

Joint United States Army & United States Air Force

RENEWABLE ENERGY Industry Day

June 12, 2012 Crystal Gateway Marriott | Arlington, VA

www.upcomingevents.ctc.com



U.S. ARMY



U.S. AIR FORCE

Army Energy Initiatives Task Force

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

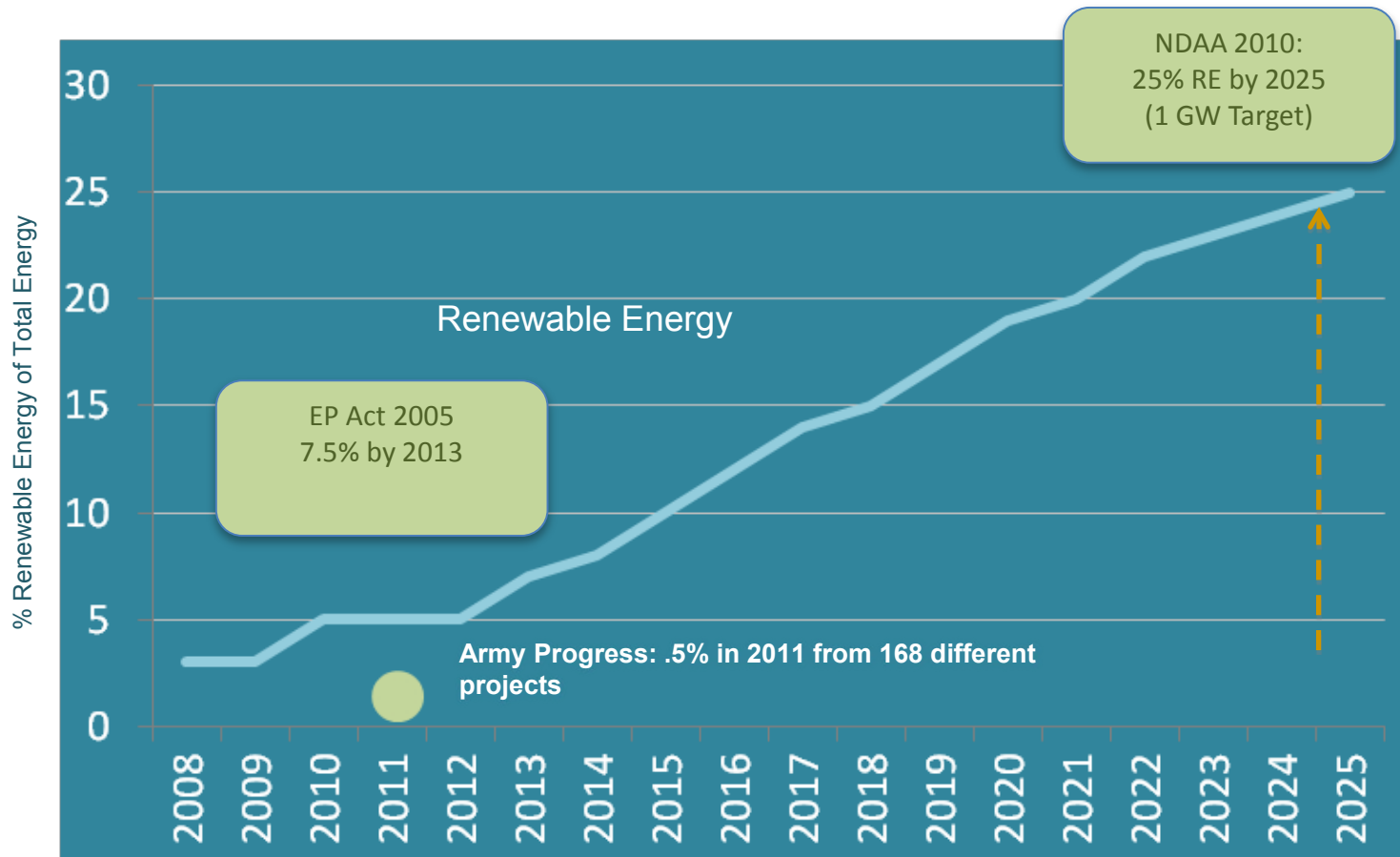
EITF serves as the central management office for **partnering** with Army installations to implement **cost-effective, large-scale,** renewable energy projects, leveraging **private sector financing**.

- Projects **equal to or greater than 10MW**
 - Will coordinate with installations for 1-10MW opportunities
 - Potential for projects that exceed Army requirements
- Solar, Wind, Biomass and Geothermal technologies
- Resources to support technology evaluation, resource validation, economic analysis, environmental permitting, utility permitting and interconnect, acquisition and other project requirements
- Will use existing DoD land-use and third-party financing authorities



