Industry Day 2013

Integrity - Service - Excellence

Energy Directorate

Mr. Ken Gray, PE
Chief, Energy Rates and Renewables Div
AFCEC/CNR

Overview

- **Mission, Organization & Capabilities**
- **Programs, Execution & Business Opportunities**
- **Contact Information**

Energy Directorate Objectives

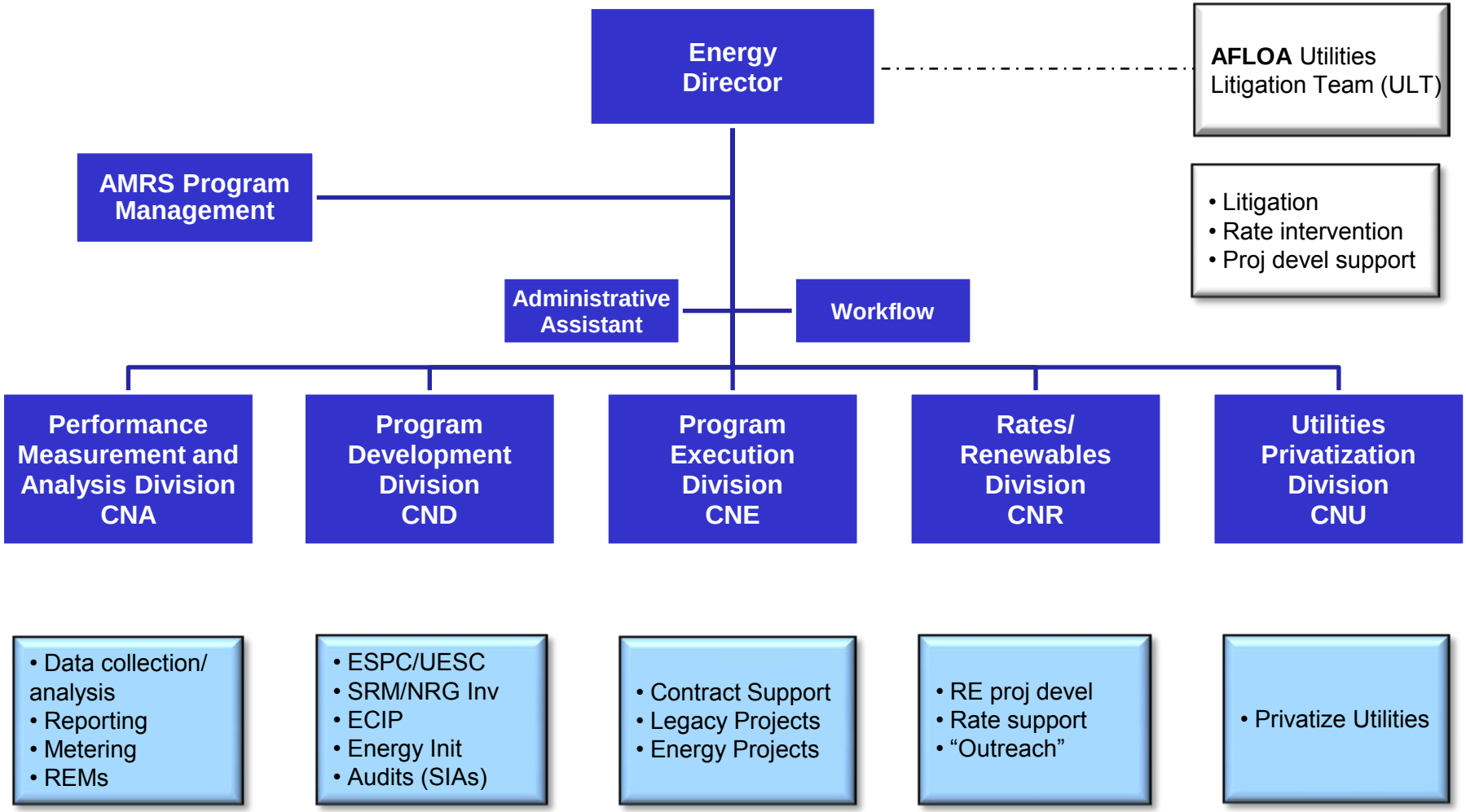
- *Drive facility energy reduction*
- *Leverage RE investments*
- *Exploit utility cost savings*
- *Privatize utilities infrastructure*

