Energy Division

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US Army Corps of Engineers
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Energy Division

- Mission: Manage energy programs that implement the Army Energy Campaign

- Vision: CEHNC is a national resource for energy solutions

- Major Customers: ACSIM, IMCOM, MEDCOM, Army Reserves, USACE

- Programmatic Challenges: Delivering the substantial reductions in fossil fuel energy use as required to meet the mandated goals of the Energy Independence and Security Act, i.e., Net Zero by 2030

Energy Division Organization Chart

Energy Division
Lawson (Stan) Lee
Tonia Thomas, Secretary

Energy Implementation Branch
Michael Norton
Jason Bray, PM Spec

Commercial Utilities Program
Bernard Givan, PgM
Bob Hennessee, PM

Energy Savings Performance Contracting
Will Irby, PM
Lisa Harris, PM
Wesley Malone, PM
Vacant PgM (1)
Sharon Gresham, PM

Power Purchase Agreements
Michael Kempner-Strehlow, PM

Meter Data Management System
John Trudell PgM
Vacant PM (1)

Energy Programs Branch
Tammie Learned
Kristi Javins, PM Spec
Kathy Stram, PM Spec

Energy Engineering and Analysis Program
Bryan Woodroof, PM
Vacant PgM (1)
Vacant PM (1)

Energy Conservation and Investment Pgm
Rob Mackey, PgM for Execution
Karen Moore, PM for DD1391 Validation
Vickie Davis, PM (1), Vacant PM (1)

Resource Efficiency Management
Vickie Davis, PgM

Army Metering Program

- Mission:
  - Install advanced meters on appropriate Army, Army Reserves and National Guard facilities. Establish a centralized Meter Data Management System (MDMS) for electronic collection, reporting and analysis of meter data.

- Customer: ACSIM and all ACOMs
- Funding:

MACOM	FY09 ($M)	FY10 ($M)	FY11 ($M)
IMCOM	$15.10	$15.00	$30
USAR	$4.10	$6.4	$4.1
MEDCOM	$2.20	$1.18	$2.5
Total	**$21.40**	**$22.58**	**$36.6**

