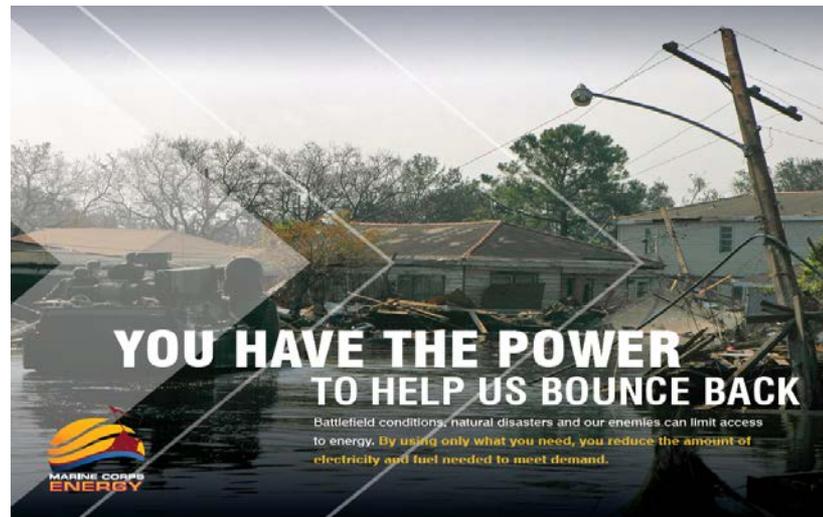




Marine Corps' Drive To Resiliency

Randy J Monohan
HQMC Energy Projects Officer

13 Apr 2017



Federal Utility Partnership Working Group
April 12-13, 2017 Savannah, GA

Hosted by:

