



Humboldt County: Strategic Planning for Emerging Offshore Wind Industry

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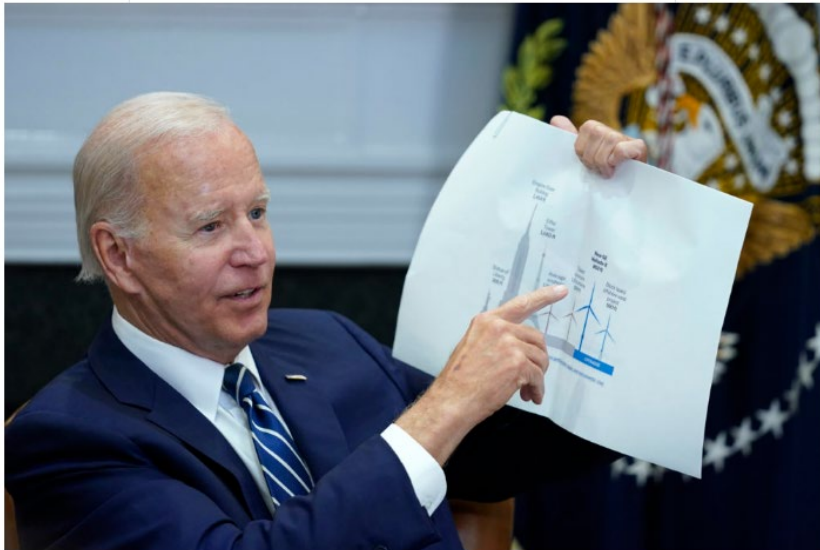


A Federal Initiative...

Biden teams with East Coast governors to boost offshore wind

June 24, 2022

By Matthew Daly, The Associated Press



President Joe Biden shows a wind turbine size comparison chart during a meeting in the Roosevelt Room of the White House, June 23, 2022, with governors, labor leaders, and private companies launching the Federal-State Offshore Wind Implementation Partnership. (Susan Walsh/AP)

FACT SHEET: President Biden's Executive Actions on Climate to Address Extreme Heat and Boost Offshore Wind

JULY 20, 2022 • STATEMENTS AND RELEASES

New Actions to Accelerate Clean Energy, Create Jobs, and Lower Costs

Proposed Areas for Offshore Wind Leasing


In 2018, the Bureau of Ocean Energy Management asked companies to propose offshore wind plans for three areas off the California Coast. The Humboldt Bay harbor district recently applied for a \$56 million grant from the federal government.



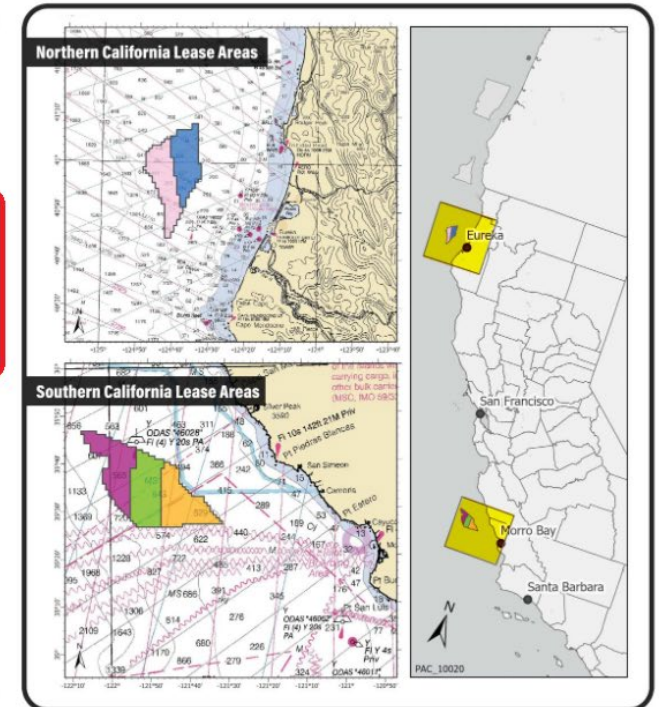
SOURCE: Bureau of Ocean Energy Management

PAUL HORN / Inside Climate News

Wind Lease Auction Concluded Dec 2022

 <div> <div>LEASE AREA</div> <div>Provisional Winners of the California Lease Areas, \$757,100,000 in High Bids</div> </div>		
OCS-P0561	RWE Offshore Wind Holdings, 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



