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Scouting Report: Tools & Support to Get Started

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TOPICS

- Introduction
- Energy Security – Why Now?
- The Army Energy Security
- Army Energy Security Program Structure
- Army Renewable Energy Projects – Current and Potential
- Federal Government Business Entry Points

Energy Security – Why Now?

- Historically, the Army has assumed energy would be available when and where needed
- Now, the Army faces increased risk of energy supply disruption:
  - Long, vulnerable fuel logistic supply lines
  - A fragile domestic power grid
- Building a more secure energy future is the right action for the Army, DoD and the Nation
  - Federal Mandates: *Meet our legal and national policy requirements*
  - DoD and Army policies: *Execute our leader's priorities*
- Energy security is not just about national security and climate change ….

  It's also about ***ECONOMIC IMPACT and JOB CREATION***

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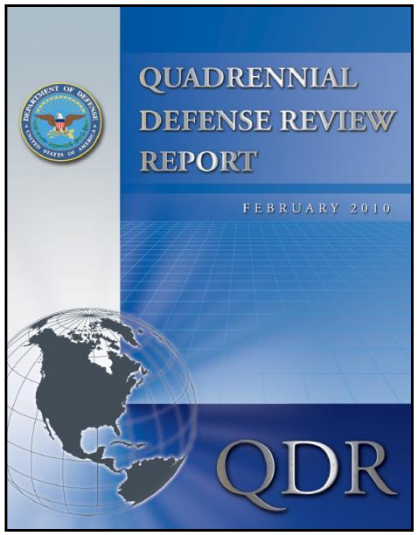
Quadrennial Defense Review
FEB 2010

QDR energy security discussion is consistent with Army approach and priorities



Focused on four specific issues where reform is imperative:
- security assistance
- defense acquisition
- defense industrial base
- **energy security** and climate change

Energy Security – "*assured access to reliable supplies of energy and the ability to protect and deliver sufficient energy to meet operational needs" – pg 87*

- DoD will
  - promote investments in energy efficiency
  - ensure that critical installations are adequately prepared for prolonged outages caused by natural disasters, accidents, or attacks
- Balance energy production and transmission to preserve test and training ranges and operating areas needed to maintain readiness

"**Energy efficiency** *can serve as a force multiplier, because it increases the range and endurance of forces in the field and can reduce the number of combat forces diverted to protect energy supply lines…" – pg 87*

- DoD will fully implement the energy efficiency KPP and fully burdened cost of fuel

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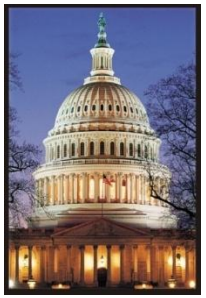
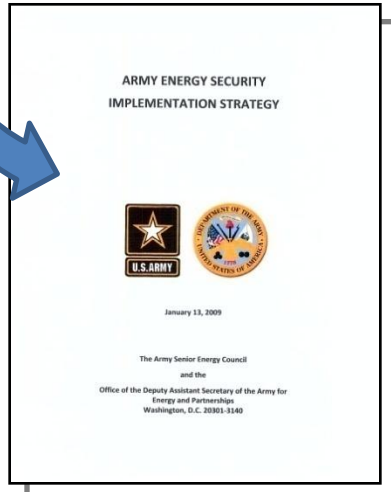
Army Strategic Energy Security Process

Energy Security Goals

1. Reduced energy consumption
2. Increased energy efficiency across platforms & facilities
3. Increased use of renewable/alternative energy
4. Assured access to sufficient energy supplies
5. Reduced adverse impacts on the environment

Statutes, Executive Orders, Committee Reports, Rules, DOE/OMB/CEQ Directives





Objectives & metrics Goal 1

Objectives & metrics Goal 2

Objectives & metrics Goal 3

Objectives & metrics Goal 4

Objectives & metrics Goal 5

Completed OPR Energy Security Implementation Plans Submitted to SEC

Campaign Plan

LOE #6 – Energy Efficiency and Security

Align Requirements to Funding Programs

FY12-17 POM Build

January 09 | March 09 | July 09 | October 09 | January 10 | We Are Here | September 10