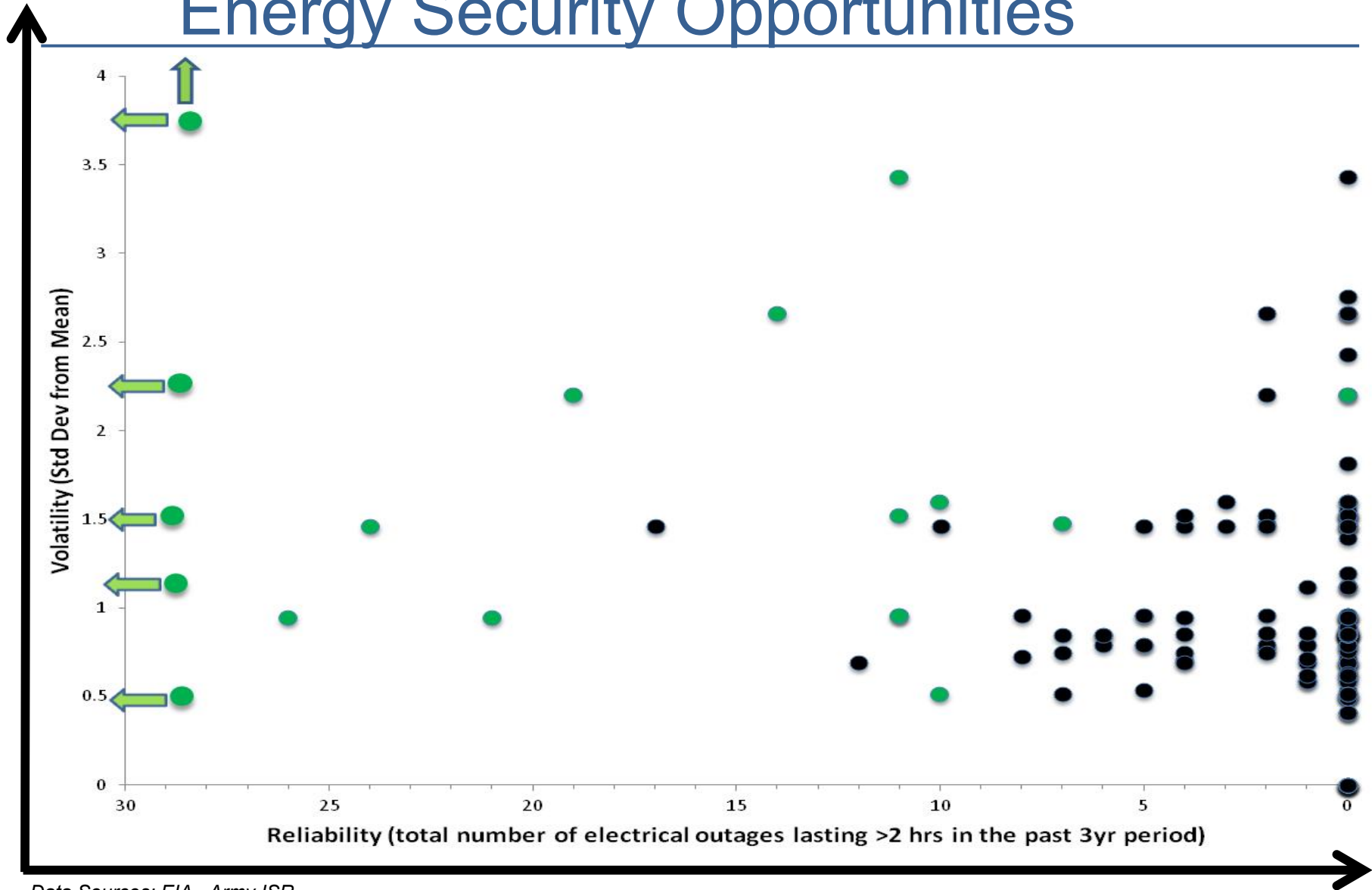
Secretary of the Army
John M. McHugh

Army Energy Outlook



Reaching Army energy goals will require significant number of large scale renewable energy projects

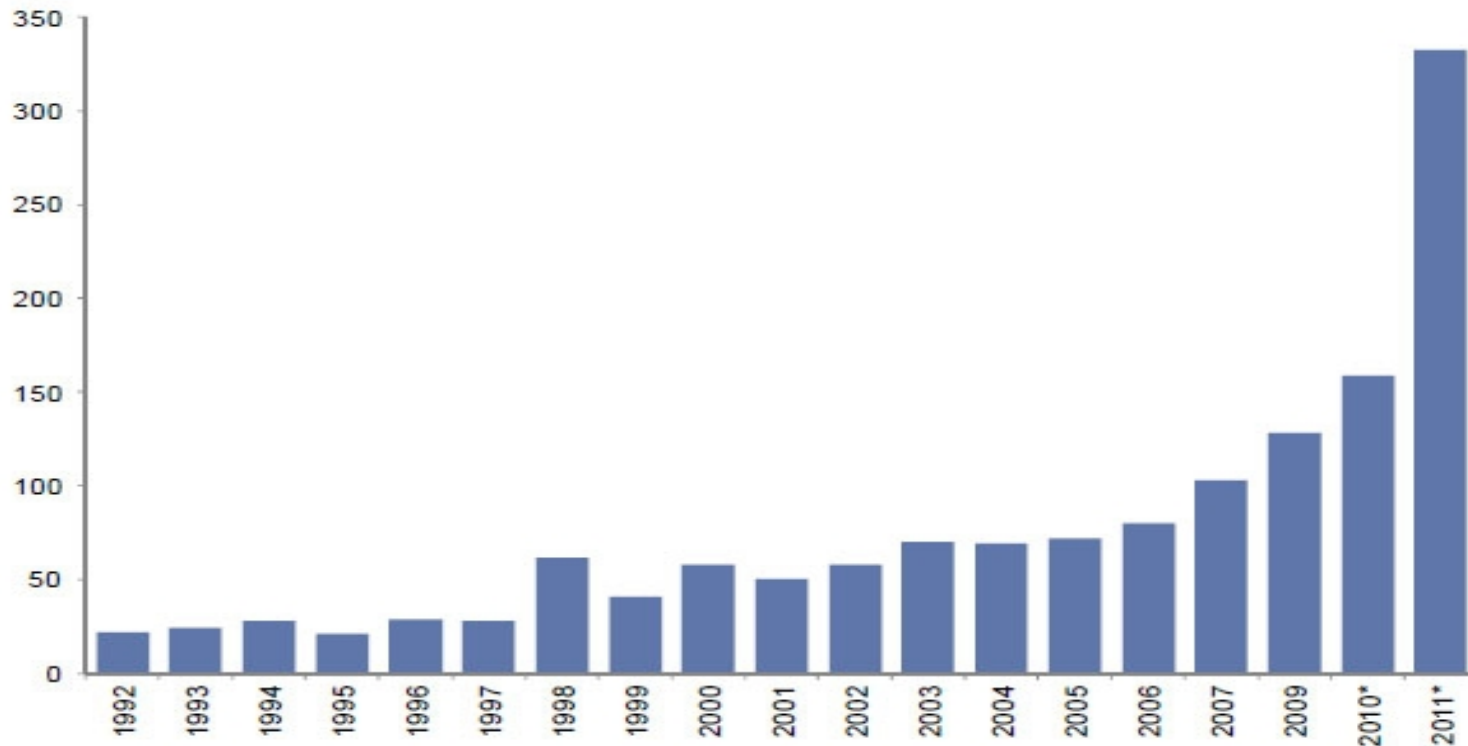
Energy Security Opportunities



Data Sources: EIA , Army ISR

The Need for Energy Security is Increasing

Power outages have risen sharply over the last decade
Major power disturbances in North America



