



DON Energy Resiliency Solutions in California

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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

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, 20MW/40 MWh BESS
- 5 MW backup diesel generators, microgrid controls

NWS Seal Beach (59 Acres)

- 10 MW Solar PV, 10 MW BESS
- 1.95 MW backup diesel generators, microgrid controls

NWSSB Det. Norco (8.3 Acres)

- 2.5 MW Solar PV, 2.5 MW BESS
- 2.2 MW backup diesel generators, microgrid controls

MCRD San Diego (1.53 Acres)

- 25 MW BESS
- 2.9MW backup diesel generators, microgrid controls

MCB Camp Pendleton and MCAS Miramar (TBD)



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.

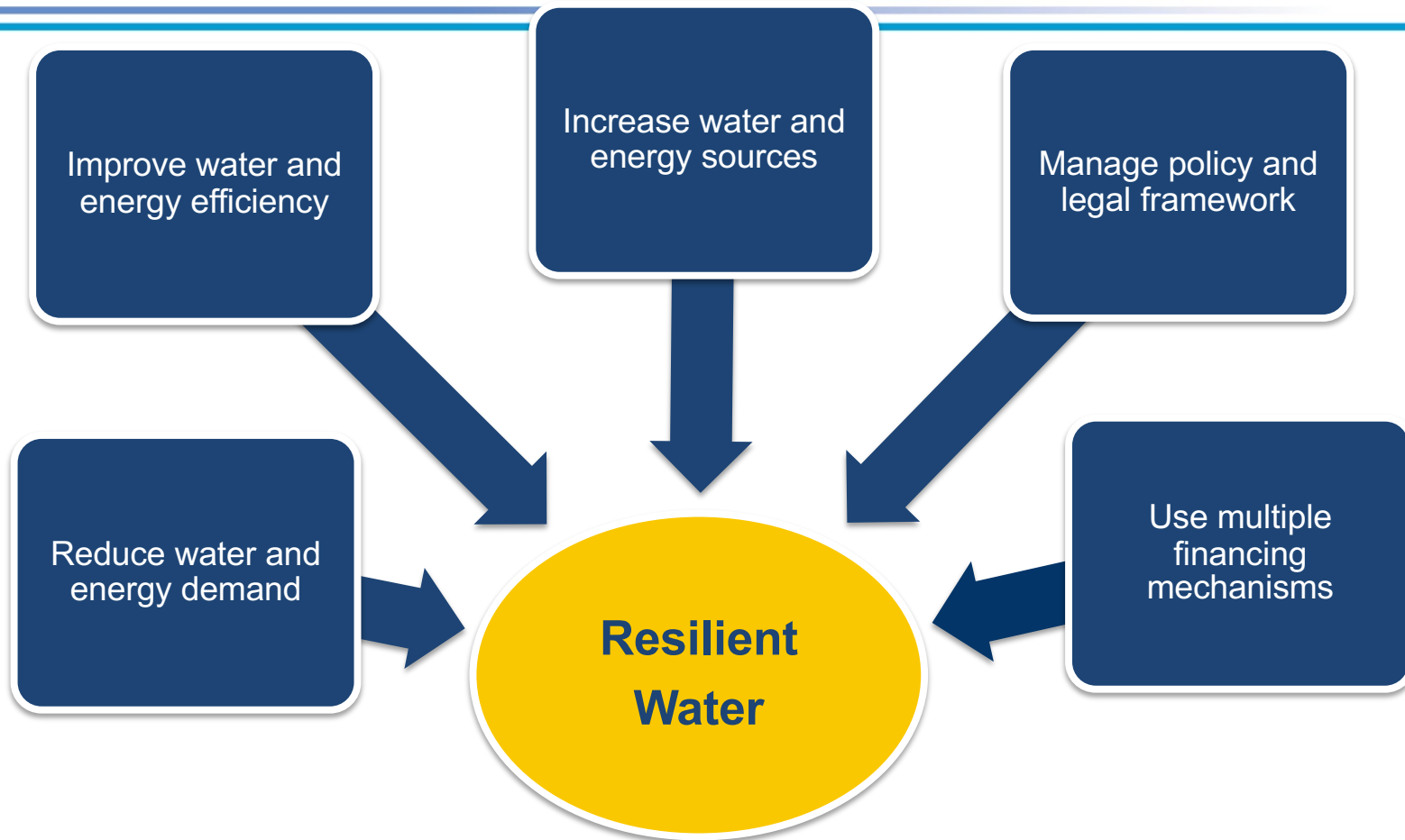
Partnerships are Key



- **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)**

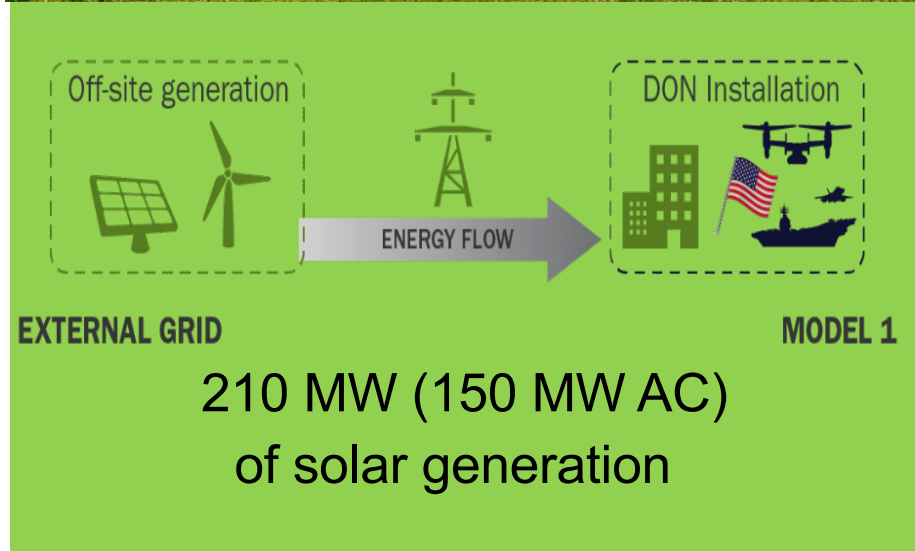


Water-Energy Nexus Initiative



- **Developed Risk Analysis, Business Models, and IPL**
- **Identified 220 Opportunities across the AOR (both Navy and USMC)**
- **Next step is to revalidate IPL (pending program is funded)**

Solar PV Power Purchase Agreement



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

What's next???