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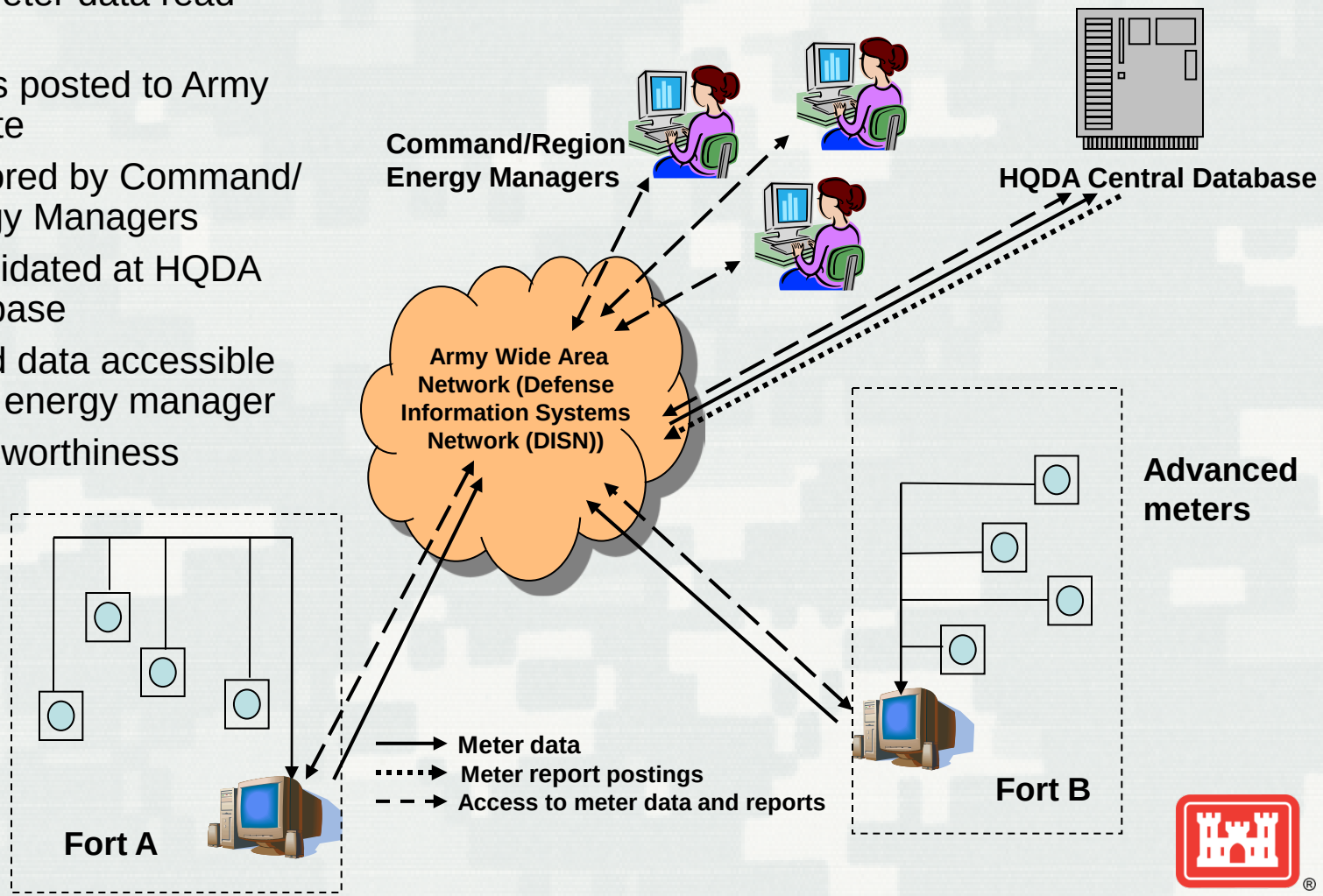
Meter Data Management System (MDMS)

Concept:

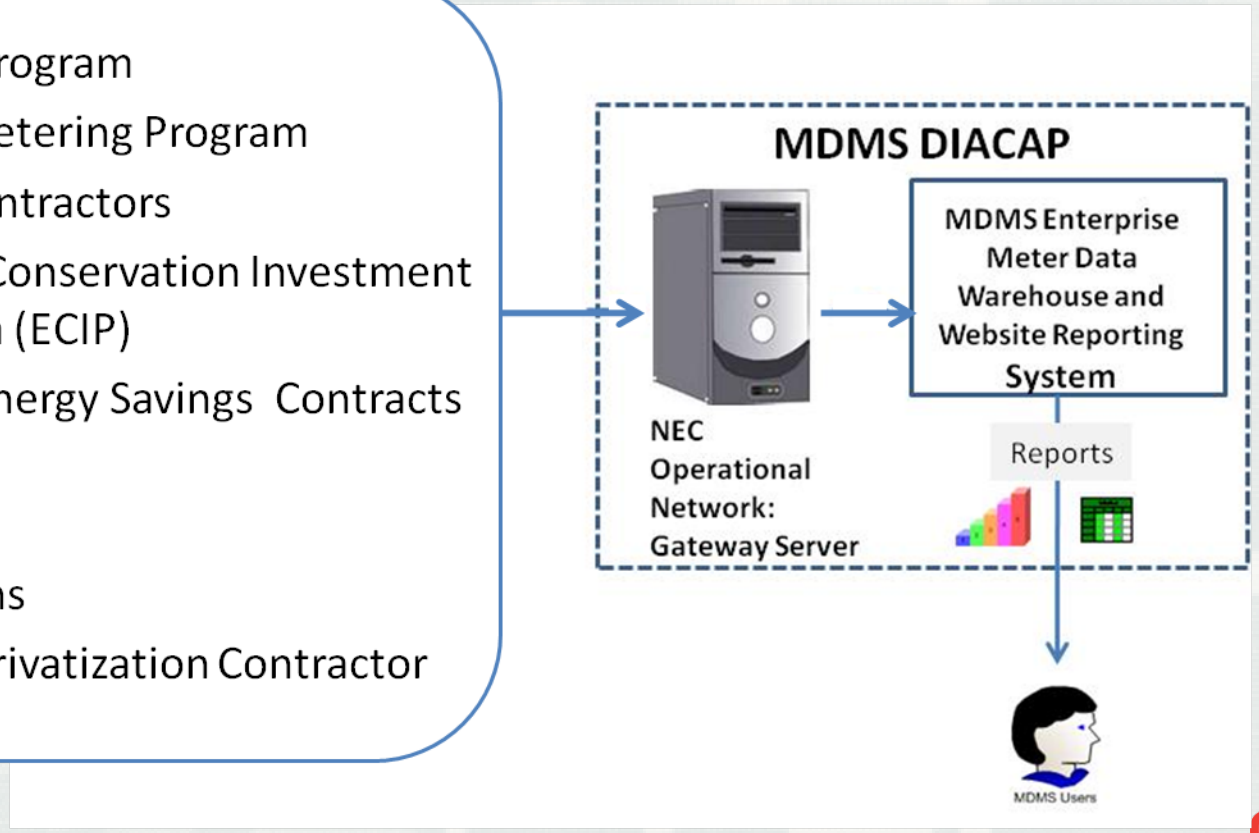
- Individual meter data read remotely
- Data reports posted to Army hosted website
- Data monitored by Command/ Region Energy Managers
- Data consolidated at HQDA Central Database
- Reports and data accessible to installation energy manager
- System net worthiness certification



