Army and Georgia Power’s 30 MW Projects
Fort Benning, Fort Gordon, and Fort Stewart

GA Environmental Conference
August 2014
Background

- Army Energy Initiatives Task Force (EITF) created in 2011

- Central management office partners with Army Installations to implement large-scale (10 megawatts (MW) or greater) renewable energy projects

- Leverages private sector financing

- Georgia Power will finance, design/build, and own/operate

- 3x30 projects would help meet the Army 2025 1 GW renewable energy goal
Site Three Solar Photovoltaic Generators

- Located at Forts Stewart, Gordon and Benning
- Each project develops one power plant that produces 30 MW-AC from solar photovoltaic
- Modules mounted on a fixed tilt system.
- GA Power will perform the transmission and interconnection work at each substation
- Deliver grid power at 115 kV that interconnects to the 46 kV solar PV system
Challenges

- Design to accommodate facility integration with base mission and operations
  - Access to renewable energy
  - Affordable energy for our Soldiers and facilities
  - Adequate power for critical missions
  - Ensure resilience
- Environmental
  - Planning/Design Analysis
    - NEPA
    - Cultural resources
    - Wetlands
    - Endangered Species
    - Tribal Consultation
  - Construction
    - Timber Harvesting
    - Permits
- Real-estate
  - Site Entry
  - License
Challenges

• Procure materials to align with Army policy and mission
  - Meet specified solar panels requirements
  - Implement cost-effective and large-scale projects

• Ensure site specific factors to optimal for development and operation
  - Required significant civil and geotechnical enhancements to produce land conducive to solar module installation and operation.

• Evaluated military protocol
  - Design and route transmission line and interconnection facilities specific to each installation
  - Develop transmission and interconnection facilities that ensure no disruption to the installation strategic mission
Fort Benning

FORT BENNING - EITF Site
Dove Field

Coordinate System: WGS 1984 UTM Zone 16N
Projection: Transverse Mercator
Units: Meter  Scale = 1:14,000
Produced Feb 2014
Disclaimer: Map is for reference purposes only.
• Drawing shows the project boundary lines, property line, roadways, and topographical details

• Installation near Columbus, GA

• 374 Acre Site

• Wetland areas, cultural and environmental constraints exist around and within the site

• Elevation 380 ft to 230 ft
Fort Gordon PV Layout

- Drawing shows project boundary lines, property line, roadways, and vegetation
- Installation near Augusta, GA
- 199 acre Site
- Wetland areas, cultural and environmental constraints exist around and within the site
- Elevations from 450ft to 280 ft
• Drawing shows the project boundary lines, property line, roadways, and vegetation details

• Installation near Savannah, GA

• 227 acre site

• Divided into three sections of 22, 185 and 20 acres

• Surrounded by or includes wetland areas and other cultural and environmental constraint
Status

• Solicitations from 19 contractors
• Full bids from six potential contractors
• Potential contractors were evaluated on following:
  - Ability to offer a competitive and firm price for the projects
  - EPC warranty offered for the projects, along with module warranties
    10 years for workmanship
    25 years for power output
    5 years inverter with optional pricing for 10 years.
  - Performance testing of the plants, including a system operational test and guaranteed performance ratio
  - Technical qualifications and prior solar construction experience
  - Management expertise and Financial strength
• Selected
  - Power Secure Solar, LLC Fort Gordon and Fort Stewart projects
  - AMEC Kamtech, Inc. Fort Benning project
  
  *Utilization of two different contractors mitigates construction risk across the three projects and achieves cost savings through economies of scale by utilizing Power Secure for two project.*

• Life of project - 35 years
• Operation date calendar year 2016
QUESTIONS

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