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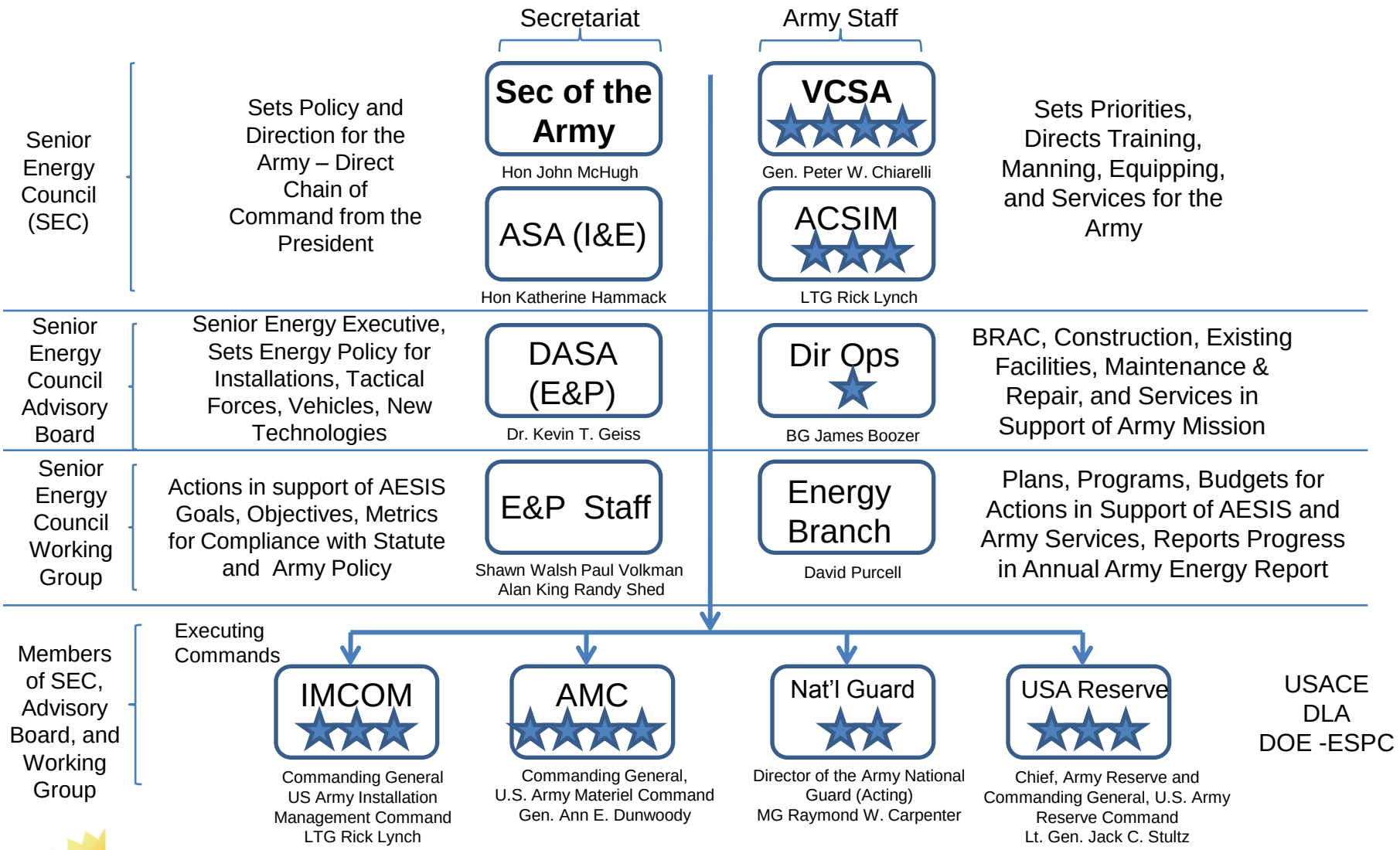
Army Energy Security Program Structure