Meter Data Management System (MDMS)

Programs/Organizations Installing Meters

- UMCS Program
- Army Metering Program
- ESPC Contractors
- Energy Conservation Investment Program (ECIP)
- Utility Energy Savings Contracts (UESC)
- MCA
- Garrisons
- Utility Privatization Contractor



Energy Savings Performance Contracting (ESPC)

- Mission: Award ESPC projects by which the Army reimburses the energy savings contractor for the capital improvements made to Army facilities through resultant annual energy savings, e.g., more efficient HVAC systems, lighting, water and steam distributions, power plants and renewable energy systems.

- Funding: Annual funding for energy payments approx. $30M/yr. Annual Budget to reimburse HNC management of program:
  FY09 $1.86M FY10 $1.59M FY11 $1.00M FY12 $1.1M

- Customers: IMCOM, AMC, US Navy, DLA, USACE, VA, MEDCOM

ESPC Program Statistics

- Projects in payment phase: 57 (45 Army, 3 Marine, 9 other)
- Capital investment: $395.3M
- Energy Savings: approximately $796M
- Average annual energy savings: $31M
- Planned new task order awards FY11: 6
- Actual new task order awards FY11: 7
- FY11 Capital Investment new task order awards: $85.8M
- FY12 Capital Investment new task order awards: $28.6M

Acquisition Vehicles

- ESPC MATOC CONUS-wide contracts with $900M capacity and 15 Energy Service Companies (ESCO's), expires 2018

Energy Engineering Analysis Program (EEAP)

- Mission:
  - Identify and develop projects to reduce energy waste at Army installations and provide renewable energy
  - Develop project documentation required to obtain funding
  - Recommend acquisition strategies for project execution
  - Develop a 5 to 30-yr energy project implementation plan that will achieve garrisons' annual energy reduction targets

- Funding: FY09 $3.5M, FY10 $2.0M, FY11 $5M

- Customer: IMCOM Garrisons, Air Force, Marine Corps Forces Reserves, Army National Guard, DLA

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EEAP Program Statistics

- Sites Surveyed: 55 (Military and Civil Works)
- Energy Conservation Projects Identified: 2,268
- Annual Energy Savings: $139M
- Capital Investment Required: $408M
- Average Simple Payback (years): 3.5

Acquisition Vehicles

- Eight AE and Engineering Services Contractors

$40M total capacity; 100% SB

Commercial Utilities Program (CUP)

