Resilience Project Examples in the Military

Improving Energy Security for Army Installations

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Energy Security

- **NDAA 2012**: “energy security”…having assured access to reliable supplies of energy and ability to protect/deliver sufficient energy to meet mission essential requirements

- **Army Directive 2017-07 (Installation Energy and Water Security Policy), Feb 2017**: requires installations to secure critical missions with necessary energy and water for a minimum of 14 days

- **Threats:**
  - Age of Infrastructure: Increasing trend in power interruptions on Army facilities due to equipment failure
  - Acts of Man: Risk of cyber attack and attempted physical sabotage
  - Acts of Nature: Extreme weather events or other natural catastrophes

- **Army needs resilient/secure energy infrastructure to:**
  - Support troops at home and overseas
  - Support communities near installations during national emergencies
Third Party Energy Security Project: Schofield Barracks, HI

- Hawaiian Electric will construct, own, operate and maintain a 50 MW biofuel/fuel oil power generation plant.
- During normal operations, power will flow to grid serving Army and Oahu.
- During grid emergency, plant will provide 50 MW of “first call” and blackstart capability to three Army installations simultaneously; 5 days of fuel storage onsite, 30 days of fuel storage on island.
- 50 MW of firm power sufficient to meet 100% of peak electricity demand at Schofield Barracks, Wheeler Army Airfield, and Field Station Kunia.

Will provide three installations and could provide to part of the surrounding community with 100% energy requirements in the event of a grid outage.
Third Party Energy Security Project: JFTB Los Alamitos, CA

PROJECT CONCEPT

• Developer would construct, own, operate and maintain 16 MWs of solar power, energy storage, and microgrid components
• During normal operations, the developer will sell power to the grid
• During grid emergency, developer would provide “islandable” capability to power critical missions for minimum of 14 days

Goal: 100% JFTB Los Alamitos contingency demand in the event of a grid outage
Third Party Energy Security Project: Fort Sill, OK

- Concept: 15 MW solar array and 54 MW natural gas fueled generators
- Partnership between Public Service Company of Oklahoma (PSO) and U.S. Army
- PSO will install, own, operate and maintain the generating assets under a 30 year land lease
- In normal operations, power from project flows directly to grid servicing Lawton and Fort Sill
- In a grid outage, power from project is routed to Fort Sill mission critical facilities
- Project capacity is sufficient to meet needs of the Utility and U.S. Army; includes necessary switching/controls for operational scenarios

Goal: In event of grid outage the facility/key installation infrastructure is "islandable," power flows to the installation
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