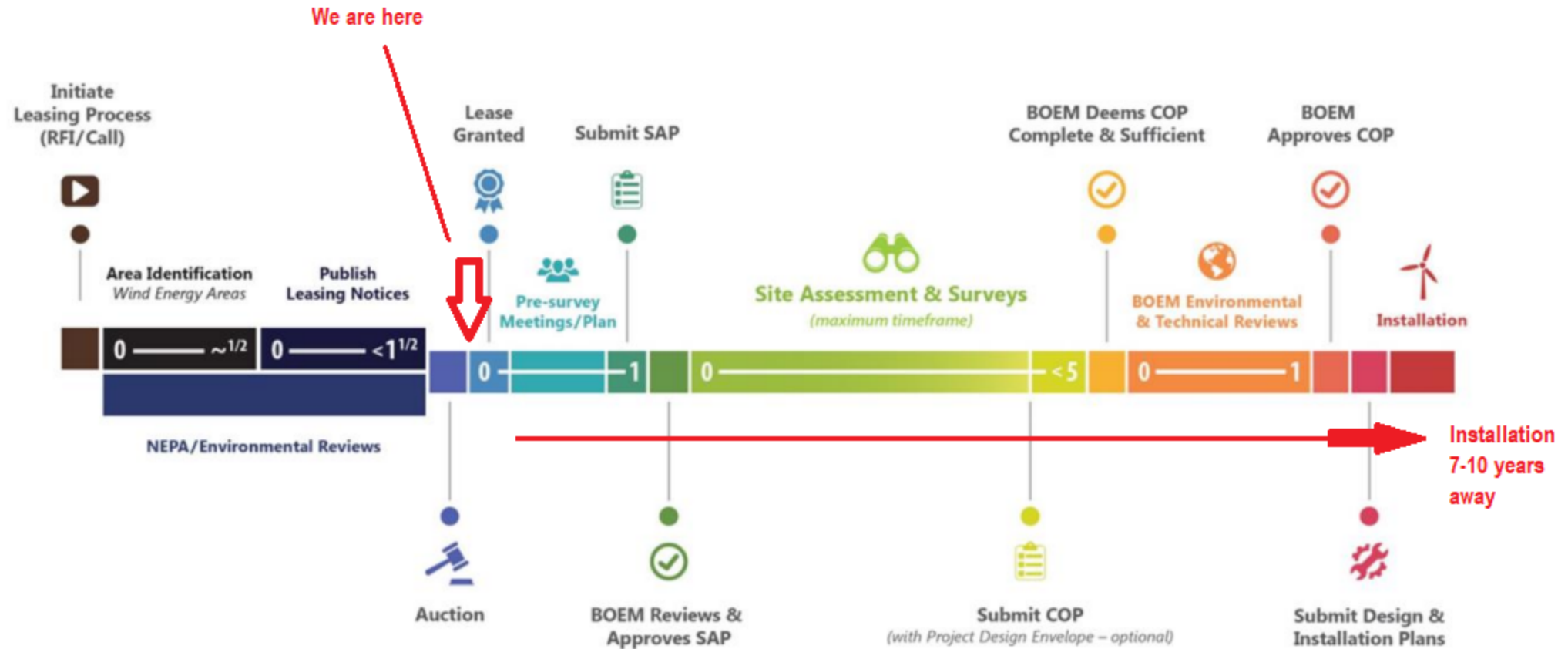


Figure 1. General Timeline of BOEM's Renewable Energy Competitive Leasing Process with Numbers Shown in Years (provided by BOEM)

