FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

November 7-8, 2018
Herndon, VA

DOD Update – Navy

Hosted by:

FEMP
Federal Energy Management Program

Dominion Energy®

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Executive Director

Resilient Energy Program Office

Department of the Navy

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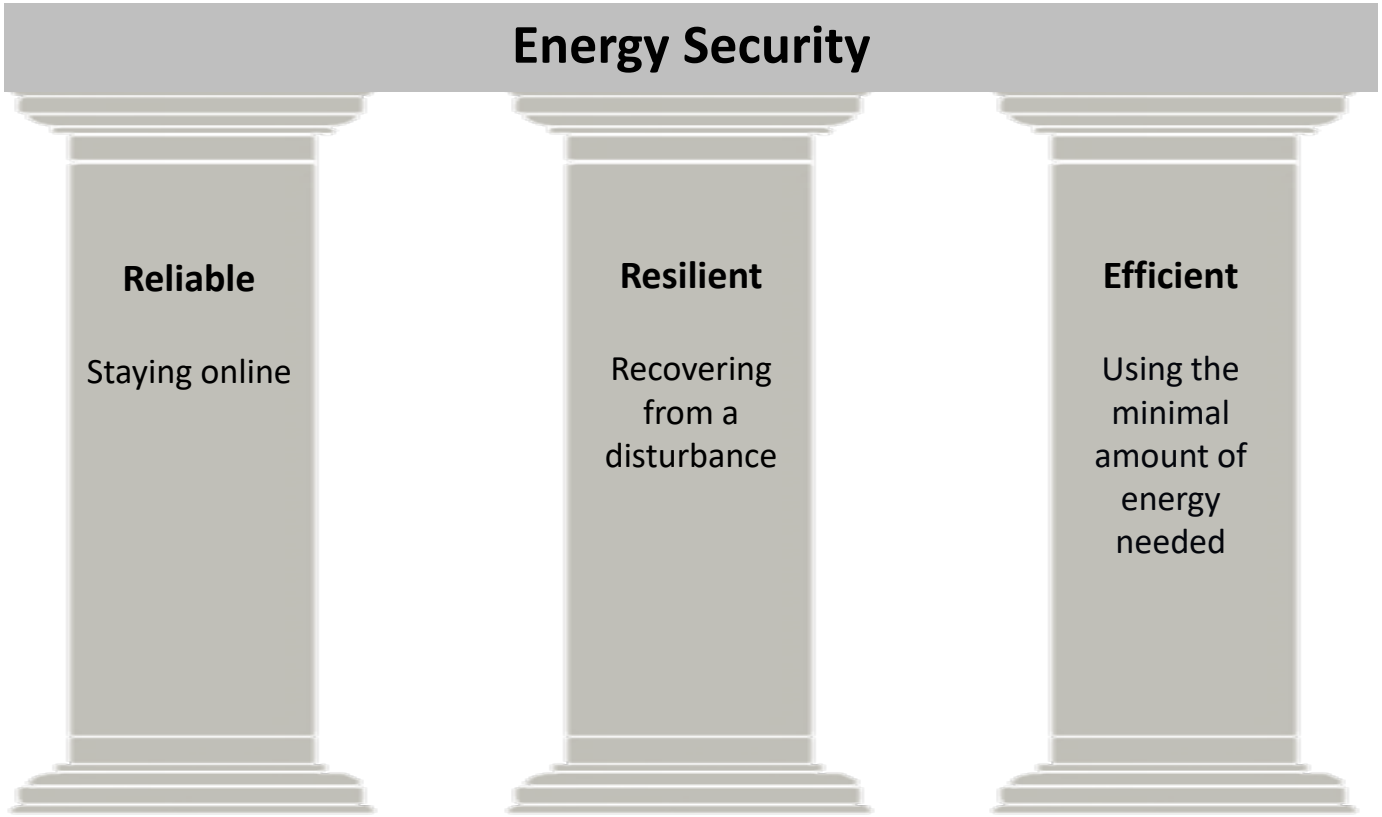
Enhanced Capabilities for the Mission

"Our access to and use of energy must continue to be secure, reliable, and resilient... we must realize the shore is an integral part of this equation since it serves as the backbone from which our forces fly, sail, submerge, and communicate."

