

January 2014



DOE-DOD Energy Security MOU

RANGE Kickoff Meeting



Bottom Line Up Front

Why DOE partners with DOD

- Joint R&D and manufacturing
- Follow on funding for DOE performers
- Test bed for DOE technologies
- Strengthen DOE energy security initiatives

Why DOD partners with DOE

- Save money through joint efforts
- Prevent redundancy
- Gain tactical edge through innovation
- Meet sustainability targets



Executive Leadership

Executive Committee Co-Chairs and Members

- Patricia Hoffman, Electricity Delivery and Energy Reliability, DOE
- David Danielson, Energy Efficiency and Renewable Energy, DOE
- Sharon Burke, Assistant Secretary, Operational Energy Plans and Programs, DOD
- John Conger, Deputy Under Secretary, Installations and Environment, DOD

DOE

- Electricity Delivery and Energy Reliability
- Office of the Deputy Secretary
- Advanced Research Project Agency-Energy
- Nuclear Energy
- Fossil Energy
- Science

DOD

- Operational Energy Plans and Programs
- Installations and Environment
- Army
- Navy
- Air Force
- Research and Engineering
- Joint Staff (J4)



Strategic Cooperation Areas

Operational Energy

- Warrior power
- Contingency basing
- Fuel logistics and transportation



Installation Energy

- Energy efficiency
- Grid management and security
- Alternative energy



Institutional Cooperation

- Personnel
- Data
- Forums





Project Accomplishments

- **National Network of Manufacturing Institutes**

- DOE (AMO), OSD (MIPB)

- **DPA Biofuels**

- DOE (Biomass), OSD (MIBP/OEPP), Navy, and USDA

- **AMPED/HESM**

- DOE (ARPA-E) and DOD (all Services/OSD)

- **SPIDERS**

- DOE (OE/FEMP) and DOD (COCOMs/OSD/Services)

- **Advanced Vehicle Power Technology Alliance**

- DOE (Vehicles) and Army (TARDEC)





Project Accomplishments

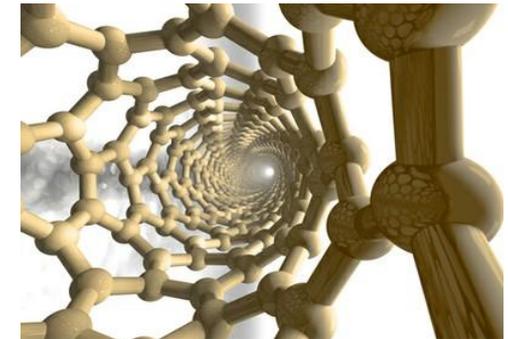
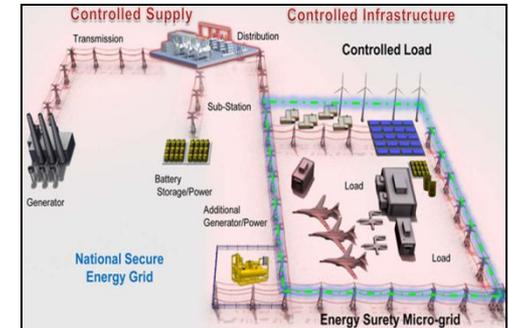
- **SUNSHOT/SUNPATH Demo**
 - DOE (Solar) and OSD (ESTCP)/Army
- **Building Technology Partnership**
 - DOE (Buildings) and OSD (ESTCP)
- **Defense Renewable Energy Finance WG**
 - DOE (OWIP/FEMP) and OSD (I&E)/Services
- **FOB Energy Storage Demonstration**
 - DOE (OE) and Army (G4 and Acquisition)
- **COCOM EA Program – PACOM MOA**
 - DOE (OE) and COCOM (PACOM)