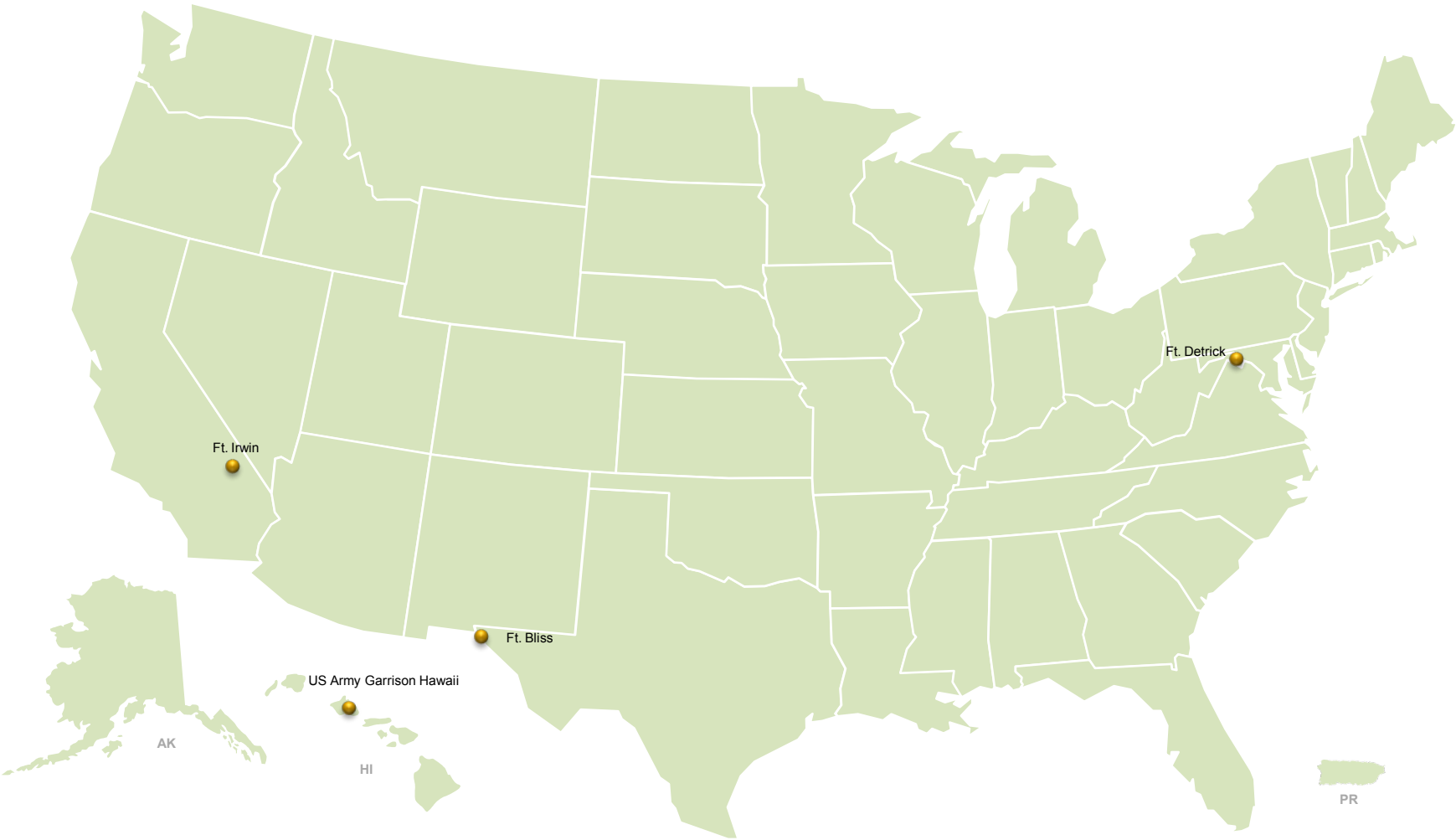
Note: * NERC equivalent data estimated based on the trends seen in the Eaton Blackout tracker for number of outages affecting over 50,000 people.

Source: NERC, Eaton Blackout Tracker, Goldman Sachs Research estimates.

EITF Highlights

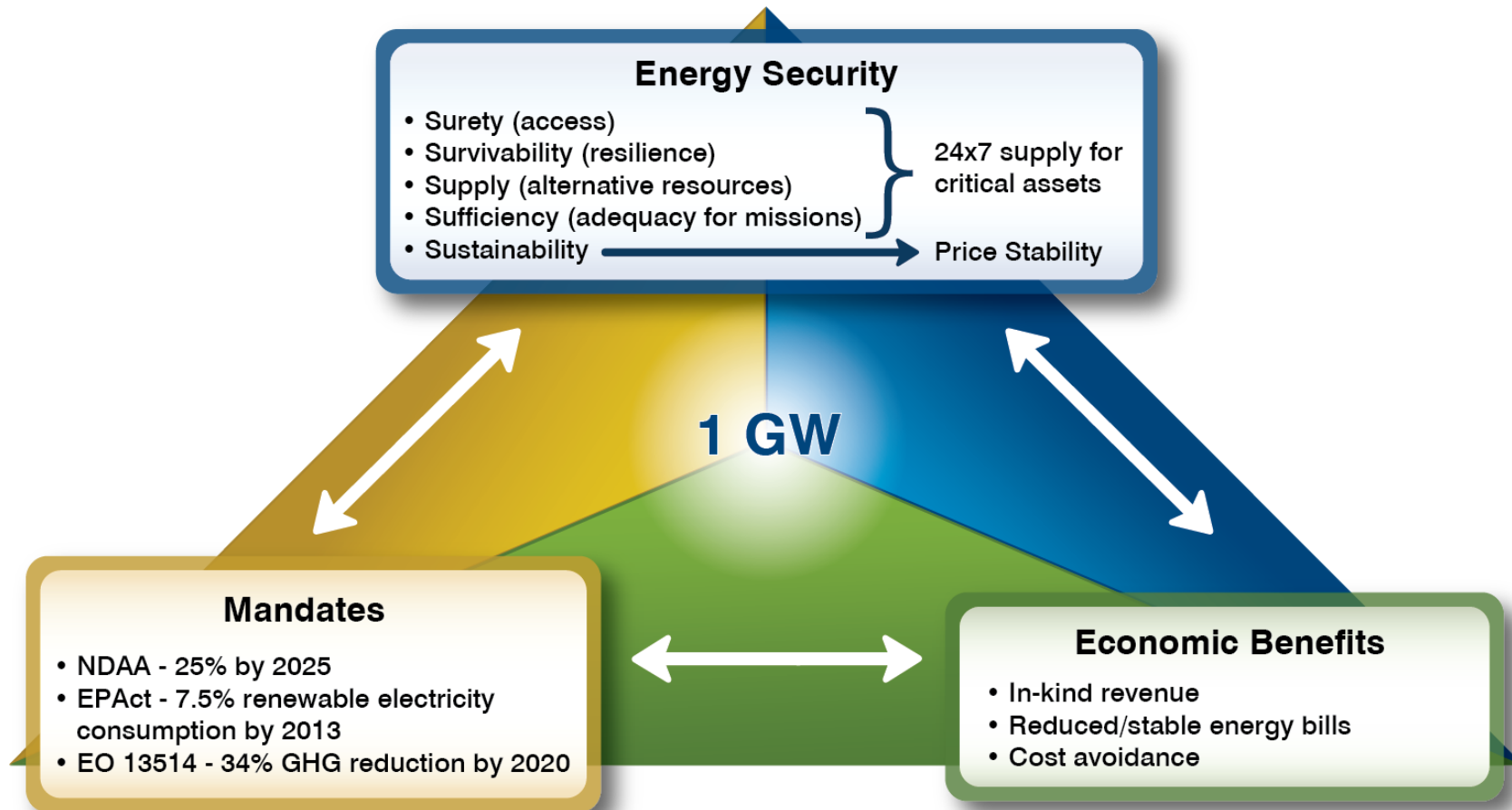
- Industry Day meetings with 97 companies
- Screened 180 Army and National Guard sites
- Development of Renewable Energy Project Development Guide with standardized processes and templates
- Development of key renewable energy project policies
- Reviewed and provided responses to over 900 comments to the USACE MATOC
- Conducted 27 site visits to 13 installations
- Initiated 8 NEPA analyses
- Working with over a twenty different installations on projects totaling 683 MW
- Coordinating with DOE on streamlined project financing

