California Offshore Renewable Energy Station

California Offshore Wind Industry Symposium

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Challenges of Floating Wind Energy Technology Acceptance

The challenge of gaining public and regulator acceptance of the novel technology of floating wind energy in California is:

- Utility scale deployments of floating wind turbines off California could involve thousands of 8 MW to 10 MW wind turbines generating 100 GW or more in aggregate

- The timeframe for siting, engineering, permitting and constructing this initial fleet of FWTs is on the order of 10 years or more.

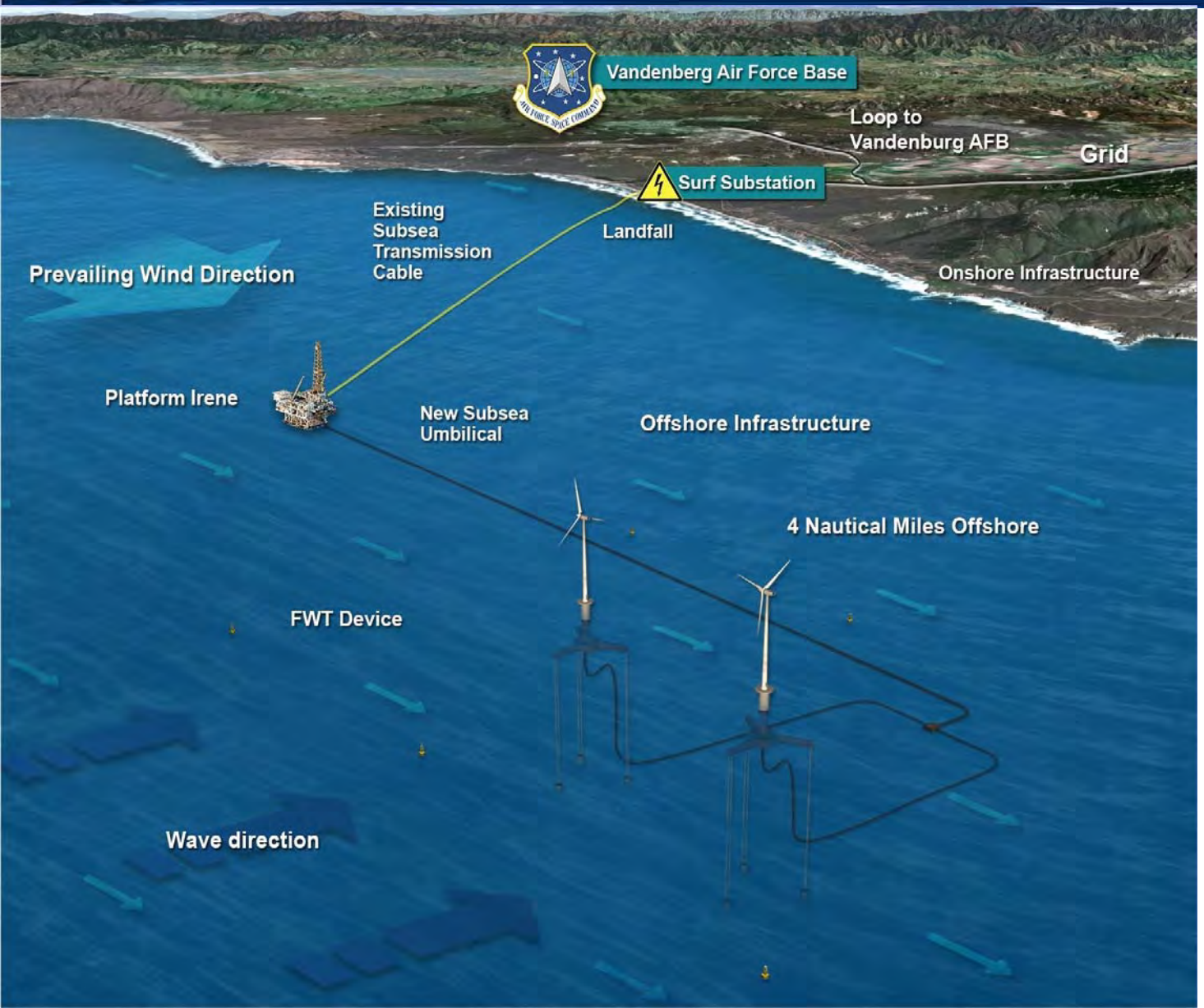
- This is a massive undertaking with large technology, cost recovery, permitting and stakeholder acceptance risks