Energy Directorate Mission

Provide expert support to Air Force installations and Major Commands, and centrally manage Air Force Facility Energy and Utilities Privatization programs in order to comply with all applicable Executive, Legislative, and Agency policies and directives related to facilities energy and utilities privatization

Energy Directorate

AFCEC/CN Organization



Facility Energy Programs

- **Energy Conservation Investment Program (~ $38M - OSD Oversight)**
  - **Design – AFCEC execution via 4PAE**
  - **Construction – AFCEC execution via SATOC**
- **Energy (NRG-SRM) Focus Funds (~$200M - AFCEC Managed)**
  - **Design – Base preference execution**
  - **Construction – Base preference execution**
- **Energy Initiative (~$20M – AFCEC Managed)**
  - **REMs and Labor Support**
  - **Pilot project development and execution**
- **Third Party Financed (AFCEC Managed)**
  - **Energy Savings Performance Contracts**
  - **Utility Energy Service Contracts (execution at base)**
  - **Renewable Energy Power Purchase Agreements**

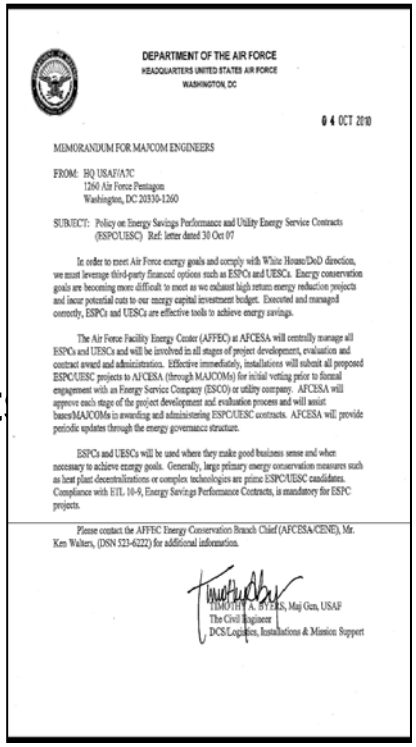
FY13 Energy/Water Conservation
Breakout by Project Type

Technology	# Projects	MMBTU Saved	Investment (K)
Boiler Projects	4	16691	$1,911
Chiller	6	31364	$3,679
Commissioning	24	212148	$8,102
EMCS (Controls)	25	133955	$14,878
Envelope	11	42346	$4,804
Ground Source Heat Pump	2	9023	$1,332
HVAC	28	202086	$16,694
Lighting	46	122840	$22,382
Mechanical	22	140034	$10,973
Roofing	11	17943	$4,902
Renewable (Solar)	4	9614	$3,343
Steam	5	50237	$3,857
Plumbing	5	1629 (Mgals)	$1,267
Water Distribution	7	102 (Mgals)	$3,181
Total	200		$101,305

200 FY13 energy and water conservation projects in progress

Energy Saving Performance Contracts (ESPC)

- **ESPC definition:**
  - **ESPCs are initiatives resulting in net decrease in future energy or water costs**
  - **Contractor finances, designs, implements, operates, maintains, and owns infrastructure improvements**
  - **Contractor paid from generated savings over time**
- **A7C Policy signed on 04 Oct 10**
  - **Current policy being revised**
  - **Assigns AFCEC to manage**
    - **Involved in all stages of project development**
    - **"Assist in awarding and administering contract**
  - **Use where good business case**
  - **Prime Targets: Needle moving projects**
    - **Heat Plant Decentralizations**
    - **Computers/Servers/Data Centers**
    - **Maintenance Processes/Equipment**



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, DC

04 OCT 2010

MEMORANDUM FOR MAJCOM ENGINEERS

FROM: HQ USAF/A7C
1260 Air Force Pentagon
Washington, DC 20330-1260

SUBJECT: Policy on Energy Savings Performance and Utility Energy Service Contracts (ESPC/UESC) Ref: letter dated 30 Oct 07

In order to meet Air Force energy goals and comply with White House/DoD direction, we must leverage third-party financed options such as ESPCs and UESCs. Energy conservation goals are becoming more difficult to meet as we exhaust high return energy reduction projects and incur potential cuts to our energy capital investment budget. Executed and managed correctly, ESPCs and UESCs are effective tools to achieve energy savings.