Near-Term Project Opportunities



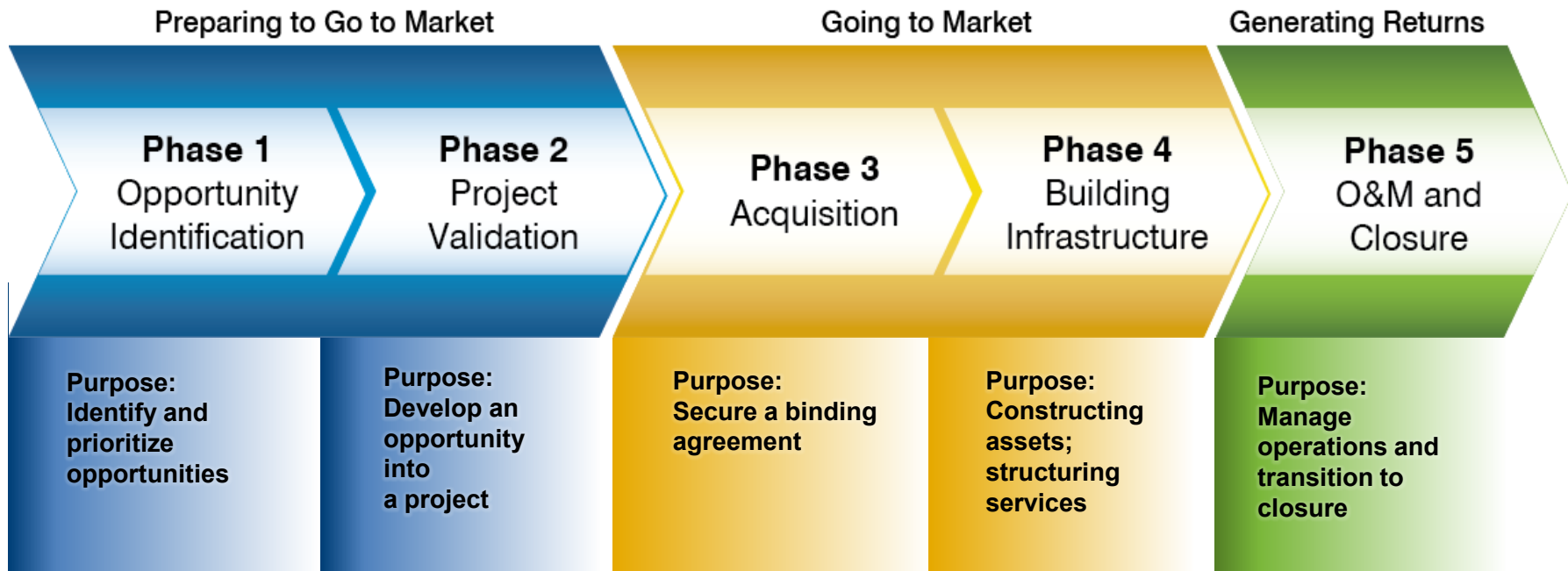
Balanced Enterprise Approach

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



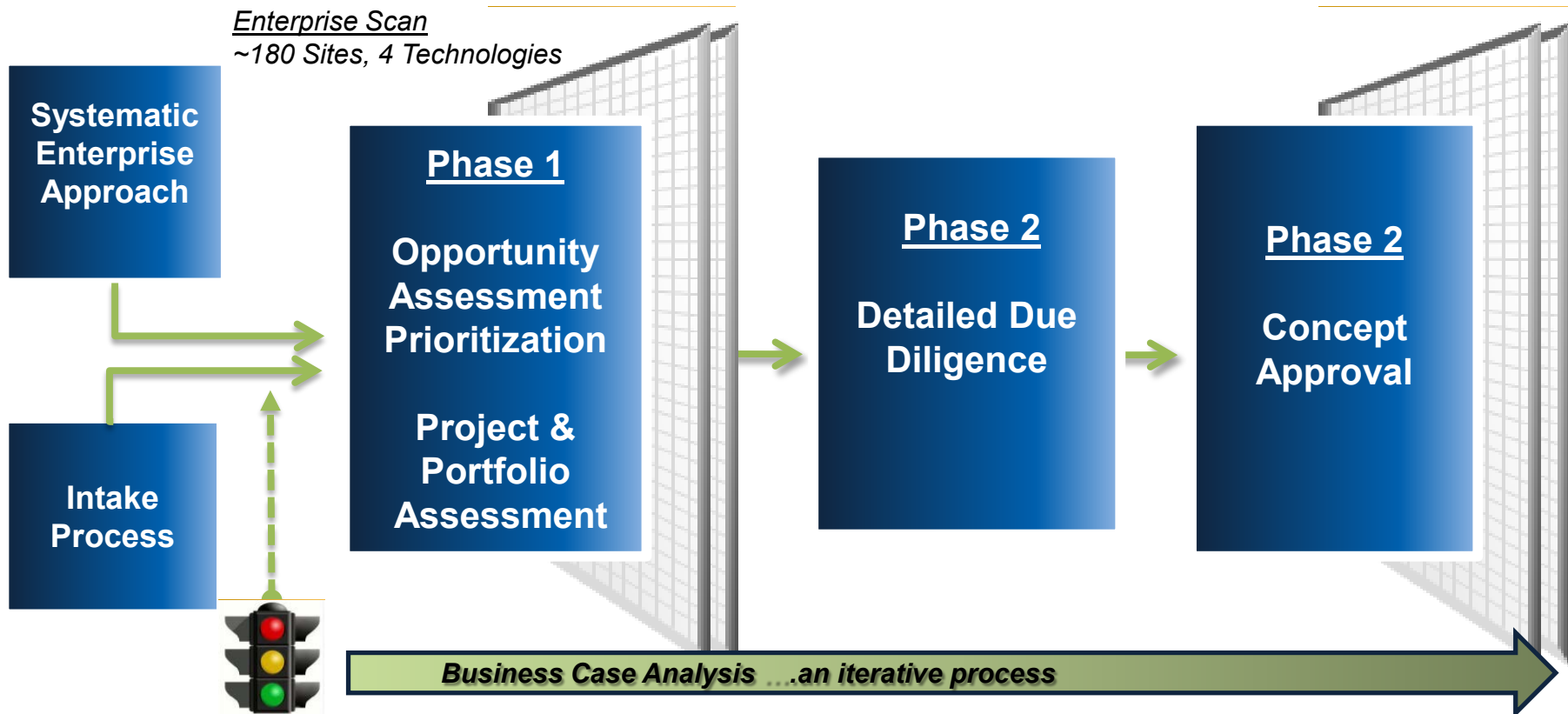
Planning and Execution Process

The EITF is producing a process for developing large-scale renewable energy projects that is **clear, consistent and transparent**. This process will be described in a ***Renewable Energy Project Development Guide*** that will detail the five phases of project development.



Our Evaluation Process

In tandem with the “enterprise view”, we are continually reviewing ideas coming from industry and installations



Project Risk Assessment Template

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



Project Risk Assessment	
Mission/ Security	<ul style="list-style-type: none"> • How does project enhance energy security on Installation? • What are the possible impacts to Installation operations or tenant missions?
Economics	<ul style="list-style-type: none"> • What is the estimate of the baseline capital cost? • Have all other development costs been included? • What is the value of any RECs? • Has resource been validated? • What is existing utility rate and alternative tariffs? • Does analysis show cost savings for Army considering current and projected utility rates? • What are the impacts of the project to the POM?
Real Estate	<ul style="list-style-type: none"> • What is the approach and what authority is being used? • What are issues to obtaining required BLM agreement?
Regulatory	<ul style="list-style-type: none"> • What are the regulatory limits for interconnection, net-metering? • What is the status of getting required PUC approvals?
Off-Take	<ul style="list-style-type: none"> • How much does installation use now and is this sufficient to consume all electricity? • If power is to be sold off the installation, have off-takers been identified? • What is the status of state RPS to drive demand?
Integration	<ul style="list-style-type: none"> • What are the technical issues to connect to grid (e.g., substation, line capacity, etc.)? • What is the status of required interconnect or flow studies?
NEPA	<ul style="list-style-type: none"> • What are the major NEPA issues? • Who will implement NEPA and what is the timeline?
Acquisition	<ul style="list-style-type: none"> • What is acquisition strategy and timeline to implement? • What performance risks are there with the developer or other partners?