- ADM John Richardson, Chief of Naval Operations

Energy Security Framework



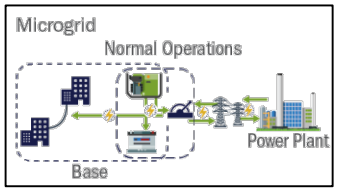
REPO – What We Do

- **Execute DoN energy security projects that improve mission readiness and enhance warfighter lethality while maximizing economic benefits**

- **Reliability / Resiliency:** Enhanced Use Lease (EUL) & Power Purchase Agreement (PPA)
  - 745MW / $1.34B privately funded generation and microgrid assets

- **Efficiency:** Energy Savings Performance Contract (ESPC) & Utility Energy Service Contract (UESC)
  - $613M (FY19) infrastructure upgrades financed through efficiency savings

- **Navy Smart Grid:** Network of cyber secure connected infrastructure that improves resource and facility management



Microgrid

Distributed Generation

Combined Heat & Power (CHP)

Preserving appropriated funds by utilizing alternative funding strategies

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Energy Security to Support Navy's Mission

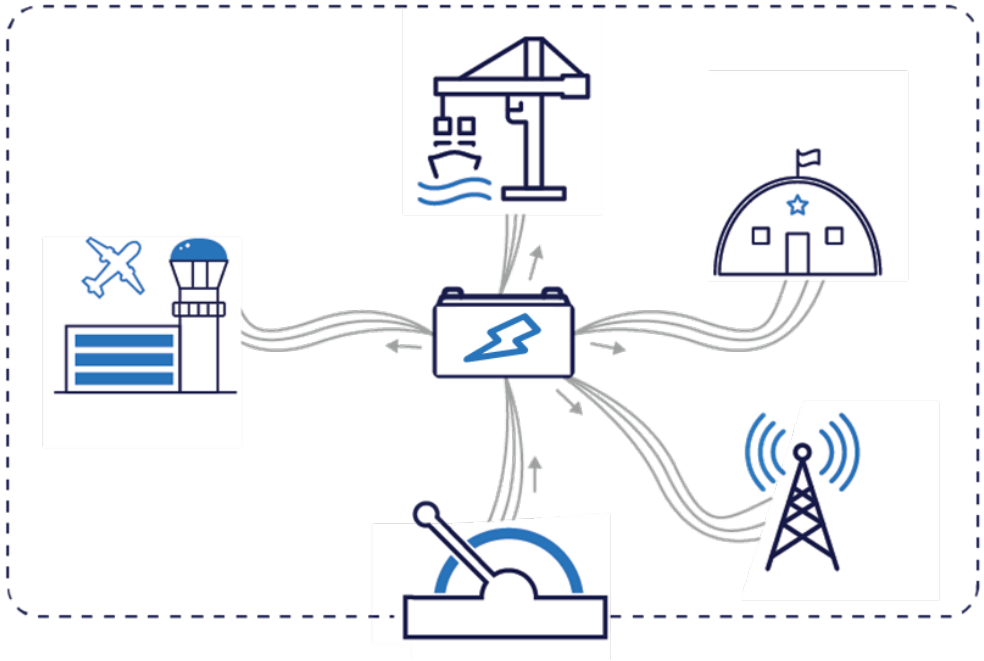
Reliability

Automated Controls

Smart Grid

Island Operations

Modernized Systems



Efficiency

Cost Savings

Minimal Transmission & Distribution (T&D) Losses

Renewable Generation

Combined Heat & Power (CHP)

Resiliency

Energy Diversity

Modular and Scalable

Responsive Technology

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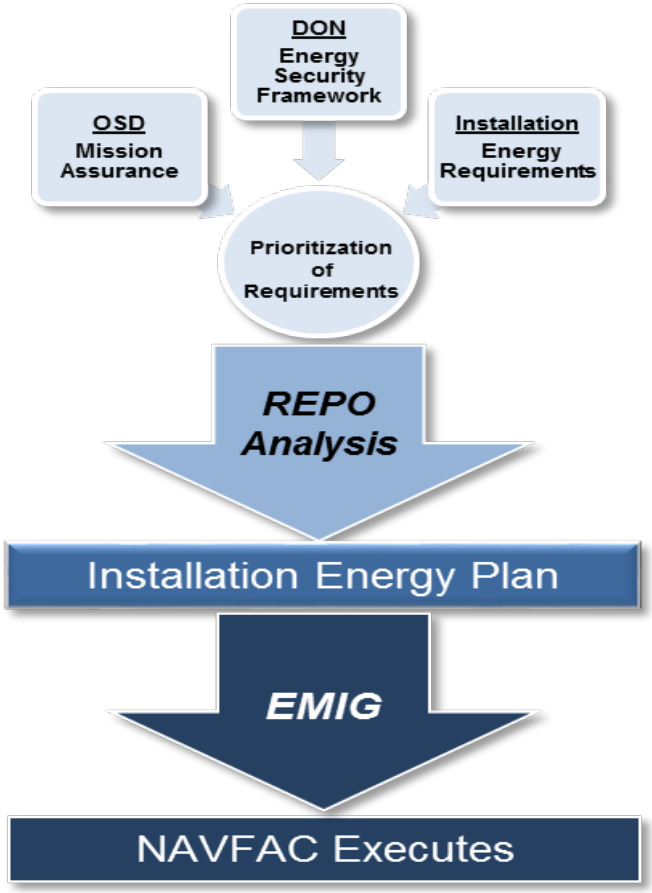
Project Development



