Offshore Wind Energy

Development Update

Port of San Francisco

June 28, 2023

What is Offshore Wind Energy?

- Proven source of clean energy
- Offshore winds tend to be strong, fast, and uniform
- Several OSW projects in development on the East Coast
- 50,500 MW installed globally
- 123 MW of which is from floating turbines

Federal Bureau of Ocean Energy Management (BOEM)

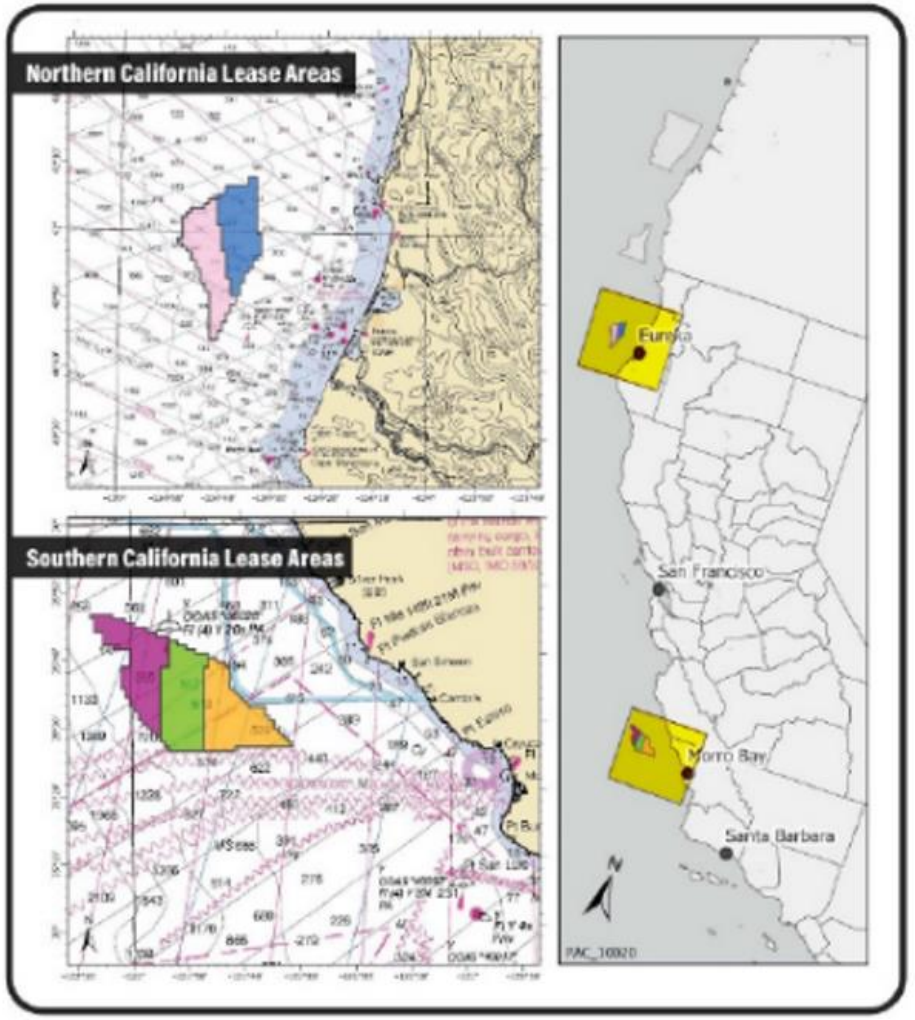
- National goal to deploy 30,000 MW (30 GW) of OSW capacity by 2030 to create a pathway to 110,000 MW (110 GW) of offshore wind capacity by 2050.
- BOEM manages federal level planning for OSW on Outer Continental Shelf (OCS).
- BOEM's authority extends from 3 nautical miles (nm) offshore ending at 200 nm.
- As of June 2021, there were 42 MW of installed OSW operating capacity in US.
- Since 2013, conducted 9 competitive lease sales in the US — all on the East Coast.
- On West Coast, BOEM designate two call areas off Humboldt Bay and Morro Bay