The Air Force Facility Energy Center (AFFEC) at AFCESA will centrally manage all ESPCs and UESCs and will be involved in all stages of project development, evaluation and contract award and administration. Effective immediately, installations will submit all proposed ESPC/UESC projects to AFCESA (through MAJCOMs) for initial vetting prior to formal engagement with an Energy Service Company (ESCO) or utility company. AFCESA will approve each stage of the project development and evaluation process and will assist bases/MAJCOMs in awarding and administering ESPC/UESC contracts. AFCESA will provide periodic updates through the energy governance structure.

ESPCs and UESCs will be used where they make good business sense and when necessary to achieve energy goals. Generally, large primary energy conservation measures such as heat plant decentralizations or complex technologies are prime ESPC/UESC candidates. Compliance with EIL 10-9, Energy Savings Performance Contracts, is mandatory for ESPC projects.

Please contact the AFFEC Energy Conservation Branch Chief (AFCESA/CENE), Mr. Ken Walters, (DSN 523-6222) for additional information.

TIMOTHY A. BYERS, Maj Gen, USAF
The Civil Engineer
DCS/Logistics, Installations & Mission Support

Industry Day – Rapid Improvement Event

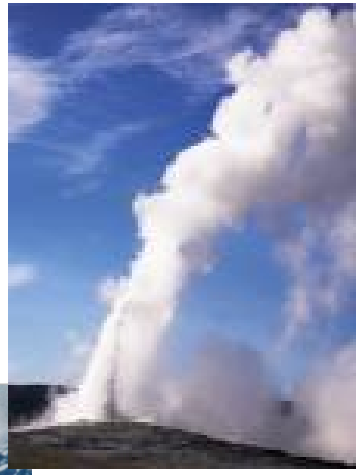
- **Industry Day – 26 November 2012**
  - **AF opportunity to share its philosophy and practices in regards to the Energy Program and ESPCs**
- **Rapid Improvement Event (RIE) – 27-29 November 2012**
  - **Objective was to identify activities that may be eliminated or streamlined to optimize ESPC execution**
  - **Several key improvements to the acquisition process identified:**
    - **Centralizing the acquisition and legal review process at AFCEC**
    - **Moving from a "submit/review" process to a more collaborative partnership with industry, and**
    - **Eliminating over-engineering by the government in several key points in the process**
    - **Reduced ESPC process from ~24 months to a target of 12 months**

How to Participate in an ESPC

- **DOE ESPC is the preferred contract**
  - **Multiple Award with 16 pre-qualified Energy Service Contractors (ESCO's)/available to all federal agencies**
  - **Any/all 16 ESCO's may propose on each project**
- **ESCOs remain free to**
  - **Introduce and/or share conceptual energy conservation ideas**
  - **Any marketing literature or conceptual ideas proposed**
    - **May be shared with other AF installation, MAJCOMs and AFCEC personnel**
    - **Must be presented in a non-proprietary document**

Renewable Technologies

- Solar
- Wind
- Biomass
- Landfill Gas
- Geothermal
- Ocean
- Hydropower
- Waste to Energy
- Ground Source Heat Pumps



Renewable Energy Procurement Hierarchy

- **First Priority: Develop on-site renewable resources**
  - **Direct AF investment (ECIP or SRM/NRG)**
  - **Renewable Energy Power Purchase Agreements (REPPAs)**
  - **Utility/Third Party Funded**
- **Second Priority: Procure renewable power from off-site resources delivered over the power grid**
- **Third Priority: Purchase Renewable Energy Certificates (RECs)**
  - **Replacement RECs**
  - **Goal Attainment**

Renewable Energy Power Purchases Agreements (REPPA)

- REPPA advantages over direct AF funded projects
  - REPPA Developer can hold and sell RECs in the marketplace
  - REPPA Developer can leverage RE incentives and tax benefits
  - REPPA Developer/Utility respond to State driven Renewable Portfolio Standard (RPS)

- Direct funded projects are less economical than REPPA
  - AF cannot currently sell RECs or leverage benefits
  - AF must maintain and operate