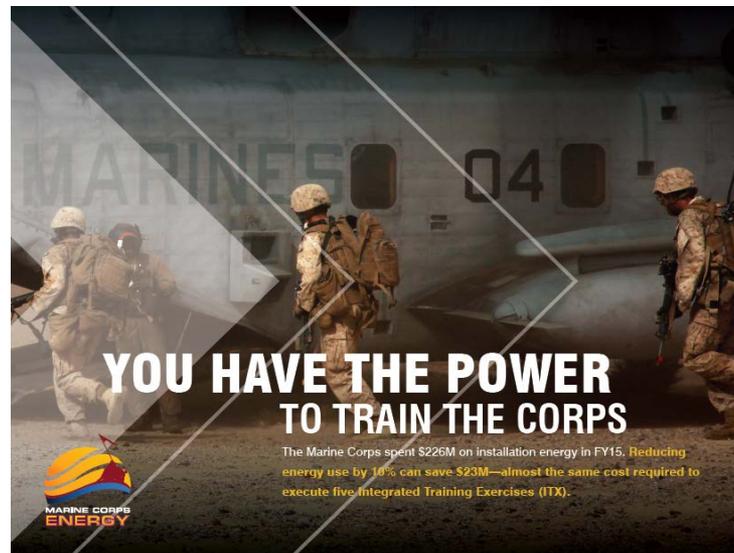




Discussion Points



- Marine Corps Overview
- Centralized Energy Program
- Way Forward



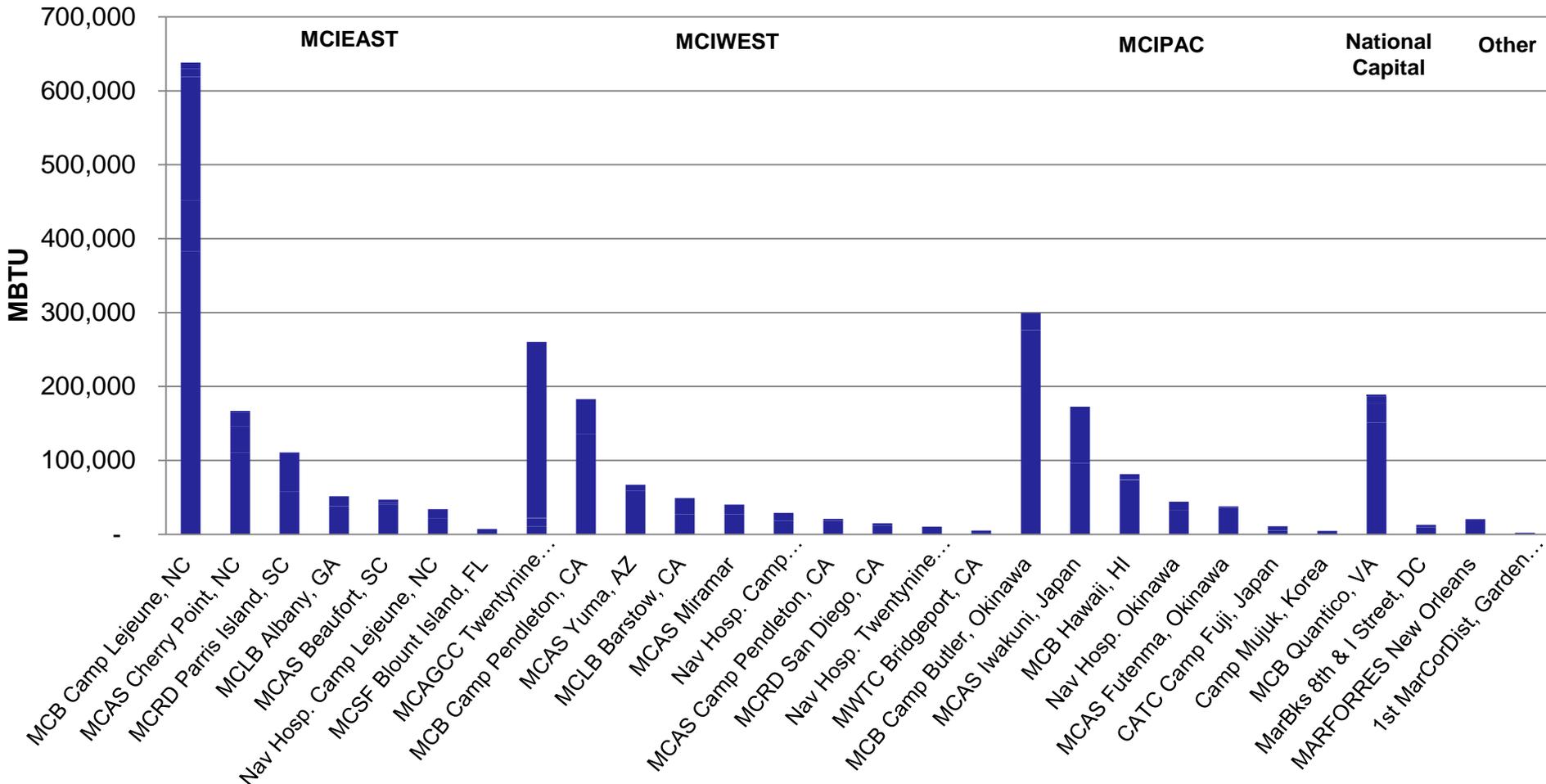


Marine Corps Installations





USMC Energy Consumption





Centralized Energy Program



- **Marine Corps has a centralized energy program which allows us to:**
 - Realign Our Vision
 - Maximize Our Resources



Realigning Our Vision



- We are realigning our focus from addressing mandates to sustaining mission through energy resilience



- This new focus leverages third party finance to improve our energy resilience through:
 - Diversifying supply through self-generation
 - Hardening our utility and controls systems against cyber attacks
 - Smart grid capabilities that integrate distributed and renewable energy supply into the electrical distribution system



Maximizing Our Resources



Third Party Finance

- ESPCs and UESCs offer preferred contract vehicles to pursue resiliency projects
- Allows USMC to implement broader, more complex resiliency upgrades
- Utilize “bundling” approach





Maximizing Our Resources



- Marine Corps approach to third party funding is that we look at the **total project “bundle”**, not just a single Energy Conservation Measures (ECM)

- By utilizing savings from all ECMs, we can **address both the routine (Standard ECM’s) and the (Challenging ECMs):**
 - **Standard ECMs:** HVAC, boilers, controls, water, lighting, etc.
 - **Challenging ECMs:** “Resilience” upgrades to include: cybersecurity for Controls Systems; renewable energy; storage; micro-grids; Smart Grid; and utility upgrades, etc.

Way-Forward



ESPC

MCRD Parris Island:

Energy Independent/Resilient

- 3.5MW's CHP
- 3.5MW's Backup Generators
- 2 Large Backup boilers
- 5.6 MW's PV arrays
- 8MWH Energy Storage
- Base wide Micro-grid with fast load shedding

MCLB Albany:

Net Zero/Energy Independent by 2018

- 4 MW's Landfill Power
- 8.5 MW's Bio-Mass
- Base wide Micro-grid

UESC

MCB Camp Lejeune:

- On-site generation
- Enhancing SCADA
- HVAC upgrades
- Transformer replacement
- Water/wastewater system upgrades
- Micro-grids, battery storage

MCAS Cherry Point:

- Exploring potential micro-grid, battery storage, renewables and CHP opportunities
- Kick-Off meeting was held week last week

Thank You

