DOCKETED	
Docket Number:	17-MISC-01
Project Title:	California Offshore Renewable Energy
TN #:	248152
Document Title:	PRESENTATION - Preliminary Assessment of Economic Benefits from Offshore Wind
Description:	PRESENTATION SLIDES FROM THE DECEMBER 19, 2022 AB 525 WORKSHOP: Preliminary Assessment of Economic Benefits from Offshore Wind: Related to Seaport Investments an Workforce Development
Filer:	susan fleming
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	12/19/2022 12:18:32 PM
Docketed Date:	12/19/2022

AB 525 Workshop
Preliminary Assessment of Economic Benefits from Offshore Wind: Related to Seaport Investments and Workforce Development

December 19, 2022

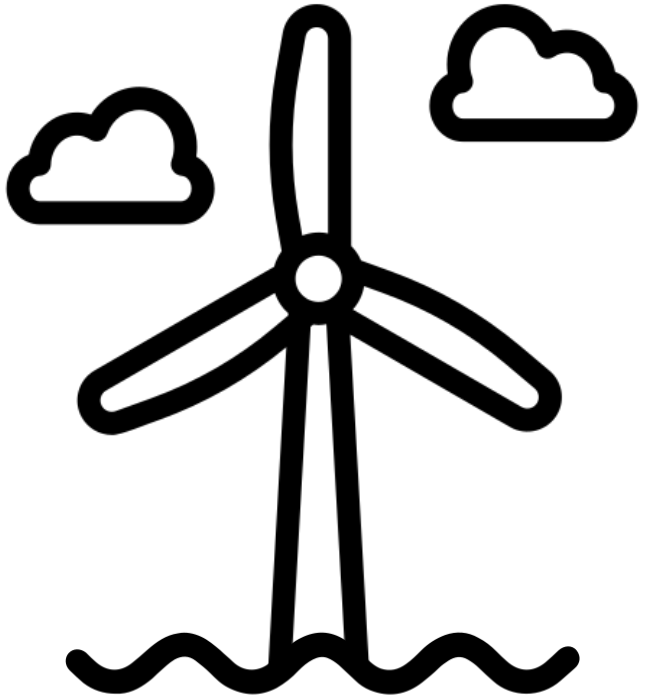
Workshop Schedule

1. Welcome
2. Staff Presentation on Draft Report
3. Questions and Answers
4. Public Comment

Advancing Offshore Wind

Background:

- October 2016: BOEM-CA Intergovernmental Renewable Energy Task Force established
- October 2018: BOEM Call for Information and Nomination
- May 2021: announcement from Biden and Newsom Administrations
- January 2022: Assembly Bill 525 took effect
- August 2022: CEC establishes OSW planning goals
- 2022 BOEM Wind Energy Areas and actions to lease



2022-2023 State Budget Investments

- $45 million proposed to support waterfront facility improvements
- $4 million to support Assembly Bill 525 implementation
- Voluntary Offshore Wind and Coastal Resources Protection Program