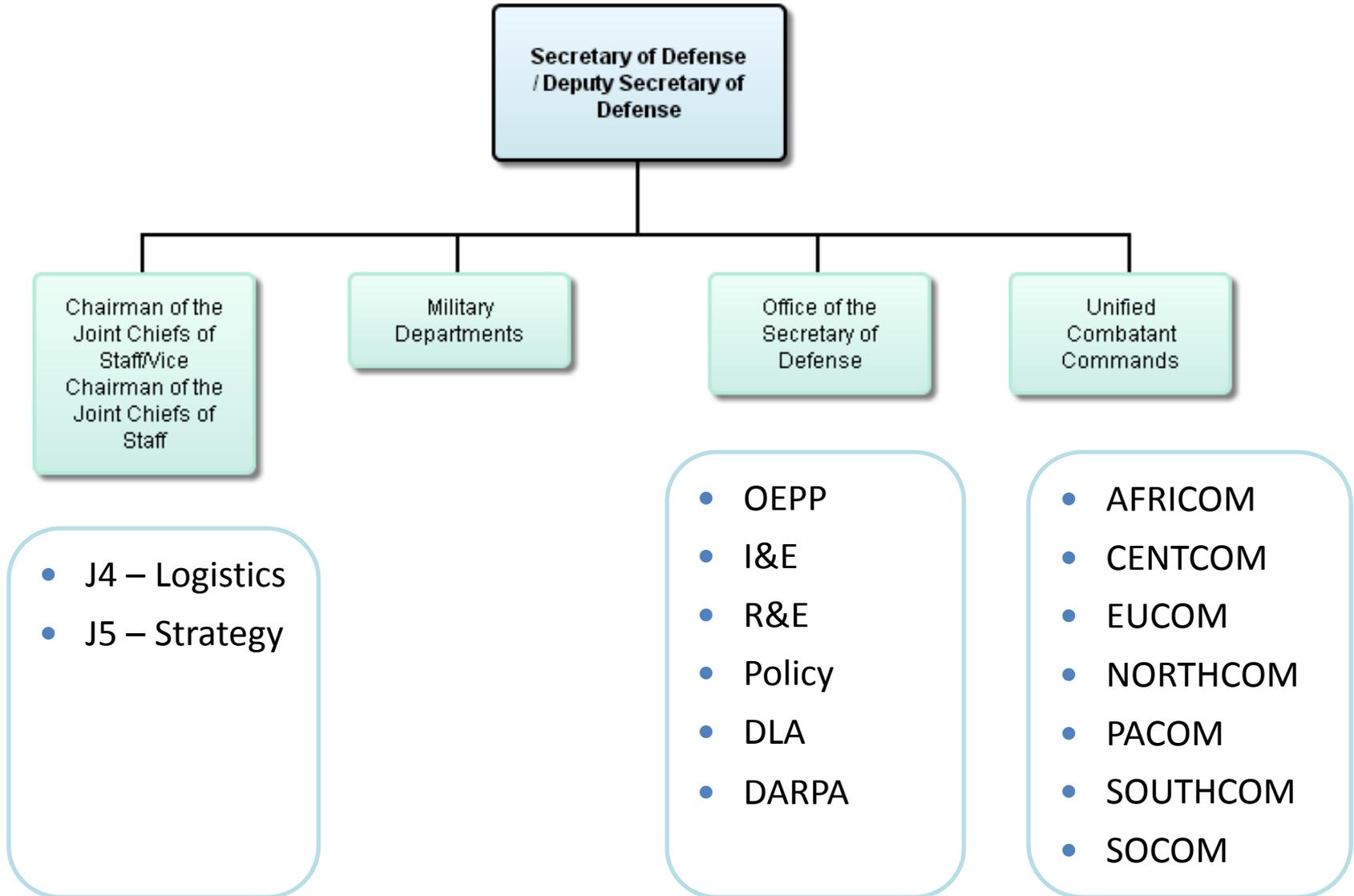
Project Accomplishments

- **DOD Installation Technical Assistance**
 - DOE (FEMP) and OSD/Services
- **Tactical HVAC Equipment**
 - DOE (ARPA-E) and DOD (OEPP/Navy)
- **Wave Energy Test Site**
 - DOE (Wind and Water) and Navy
- **Fuel Cell Demos and Manufacturing**
 - DOE (Hydrogen) and OSD/Services
- **Defense Production Act – Materials**
 - DOE (Vehicles) and OSD (MIPB)





DOD Organizations





DOD Organizations

Army



- I,E,&E
- ASAALT
- IMCOM/ACSIM
- G4 - Logs
- G3/5/7 – Ops
- Army Corps
- Chief Scientist
- AMC/RDECOM

Navy



- E,I,&E
- RD&A - ONR
- CNO
- Chief Scientist
- N4 – Ops
- SLCOM
- NAVSEA
- NAVFAC



- E2O
- I&L
- MCICOM

Air Force



- I,E,&L
- A3/5 – Ops
- A4/7 – Logs
- Chief Scientist
- AFMC/AFRL
- AMC
- AFCEC

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DOD Energy Basics

Why DoD focuses on Energy

- DoD accounts for 80% of Federal energy consumption
- \$19.4B on energy in FY11 – 21% Facilities / 79% Operations
 - 507 installations , 300,000 buildings, 2.2 billion sq/feet of facility space, and 28 million acres of land
 - For every 1 in 24 fuel convoys in Afghanistan/Iraq 1 soldier/Marine is killed or wounded
 - For a 72 Hour patrol (Army) - 50 batteries and 17.9 pounds/soldier
- ~ \$2.7B for energy improvements at DOD (\$1.6B for operational energy, \$1.1B for installations energy (FY13 budget request))
- Broad recognition in DoD that energy is national security issue