Identify Problems: Gap Analysis

- Utilize multiple inputs to compare energy requirements versus current state to identify energy needs
- Create prioritized list of requirements based on energy needs identified in Gap Analysis

Identify Solutions: REPO Analysis

- Assess information from prioritized requirements list in conjunction with market information
- Identify opportunities and solutions to respond to requirements

Select Solutions: Installation Energy Plans

- Use REPO solutions to break large scope into single projects, using all energy tools available (REPO Models 1-3, ESPC/UESC, etc.)
- Submit requested projects to EMIG

Select prioritized and funded projects: EMIG process

- Installations submit annual project execution request to NAVFAC
- EMIG identifies projects which are planned, prioritized, and funded, to create future project execution pipeline

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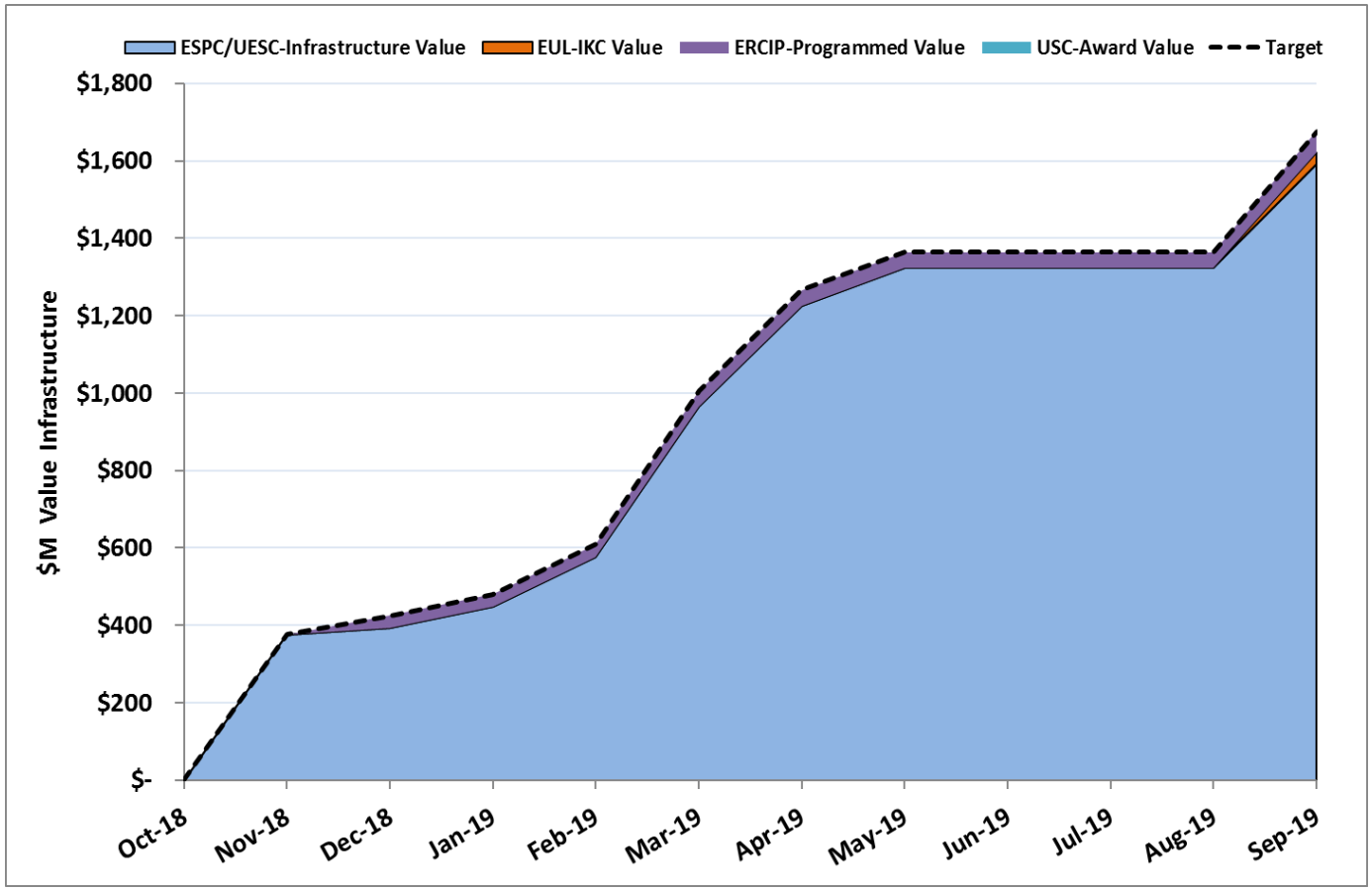
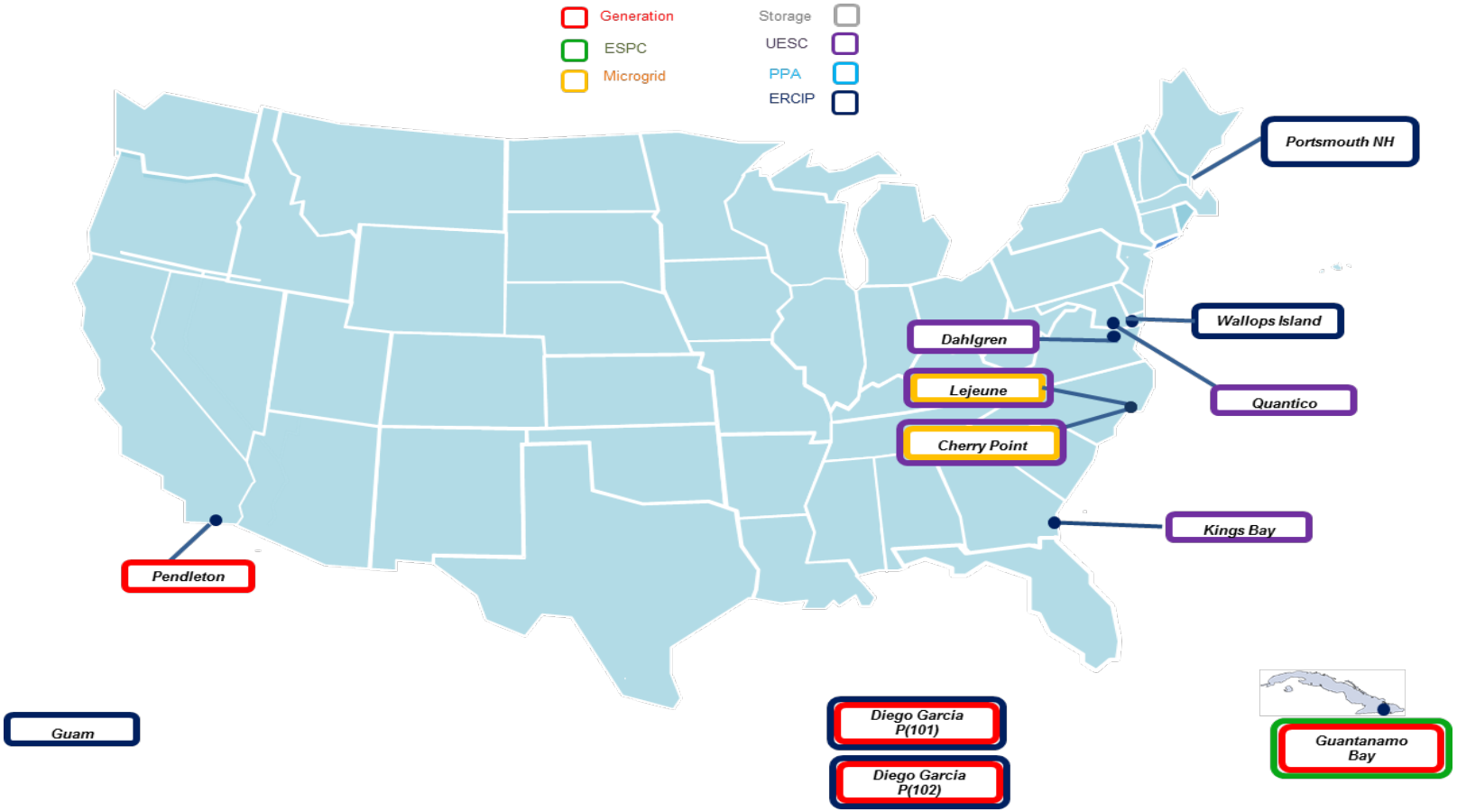
Project Execution (FY19)