Port development



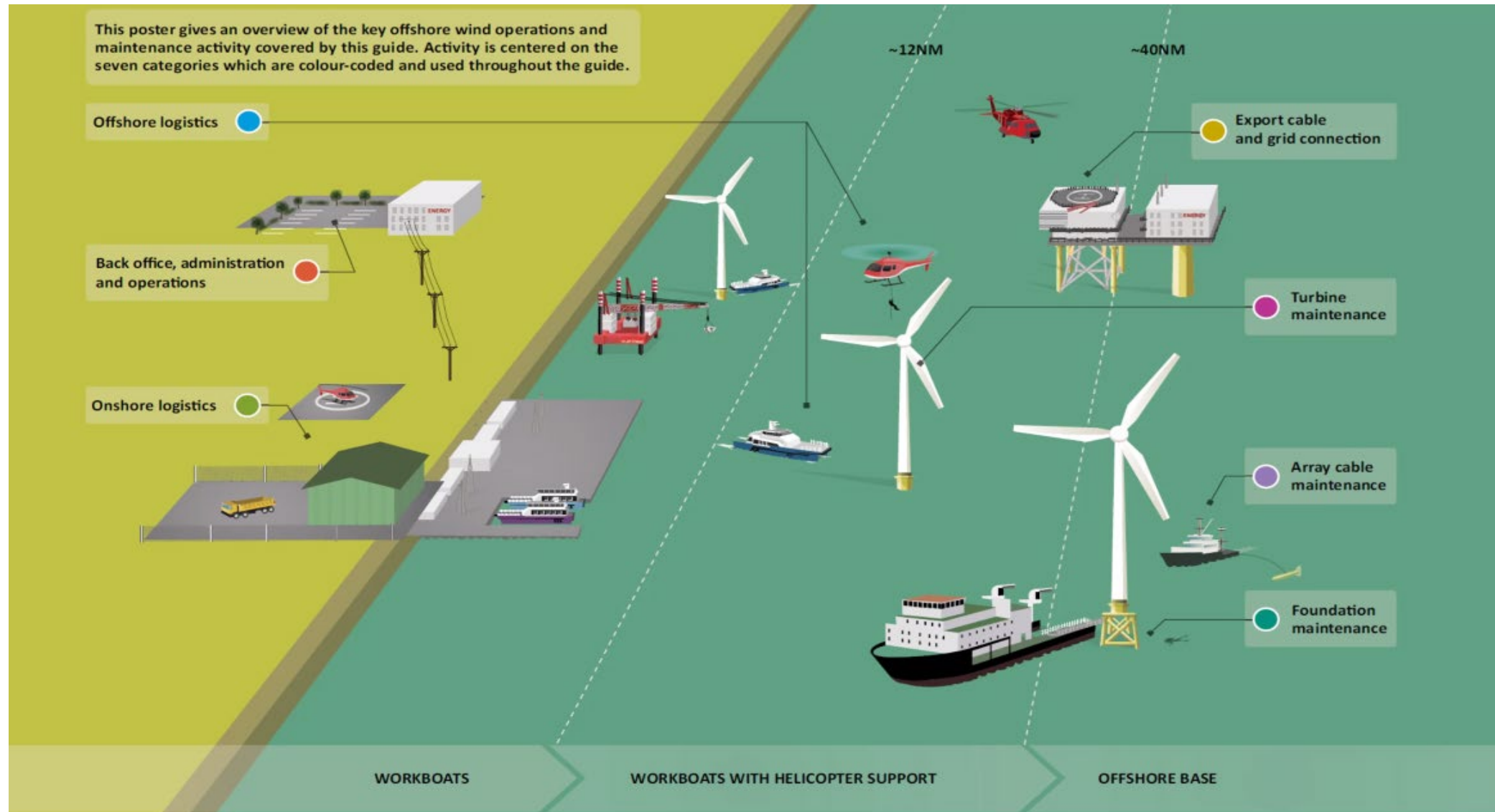
Staging and assembly



Deployment



O&M Phase





Workforce, Business and Community

Board of Supervisor's Actions

1. Approve the formation of two separate ad hoc committees to work with staff and community stakeholders on matters related to offshore wind; and
2. Provide direction and authorize staff to execute agreements with the Humboldt Bay Harbor, Recreation, and Conservation District, City of Eureka other local governments and tribal agencies for collaboration on port and wind development; and
3. Direct staff and the corresponding ad hoc committees to:
 - a) Return with specific action steps and a strategic plan for civic engagement and community outreach for offshore wind; and
 - b) Return with expanded recommendations and a strategy for supporting a robust community benefit process; and
 - c) Work with workforce partners and wind developers to explore opportunities and needs surrounding a workforce and supply chain community benefit agreement.

April 2021



WIND POWER & GREEN RECOVERY

Wind can power 3.3 million new jobs over next five years

In addition to providing affordable, clean and zero-carbon electricity, wind energy has the capacity to bring tremendous socioeconomic benefits to local communities. Large-scale onshore and offshore wind projects generate sustainable jobs which require a variety of skills, across the full value chain of the sector.



