

Date of Hearing: April 24, 2024

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Cottie Petrie-Norris, Chair

AB 2212 (Lowenthal) – As Amended April 16, 2024

**SUBJECT:** Energy: offshore wind workforce safety training facilities

**SUMMARY:** Requires the California Energy Commission (CEC) to oversee the allocation and use of funds allocated for the development of offshore wind workforce safety training facilities and to develop standardized training curricula tailored to the specific needs of the offshore wind industry. Also, requires the CEC to annually submit a report to the Governor and the Legislature summarizing the progress made in establishing and operating these training facilities.

Specifically, **this bill:**

- 1) Requires the CEC, in collaboration with relevant state agencies, including, but not limited to, the Natural Resources Agency, the California Workforce Development Board, the California Public Utilities Commission (CPUC), the Department of General Services, and the State Department of Education, to oversee the allocation and use of funds allocated for the development of offshore wind workforce safety training facilities.
- 2) Provides that, for purposes of this bill, funds include bond proceeds, community benefit agreement funds, or matching private funds.
- 3) Requires offshore wind workforce safety training facilities to be strategically located near ports engaged in offshore wind development activities to facilitate convenient access for trainees and to support the workforce safety training needs of the industry.
- 4) Requires smaller offshore wind workforce safety training centers to be established near ports designated for operation and maintenance activities associated with offshore wind farms.
- 5) Requires that priority be provided to forming partnerships with community colleges, regional occupation centers, including repurposing former regional occupational centers that have been permanently closed, trade schools, and similar institutions with existing campuses or physical facilities that can offer offshore wind workforce safety training and meet the specific needs for offshore wind development.
- 6) Requires the CEC, in consultation with industry workforce safety experts and educational institutions, including, but not limited to, community colleges, to develop standardized training curricula tailored to the specific needs of the offshore wind industry.
- 7) Requires offshore wind workforce safety training programs offered at the training facilities to meet established industry standards and receive accreditation from relevant accrediting bodies, including the Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges, and the State Department of Education for the accreditation of regional occupation and career technical education, to ensure the quality and effectiveness of the training provided.

- 8) Requires the CEC to annually submit a report to the Governor and the Legislature, the progress made in establishing and operating offshore wind workforce safety training facilities, including the use of funds, the number of trainees enrolled, and any recommendations for improvement.

**EXISTING LAW:**

- 1) Requires the State Energy Resources Conservation and Development Commission (also known as the California Energy Commission (CEC)), in coordination with specified state entities and other relevant federal, state, and local agencies, to develop a strategic plan for offshore wind (OWE) energy developments installed off the California coast in federal waters, and requires the CEC to submit the strategic plan to the Natural Resources Agency and the Legislature on or before June 30, 2023. (Public Resources Code § 25991 et seq.)
- 2) Establishes the policy of the state that eligible renewable energy resources and zero-carbon resources supply 90% of all retail sales of electricity to California end-use customers by December 31, 2035, 95% of all retail sales of electricity to California end-use customers by December 31, 2040, 100% of all retail sales of electricity to California end-use customers by December 31, 2045, and 100% of electricity procured to serve all state agencies by December 31, 2035. (Public Utilities Code § 454.53)
- 3) Requires retail sellers and publicly owned utilities to increase purchases of renewable energy such that at least 60 percent of retail sales are procured from eligible renewable energy resources by December 31, 2030. This is known as the Renewables Portfolio Standard (RPS). (Public Utilities Code § 399.11 et seq.)
- 4) Requires the CEC, in coordination with relevant state and local agencies, to develop a plan to improve waterfront facilities that could support a range of floating offshore wind energy development activities. Requires the plan to include, among other things:
  - a) An analysis of the workforce development needs of the California offshore wind energy industry, including occupational safety requirements, the need to require the use of a skilled and trained workforce to perform all work, and the need for the Division of Apprenticeship Standards to develop curriculum for in-person classroom and laboratory advanced safety training for workers.
  - b) Recommendations for workforce standards for offshore wind energy facilities and associated infrastructure, including, but not limited to, prevailing wage, skilled and trained workforce, apprenticeship, local hiring, and targeted hiring standards, that ensure sustained and equitable economic development benefits. (Public Resources Code § 25991.3)

**FISCAL EFFECT:** Unknown. This bill is keyed fiscal and will be referred to the Committee on Appropriations for its review.