EITF Execution Division Project Teams

Project Director

- > Develops and recommends project strategy to Army leadership

Project Support Lead

- > Coordinates day-to-day project management activities
- > Facilitates development of project business case

Financial SME

- > Analyzes project finances and determines financial viability
- > Assesses Army budget impacts

Utility SME

- > Assesses and quantifies interconnection/integration requirements
- > Develops recommended strategy for interconnection

Stakeholder SME

- > Tracks stakeholder issues/sensitivities (utility, community, state/local Government)

Regulatory SME

- > Ensures and advises on regulatory compliance

Technical SME

- > Assesses renewable energy resource
- > Conceptual layout and design requirements

Acquisition / Legal SME





- > Assesses contract and acquisition issues and recommended approached




Environmental SME

- > Manages compliance with NEPA and develops all required assessment documents

EITF Project Execution Critical Paths

All dates are pre-decisional and subject to change

Project	Q3, 2012			Q4, 2012			Q1, 2013		
	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
 Irwin 20 MW					BCA Complete				NEPA Complete
 Bliss 20 MW			BCA Complete	NEPA Complete					
 Detrick 15 MW	NEPA Complete		BCA Complete						
 USAG-HI 50 MW	NEPA Complete		BCA Complete						

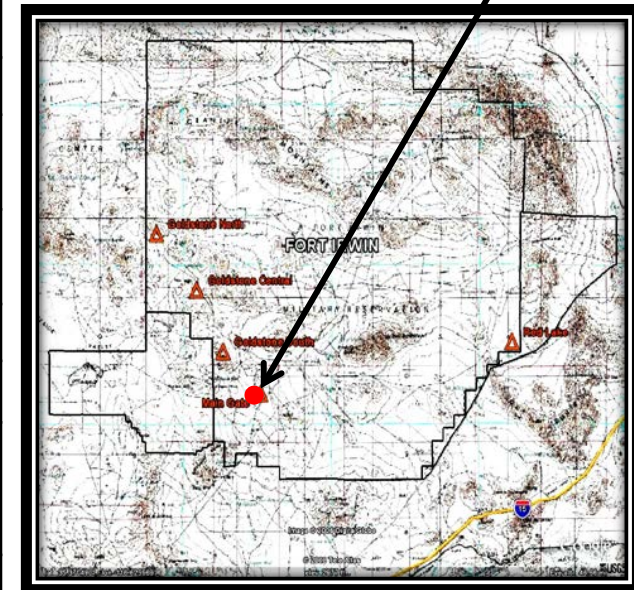
 Project Milestone
  Army Leadership Approval
  Acquisition Action

Fort Irwin, California

- *Project Size:* 20 MW Solar
- *Transactions:* Power purchase agreement with real estate agreement
- *Primary Authority:* 10 USC 2922a
- *Next Step:* Negotiation of PPA terms with Irwin Energy Security Partners (competitively selected in July 2009)
 - Anticipated PPA in Q1, FY13



Proposed Project Site

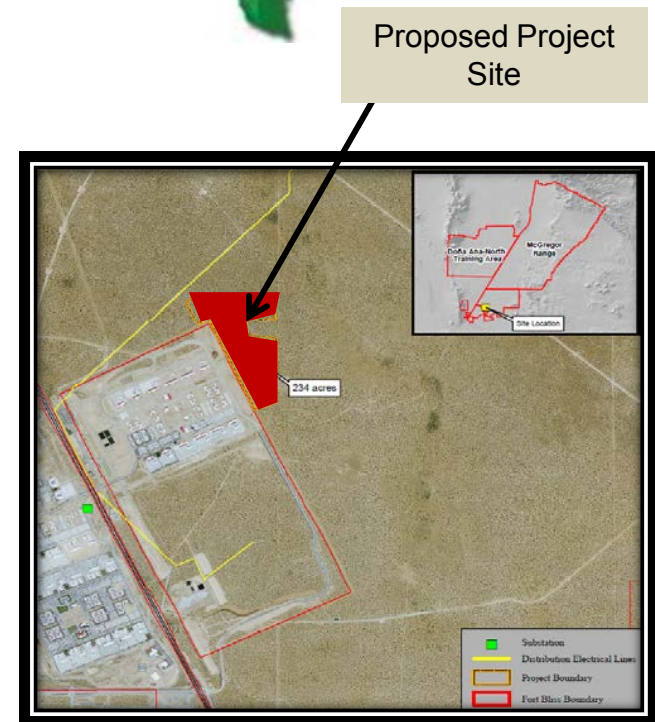
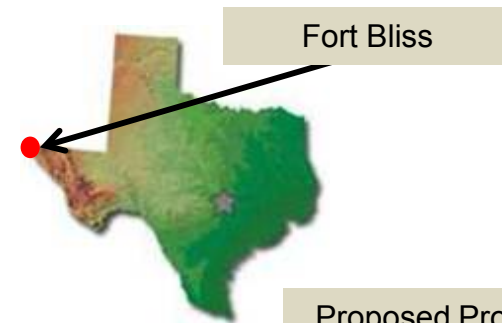


PROJECT ASSESSMENT CRITERIA	
<i>Mission / Security</i>	• Selected sites have been deconflicted from mission
<i>Economics</i>	• Solar market conditions favorable
<i>Real Estate</i>	• Planned land use authority is a license or easement
<i>Regulatory</i>	• Developer has submitted signed Systems Impact and Facilities Study agreement
<i>Off-Take</i>	• All electricity will be consumed on-site
<i>Technical</i>	• Will require additional tie-in and upgrades
<i>NEPA</i>	• Ongoing biological assessment • NEPA will be complete by December 2012 with expected FONSI
<i>Acquisition</i>	• PPA with Irwin Energy Security Partners

Fort Bliss, Texas

- *Project Size:* 20 MW Solar
- *Transactions:* Power purchase agreement with real estate agreement
- *Primary Authority:* 10 USC 2922a
- *Next Step:* Anticipated RFP in Q4, FY12

PROJECT ASSESSMENT CRITERIA	
<i>Mission / Security</i>	• Selected sites have been deconflicted from mission
<i>Economics</i>	• Solar market conditions favorable
<i>Real Estate</i>	• Determining appropriate real estate transaction
<i>Regulatory</i>	• Will require PUC approval for special tariff contract
<i>Off-Take</i>	• All electricity will be consumed on-site
<i>Technical</i>	• Transmission interconnection upgrades required
<i>NEPA</i>	• NEPA will be complete July 2012 with expected FONSI
<i>Acquisition</i>	• Sole source PPA with regulated utility • Utility will competitively select developer

