



**American Council on  
Renewable Energy**

**Mr. Richard Kidd**

**Deputy Assistant Secretary of the Army  
(Energy and Sustainability)**



## **General Order 1:**

“...The ASA (IE&E) is responsible for setting the strategic direction for and ensuring Army efforts related to installations, Army real estate, energy security and sustainability and the environment are executed consistent with law, regulation and policy.”

“Supervising Army energy security and sustainability, including the development of strategy and policy, coordination of initiatives, supervision of HQDA councils and committees and representation of Army environmental and sustainability interests in coordination with Federal regulatory agencies and State and local governments.”

## **DASA E&S Mission:**

Provide strategic leadership, policy guidance, program oversight and outreach for energy and sustainability throughout the Army enterprise to enhance current installation and operational capabilities, safeguard resources and preserve future options.



## SOLDIER      BASING      VEHICLE



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**.

- **Resilience**: the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions (E.O. 13693)
- **Energy Security**: having assured access to reliable supplies of energy and the ability to protect and deliver sufficient energy to meet mission essential requirements
- **Soldier:**
  - Ø Lightening soldier power loads
  - Ø Agility and self-reliance through renewable energy
- **Vehicles:**
- **Basing:**
  - Ø Improving installation fuel, water and energy efficiency
  - Ø Diversity of supply through renewable energy enhancing energy security
  - Ø Hybrid energy solutions
  - Ø Integration w/ microgrids



## Direct Acquisition of Combat Systems and Solutions

E2S2, REF



## MILCON

Bid Savings, ECIP,



1.5 MW Wind Turbine  
Tooele Army Depot

## ESPCs



4.1 MW Solar Array  
White Sands Missile Range

## ESTCP

Environmental Security Technology  
Certification Program



250KW Methane Power Plant  
Ft. Benning GA

## Residential Community Initiative (RCI)

86,000 homes, 44 installations,  
98% of Army Family Housing in U.S.

Leverages \$1.9B in government  
equity  
into \$13.3B in private development  
7 to 1 leverage

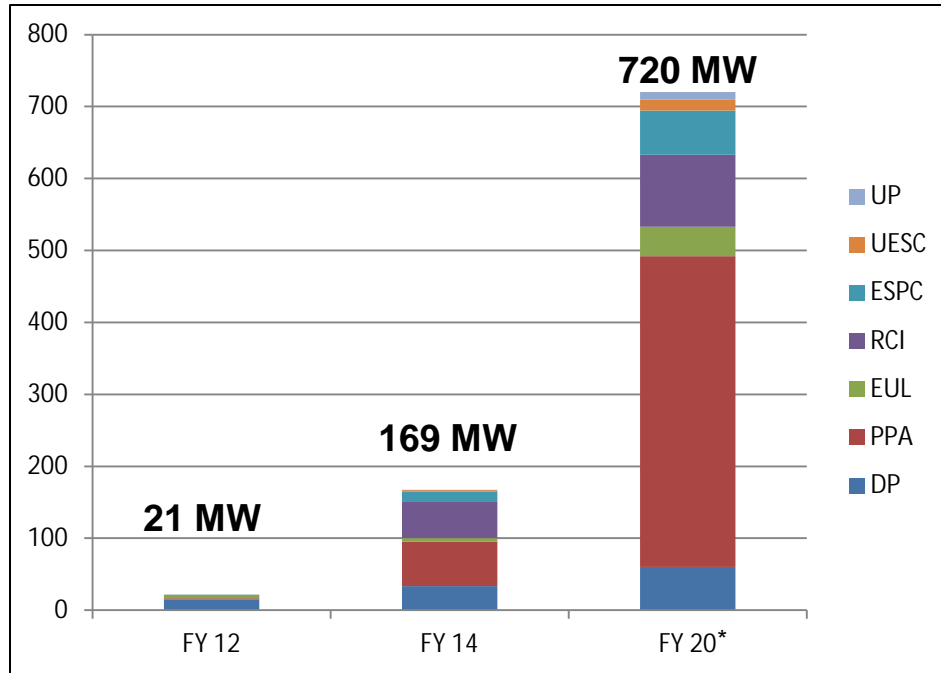
RCI projects include 50 MW of  
rooftop  
PV with an additional 5.7 MW under  
consideration

