

# FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

November 3-4, 2015  
Houston, TX

## Strategies for Integrating Renewable Energy into the Department of the Navy's Infrastructure

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Hosted by:





# Why Does Energy Security Matter?



GROTON, Conn. (July 16, 2014) The Los Angeles-class attack submarine USS Toledo (SSN 769) transits the Thames River as Toledo departs Naval Submarine Base New London to conduct local operations.

(U.S. Navy photo by Mass Communication Specialist 1st Class Jason J. Perry/Released)

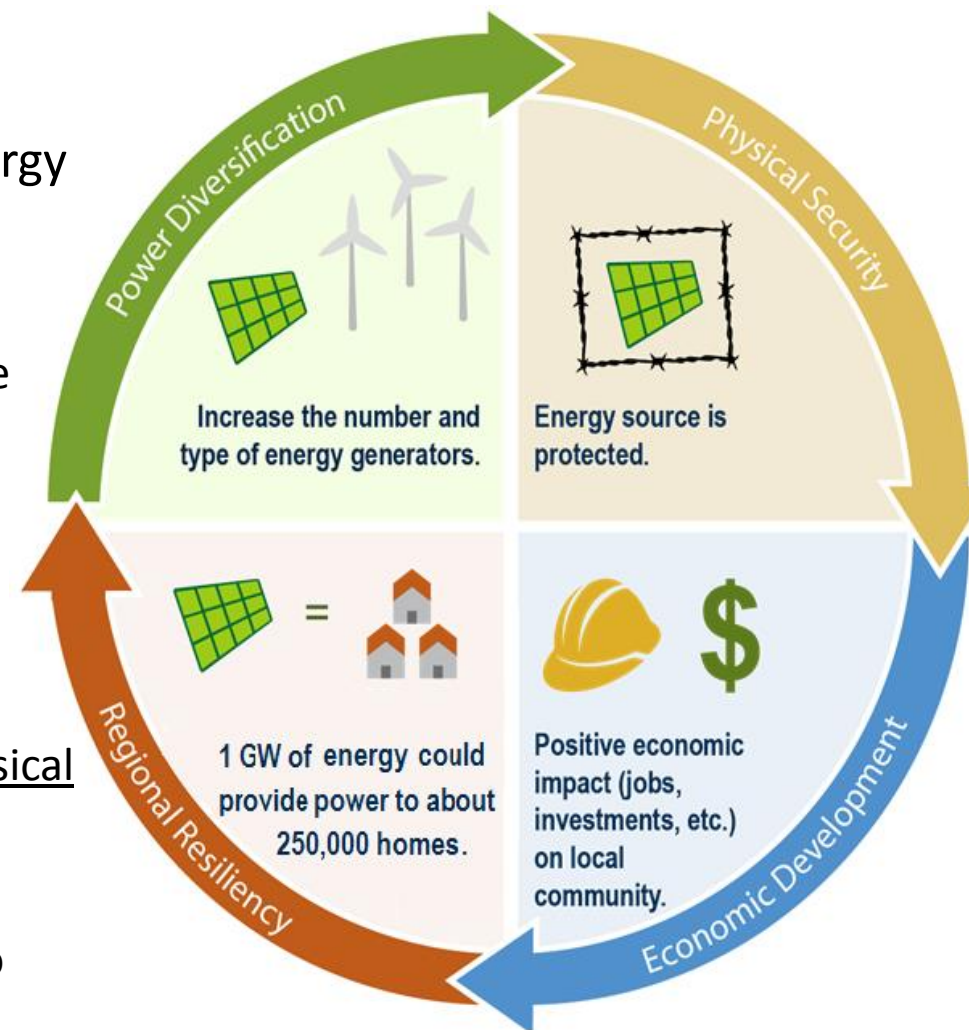
- Regional Energy Security: Pushing Power to Groton
  - Naval Submarine Base New London
- Emergency Preparedness and Response
- Price and Supply Volatility
  - Natural gas spikes and Navy utility bill



# Benefits of Renewable Energy to the DON

Deploying new renewable energy generation will enhance the DON's energy security posture:

- Long-term contracts for RE at a set price provide cost-stability
- Power diversification increases the availability of local energy sources
- Locating facilities on-base provides physical security
- Collaborating with local communities to provide services in times of disaster or need