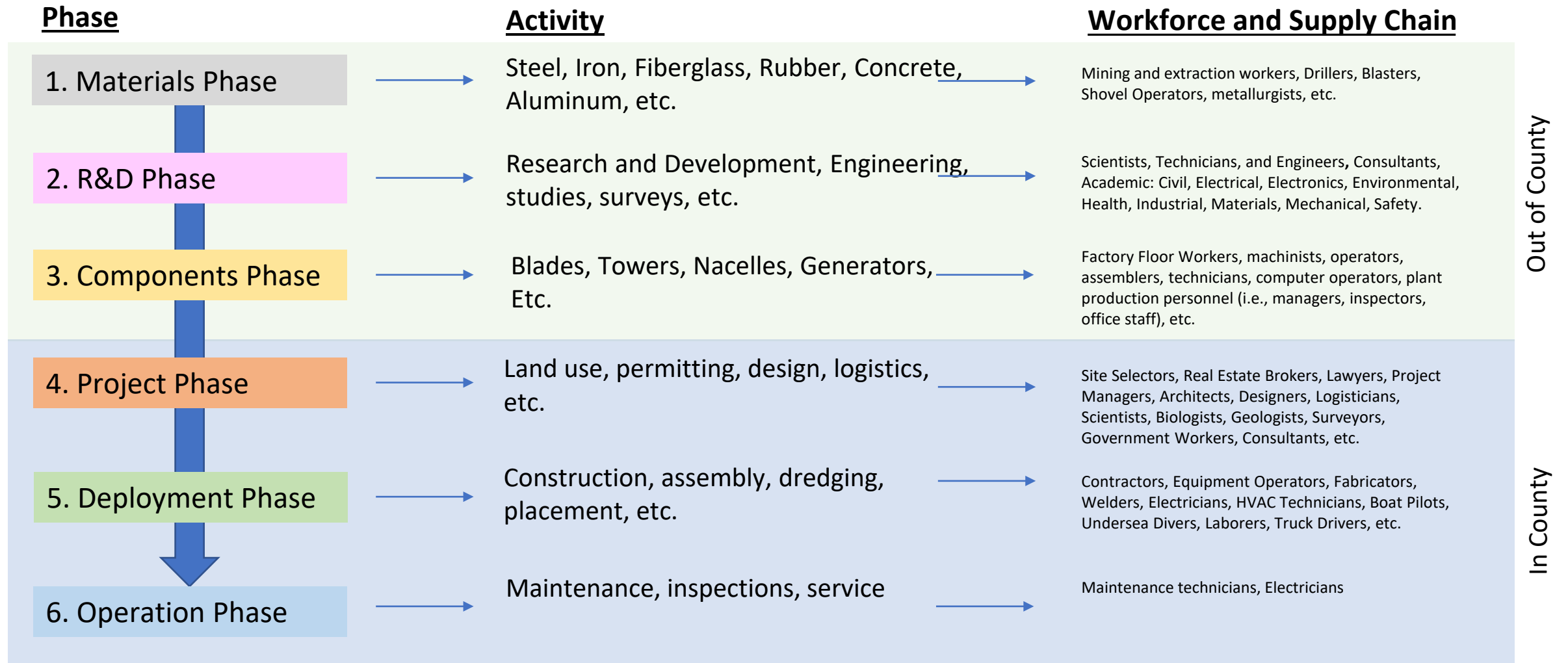
Offshore Wind (OSW), Workforce Demand Chart

Direct Jobs: OVERVIEW

Company Type	Field of Activity	Skilled	Semi-Skilled	Un-skilled	Representative Job Profiles
Planning and Development	Management	X			Economists, Engineers, Lawyers, Meteorologists Project managers
Design and Manufacturing	Wind Turbine and Turbine component producers	X	X		Engineers, Health and Safety Experts Iron Workers, Metal Workers, Millwrights,
Construction and Installation	Building the Wind Farm	X	X	X	Electricians, Engineers, Health and Safety Experts, Iron workers, Marine Operators, Painters, Pile drivers
Operations and Maintenance and Repair	Regular Inspection, Operations and Repair	X	X	X	Crane operators, Electricians, Iron workers, Longshoremen, Marine Operators, Painters
Technical, Financial and Legal Expertise	Diverse Specialized Professional Activities	X			Engineers, Lawyers, Meteorologists, Policy Experts, Programmers, Support Staff
Ship Building and Retrofitting	Specialized, Jones-Compliant Vessels for Installation/Repair	X	X	X	Engineers, Maritime Operators, Ship Building Construction Trades, Support Staff

Source: 22,23

European Wind Energy Association. (2009, January). Wind at Work: Wind energy and job creation in the EU.
Retrieved from: http://www.ewea.org/fileadmin/ewea_documents/documents/publications/Wind_at_work_FINAL.pdf
23 Gerard Dhooge, President, Maritime Trade Council, (personal communication, December 6, 2011)