## Large Scale 3<sup>rd</sup> Party Financing

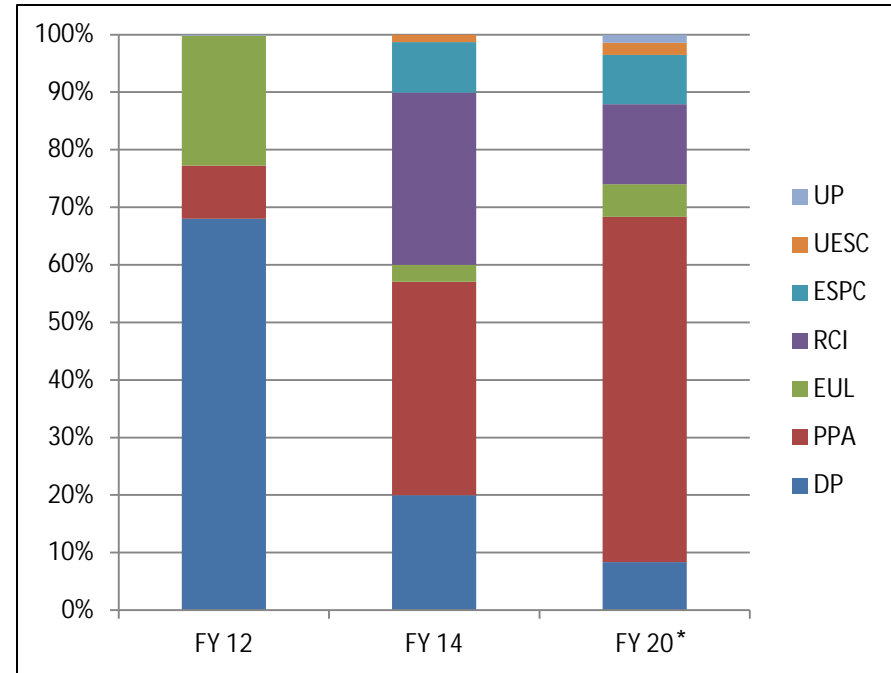
- Power Purchase Agreement (PPA)  
10 USC 2922a
- Enhanced Use Leases (EUL)  
10 USC 2667
- GSA Area wide w/easement  
10 USC 2668
- Utilities Privatization (UP)  
10 USC 2688



**Renewable Energy Totals by FY**



**Renewable Energy Funding Source by FY**



\*FY 20 Numbers are Estimates

**The Army is leveraging third party financing in order to meet the goal of 1 GW of renewable energy by 2025.**



The Office of Energy Initiatives (OEI) serves as the central management office to develop large-scale (>10 MW) renewable and alternative energy projects to **secure a resilient energy supply for mission critical operations on Army installations**

- **On or bordering Army land**
  - Not dependent on assets hundreds of miles away
  - More secure infrastructure
  
- **Utilizing authorities from Congress**
  - 10 USC 2922a, 10 USC 2667, FAR Part 41
  - Power purchased using current utility funding
  - All projects are at or below the projected cost of grid energy
  - Providing energy resiliency
  
- **Leverages Private Sector Financing**
  - Providing energy security
  - Built with private capital investment
  - Owned, operated, and maintained by the private sector
  - Stimulates the economy and creates jobs
  - Supports small businesses



**OFFICE OF ENERGY INITIATIVES**  
*Securing Army installations with energy that is **clean, reliable** and **affordable***



**Energy Security Ensures Mission Readiness**



**PROJECT DEVELOPMENT**

**EXECUTION**

**RETURN ON INVESTMENT**

**Phase 1  
Project  
Assessment**

Fatal flaw analysis,  
project definition, incl.  
business model  
**Target: 90 Days**  
*Current: 1-3 Years*

**Phase 2  
Project Validation**

Project concept  
optimization and Army  
approval  
**Target: 90-180 Days**  
*Current: 1-3 Years*