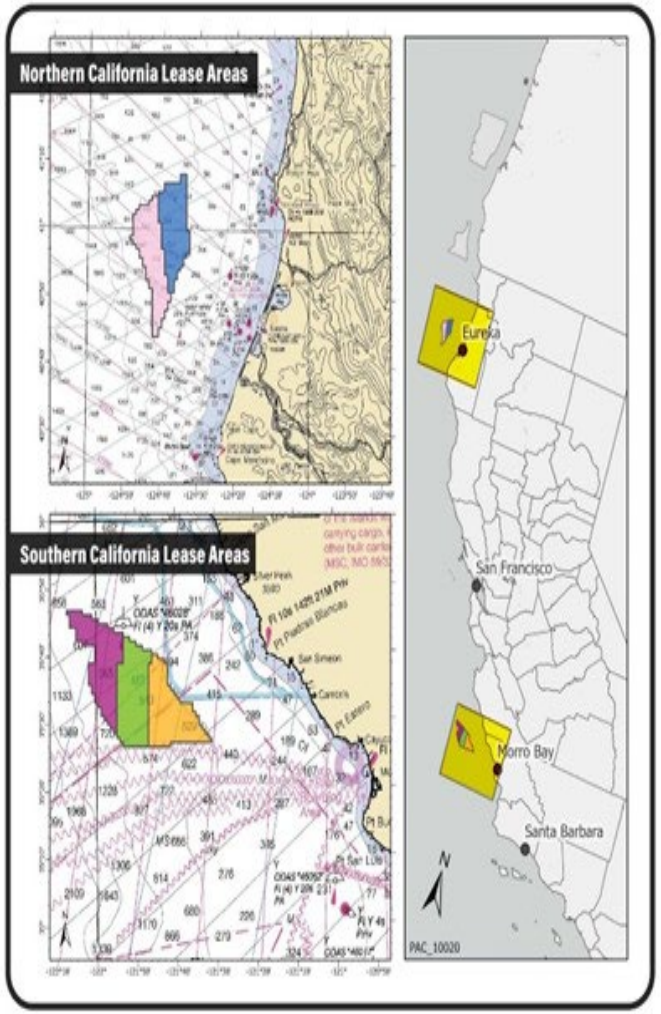
BOEM Lease Auction

- December 6 and 7, 2022, 1st auction for the West Coast
- 373,268 total acres off central and northern California
- Over 4.6 GW potential offshore wind energy
- Winning bids for the 5 lease areas from 5 companies for $757 million

Provisional Winners of the California Lease Areas, $757,100,000 in High Bids

LEASE AREA		
OCS-P0561	RWE Offshore Wind Holding, LLC	$157,700,000
OCS-P0562	California North Floating LLC	$173,800,000
OCS-P0563	Equinor Wind US LLC	$130,000,000
OCS-P0564	Central California Offshore Wind LLC	$150,300,000
OCS-P0565	Invenergy California Offshore LLC	$145,300,000

BOEM Bureau of Ocean Energy Management



2021 Joint Agency Senate Bill 100 Report

Energy and Climate Goals:

- RPS – 60% by 2030
- Zero carbon resources for all retail electricity sales by 2045
- Reduce GHG emissions to 40% below 1990 levels by 2030

Key Findings:

- Need for sustained record setting build rates
- Additional work is needed to understand the potential of emerging technologies

California
Clean Electricity Resources

	Existing Resources	Projected New Resources	
	2019*	2030**	2045**
Solar (Utility-Scale)	12.5 GW	16.9 GW	69.4 GW
Solar (Customer)	8.0 GW	12.5 GW	28.2 GW
Storage (Battery)	0.2 GW	9.5 GW	48.8 GW
Storage (Long Duration)	3.7 GW	0.9 GW	4.0 GW
Wind (Onshore)	6.0 GW	8.2 GW	12.6 GW
Wind (Offshore)	0 GW	0 GW	10.0 GW
Geothermal	2.7 GW	0 GW	0.1 GW
Biomass	1.3 GW	0 GW	0 GW
Hydrogen Fuel Cells	0 GW	0 GW	0 GW
Hydro (Large)	12.3 GW	N/A†	N/A†
Hydro (Small)	1.8 GW	N/A†	N/A†
Nuclear	2.4 GW	N/A†	N/A†

AB 525 Legislative Findings

If developed at scale, offshore wind can:

- ✓ Provide economic and environmental benefits.
- ✓ Advance progress toward California's renewable and climate goals.
- ✓ Diversify the state's energy portfolio.
- ✓ Realize economic and workforce development benefits.
- ✓ Contribute to renewable resource portfolio that can serve electricity needs and improve air quality in disadvantaged communities.
- ✓ Offer career pathways and workforce training opportunities.

Offshore wind should be developed in a manner that protects coastal and marine ecosystems.

AB 525 Required Interim Work Products

June 1, 2022

- Evaluate and quantify maximum feasible capacity of offshore wind
- Establish megawatt planning goals for 2030 and 2045

December 31, 2022

- Complete a preliminary assessment of economic benefits related to seaports and workforce development needs and standards
- Develop a permitting roadmap

July 30, 2023

- Develop a strategic plan for offshore wind off the California coast in federal waters

CEC Established OSW Planning Goals

CEC Report: *Offshore Wind Energy Development off the California Coast: Maximum Feasible Capacity and Megawatt Planning Goals for 2030 and 2045*

AB 525 Additional Requirements

Identify suitable Sea Space for wind areas in federal waters sufficient to accommodate the planning goals.

Develop a plan to improve waterfront facilities that could support a range of floating offshore wind development activities.

Assess the transmission investments and upgrades necessary, including subsea transmission options, to support the offshore wind planning goals.