# REPO Project Development Models

## Model 1

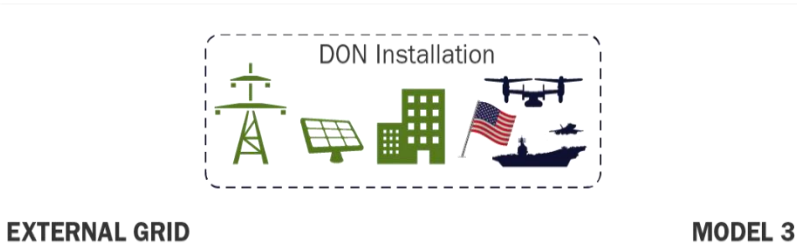
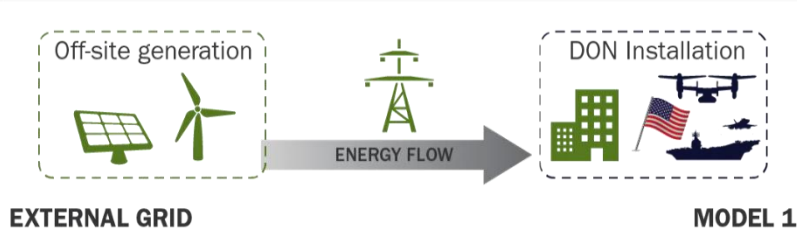
Off-base Generation for  
On-base Consumption  
(Acquisition: USC/PPA)

## Model 2

On-base Generation for  
Off-base Consumption  
(Real Estate: Outgrant)

## Model 3

On-base Generation for  
On-base Consumption  
(Acquisition: PPA)

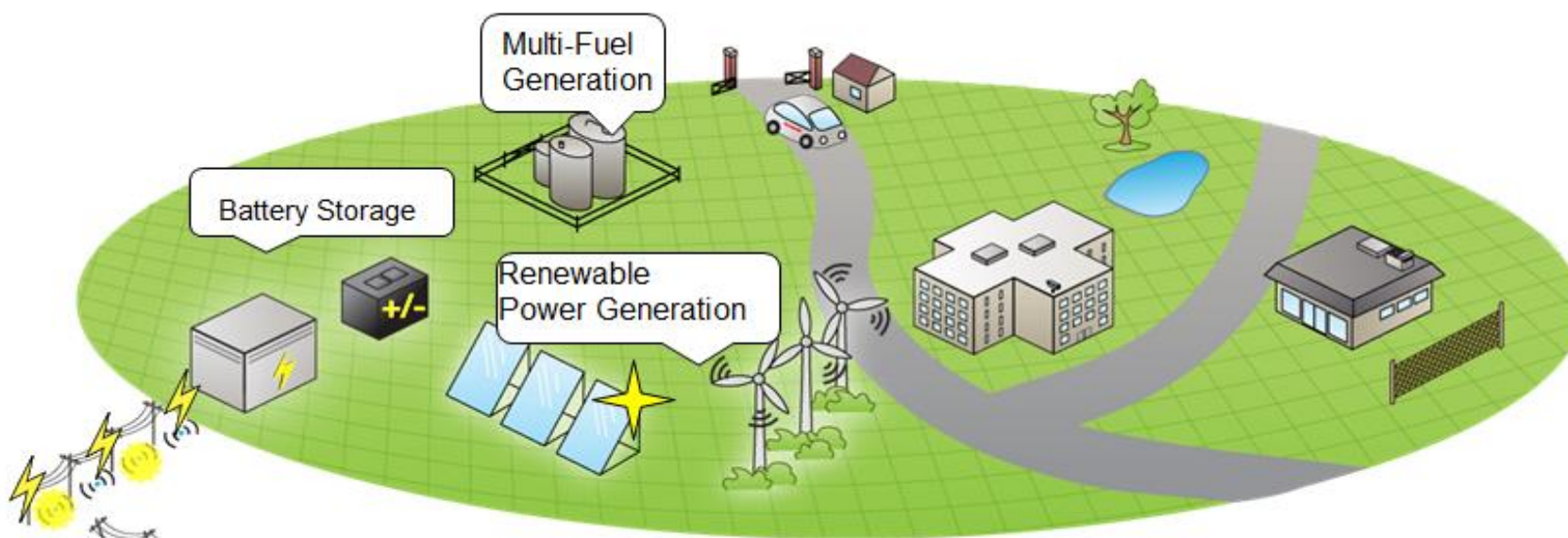




# Integrating Microgrid Technology to Optimize RE

Additional updated infrastructure is required to create access to on-base renewable energy generation

- Microgrid technology will help protect existing infrastructure
- Integration could guarantee continuity of operations and will avoid inefficient use of fossil fuels.
- Opportunity to provide ancillary services that are mutually beneficial to the DON and energy service providers
- Adding energy management systems will automate load-allocations to critical infrastructure







# Regulations can Facilitate Win-Wins for the DON and Utility Partners

## State Regulations

- Create a market that would monetize ancillary services, e.g., a tariff
- Guidance from regulators about obligation to supply energy when creating a microgrid and maintaining the reliability of the future grid of grids
- Consider regulatory relief/arrangements to allow DON to supply to utility partners