**Phase 3  
Contracts &  
Agreements**

Final approvals and  
securing a binding  
agreement  
**Target: .5-1 Years**  
*Current: 1-3 Years*

**Phase 4  
Construction**

Constructing and  
structuring services  
**Target: 1-3 Years**

**Phase 5  
Operations &  
Support**

Operations and  
transitioning to closure  
**Target: 10-30 Years**

OEI Project Assessment

Procurement Partners

Mgt Partners

USACE, DLA, GSA

MICC

OEI Project Life Cycle Management

**8 Assessment Criteria**



8 Assessment Criteria should be reviewed regularly to identify and mitigate excessive risks and key issues for successful project development.

<b>Mission/Energy Security</b>	<ul style="list-style-type: none"> <li>How does project enhance energy security on host and surrounding installations?</li> <li>What are the possible impacts to installation operations or tenant missions?</li> <li>Has the project been approved by installation, Army HQ, and DoD staffs?</li> </ul>
<b>Economics</b>	<ul style="list-style-type: none"> <li>What is the estimate of the baseline capital cost?</li> <li>What is the value of any RECs or other incentives?</li> <li>What is the predicted resource? Has it been validated?</li> <li>What is existing utility rate and alternative tariffs?</li> <li>What are the impacts of the project to the POM?</li> </ul>
<b>Real Estate</b>	<ul style="list-style-type: none"> <li>What is the Real Estate approach and what authority is being used?</li> <li>Identify and mitigate real estate siting, constructability, access, or land use issues.</li> <li>Is the project consistent with the installation Master Plan?</li> </ul>
<b>Regulatory and Legal</b>	<ul style="list-style-type: none"> <li>What are the regulatory limits for interconnection, net-metering?</li> <li>What is the status of getting required PUC approvals?</li> </ul>
<b>Market/ Off-Take</b>	<ul style="list-style-type: none"> <li>Will the installation consume all electricity generated?</li> <li>What is the status of state RPS and other incentives to drive external demand?</li> <li>If power is to be sold off the installation, have off-takers been identified?</li> <li>Can the utility wheel power to other potential off-takers?</li> </ul>
<b>Technical/ Integration</b>	<ul style="list-style-type: none"> <li>Is there sufficient line and substation capacity? What upgrades are required?</li> <li>Are flow studies are required? What is the status?</li> <li>Is the system upgradeable for smart grid and energy storage technologies?</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>What are the major environmental issues?</li> <li>During the project lifecycle, which parties will perform ECP and NEPA requirements, and when?</li> </ul>
<b>Procurement</b>	<ul style="list-style-type: none"> <li>What is acquisition strategy and timeline to implement?</li> <li>What performance risks are there with the developer or other partners?</li> </ul>