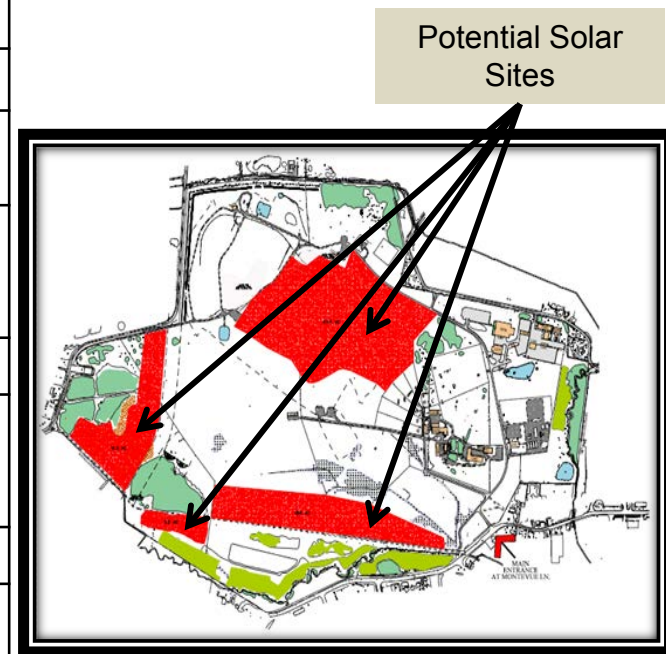
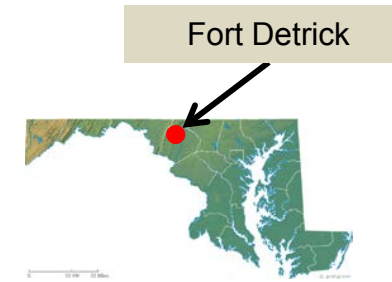


Fort Detrick, Maryland

- *Project Size:* 15 MW Solar
- *Transaction Type:* Power purchase agreement with real estate agreement
- *Primary Authority:* 10 USC 2922a
- *Next Step:* Anticipated RFP in Q4, FY12

PROJECT ASSESSMENT CRITERIA

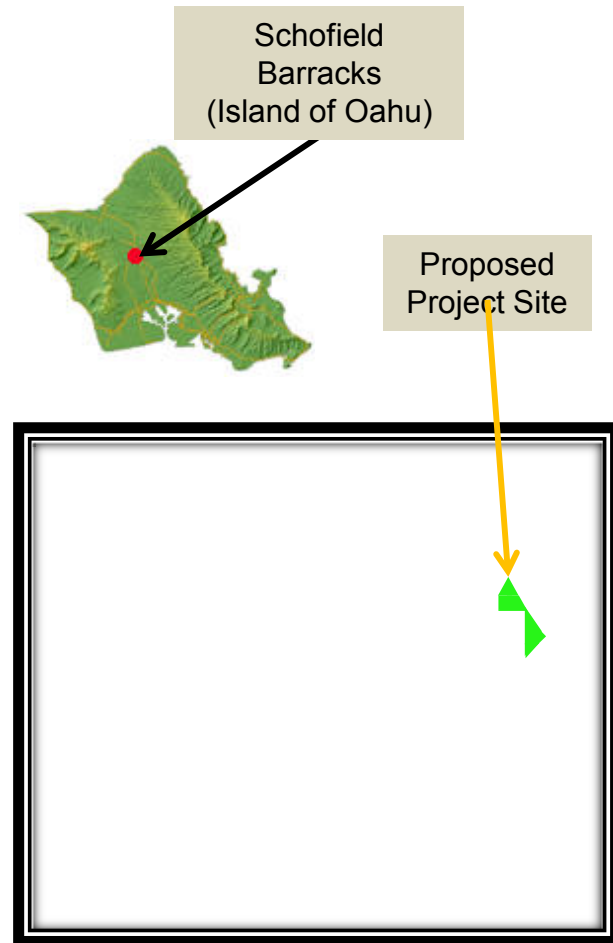
<i>Mission / Security</i>	<ul style="list-style-type: none"> • Selected sites have been deconflicted from mission
<i>Economics</i>	<ul style="list-style-type: none"> • Project to leverage available RECs
<i>Real Estate</i>	<ul style="list-style-type: none"> • Planned land use authority is a license or easement
<i>Regulatory</i>	<ul style="list-style-type: none"> • Selected developer required to enter into interconnection agreement with Potomac Edison
<i>Off-Take</i>	<ul style="list-style-type: none"> • All electricity will be consumed on-site
<i>Technical (Integration)</i>	<ul style="list-style-type: none"> • Army-owned infrastructure upgrades underway • May require additional distribution upgrades
<i>NEPA</i>	<ul style="list-style-type: none"> • NEPA is complete with FONSI
<i>Acquisition</i>	<ul style="list-style-type: none"> • Competitive solicitation for PPA through Defense Logistics Agency (DLA)