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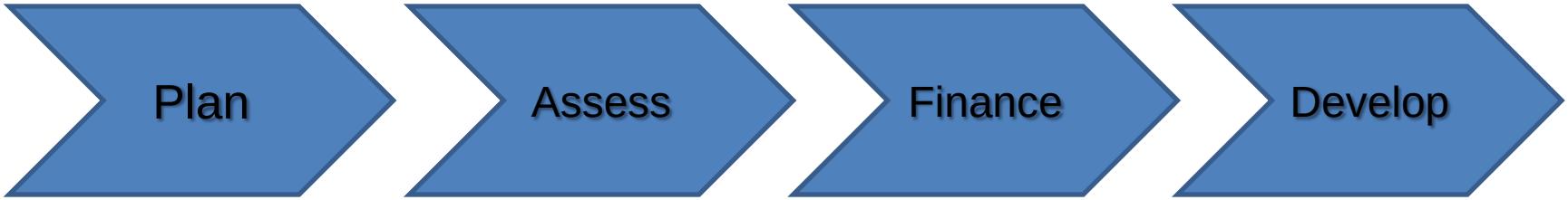
Renewable Energy Project Development Process

Key steps for Installations to consider when developing an onsite renewable energy project



- Review installation master plan
- Compatible with training requirements?
- Address OMB scoring issue
- Consider BLM withdrawn land issue
- Evaluate RECs
- Initiate NEPA process

- Validate renewable resource availability
- Evaluate available technologies
- Complete market analysis
- Complete business case analysis for project size & scope

- Screen all financing options (SRM/ECIP/ESPC/ UESC/EUL/PPA)
- Select appropriate financing option
- Program project on DA Form 4283 using SRM (>$750K) or on DD Form 1391 using ECIP (>$10M)
- Initiate alternative financing process for large-scale projects (<$10M)

- Coordinate permitting & project approval process
- Provide required project management support
- Closely monitor progress

Renewable projects help meet Army Energy Security Implementation Strategy goals

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Feasibility of Renewable Energy Generation on Select Army Garrisons

- Study completed in May 2010
- Purpose: assess Army CONUS real property for viable renewable energy projects
- Results:
  - Identifies the top states with Army installations for renewable energy development
  - Identifies Army garrisons and technologies for further detailed analysis and due diligence

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Feasibility of Renewable Energy Generation - Assessment Factors

- **Resource/Technology**
  - Resource potential (solar, wind, biomass, geothermal)
  - Capital and operating costs
  - Scale of operation
- **Policies**
  - Renewable Portfolio Standards
  - Tax Credits
  - Loan Guarantees
  - Carbon Cap & Trade
- **Market Factors**
  - Power demand
  - Regulated vs deregulated markets
  - Fuel Mix
  - Transmission Availability

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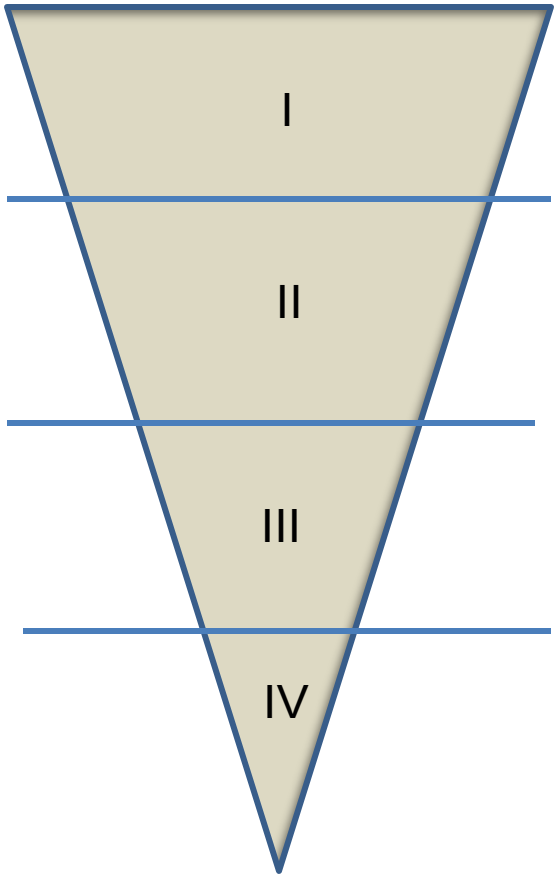
Feasibility of Renewable Energy Generation – Screening Stage Analysis

