAR Part 41)
- Purchase of Electricity (40 USC 591)
- Utility Energy Services Contracts (10 USC 2913)
- Energy Savings Performance Contracts (42 USC 8287)
- Cooperative Agreements (31 USC 6305)
- Easement Authority (40 USC 1314)
Wrap Up

• Energy and energy security are key components of Army mission effectiveness.

• Renewable energy is and will continue to be a significant part of the Army’s energy security strategy.

• Through the EITF, the Army is aggressively developing new business models and processes to support the rapid deployment of 1 GW of renewable energy projects by 2025.
Connect with the EITF

www.armyeitf.com

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