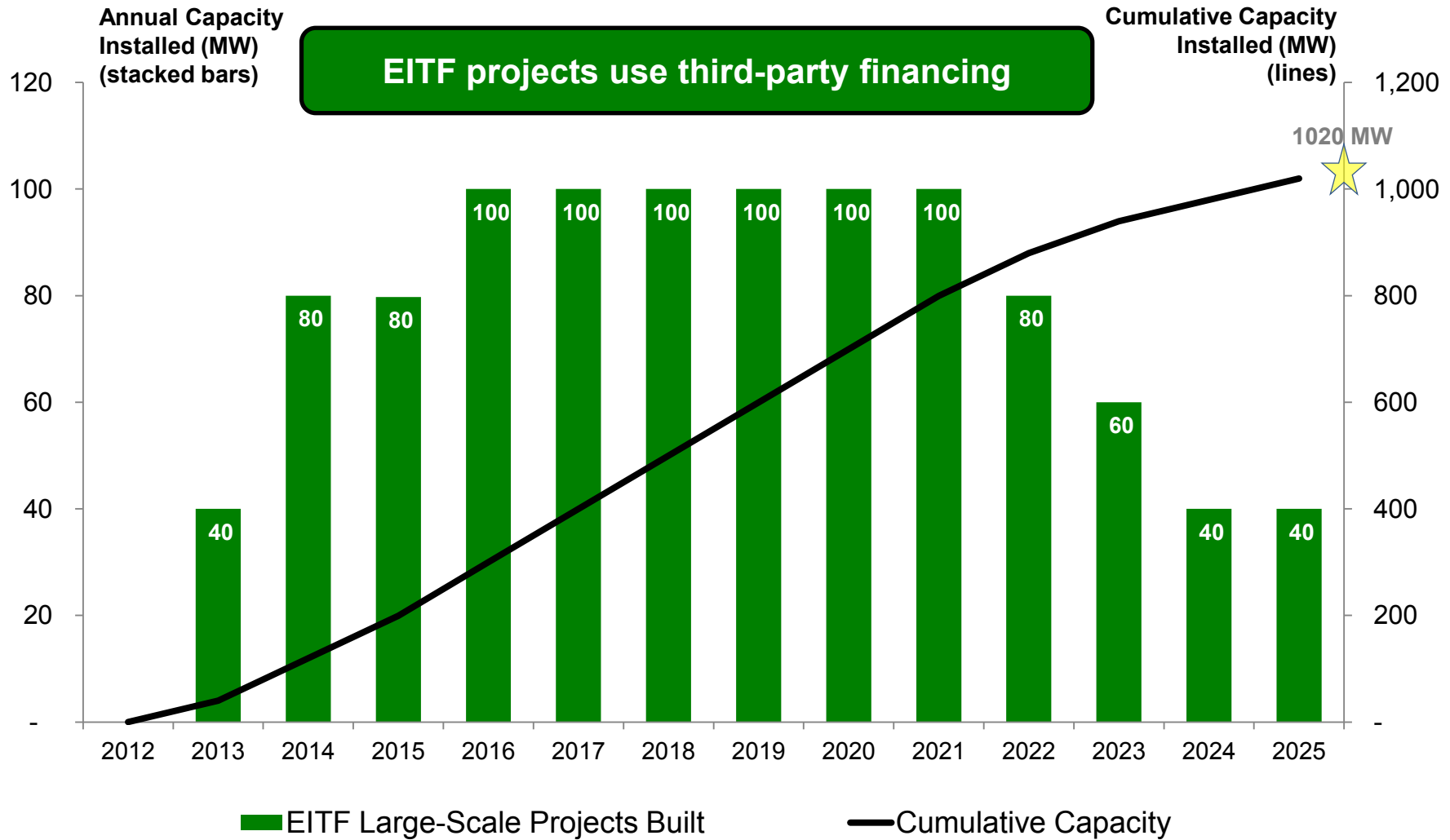
Schofield Barracks, Hawaii

- *Project Type:* 50 MW biofuel
- *Transaction Type:* Lease with in-kind consideration
- *Primary Authority:* 10 USC 2667
- *Next Step:* Anticipated MOU with utility (HECO) in Q4, FY12

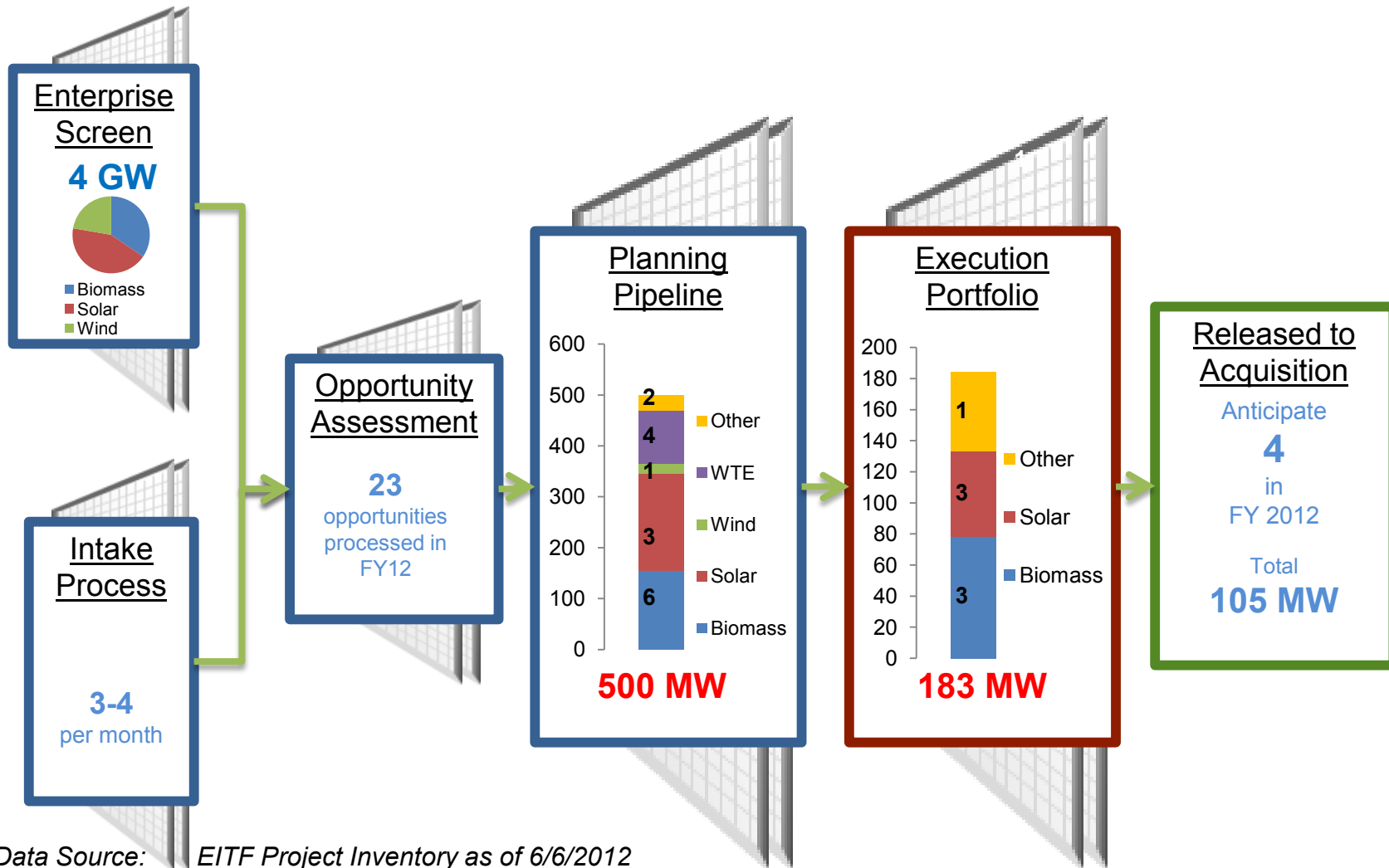
PROJECT ASSESSMENT CRITERIA	
<i>Mission / Security</i>	<ul style="list-style-type: none"> • Selected sites have been deconflicted from mission
<i>Economics</i>	<ul style="list-style-type: none"> • No planned power purchase agreement with Army therefore no impact on existing tariff
<i>Real Estate</i>	<ul style="list-style-type: none"> • Proposed land lease under 10 USC 2667
<i>Regulatory</i>	<ul style="list-style-type: none"> • Project subject to PUC approval
<i>Off-Take</i>	<ul style="list-style-type: none"> • Utility to consume all off-take • Dedication of power to installations in the event of a commercial grid outage
<i>Technical</i>	<ul style="list-style-type: none"> • Infrastructure upgrades will be installed to enable islanding of installation
<i>NEPA</i>	<ul style="list-style-type: none"> • NEPA action in planning
<i>Acquisition</i>	<ul style="list-style-type: none"> • Under development