PG&E WaveConnect and DOE CalWave Lessons Learned

- Agencies need to have detailed descriptions of all project elements up front
- Meaningful, long-term stakeholder outreach process is critical
- Submarine power cables require substantial permitting and are expensive to build and maintain
- NEPA and CEQA permitting requirements need to be better integrated
- California needs a "one-stop shop" for permitting and submerged lands leasing and a State appointed "shepherd" to help guide the applicant through a maze of agencies

NEPA = National Environmental Policy Act CEQA = California Environmental Quality Act

Offshore Wind Energy Demonstration Siting in California



California Offshore Renewable Energy Station (CORES)

Proposed Concept

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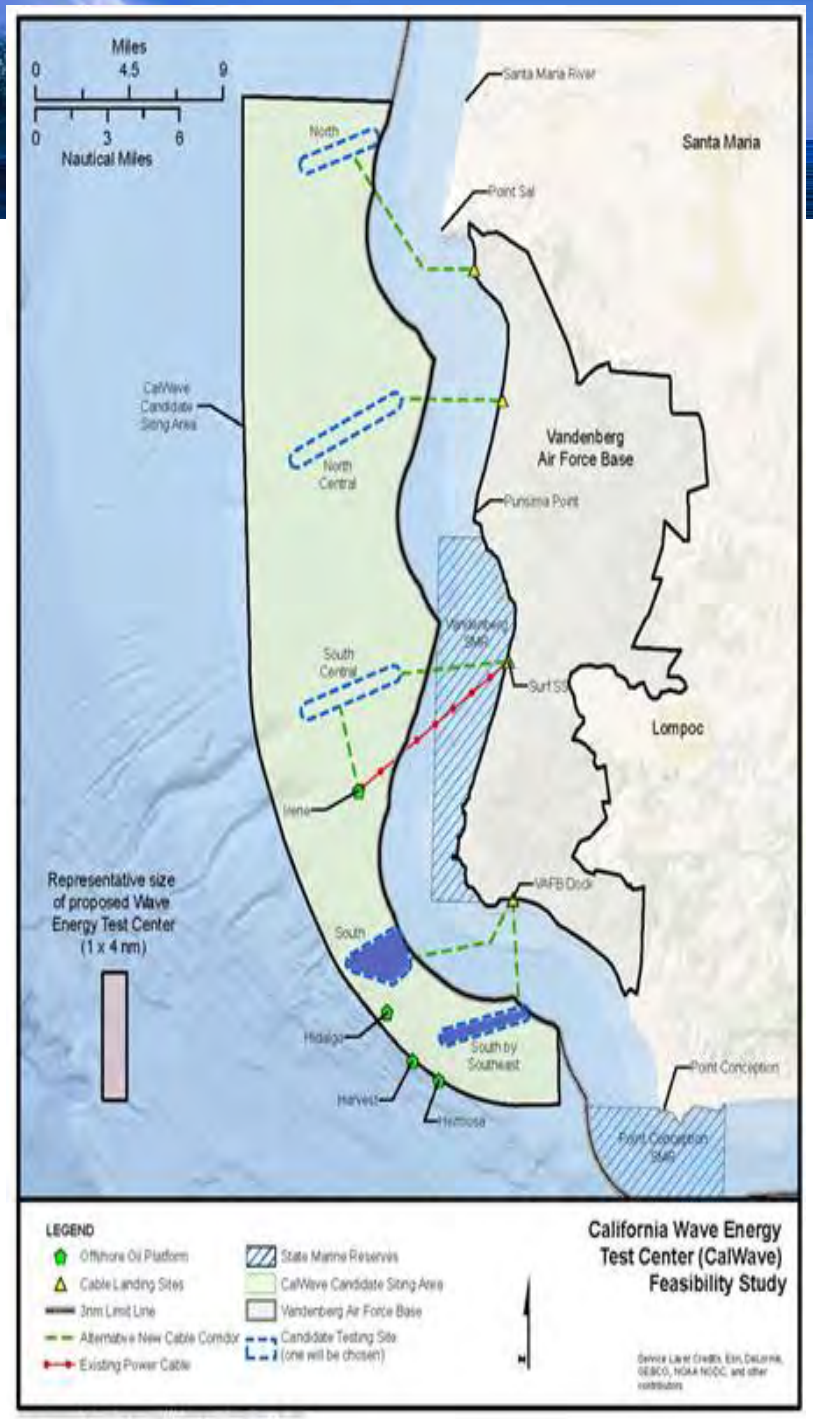
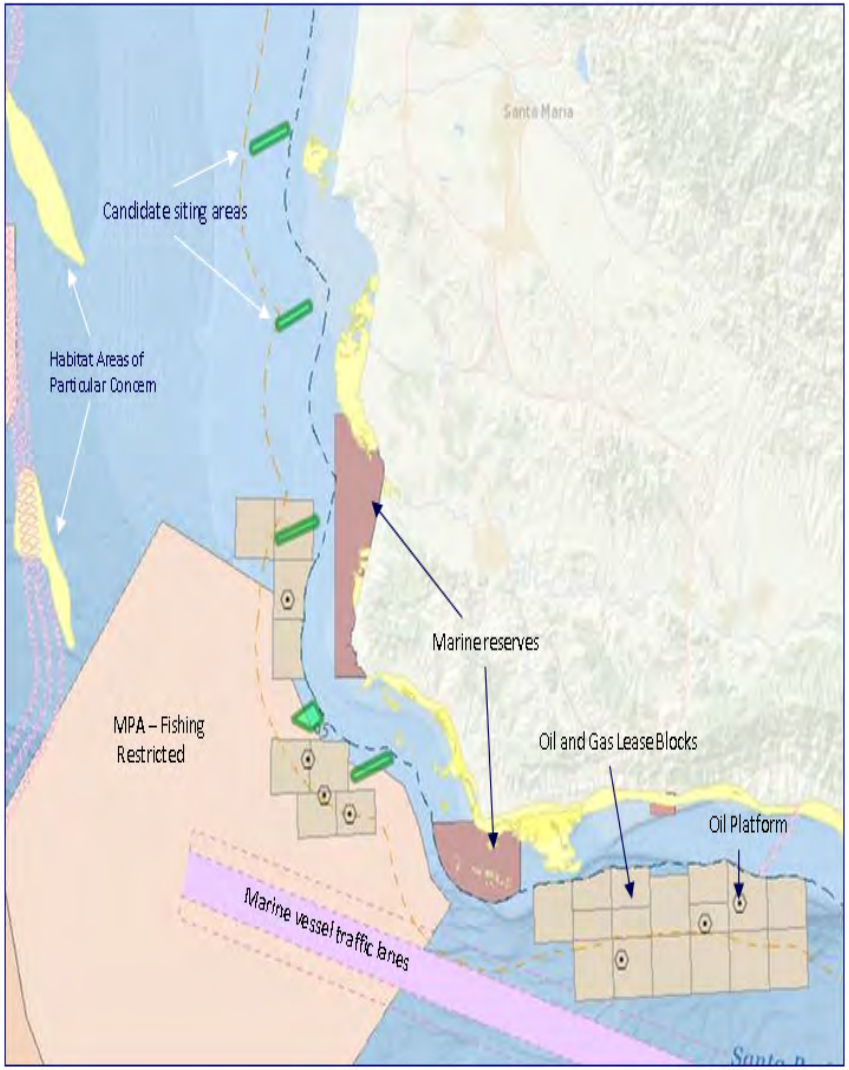
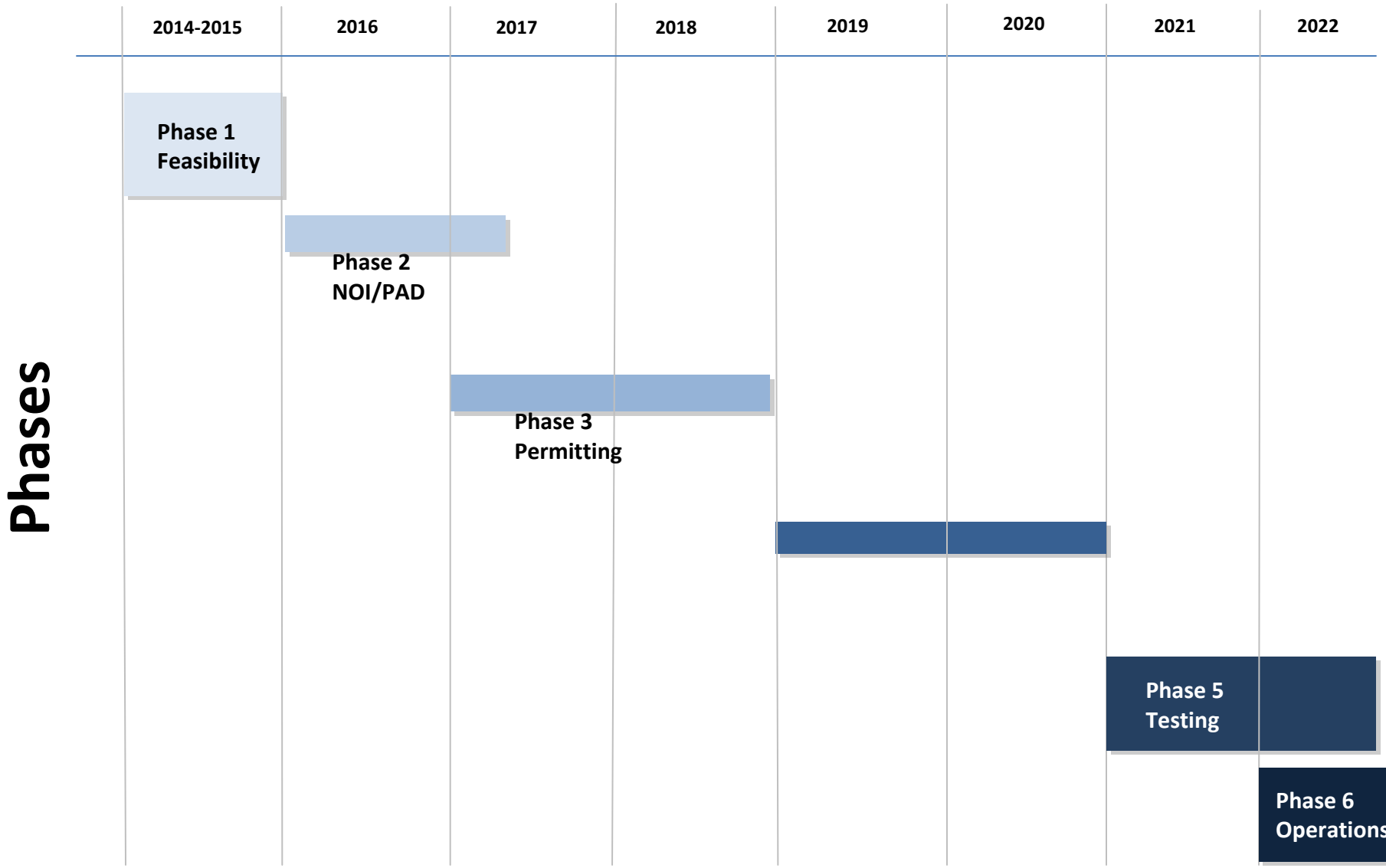




Source: Bureau of Ocean Energy Management, MarineCadastre.gov National Viewer, 2014

DOE CalWave Siting Study

CORES Timeline



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