Planned Awards
EUL- Pendleton
UESC– Camp Lejeune
UESC – MCAS Cherry Point
UESC – Dahlgren
UESC – Kings Bay
UESC – Quantico
ESPC – Guantanamo Bay
ERCIP – Diego Garcia PV Solar
ERCIP – Portsmouth NH Steam
ERCIP – Diego Garcia PV
ERCIP – Guam Solar
ERCIP – Wallops

REPO Project Opportunities (As of October 2018)



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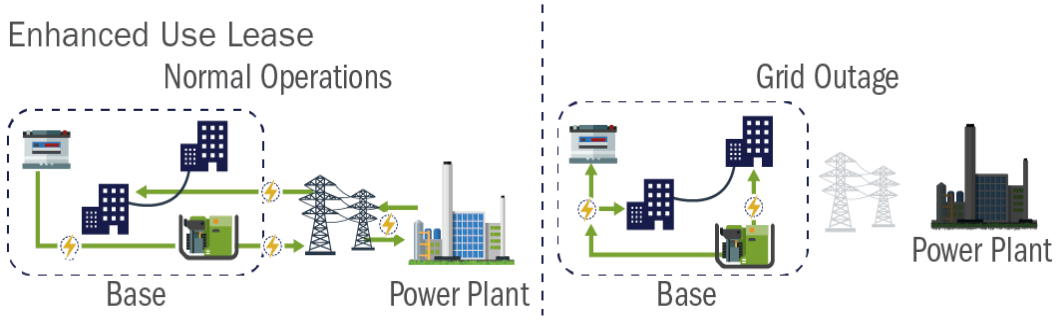
Naval Submarine Base New London

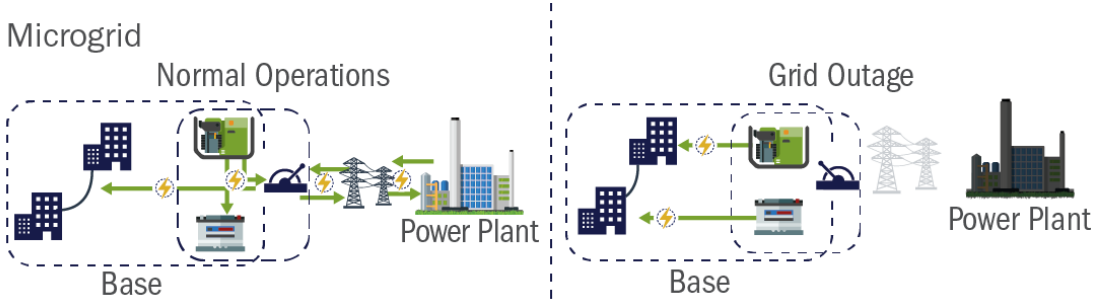
- **Installation Mission:** As the DON's primary East Coast submarine base, provide infrastructure for Navy operating forces and is homeport to 5 attack submarines



- **Project Summary:**
  - Fuel Cell and Microgrid
  - 7.4 MW
  - Partners Connecticut Municipal Electric Energy Cooperative (CMEEC), Groton Utilities and the state of Connecticut

Marine Corps Air Station Yuma

- **Installation Mission:** Provide aviation ranges, support facilities and services that enable forces to enhance their mission capabilities and combat readiness



- **Project Summary:**
  - Diesel Generator Peaker Plant and Microgrid
  - 25 MW
  - Arizona Public Service

