



US Army Power and Energy

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Army Strong



Army Threats to Energy



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



Army Energy Consumption



United States



1%

Federal Government



80%

DoD

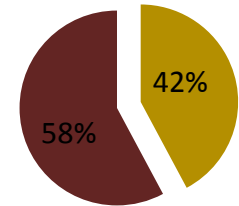
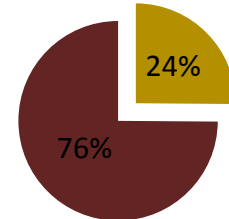
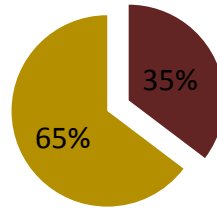


23%

U.S. Army



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



FY10 Highlights

- \$2.5+B Operational Energy Costs
- \$1.2 B Facility Energy Costs
- +64% fuel costs in Afghanistan - not counting cost to deliver and secure
- +\$400 million increase in fuel costs expected in FY11 across DoD in Afghanistan

U.S. = 98,079 Trillion Btu
 Fed Gov = 1,096 Trillion Btu (FY09)
 DoD = 819 Trillion Btu
 U.S. Army = 189 Trillion Btu

Sources: Energy Information Agency, 2010 Monthly *Energy Review*; Agency Annual Energy Management Data Reports submitted to DOE's Federal Energy Management Program (Preliminary FY2010)



Army Power and Energy



“Grand Challenges”

- Give soldiers and leaders capability to manage energy status, resources, performance
- Significantly reduce energy footprint
- Provide flexibility and resiliency by developing alternatives and adaptable capabilities

Power and Energy Strategy White Paper, Army Capabilities Integration Center/Research, Development and Engineering Command /Deputy Chief of Staff, G-4, US Army, 1 April 2010

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Net Zero Installations



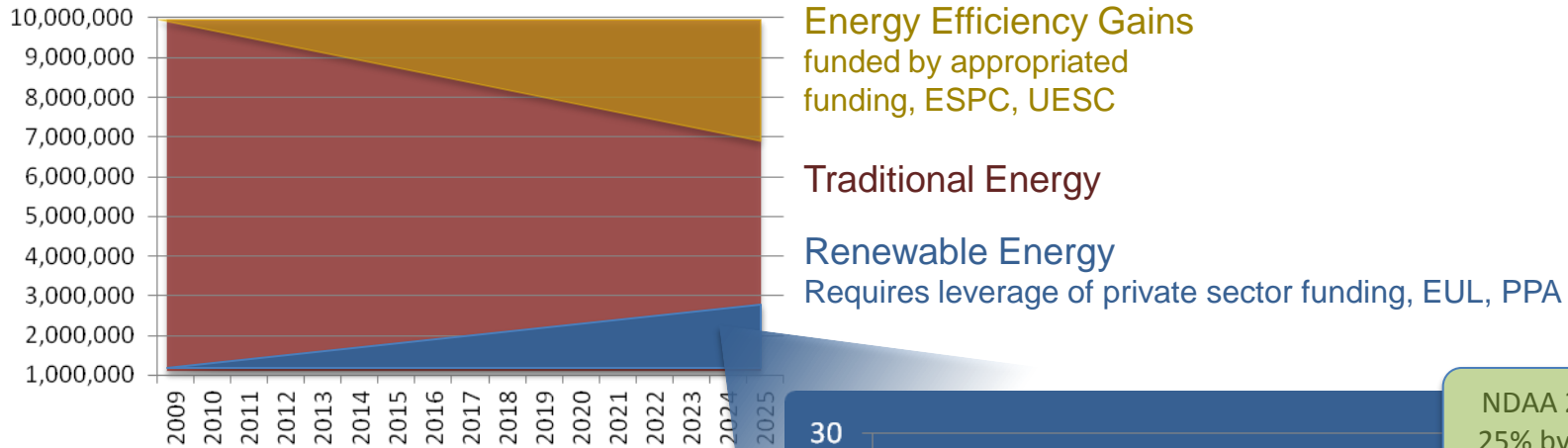
- **A Net Zero ENERGY Installation** produces as much energy on site as it uses, over the course of a year
- **A Net Zero WATER Installation** limits the consumption of freshwater resources & returns water back to the same watershed so not to deplete the groundwater & surface water resources of that region in quantity or quality
- **A Net Zero WASTE Installation** reduces, reuses, & recovers waste streams, converting them to resource values with zero solid waste to landfill
- **A Net ZERO INSTALLATION** applies an integrated approach to management of energy, water, & waste to capture & commercialize the resource value and/or enhance the ecological productivity of land, water, & air