Assembly Bill AB 525

- September 2021 – signed into law by Governor Newsom
- Sponsored by former Assemblymember David Chiu (Current SF City Attorney)
- The law requires CEC to develop strategic plan for installing OSW floating turbines off CA Coast in federal waters
- CEC leads coordination of plan with federal, state, and local agencies and stakeholders
- CEC is required to submit strategic plan to State Legislature by June 30, 2023

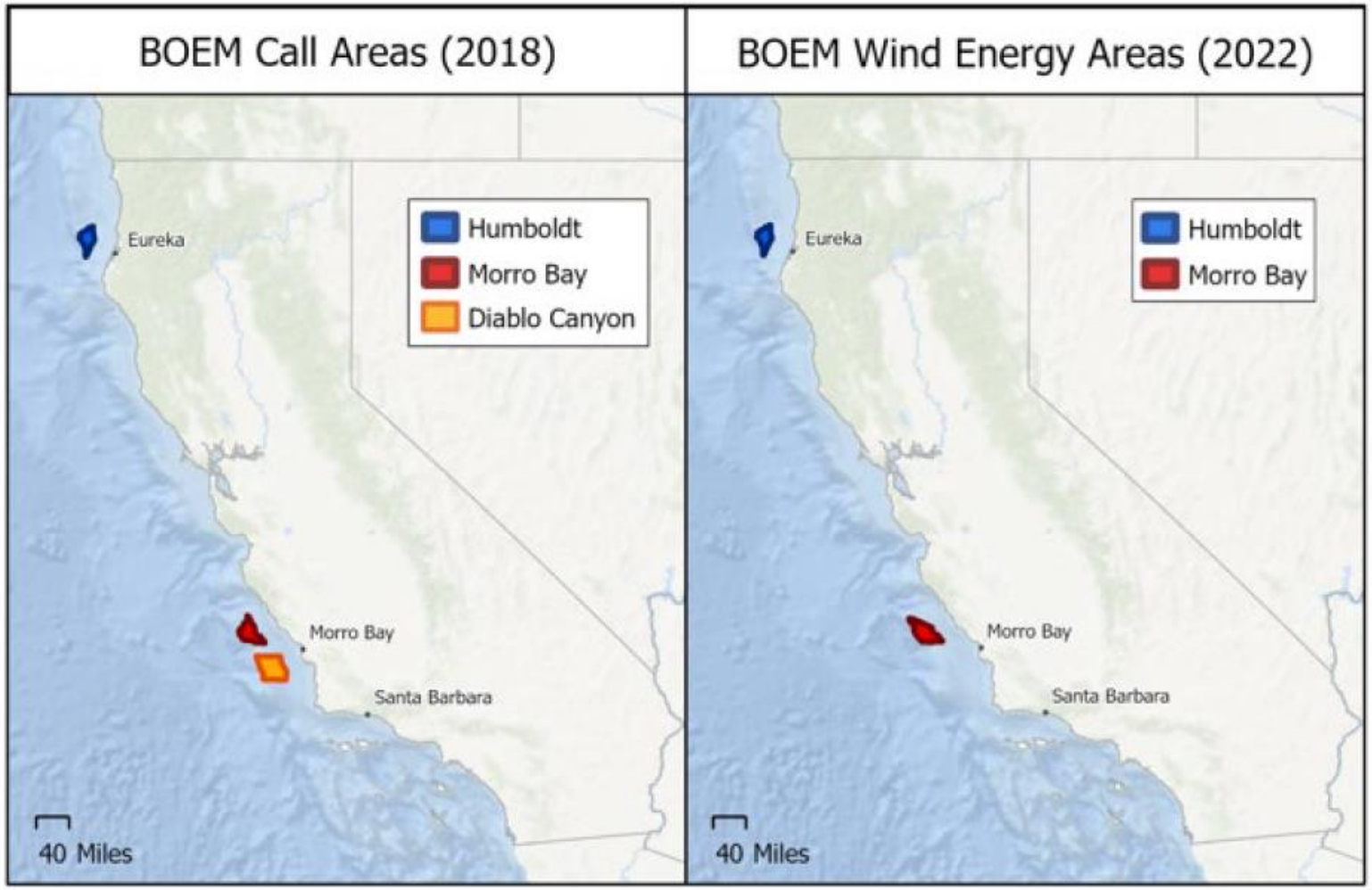
CEC OSW Strategic Plan

- Identify suitable sea space for OSW in federal waters
- Assess sea space sufficient to meet OSW goals: 2030 (2-5 GW) and 2045 (25 GW)