- Mission:
  - ▶ Ensure reliable utility services are purchased at a fair and reasonable price and equitably resold to tenants.
  - ▶ Provide rate interventions, utility contract and negotiation support, rate studies and garrison utility assessment analysis.
- Funding: FY10 $810K, FY11 $589K,
  FY12 $0K, $991K requested
- Customers: HQUSACE, IMCOM, EITF, ACSIM

- CUP Savings/Cost Avoidance:
  - ▶ Utility rate interventions: $34.7 million over 3 years
  - ▶ Utility rate studies: $8.9 million over last 3 years.
  - ▶ Site Assessment Visits: $1.2 million over 2 years.

- CUP Acquisition Vehicles
  - ▶ IDIQ $5M, 5 year, SB rate analysis and intervention services

Resource Efficiency Manager (REM)

- Mission:
  - ▶ Place a contracted REM at selected DPWs. REM must identify potential energy savings that exceed his/her own salary as condition to contract renewal
- Funding**:** FY09 $2.4M; FY10 S&A only; FY11 $0K
- Customers**:** HQ IMCOM until FY11; now decentralized
- REM Program Statistics
  - ▶ Since award of the REM IDIQ contract (May 2009), the average cost per REM has been reduced by approximately 20%.
  - ▶ REMs have identified more than $12M in energy savings.
  - ▶ 11 Garrisons with self funded REMs
- REM acquisition vehicles
  - ▶ 5 IDIQ contracts; $37.7M remaining; 100% SB set-aside
  - ▶ $3.7M investment has realized >$100M in potential savings and > $20M actual savings to date.

Energy Conservation and Investment Program (ECIP)

- Mission:
  - Provide program technical support to ACSIM–project DD Form 1391 preparation/ validation; acquire national MATOC for ECIP project execution
  - Assist with ECIP project status inquiries and District execution problem solving when requested by ACSIM.
  - Execute ECIP projects Districts have requested HNC to execute.

- Funding:
  - FY09 $0; FY10 $10.4M; FY11 $7.9M (to date)

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ECIP Project Statistics

- Projects:
  - Awarded ECIP projects totaling $17.8M
  - Additional ECIP projects slated for HNC execution in FY11:
    - Building Energy Upgrades
    - UMCS Building Upgrades
    - Geothermal heat pump system
    - Solar projects

- ECIP Contract Vehicles
  - SATOC Design-Build Contract 5yr / $36M as bridge to new MATOCs
  - April 2011 award of 6 Design-Build Energy Project MATOCs (5yr / $210M total (SB) and 2 Energy A/E MATOCS 5yr/$48M
  - Acquisition underway for Unrestricted MATOC $600M

Army Energy Initiatives Task Force

Reference: SECARMY Directive to establish an Energy Initiative Task Force within the ASA(IE&E), 29 August 2011

EITF Mission: Obtain large scale renewable and alternative energy sources for Army use that are financed, constructed and operated by the private sector on or near Army Installations

USACE Objective: Support the Army Energy Initiatives Task Force by providing acquisition vehicles and project execution services where and when needed. *"Be first with the best"*

Army Energy Facts:

- Army is RED on its renewable energy (RE) use metric--currently at 2%
- DOD required to consume or produce 25% RE by 2025
- The Army currently spends nearly $4B/year on energy
- The Army must consume or produce 2.5 million MWh of RE to meet the 25% by 2025 goal.

Renewable Energy (RE) Power Purchase Agreement (PPA)