OSW Workforce *Pre* Analysis

Workforce

- Samoa Peninsula Development
 - 1792 direct, indirect, and induced permanent jobs
 - 700 temporary construction jobs (10 years)
- Offshore Wind
 - 3,426 direct, indirect, and induced permanent jobs
 - 800 Temporary construction jobs
- Cal Poly Humboldt
 - 1981 direct, indirect, and induced permanent jobs
- TOTAL JOB GROWTH
 - 7,199 permanent jobs
 - 1,500 temporary jobs

Population Growth

- Normal Population Growth
 - 1,800
- Direct Increase
 - 6,000 Students
- Labor Force Needs
 - 7,199 employees
 - 1,292 to replace loss in working age population
- TOTAL POPULATION GROWTH (10-15 years)
 - 16,291

Humboldt County Offshore Wind – Supply Chain

Offshore Wind Developers						
	EPCI					
Development & Engineering	Turbine Supply	Balance of Plant	Installation & Commissioning	Operation & Maintenance	Life-Time Extension & Decommissioning	Ecosystem
Site investigation and surveys	Marshalling yards	Turbine foundations	Turbine installation	Maintenance services	Life-Time Extension & Decommissioning	Law
Design and engineering	turbine logistics	Assembly yards	Foundation installation	Inspection services	decommissioning	Finance
Project management	Drive chain	Electrical cables	Offshore and onshore cable installation	Vessels		Marketing
Consenting and development services	Power conversions and supplies to the turbine	Electrical systems	Offshore and onshore substaion installation	O&M Ports		Digitalisation and systems
		HVAC/HVDC/Substations	Installation on port	Training and certification		Universities and research institutions
		Secondary steel work	Installation logistics	Monitoring		Government and other public institutions
		Mooring	Commissioning			
		Equipment for foundation and transition piece				

Engagement



POWER CA

- Department of Commerce Spinoff Event
- Annual renewable energy conference
- Business attraction
- National and International attendees

WindLink

- Supply chain OSW group
- Modeled on Business Network for Offshore Wind

Education



University of Massachusetts: Offshore Wind Certificate

- 12 community leaders
- Professional certificate

IPF and POWS

- Workforce Development Board members
- Tribal members
- Board of Supervisors members

New Bedford

- 50 delegates
- Tour staging and assembly sites
- Tour hands on workforce development programs
- Boat tour to see the turbines in the water
- A day of meeting with our counterparts

Analysis

TABLE 1

Employment multipliers per 100 direct jobs, by major private-sector industry group

Major industry group	Direct jobs	Supplier jobs*	Induced jobs**	Total indirect jobs
Agriculture, forest, fishing, and hunting	100	93.6	134.8	228.5
Mining	100	224.0	166.0	390.0
Utilities	100	515.4	442.2	957.7
Construction	100	88.0	138.1	226.1
Durable manufacturing	100	289.1	454.9	744.1
Nondurable manufacturing	100	184.8	329.5	514.3
Wholesale trade	100	107.3	128.0	235.3
Retail trade	100	46.7	75.4	122.1
Transportation and warehousing	100	112.8	163.3	276.0
Information	100	252.0	321.1	573.1
Finance and insurance	100	149.7	214.7	364.4
Real estate and rental leasing	100	396.6	483.1	879.7
Professional, scientific, and technical services	100	142.1	276.2	418.3
Management of companies	100	144.4	255.4	399.9
Administrative and support services and waste management	100	45.5	89.1	134.5
Educational services	100	63.8	129.9	193.7
Health care and social assistance	100	69.4	136.2	205.6
Arts, entertainment, and recreation	100	123.3	255.2	378.5
Accommodation and food services	100	53.8	107.4	161.2
Other services (except public administration)	100	70.7	139.6	210.3

Moffat and Nichol: Samoa Peninsula Study

Economic Infrastructure Financing District

Zoning and permitting needs

Infrastructure development associated with OSW

Workforce opportunities

Xodus: Workforce, Supply Chain and Stakeholder Analysis

Local and Regional planning

Sequencing analysis

Stakeholder mapping

Next steps

1. Complete studies and present them to the community
2. Develop report based on findings from New Bedford trip
3. Seek out 3rd round of funding for workforce and supply chain planning
4. Offshore Wind community engagement facility
5. Complete CEDS and Local and Regional Plans



QUESTIONS?



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