- Support economic and workforce development
- Improve waterfront facilities to support OSW
- Transmission planning and assessment with PUC and Independent System Operator
- Identify potential impacts on coastal resources, fisheries, Native American and Indigenous peoples, and national defense, and strategies for addressing the impacts



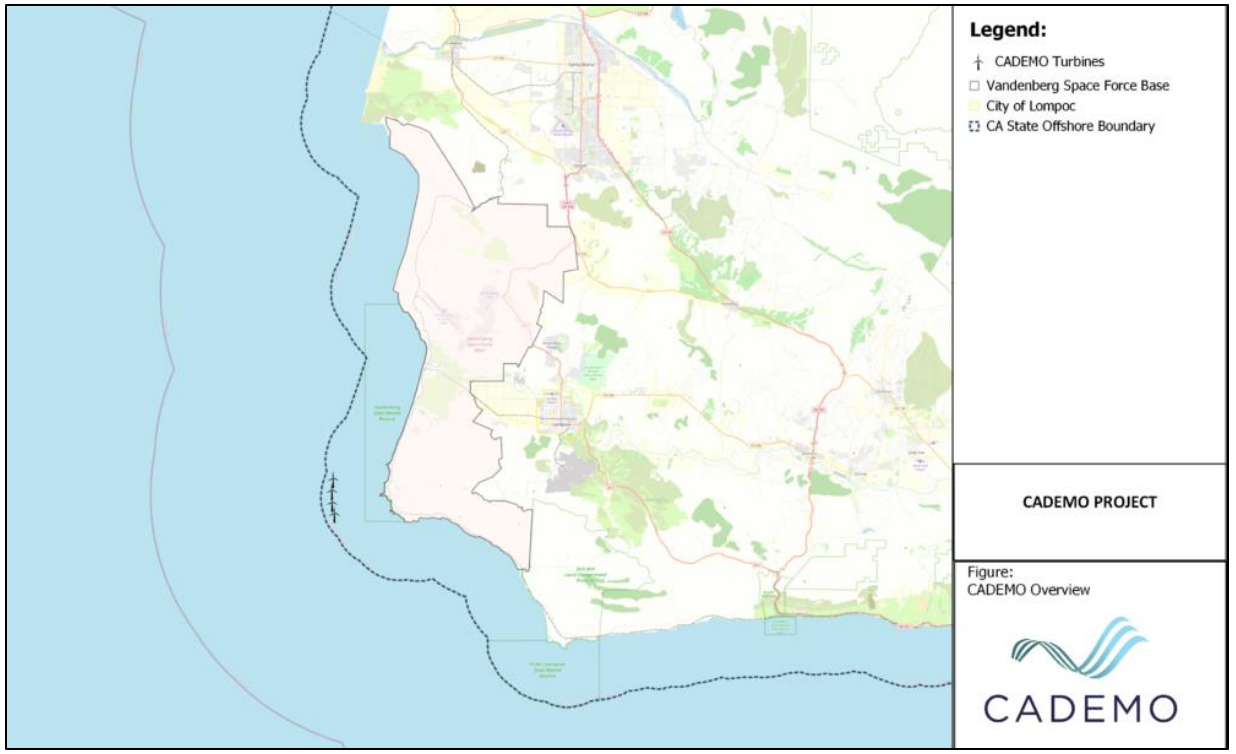
West Coast OSW Call Areas

- Dec. 2022, BOEM held first CA lease sale in call areas
- Five winning bidders for five lease areas totaling $757.1 Million
- Leased areas have potential to produce 4.6 GW of OSW energy, enough to power more than 1.5 million homes



