



**U.S. Army has a well defined & effective energy management strategy & program**

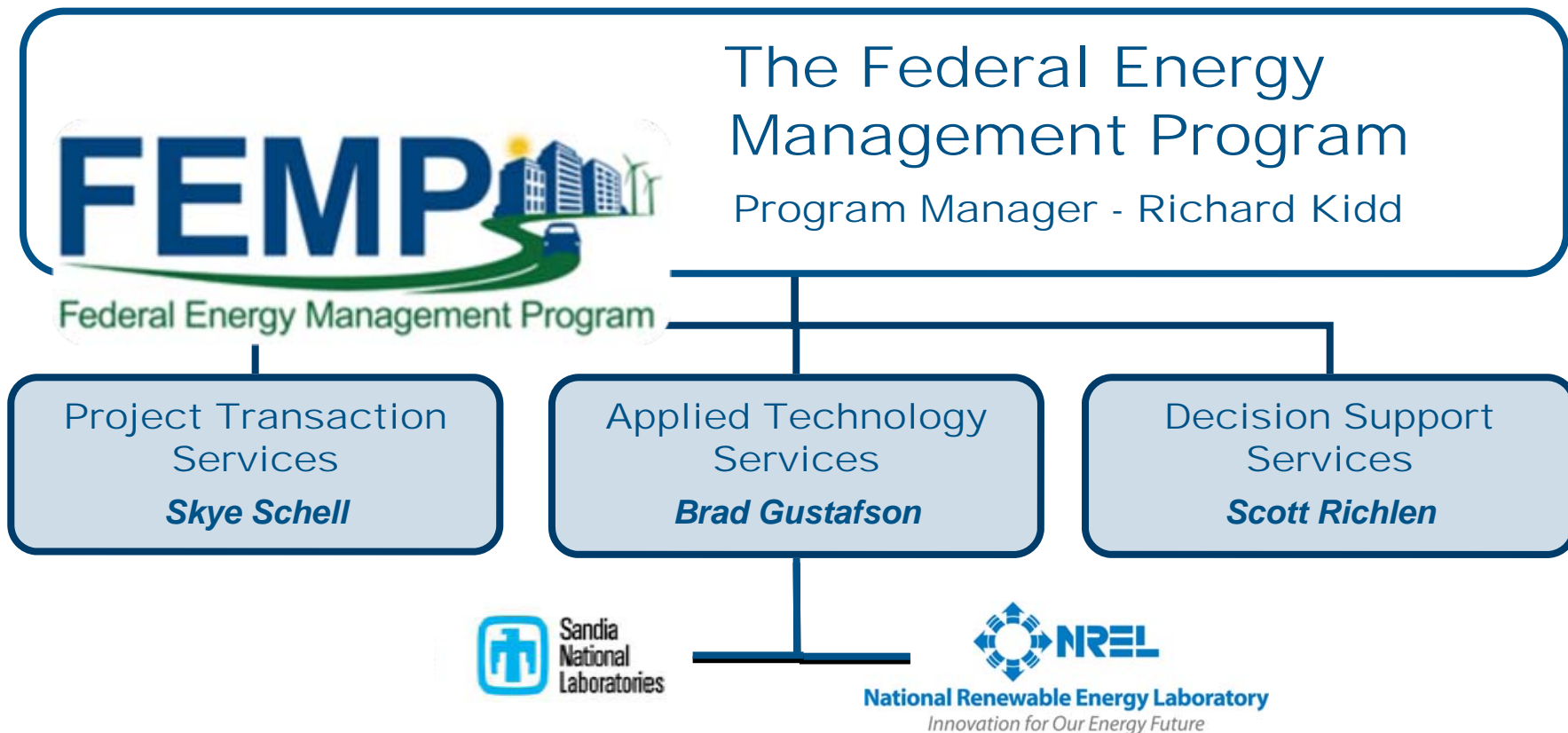
**Fort Bliss provides a unique opportunity to demonstrate leadership in energy efficiency and renewable energy**



**FEMP can provide a wide range of services to support the Army's & Fort Bliss', near-, mid- & long-term energy management & security goals**

*MISSION:*

***FEMP facilitates the Federal Government's implementation of sound, cost-effective energy management & investment practices to enhance the nation's energy security & environmental stewardship***



# FY 2009 ARRA Technical Project

## Implement Tiger Team Recommendations

### Fort Bliss, TX

- DOE FEMP provides DOE National Lab Expertise
- NREL technical support for:
  - Project development support for on-site utility scale Renewable Power to increase energy security – input to Master Plan
    - FY10 Input for DPW PEIS for RE Power
  - Energy efficiency and renewable energy measures in new construction and facility retrofits to reduce building loads
- SNL technical support for:
  - Design of Cantonment microgrid for secure and reliable energy of critical mission needs

8 MW San Emidio Geothermal Plant, Reno , NV  
US Geothermal, Inc



- 20MW geothermal power potential
- Exploratory Drilling in FY10
  - \$5M El Paso County DOE Grant - Drilling/Analysis
  - BLM Lease Positions
- Plant Size based on well data
- Base Power – 95% availability
- High Value resource for Energy Security
- Land area for PEIS – 20 acres
- \$80-120M for Binary Plant

16 MW Waste to Energy Plant, Tulsa, OK  
Covanta Energy



- 6-30 MW Waste to Energy (WTE) power potential
  - Minimum Ft. Bliss Waste Stream
  - Maximum Ft. Bliss & City of El Paso Waste Streams
- Near Base Power – 85% availability
- Investigate integration of CSP trough plant – 90+% availability
- High Value resource for Energy Security
- Land area for PEIS – 12 Acres (30MW WTE), CSP +250 acres
- \$50M (6MW) - \$180 (30 MW) for WTE
  - +\$200-250M for integrated CSP plant

- Conceptual design is underway for a small energy surety microgrid to be implemented in the Cantonment area.
- Microgrid will integrate existing backup generation with new renewable PV systems to provide the capability to operate in “grid-tied” or “islanded” modes.
- Microgrid will be designed to provide secure and reliable energy supply for defined critical mission energy needs.
- Based on initial demonstration success, Ft. Bliss will implement additional microgrids to support additional critical mission energy security and reliability.

# FEMP/Lab Customer Representatives

Agency	Representative	Contact Information
Department of Defense	Richard Kidd	<a href="mailto:richard.kidd@ee.doe.gov">richard.kidd@ee.doe.gov</a> 202-586-5772
U.S. Army	Anne Crawley	<a href="mailto:anne.crawley@ee.doe.gov">anne.crawley@ee.doe.gov</a> 202-586-1505
Ft. Bliss	LABS	
NREL	Doug Dahle	<a href="mailto:douglas.dahle@nrel.gov">douglas.dahle@nrel.gov</a> 303-384-7513
SNL	Mike Hightower	<a href="mailto:mmhight@sandia.gov">mmhight@sandia.gov</a> 505-844-5499