

# **DON Energy Resiliency in CA & New Climate Strategy**

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**16 JUNE 2022**

# Navy 3-Pillars of Energy Security



DON's energy strategy is based on the Energy Security Framework and the three pillars to make installations more reliable, resilient, and efficient.

## 3 Pillars of Energy Security (P-602)

### Reliability

*The percentage of time energy delivery systems (utilities) can serve customers at acceptable regulatory standards.*



- Outage Duration
- Outage Frequency
- Availability
- Power Quality

### Resiliency

*The ability to avoid, prepare for, minimize, adapt to, and recover from energy disruptions.*



- Backup Generation
- Uninterruptible Power Supply
- Power/Fuel Storage

### Efficiency

*The use of the minimum energy required to achieve the desired level of service.*



- Metering
- Audits
- Intensity Reduction

# *Annual Energy and Water Savings*



**Water**

**93,000,000 gallons**

**Energy**  
**875,000 MBTUs**



*Reducing Carbon Footprint & Saving Money*

# Solar PV Power Purchase Agreement



EXTERNAL GRID

MODEL 1

210 MW (150 MW AC)  
of solar generation

The San Diego Union-Tribune

## Navy signs largest-ever U.S. solar deal



By Morgan Lee | 11:08 a.m. Aug. 14, 2015



**Provides 1/3 of all Power for the DON in CA**

# DON's CA Project Portfolio



DON is executing multiple projects at Marine Corps and Navy installations **throughout California** to enhance our energy resilience and support the CA electric grid.

## NAS Lemoore (150+ Acres)

- 40+ MW Solar PV, /40 MW BESS

## NWS Seal Beach (59 Acres)

- 10 MW Solar PV, 10 MW BESS

## NWSSB Det. Norco (8.3 Acres)

- 2.5 MW Solar PV, 2.5 MW BESS

## MCRD San Diego (1.53 Acres)

- 25 MW BESS

**New Starts: MCB Camp Pendleton, MCAS Yuma, and NB Point Loma**



*DON recognizes its role as a CA grid stakeholder, and sees the opportunity to develop projects that support market-driven grid needs and achieve national defense resiliency objectives.*

# *Camp Pendleton Energy and Water Resiliency Enhanced Use Lease*



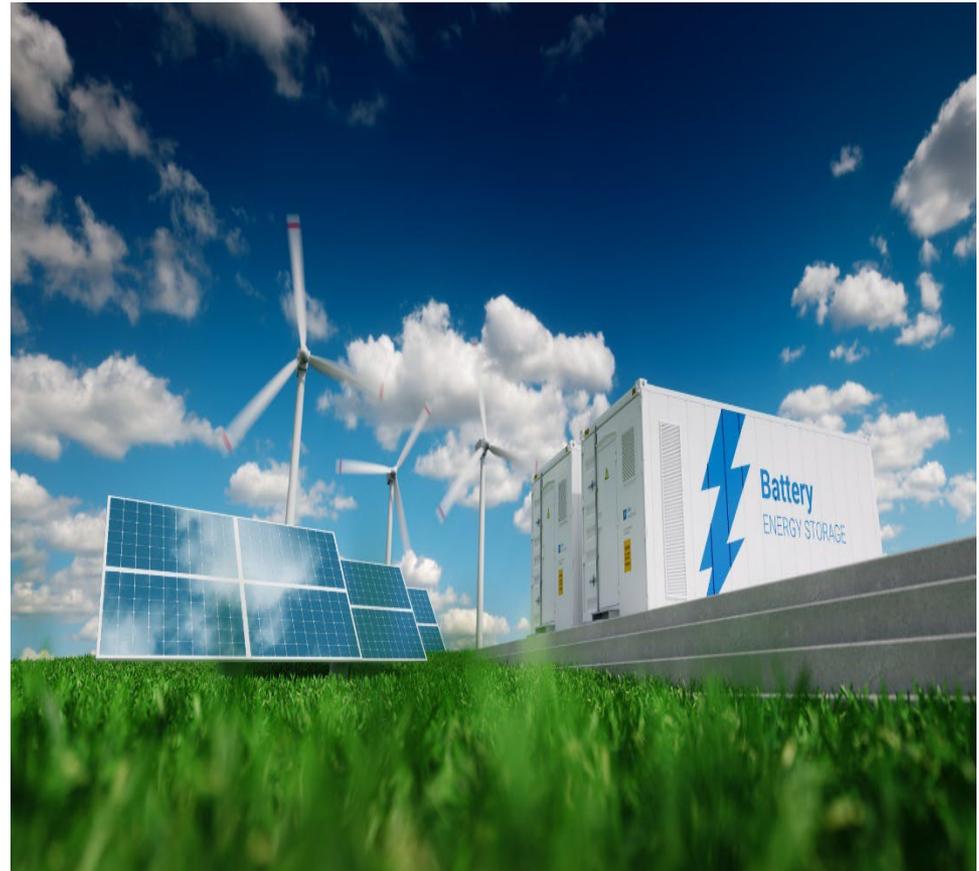
- Leverage the inherent value of real property along key infrastructure corridors to develop comprehensive energy and water utilities resilience solution at Marine Corps Base Camp Pendleton
- Meet 14-days (minimum) of operational capabilities during contingency through In-Kind Consideration Resilience Projects as payment for a potential future lease.
- Request for Information was released on 16 OCT 2021 to gather information from industry to include both ideal site locations as well as technology and plan to achieve resiliency
- Industry Day held on 1-2 DEC 2021 and was attended by 19 developers