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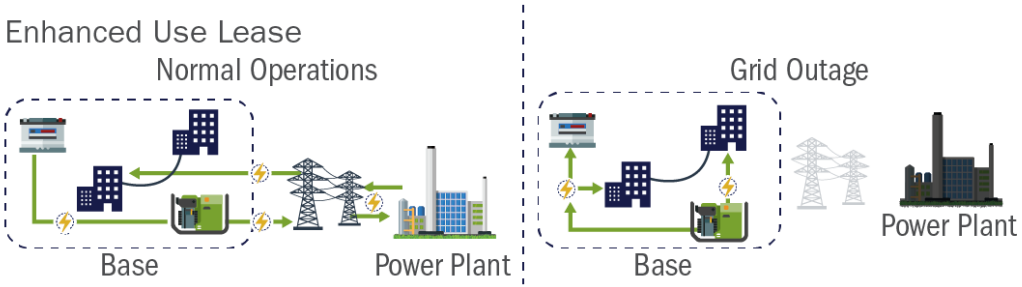
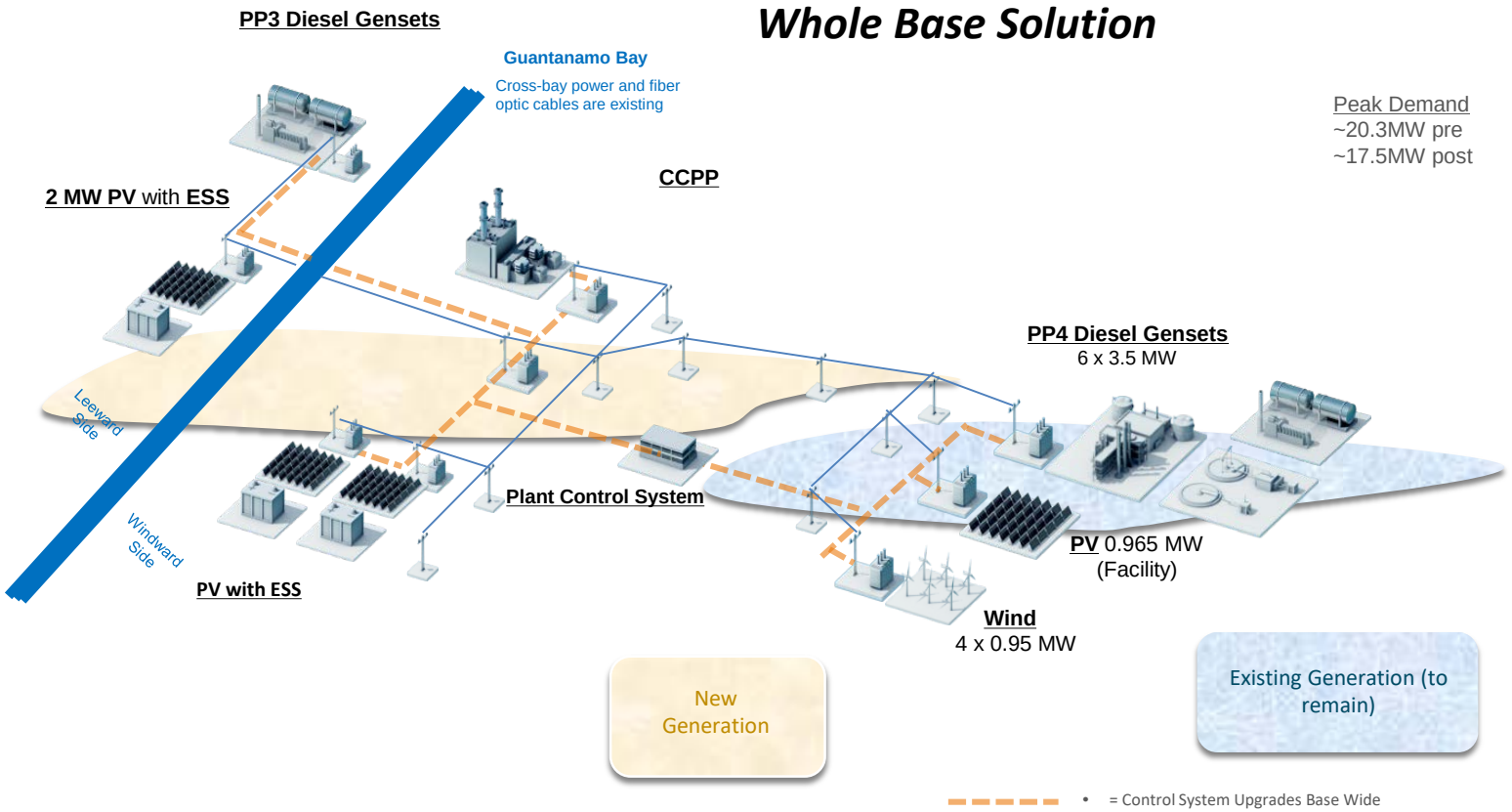
Pacific Missile Range Facility, Barking Sands

- **Installation Mission:** The world's largest instrumented, multi-dimensional testing and training missile range.