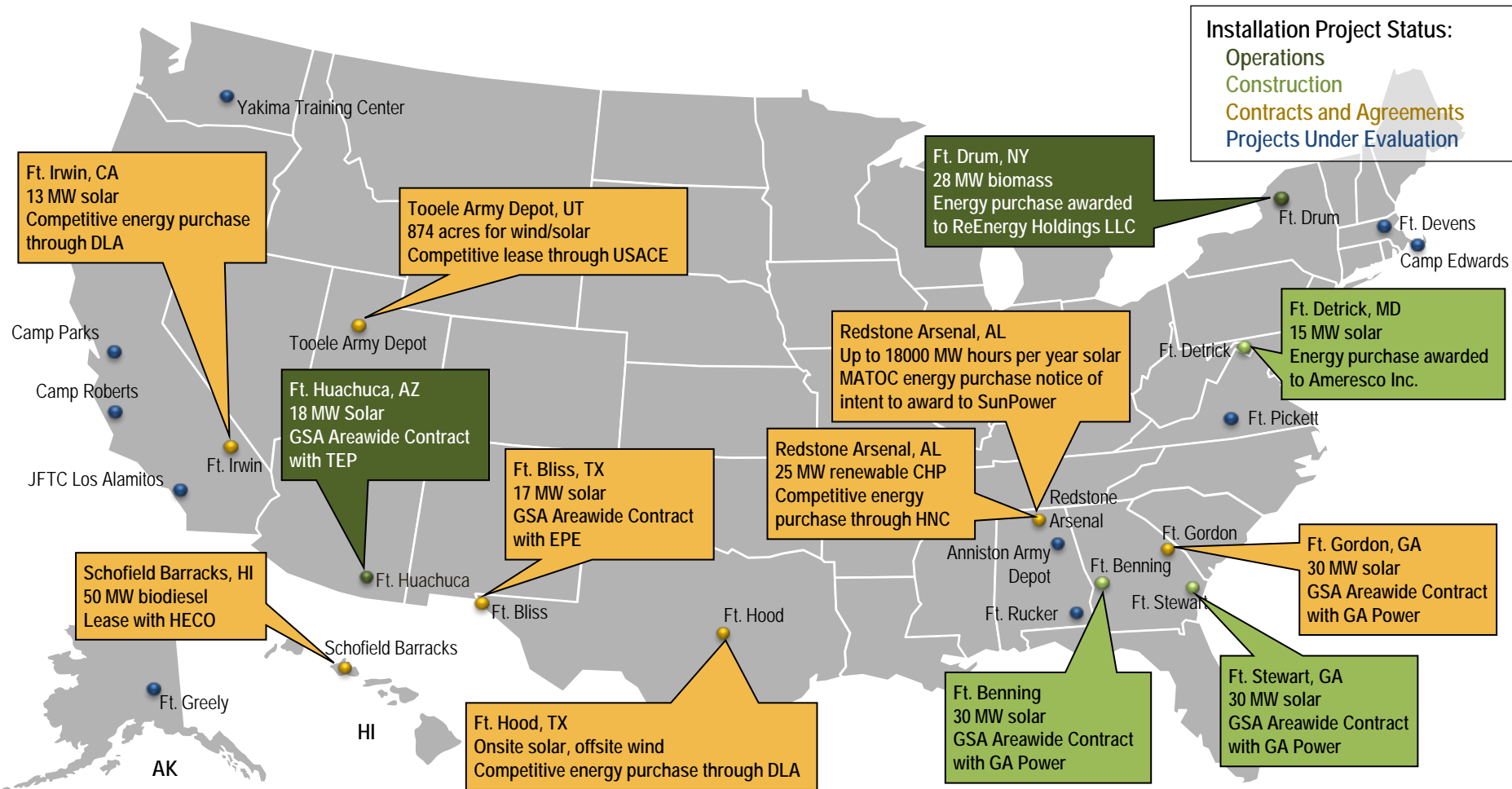


## Near Term Procurement Actions

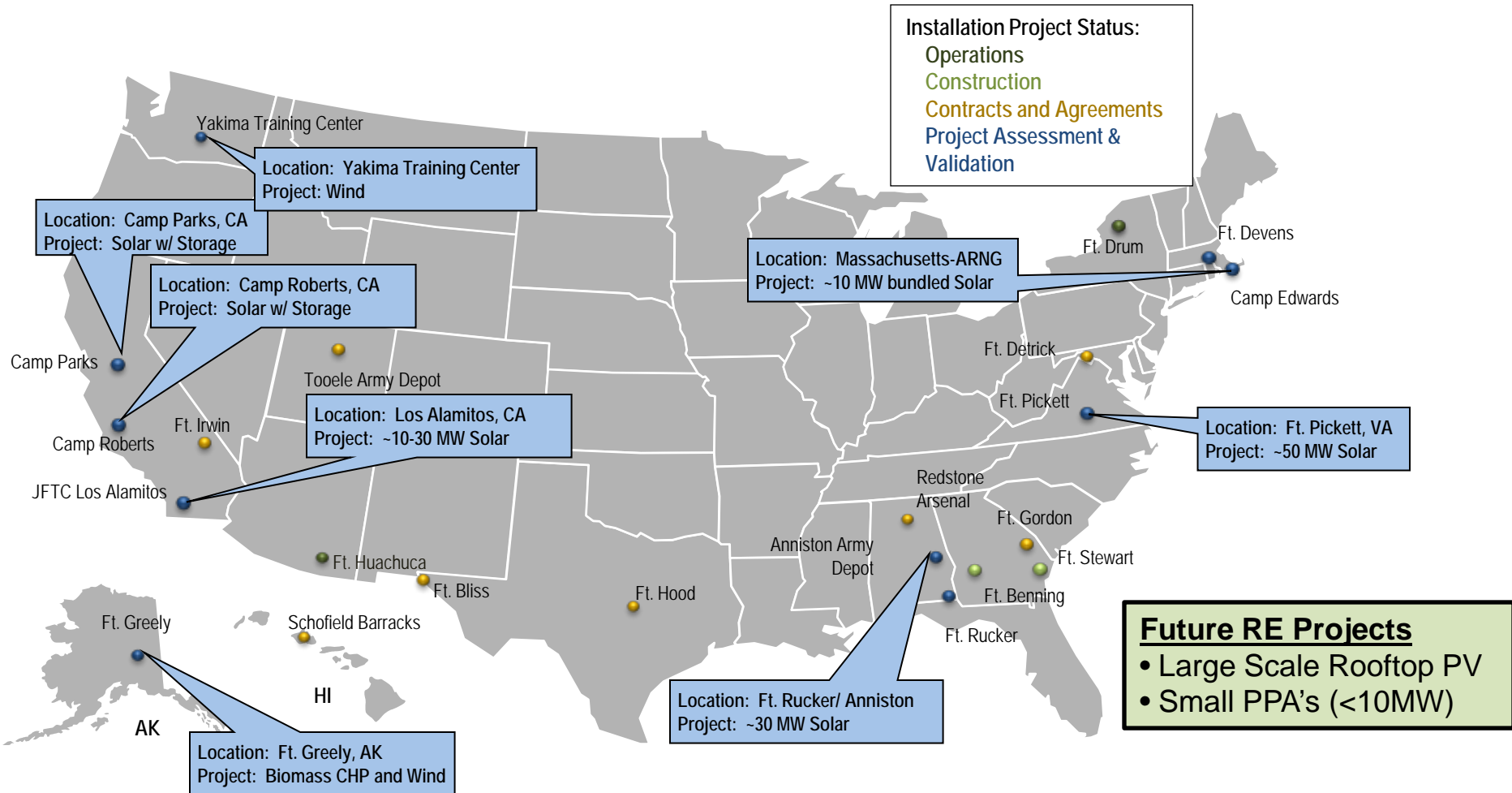


- One Award
- Three Notice of Intent to Award
- One Upcoming Requests for Proposals





**Increasing Energy Security and Resiliency for Army Operations**



***Increasing Energy Security and Resiliency for Army Installations***



# Renewable Energy Credits (RECs)



Photo from Alstom 2010, NREL/PIX 18207



Photo from SunPower 2013, NREL/PIX 23816

- The Army is committed to deploying renewable energy to provide a secure and resilient energy supply for Army installations.
- RECS are required for some Federal renewable energy goals; but the Army, by policy, **will not purchase** RECs solely for goal attainment.
- The Army **will not sell RECs** from projects owned by the Army.
- RECs from 3<sup>rd</sup> party financed projects will be evaluated on a **project-by-project basis** to determine if the Army will:
  - Receive the project RECs,
  - Receive replacement RECs, or
  - Allow the developer to use the RECs for regulatory or economic purposes.



## Solar Ready Vets is a training program for transitioning Military

- First workforce training partnership between a civilian Federal agency (DOE) and the DoD
- Military personnel participating in the *Solar Ready Vets* training program learn how to size and install solar energy systems, connect electricity to the grid, and interpret and comply with local building and electric codes
- Leverages the discipline and technical-savvy skills of Soldiers for solar industry
- 4 to 6 week training provided at no cost to Soldiers
- Part of the initial goal to produce 50,000 trained solar workers by 2020
- Visit <http://energy.gov/eere/sunshot/solar-ready-vets> for more details