**Request for Proposal – December 2022**

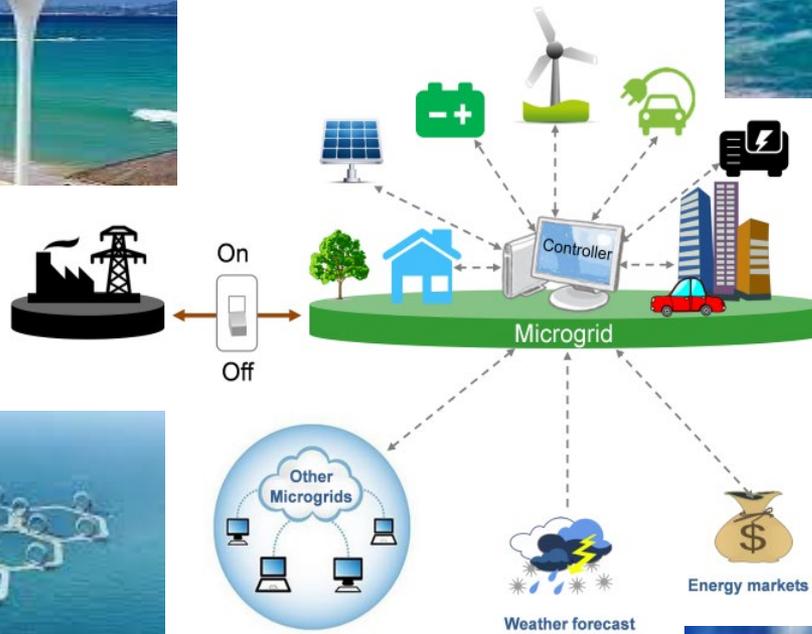
# Partnerships are Key



- **DON-California Energy Partnership**
  - California Energy Commission (CEC)
  - California Public Utilities Commission (CPUC)
  - California Independent System Operator
  - Other state and local organizations
- **National Labs (NREL, PNNL, IDNL)**
- **Industry**
- **Utility Partners (SDG&E, SCE, and PG&E)**



# What's next???



# Foundations of a Climate Ready Force



***Climate Action 2030 outlines two performance goals to guide Navy and Marine Corps efforts:***

1

## **Build Climate Resilience**

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Ensure that our forces, systems, and facilities can continue to operate effectively and achieve the mission in the face of changing climate conditions, and worsening climate impacts.

2

## **Reduce Climate Threat**

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The Department must reduce its greenhouse gas emissions and draw greenhouse gases out of the atmosphere, stabilize ecosystems, and achieve, as an enterprise, the nation's commitment of net-zero emissions by 2050.

# Building a Climate Ready Force Requires Meeting Ambitious Targets



## Executive Order 14057

- The Administration has directed that Federal agencies work aggressively to reduce their climate impacts.
- The DON has incorporated these targets into its *Climate Action 2030*.

## Targets

Reducing emissions department-wide by 65 percent by 2030 (measured from a 2008 baseline)

Achieving 100 percent carbon pollution-free electricity by 2030, at least half of which will be locally supplied clean energy to meet demand

Acquiring 100 percent zero-emission vehicles by 2035, including 100 percent zero-emission light-duty vehicle acquisitions by 2027

Achieving a 50 percent reduction in emissions from buildings by 2032

Annually diverting at least 50 percent of non-hazardous solid waste from landfills, including food and compostable materials, and construction and demolition waste and debris by 2025

## *Additional Climate Action Targets*



*In addition to the Executive Order targets, the DON will pursue the following internally developed targets:*

- **Nature-Based Resilience.** Drawing down an additional **5 million metric tons of CO<sub>2</sub>e per year by 2027**, roughly the same as removing one million cars from the road, on our lands or through partnerships.
- **Energy Resilience.** Installing **cyber-secure microgrids or comparable resilience technology** to support energy resilience for critical missions. All installation microgrids will leverage carbon pollution-free power generation and long-duration battery storage to ensure continuity of critical missions.

# Organization Around Lines of Effort



***The Department's Efforts will be organized around the five Lines of Efforts (LOEs) identified by DOD in their Climate Adaptation Plan.***

<p><b>1</b></p> <p><b>Climate-Informed Decision-Making</b></p> <p>Climate change and its impacts will be integral considerations in decision making processes across the enterprise.</p>	<p><b>2</b></p> <p><b>Train and Equip for Climate Resilience</b></p> <p>From individual Sailors and Marines, to the civilian workforce, to platforms, equipment, and installations, the Department will ensure that the total force is trained and equipped to operate effectively and efficiently in evolving and intensifying future climate conditions.</p>	<p><b>3</b></p> <p><b>Resilient Built and Natural Infrastructure</b></p> <p>Built and natural infrastructure will be resilient to projected climate impacts and continue to support mission requirements, military readiness, and operational success.</p>	<p><b>4</b></p> <p><b>Supply Chain Resilience and Innovation</b></p> <p>Through transformational low-carbon technologies and supply chain resilience measures, the DON will minimize reliance on logistics drivers like energy and water and ensure access to key materials, equipment, and supplies in the face of climate disruptions.</p>	<p><b>5</b></p> <p><b>Enhanced Mitigation and Adaptation Through Collaboration</b></p> <p>Through partnerships and collaboration with a full range of partners, the DON will combine its funding, authorities, and capabilities with those of external partners, increasing the scale and scope of our adaptation and mitigation impacts.</p>
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# Q / A



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