Army Energy Outlook

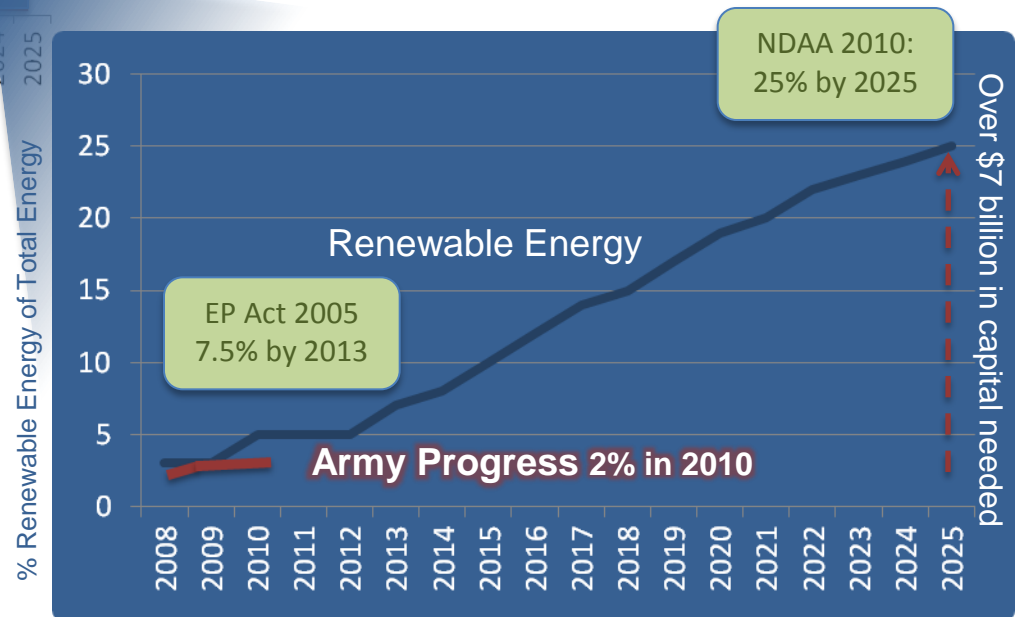


Path to 25% Renewable Energy by 2025 - Notional



Major Issues

- Declining Budgets
- Specialized Expertise
- Enterprise Strategy



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Army Renewable Energy Potential



SOLAR



GEO THERMAL



WIND



BIOMASS



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Army Renewable Energy NOT New



GOLD: Existing Project
BLUE: Planned Project
RED: Development or Testing Project

TOTAL PROJECTS = 140

194,643 MWh of renewable generation in FY2010

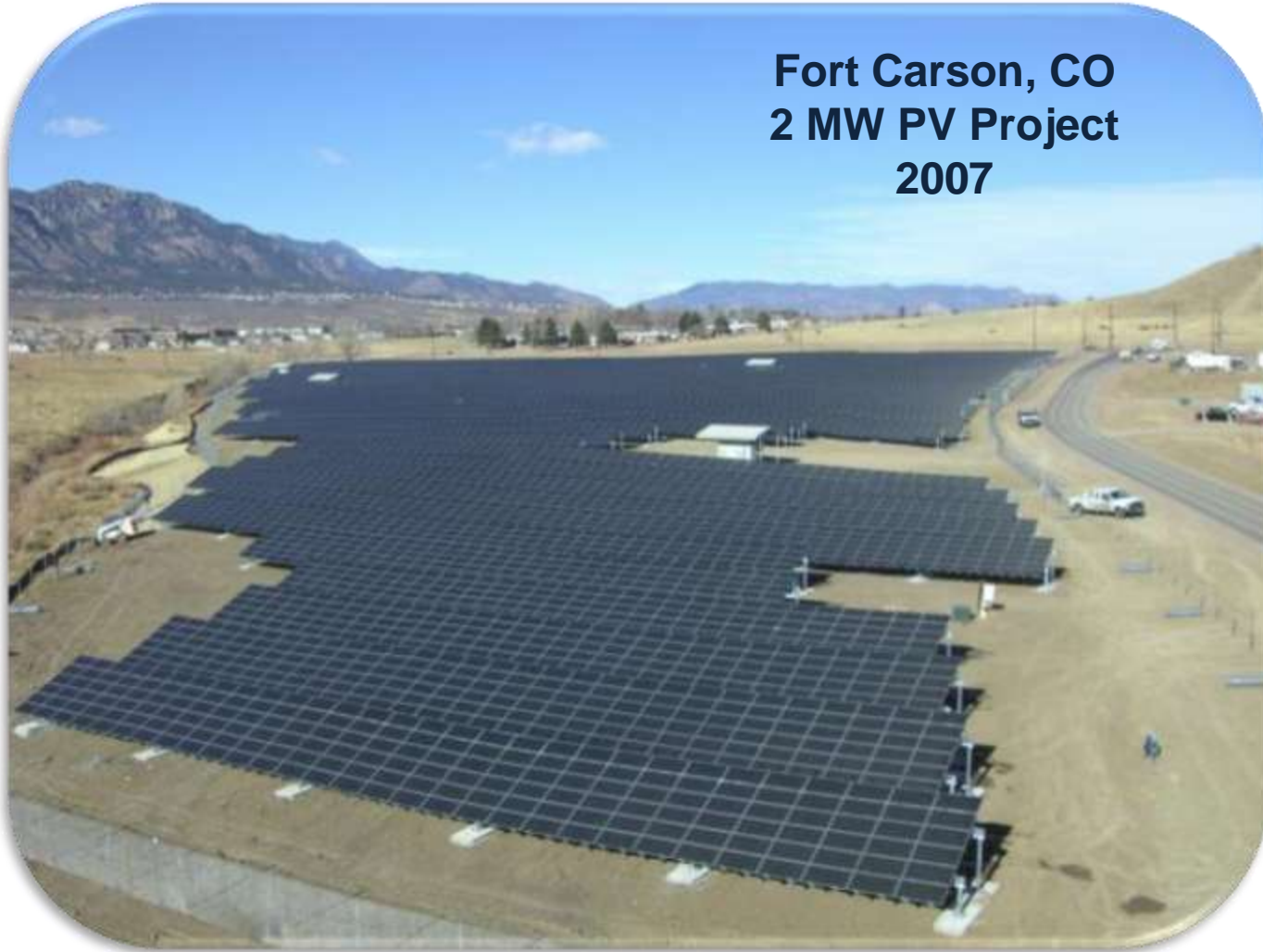
Source 2010 Army Energy Management Report