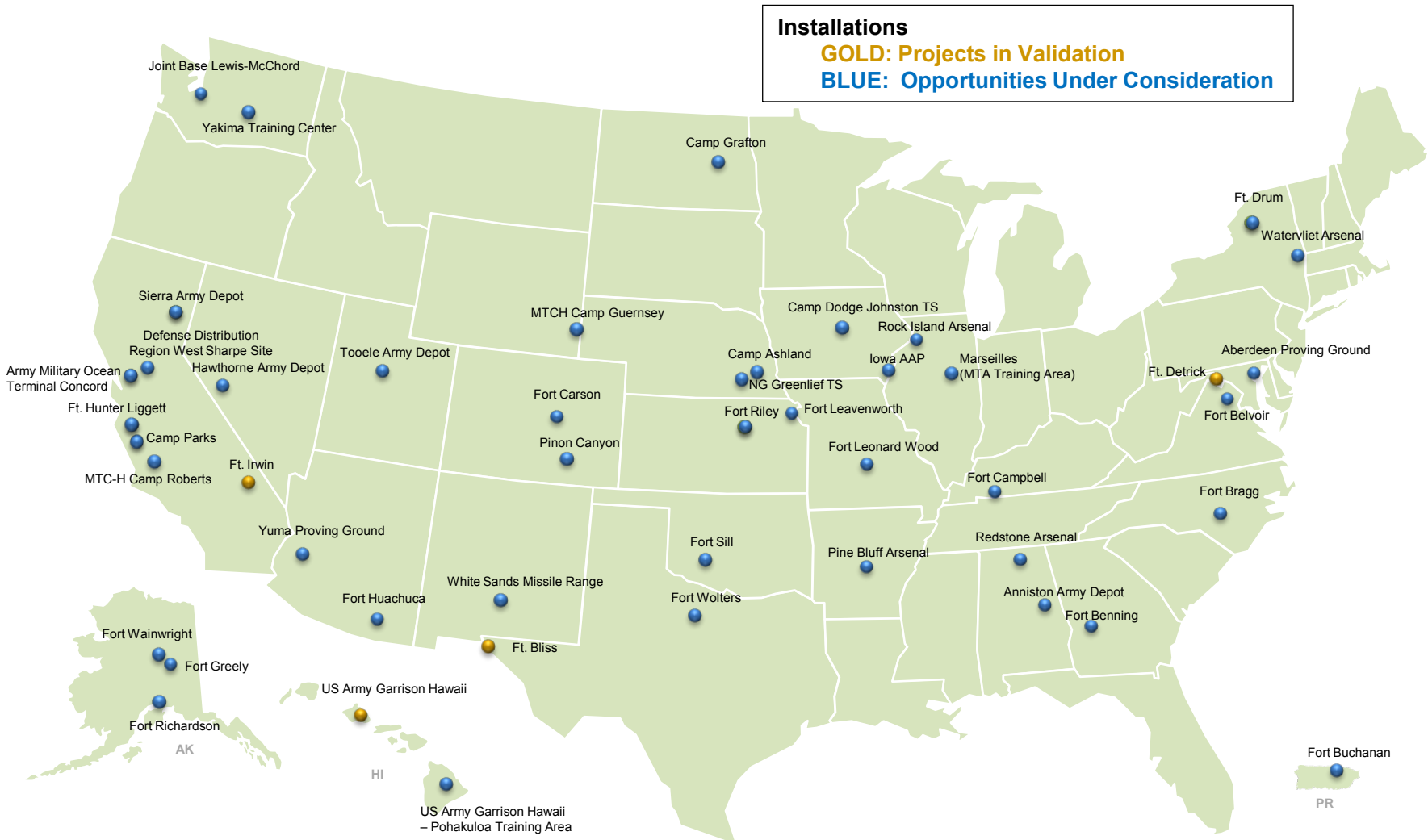
Army Glide Path to 1 GW



A Healthy Pipeline of Projects



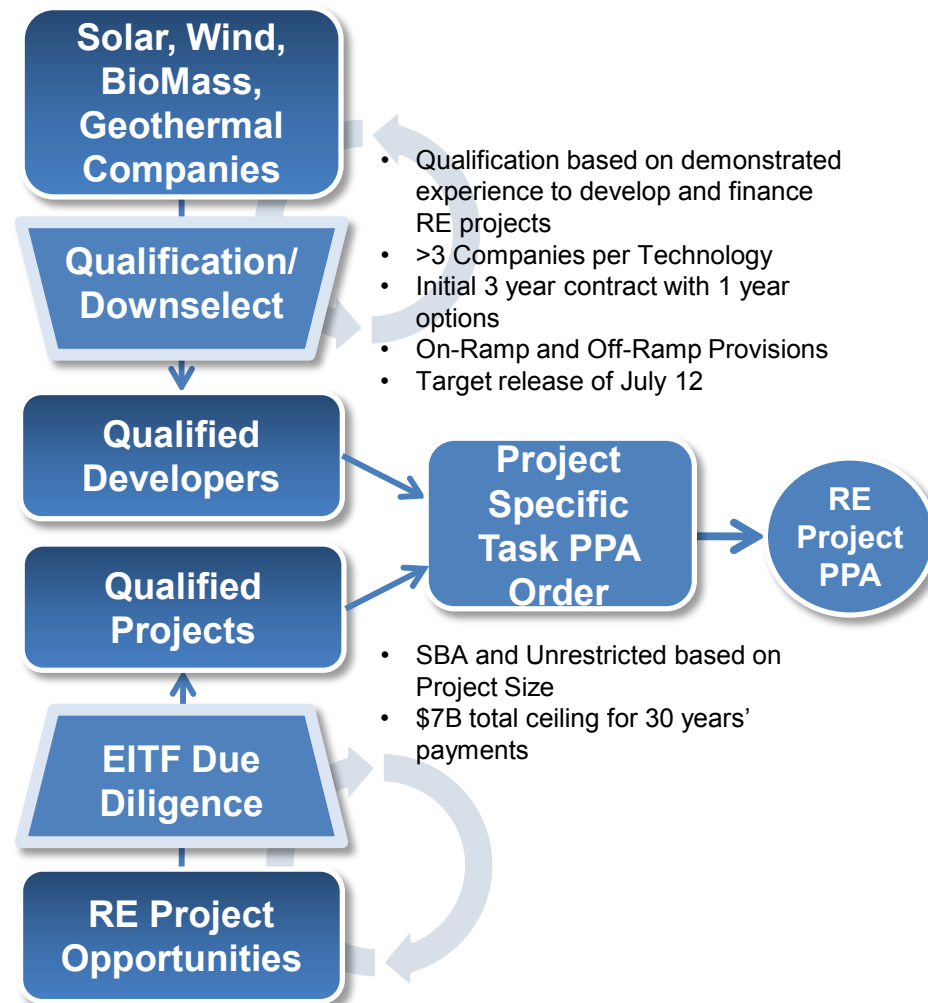
Large-Scale Renewable Energy Opportunities



EITF Acquisition Approach

- The EITF will develop a multi-pronged acquisition strategy that can provide required flexibility beyond the Task Force term.
- We expect to utilize multiple contracting offices, potentially including the Army Corps of Engineers and Defense Logistics Agency, as well as DOE power marketing authorities (WAPA, BPA, TVA).
- The EITF anticipates leveraging a Multi-Award Task Award Contract (MATOC) for PPA's being developed through USACE-Huntsville.
 - RFP targeted for release July 12

Multi-Award Task Order Contract (MATOC)



Working with the EITF

Industry

- **GovEnergy**, 19 – 22 August 2012, St. Louis MO
- **AUSA**, 22 – 24 October 2012, Washington D.C.
- Register to **meet with EITF staff** to provide summaries on industry capabilities, visit www.armyeitf.com
- **Industry Days** at installations

Installations

- The EITF will actively work with installations to screen and provide feedback on renewable energy project opportunities based on an enterprise-wide approach.

Keep updated at www.armyeitf.com