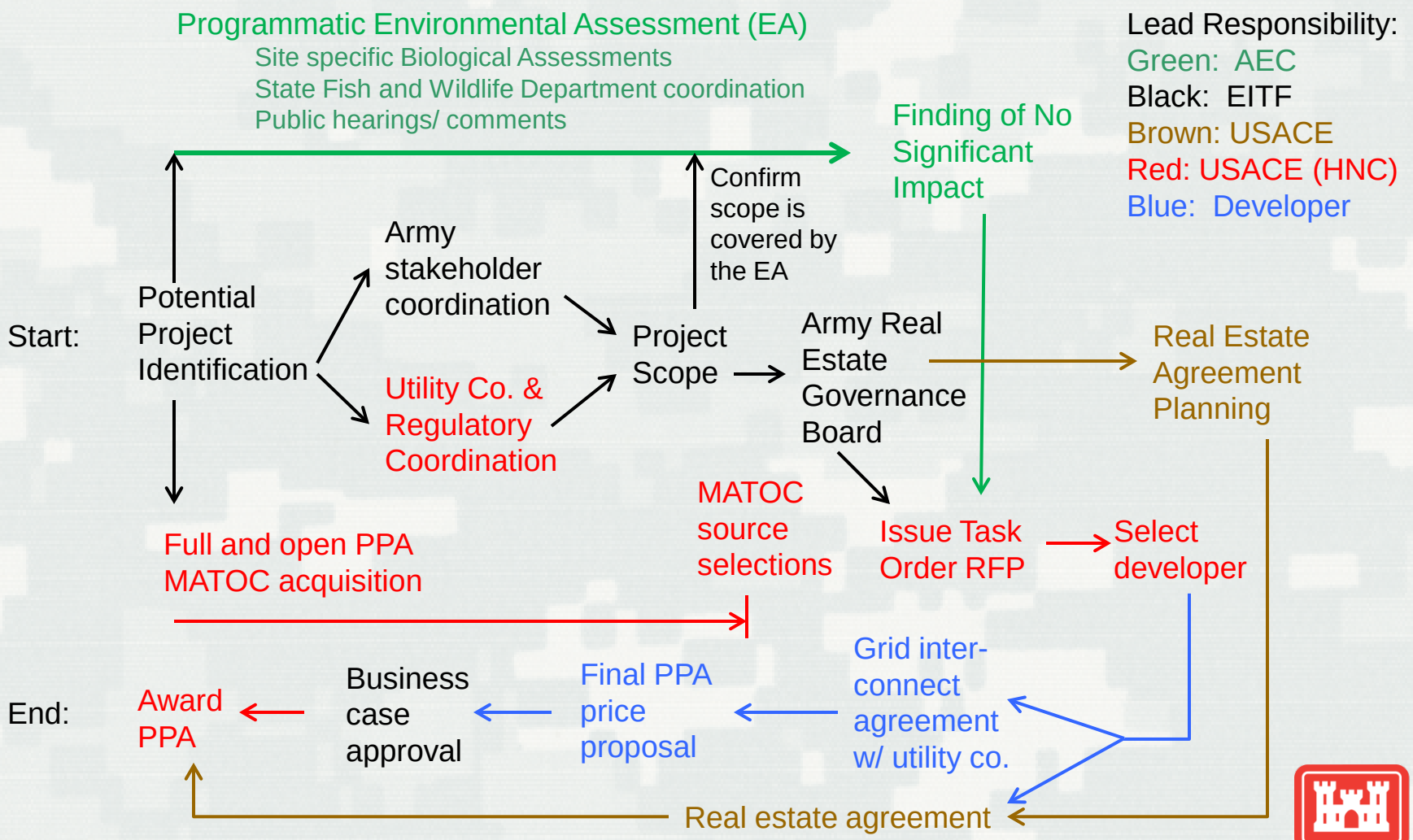
What is it?

- Unit price commodity supply contract for energy produced from renewable sources, e.g., wind, solar, geothermal and bio-mass
- Payment based on quantity of renewable energy consumed by Army times contracted rate, e.g., $0.12/ KWHR
- Energy plant is contractor owned and operated
- Contract terms may include minimum annual purchase and/or maximum energy demand
- Includes land use agreement (lease, easement or license) if constructed on Army property

Authorities:

- FAR Part 41 Acquisition of Utility Services. Allows up to 10 year term
- 10 U.S.C. § 2922a - Procurement of energy systems using renewable forms of energy. Allows up to a 30 year term. OSD must approve if > 10 years.

Renewable Energy PPA Flowchart



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