California Demonstration (CADEMO)

- 60 MW demonstration project
- Kickstarting OSW with deployment of four wind turbines
- Source of information and lessons learned to benefit larger developments.
- State Lands Commission staff are in the early stages of the EIR process



CADEMO included Port SF as a potential location for fabrication of floating wind turbine "foundations" in its notice of preparation of an Environmental Impact Report (EIR)

CEC Port Infrastructure Strategic Plan

Existing port infrastructure on the West Coast is not adequate to support OSW activities, and significant investment is required to develop potential offshore wind port sites

Emphasize and prioritize actions that will improve port infrastructure:

- Port retrofits – Strengthening of piers and wharves
- Investments – Capital funding
- Workforce – jobs and economic development

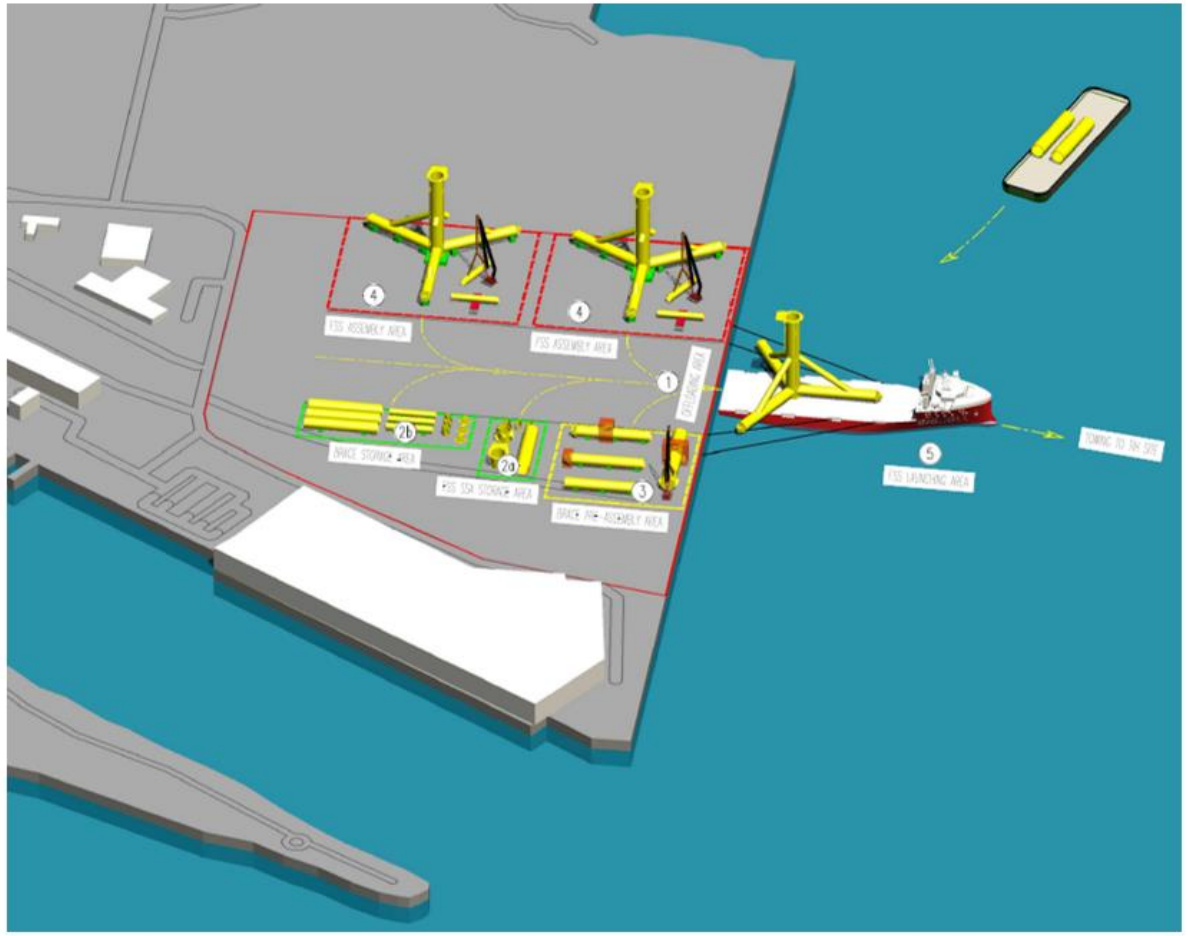
Strive for compatibility with other harbor tenants and ocean users complement other local industries when considering development.