REPPA provides lower cost solutions for RE goals

PPA/AF-Funded

Awarded and/or in Construction

Installation	Source	Fund Source	Capacity MW	BCA	NEPA	Award	Est. on-line
Tyndall AFB, FL	Solar PV	SRM	0.08	2011	2011	2011	2012
Los Angeles AFB, CA	Solar PV	ECIP	0.35	2009	2010	2010	2012
Stewart ANGB, NY	Solar PV	RDT&E	0.30	N/A	2012	2011	2013
Camp Perry ANGB, OH	Wind	RDT&E	0.65	2009	2009	2011	2013
Davis-Monthan AFB, AZ	Solar PV	PPA	14.5	2010	2009	2010	2013
Cape Cod AFS, MMR, MA	Wind	ECIP	3.20	2011	2010	2012	2013
JBER, AK – Ft Richardson	LFG	UP	7.0	2011	2011	2012	2013

Existing Capacity = 51 MW

26.1 MW

Upcoming Projects Summary
(FY13-15)

Technology	# Projects	Capacity KW
Photovoltaic	8	54,300
Wind	4	36,500
Biomass	1	25,000
Waste to Energy	1	5,400
Landfill Gas	1	4,300
Geothermal	1	10,000
Total	16	135,500

Renewable Project Development

- **Resource Analysis:**
  - **Looks at renewable energy types e.g. wind, solar, biomass, biogas…**
  - **No base specific info- land available, mission, siting**
- **Opportunity Assessment: IDs Base requirements e.g. mission impact, environmental, land availability, incentives…**
- **Feasibility Study: crunch the numbers of project details e.g. costs, method of execution, simple payback…**

Renewable Project Execution

- If regulated location,
  - First source is jurisdictional utility provider
  - If utility unwilling or unable, with SAF approval- competitive procurement by RFP
- If non-regulated location,
  - Competitive procurement by RFP
- When Using RFP
  - Pre-solicitation notice in FEDBIZ Ops 3-4 months prior to RFP
  - RFP notice in FEDBIZ Ops

Utilities Privatization (UP)

- Privatizes utility systems on installations
  - UP Privatizes Infrastructure, Not the Commodity
- Results in:
  - 50-year utility service contract
  - Bill of sale (signed by SAF/IEI and system owner)
  - Systems maintained and operated at industry standard
- DLA Energy - AF preferred contracting office
  - DLA RFP Release Schedule Website
    http://www.energy.dla.mil/energy_enterprise/Pages/default.aspx
- GSA and 10 CONS continue to release RFP's

Utilities Privatization Request for Proposal (RFP) Release Schedule Fiscal Year and Quarter (FY-Qtr)

Base	CO	Issue RFP FY-Qtr
Academy (S,W)	USAFA	13 - 2
Beale (G)	DLA Energy	13 - 4
Cape Canaveral (S,W)	DLA Energy	13 - 2
Edwards (E,G,S,W)	DLA Energy	14 - 1
Hanscom (E,S,W)	DLA Energy	14 - 1
Holloman (E)	GSA	13 - 2
Keesler (E,S,W)	DLA Energy	13 - 4
Langley (E)	GSA	13 - 2
Malmstrom (E,G)	DLA Energy	13 - 2
Moody (E,G)	DLA Energy	13 - 2
Patrick (S,W)	DLA Energy	13 - 2
Robins (E,G,S,W)	DLA Energy	13 - 3
Schriever (E,G,S,W)	DLA Energy	13 - 2
Scott (S)	DLA Energy	13 - 4
Seymour Johnson (E)	DLA Energy	13 - 4
Wright-Patterson (G,S,W)	DLA Energy	13 - 2

Summary

- **Comprehensive energy program strategy**
  - **Meet legislative mandates, reduce future costs**
- **Focused/leveraged investments**
  - **Proven conservation measures**
  - **Cost effective renewable energy procurement**
  - **Direct investment and 3rd party financing**
- **Many opportunities for participation**
  - **Multiple 'vehicles' and execution avenues**
    - **Get involved with SATOC, GSA, etc**
  - **Look for notifications in FEDBIZ Ops**

Energy Directorate

Key Personnel

AFCESA Office Symbol	AFCEC Office Symbol	Office Name	Contact info
CEN	CN	Energy Directorate	DSN 523-6341
CENE	CNA	Performance Measurement and Analysis Division	DSN 523-6222
CENI	CND	Program Development Division	DSN 523-6238
CEK	CNE	Program Execution Division	DSN 523-6361
CENR	CNR	Rates/Renewables Division	DSN 523-6357
CENU	CNU	Utilities Privatization Division	DSN 523-6655
	CNP	AMRS Program Management Office	DSN 523-6420

QUESTIONS?