## Federal Regulations

- Allow the Services to monetize energy security
- Encourage use of third-party finance structures and clarify boundaries/triggers for OMB scoring



# Utilizing 3<sup>rd</sup> Party Financing for Microgrid Development

- Collaborating with utilities and energy service providers to provide ancillary services that benefit the community, the greater grid and the DON
  - Yuma, Arizona
  - New London, Connecticut
- How do we do it:
  - Real estate outgrants – USC\$2667
  - ESPCs
  - Work with regulatory bodies at the state and federal level to enable the DON to monetize ancillary services in exchange for energy security benefits

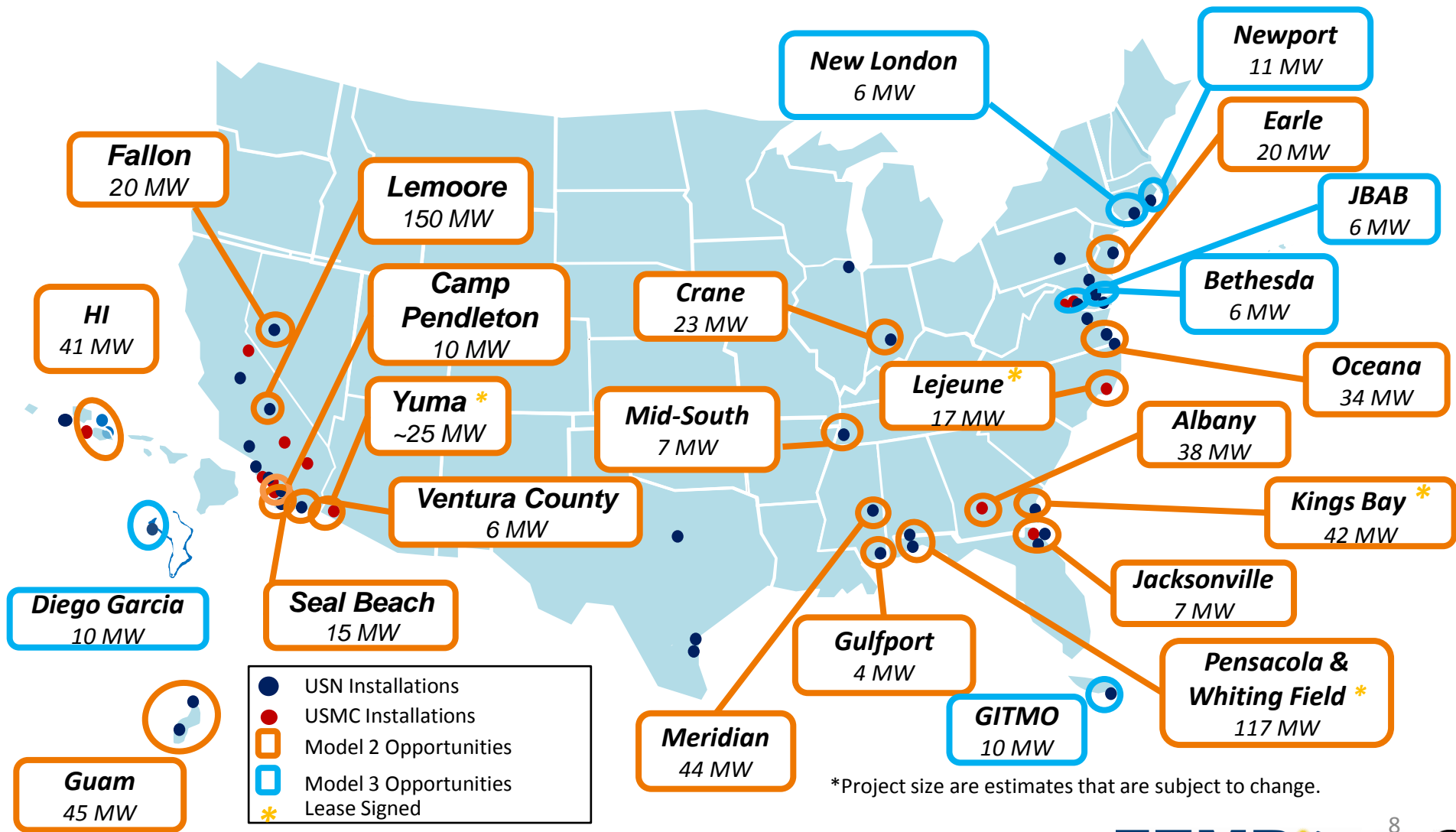


Commandant of the Marine Corps Gen. Joseph F. Dunford Jr. visits Marine Corps Air Station Yuma, Ariz.

U.S. Marine Corps photo by Sgt. Gabriela Garcia/Released



# REPO Project Opportunities with Potential for Microgrid Integration







# Questions?

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