Port SF Analysis

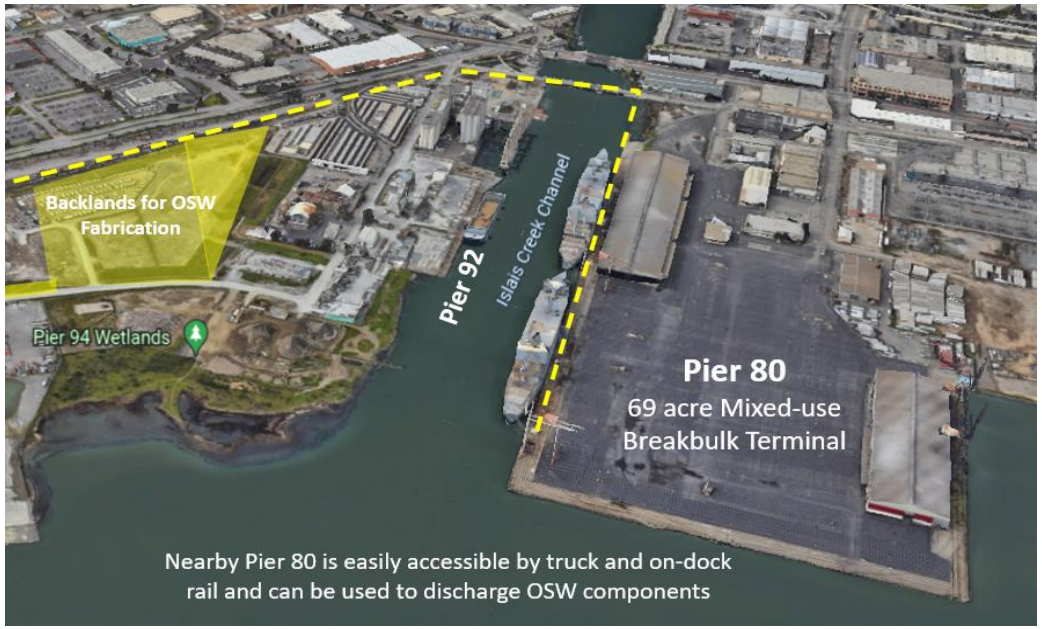
- Pier 96 is designated as SF Port's Eco-Industrial Center
- Pier 96 also slated for upgrades as SF City's port logistics facility for disaster response
- Port of San Francisco is beginning planning <u>now</u> for Pier 96 emergency facility upgrades
- Planning for offshore wind will complement this process
- Efficiencies of cost & time by combining both processes

Advantages of Pier 96

- 25 acres of available wharf space
- 12 acres of backlands space
- Water depths 40’ plus, no dredging needed
- Two adjacent, large-capacity concrete production facilities: CEMEX and Central
- Availability of diverse, skilled union workforce in Bay Area
- Transportation options & regional industries enable high in-state content for supply chain



OSW Support Piers



- Near Piers 94- 96
- Rail access

Potential Uses:

- Offloading of OSW components from vessels
- Indoor and outdoor storage of components

- Additional berth availability
- Development opportunity for workforce training

Potential Uses:

- Administrative offices
- Component fabrication and assembly

Next Steps

- Port Engineering has engaged a consultant to prepare the basis of design for improvements to pier infrastructure
- Port's Maritime and Legislative Affairs staff have and will continue to engage with a range of OSW stakeholders
- Staff proposes to continue down the path as described herein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Questions?