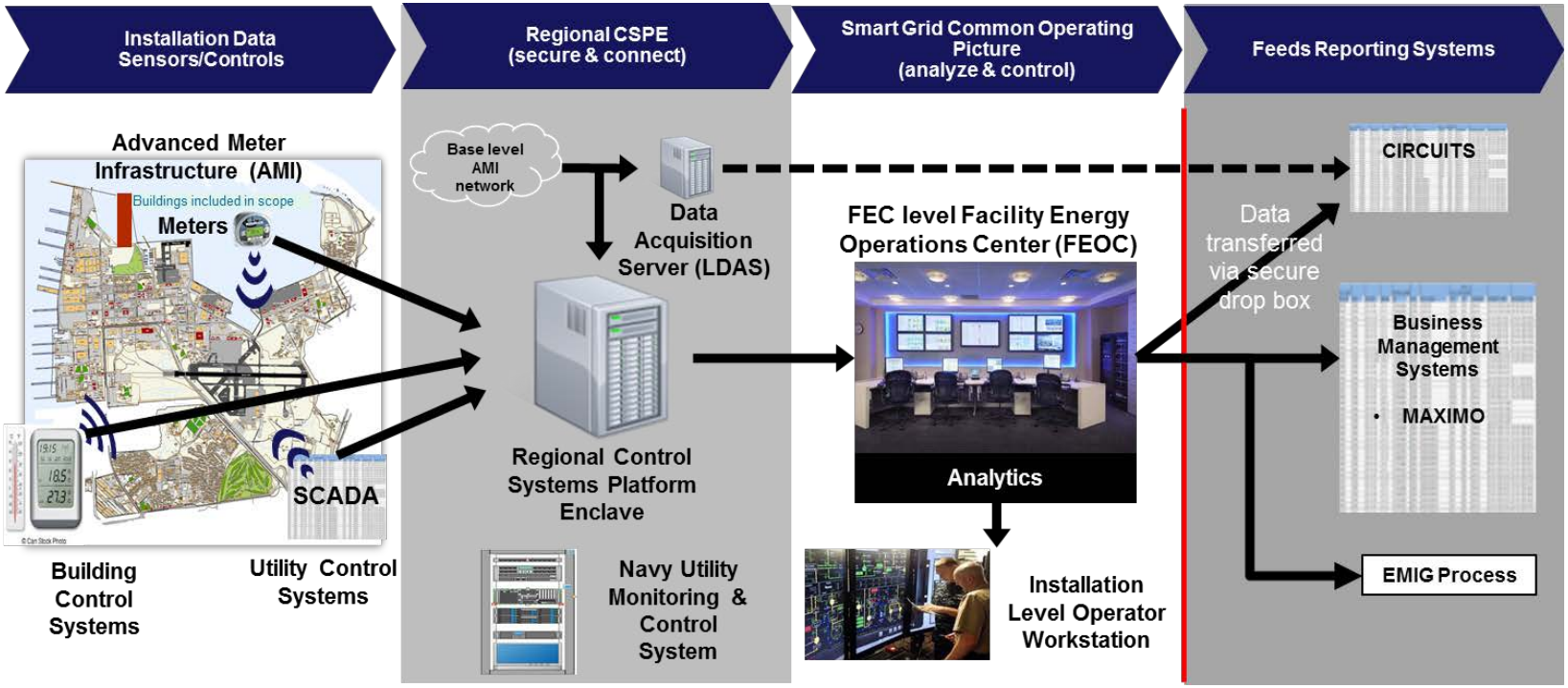
- **Project Summary:**
  - Solar Generation with Integrated Storage
  - 19 MW generation and 60 MWh energy storage
  - Kauai Island Utility Cooperative

ESPC at Guantanamo Bay



Smart Grid Integration

Smart Grid is a centralized, cyber secure monitoring and control system that analyzes building energy and utility data to generate actionable information enabling more secure, efficient, and cost-effective energy management across the Department of the Navy.



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Questions?