- **Screening Stage I:** All Army Garrisons
- **Screening Stage II:** Garrisons in states with good policy and demand for renewable power
- **Screening Stage III:** Garrisons in states with sufficient land and renewable resource
- **Screening Stage IV:** Garrisons to proceed with potential project evaluations



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Screening Results: State Rankings

State Rankings for Renewable Technology Development					
STATE	**Overall**	**Solar**	**Wind**	**Biomass**	**Geothermal**
CA	1	1	3	4	1
NM	2	2	1	44	2
ORE	3	7	15	3	4
CO	4	3	4	34	8
HA	5	5	8	33	3
ILL	6	12	6	1	36
NV	7	4	16	45	5
AZ	8	6	28	46	6
KS	9	13	7	13	14
WA	10	20	19	9	9

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Renewable Energy Projects
Challenges

- Land Availability – withdrawn BLM Land
- Water Availability
- National Environmental Policy Act (NEPA) and other environmental, safety & health requirements
- Renewable Energy Credits (RECs)
- Transmission / distribution lines

Renewable Energy Projects
Considerations

- Technology
  - Solar
  - Wind
  - Geothermal
  - Biomass
  - Other
- Acquisition Strategy
  - PPA, EUL, ESPC, UP, MILCON / ECIP
- Financing
  - Appropriated funds
  - Public-private partnership
  - Scoring
  - Renewable Energy Credits

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Summary of Potential Renewable Development Opportunities

Army Garrison	Technologies	Project Tier
Fort Irwin, CA	Solar, Geothermal	Top Tier Projects
Hawthorne Army Depot, NV	Solar, Geothermal	
Fort Bilss, TX	Geothermal, Solar	
White Sands Missile Range, NM	Geothermal, Solar	
Yakima Training Center, WA	Geothermal	
Fort Huachuca, AZ	Solar, Geothermal	2nd Tier Projects
Sierra Army Depot, CA	Geothermal	
Yuma Proving Ground, AZ	Solar, Geothermal	
Pinon Canyon Maneuver Site, CO	Wind, Solar, Geothermal	
Rock Island Arsenal, IL	Biomass	
Fort lewis, WA	Biomass	3rd Tier Projects
Schofield Barracks, HA	Solar	
Kahuku Training Area, HA	Wind	
Fort Carson, CO	Solar, Geothermal	

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Potential Federal Government Entry Points & Opportunities

- **U.S. Army Office of the Deputy Assistant Secretary for Energy and Partnerships [DASA(E&P)]**
- http://www.asaie.army.mil/Public/Partnerships/

- **U.S. Army Installation Management Command (IMCOM)**
- http://www.imcom.army.mil/hq/

- **Assistant Chief of Staff of the Army for Installation Management (ACSIM)** http://www.acsim.army.mil/

- **U.S. Army Energy Program** http://army-energy.hqda.pentagon.mil/

- **U.S. Department of Energy, Federal Energy Management Program (FEMP)** http://www1.eere.energy.gov/femp/

- **FedBizOpps.gov** https://www.fbo.gov

- **Grants.gov** http://www.grants.gov/

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