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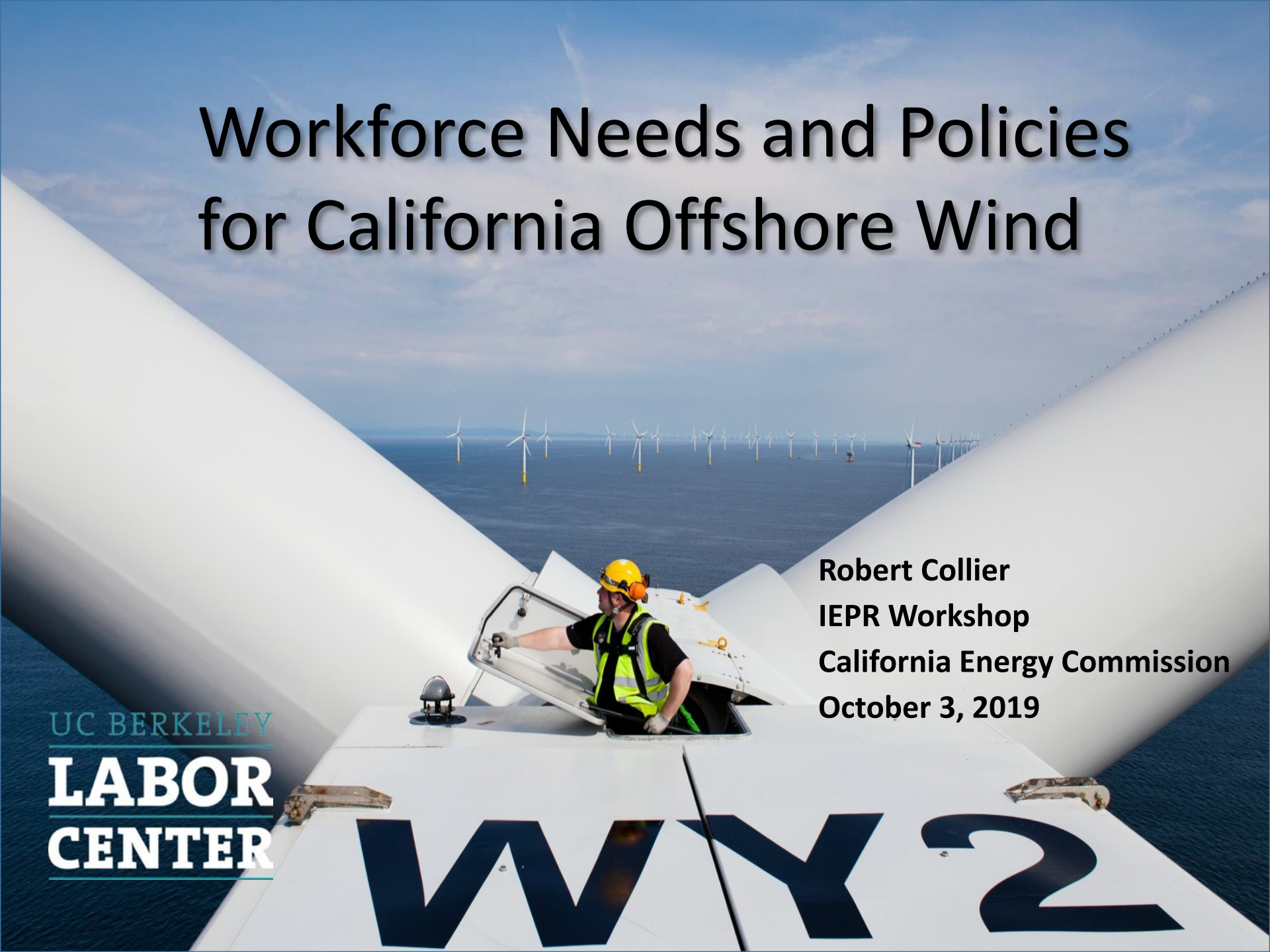
Workforce Needs and Policies for California Offshore Wind



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UC BERKELEY LABOR CENTER

Prior research on CA offshore wind employment generation

- Fixed-bottom and floating offshore wind are similar but have major differences. Lessons learned are valuable but should not be conflated entirely.
- Published economic impact projections show that a build-out of 18 GW by 2045 would create as many as 13,620 direct annual jobs in manufacturing, construction, and installation, along with a maximum of 4,330 permanent jobs in operations and maintenance.
- However, comparing these estimates to actual employment of existing offshore wind projects is difficult because of the lack of publicly available jobs and workforce data for those projects.