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Army Renewable Energy NOT New





EITF



Energy Initiatives Task Force (EITF) established by the Secretary of the Army on September 15, 2011.

EITF serves as the central management office to implement **cost-effective, large-scale**, renewable energy projects on Army installations, leveraging private sector financing.

Features:

Large-scale renewable energy projects

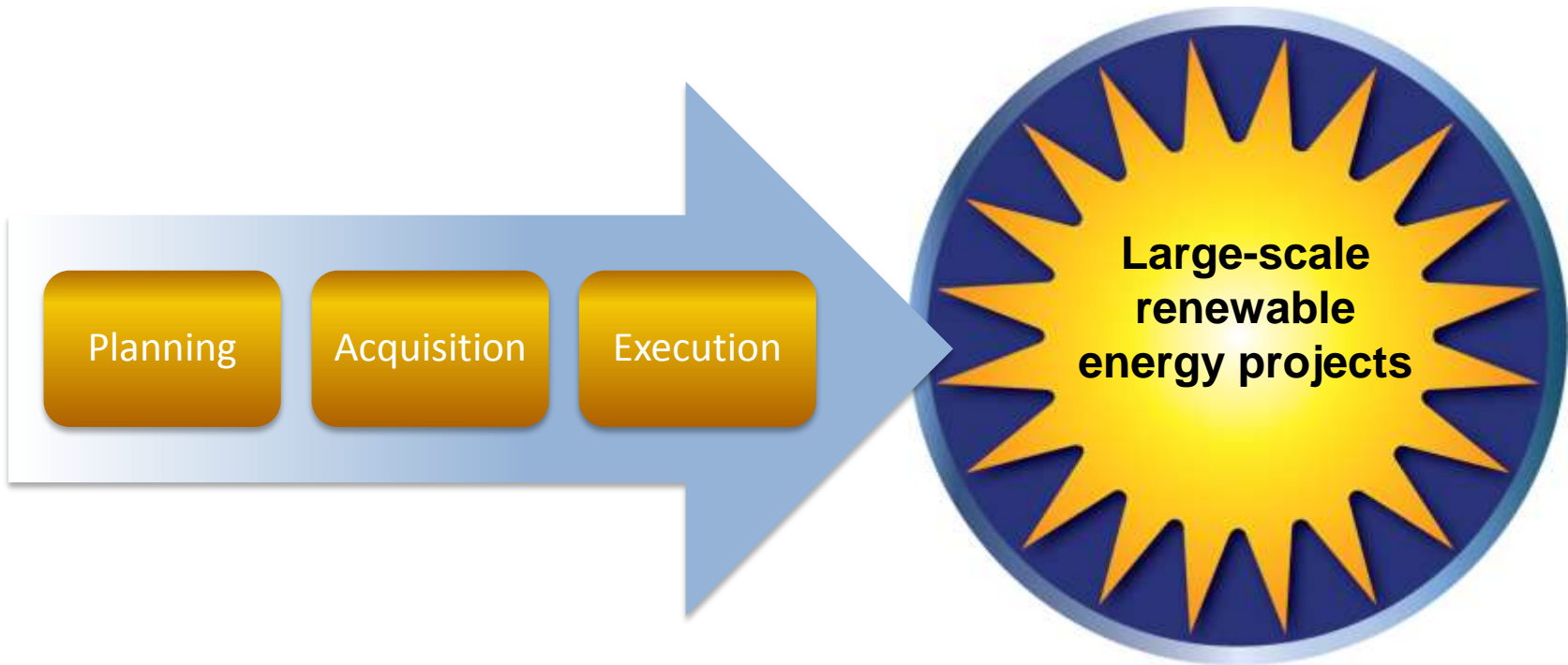
- Greater than 10MW
- Will coordinate with installations for 1-10MW opportunities
- Will use land-use and third-party financing authorities: EUL, easement, ESPC, PPA and UESC



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Roads to Project Completion





Opportunity Assessments





Find the EITF



Keep updated at www.armyeitf.com



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