Focus of this workshop

AB 525, Section 25991.3[d] requires:

On or before December 31, 2022, the commission shall complete and submit to the Natural Resources Agency and the relevant fiscal and policy committees of the Legislature ***a preliminary assessment of the economic benefits of offshore wind as they relate to seaport investments and workforce development needs and standards***

Seaports and Offshore Wind

Seaports (ports) and waterfront facilities

- Where ships are docked
- Goods loaded/unloaded and transported
- Differ in size, governance, cargo type, and purpose
  - ✓Private vs public ownership
- Driver for U.S. economy (26% of GDP in 2021)
  - ✓Trains, trucks, barges and ships move goods through ports
- Located around coastal communities

Port Activities for Offshore Wind

- ✓Manufacturing and Fabrication
- ✓Construction
- ✓Assembly
- ✓Operations and Maintenance

Offshore Wind Economic Opportunity

- Significant economic benefits are expected from offshore wind energy development
- Offshore wind development could:
  - ✓Increase economic development opportunities,
  - ✓Create new sources of fiscal benefits (tax revenue)
  - ✓Develop a skilled and trained workforce, and create long-term jobs

Defining Economic Benefits

*An **economic benefit*** is any activity that can be quantified in terms of the money that it generates such as net income, revenue, profit, and cash flow.

Types of Economic Benefits

Direct Benefits

- Onsite and project development benefits directly related to the port operations and resulting growth

Indirect Benefits (supply chain)

- Benefits related to economic growth in upstream industries from spending at ports, such as supply chain development and component manufacturing.

Induced Benefits

- Ripple effects that occur at all points in the supply chain from both direct and indirect impacts from increased local and regional spending.

Review of Literature

- USC Schwarzenegger Institute
  - ✓Economic benefits and seaport development
- CA Polytechnic State University:
  - ✓Seaport investments and job creation
- Schatz Energy Research Center
  - ✓Various studies
- Berkely Center for Labor Research and Education
  - ✓Workforce training needs
- NREL / BOEM
  - ✓Seaports and supply chain
- Numerous other studies

State Seaport Investments

- $10.45 million grant to Humboldt Bay Harbor, Recreation, and Conservation District (Harbor District)
  - ✓Development of a new multi-purpose offshore wind marine terminal
- AB 209: CEC to support offshore wind infrastructure improvements at ports
  - ✓Advance port capabilities and maximize economic benefits
  - ✓2022-2023 state budget added $45 million to CEC for this program

Experiences From East Coast

- New Jersey Wind Port (NJWP)
  - ✓ purpose-built offshore wind port.
- New York offshore wind master plan (2018)
  - ✓Public investment in OSW port (2022)
- Maine offshore wind initiative (2019)
  - ✓$2 million grant funding for OSW roadmap
- Port of Virginia (2021)
  - ✓$20 million grant for port upgrades

Offshore Wind Workforce Needs

- Developing offshore wind requires diverse skills and occupations
  - ✓Construction, assembly, and staging
  - ✓Manufacturing and supply chain
  - ✓Engineering
  - ✓Operations and maintenance
  - ✓Sales
  - ✓Maritime services
  - ✓Longshoreman
  - ✓Tugboat and other watercraft operators
- Much of this new workforce will require training and/or certification

Offshore Wind Funding Opportunities

- Inflation Reduction Act (2022)
  - ✓Investment tax credit and production tax credit

- Infrastructure Investment and Jobs Act (2021)
  - ✓Port infrastructure development

- U.S. Department of Energy (2022)
  - ✓ Prize funding for supply chain development

Next Steps

- Comments due on preliminary economic assessment January 9
- Consideration of the Preliminary Report at a CEC Business Meeting in January

Thank You!

Paul Deaver: Paul.Deaver@energy.ca.gov

https://www.energy.ca.gov/programs-and-topics/topics/renewable-energy/offshore-renewable-energy

Questions and Answers

Public Comment Instructions

Rules
- 3 minutes per person

Zoom
- Click “raise hand”

Telephone
- Press *9 to raise hand
- Press *6 to (un)mute

When called upon
- Unmute, spell name, state affiliation, if any

Written Comments:
- Due: January 9, 2023 by 5:00 p.m.
- Docket: 17-MISC-01
- Submit at: https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=17-MISC-01

3-MINUTE TIMER