Lessons from Abroad

- Britain's track record in successfully developing offshore wind has not translated into the creation of a large domestic supply chain. The industry is global by nature, and international supply chain competition must be a factor in policymaking.
- The case of Denmark shows that sustained government direction and control over many years can steer the success of the offshore wind sector and create a highly competitive industrial cluster.
- As shown by the German example of Bremerhaven, government support for offshore wind port development can play a key role in creating an industrial cluster, but success is not guaranteed to be long lasting, and market fluctuations can be influential—for better or worse.
- Chinese manufacturers do not play a role in offshore wind export markets currently, but in coming years, they are likely to be strong competitors in the California offshore turbine market.

The U.S. Experience: What States Can Do

- The regulatory agencies of East Coast states have greater legal authority than those in California to directly impose labor standards and local content requirements on offshore wind developers.
- Nevertheless, California has a wide variety of policy tools to optimize workforce outcomes in the offshore wind industry, and these tools deserve close consideration by state policymakers.
- State and local governments can use their regulatory leverage over project permitting, direct subsidies for port and infrastructure upgrades, offshore transmission interties, and long-distance transmission planning, among others. CCAs could also adopt and expand requirements that their PPAs include prevailing wage and PLAs and provide other local economic benefits.
- Developer commitments such as Community Benefits Agreements should be encouraged, but they also deserve close scrutiny and should meet the standards of robust CBAs rather than just using the CBA label.
- The state's new High-Road Training Partnership initiative could be a model for the offshore wind industry.

Gordian Knot: Ports and Supply Chain

- California lacks an existing supply chain for major wind components. It also lacks suitable port and manufacturing locations.
- East Coast states are subsidizing new offshore wind port facilities, vying to be manufacturing hubs.
- Manufacturers would be more likely to build a California supply chain if the state and federal governments set a firm target at least 8 GW in offshore capacity per decade.
- The state should work with industry to identify and develop a multi-site network of ports, including Humboldt Bay.
- The state would need to address the North Coast's lack of transmission interconnection to the state grid.

Could the Port of Humboldt Bay…

… be turned into this?

CA climate policy: existing best practices

- **Community Workforce Agreements and Community Benefits Agreements.** CWAs are PLAs with goals for hiring from local communities and/or disadvantaged groups, while CBAs are agreements between community groups and a developer and require benefits similar to CWAs.
- **Responsible procurement policies**. Examples: a floor on wages, skill standards, and other workforce standards in bidding evaluation for contracts for large capital equipment and public services and in grant programs.
- **Skill standards because of worker safety risks**. Example: SB 54 (2012) mandating a "skilled and trained workforce" in private sector construction or maintenance work in refineries.
- **Training partnerships**. The state Workforce Board's new initiative for a High-Road Training Partnership (HRTP) program could be adapted for offshore wind – to add modules to existing apprenticeship programs, and other employer-led training initiatives.
- **Just Transition.** Example: programs to transition workers at municipal gas-fired utility power plants into new offshore wind projects.

Floating platforms: differing workforce needs

Platform	Materials	Job Skills & Trades	Local Content & Jobs	Likely Locations	Dry dock Needed	Dock Acreage
Ideol	Concrete	All building trades for platform assembly	High	California	No	Medium
Principle Power	Steel	All building trades for ports	Very low at start except high port construction; possibly high in later manufacturing	East Asia	Yes	Large
Aqua Ventus	Concrete	All building trades?	Unclear, possibly high	California	No	Medium
Stiesdal	Steel	Minor	Low	Other U.S.	No	Small

Conclusion: “Go big or go home”

- Offshore wind could provide thousands of high-wage jobs – but only if the state commits to fixed targets and a high-road approach.
- If the planning process evolves in a more piecemeal basis, the likely result would imported inputs and insignificant economic benefits.

Full report:

http://laborcenter.berkeley.edu/offshore-wind-workforce-grid/

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