**BACKGROUND:**

*California's Ambitious Goals & SB 100's Joint Agency Report* – SB 100 (De León, Chapter 312, Statutes of 2018) established the state policy that renewable and zero-carbon resources should supply 100% of retail sales and electricity procured in the state by 2045.<sup>1</sup> This policy was recently updated under SB 1020 (Laird, Chapter 361, Statutes of 2022) which accelerated the requirement on state agencies to 100% by 2035, and established interim targets to meet the economy-wide 100% goal. In March 2021, the CEC, CPUC, and CARB released the first SB 100 report, and offshore wind energy was modelled to 10 gigawatts (GW) over four resource zones: Morro Bay, Diablo Canyon, Humboldt Bay, and Cape Mendocino. The model was given an input assumption of 2030 as the first available year for bringing offshore wind energy online given the current California Independent System Operator (CAISO) interconnection queue and resource development needs of offshore wind energy.<sup>2</sup> The next joint report will be released in 2025, and one every four years later.

*Offshore Wind Energy Technologies.* Offshore wind energy technology designs fall into two main categories: fixed and floating. Most fixed turbines are anchored to the seabed through a solid monopile, tripod, or jacket.<sup>3</sup> These designs prevent machines from moving significantly in response to wave or wind pressures. Fixed foundations typically have a maximum usable water depth of 50 meters to 60 meters; beyond this depth, fixed wind designs are not economically or technically feasible. Floating platforms unlock offshore wind access in ocean waters with depths greater than 60 meters.<sup>4</sup>

*Offshore Wind Potential in California* – Although California has no offshore wind generation currently, the National Renewable Energy Laboratory has identified 112 GW<sup>5</sup> of offshore wind technical potential<sup>6</sup> for California. However, approximately 96 percent of this potential is located in water deeper than 60 meters, where the mature, fixed-bottom turbine technology is not technically feasible.<sup>7</sup> Off the coast of California, a steep continental shelf and increased wind speeds combine to make floating turbines the primary technically feasible option. Nearly all project proposals in the United States are for fixed foundation projects sited in federal waters – which begin three nautical miles from shore out to 200 nautical miles – and fall under the jurisdiction of the federal Bureau of Ocean Energy Management (BOEM). In December 2022, BOEM awarded five existing offshore wind leases in California: two in Northern California off Humboldt County, and three in Central California near Morro Bay.<sup>8</sup>

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<sup>1</sup> Public Utilities Code §454.53

<sup>2</sup> Pg. 41; *Inputs & Assumptions: CEC SB 100 Joint Agency Report*; June 2020.

<sup>3</sup> Solid monopile foundations are piles driven into the subsurface for stability. Jacket and tripod platforms involve three to four connection points with the subsurface.

<sup>4</sup> Pg. 11; “CEC, “Research and Development Opportunities for Offshore Wind Energy in California.” CEC-500-2020-053; August 2020

<sup>5</sup> Pg. 1; Ibid

<sup>6</sup> “Technical potential” is defined as the amount of offshore wind capacity that could be developed while taking into account exclusion factors related to water depth, mean wind speed, industry uses, and environmental conflicts.

<sup>7</sup> Pg. 7; *CEC Research and Development Opportunities for Offshore Wind Energy in California*; CEC-500-2020-053; August 2020.

<sup>8</sup> BOEM. “BOEM Announces Environmental Review of Future Development of California Offshore Wind Leases.” <https://www.boem.gov/newsroom/press-releases/boem-announces-environmental-review-future-development-california-offshore>

*Offshore Wind Strategic Plan* – AB 525 (Chiu, Chapter 231, Statutes of 2021) required the CEC, in coordination with federal, state, and local agencies, California Native American tribes, and a variety of stakeholders, to develop a strategic plan for offshore wind energy development in federal waters off the California coast. In January 2024, the CEC released the strategic plan, which are guided by three AB 525 interim reports:<sup>9</sup>

- The first report evaluated and quantified the maximum feasible capacity of offshore wind to achieve reliability, ratepayer, employment, and decarbonization benefits and established aspirational planning goals of 2 to 5 gigawatts (GW) for 2030 and 25 GW for 2045.<sup>10</sup>
- The second report provided a preliminary assessment of the economic benefits of offshore wind as they relate to seaport investments and workforce development needs and standards.
- The third report described permitting roadmap options that included time frames and milestones for a coordinated, comprehensive, and efficient permitting process for offshore wind energy facilities and associated electricity and transmission infrastructure off the coast of California.<sup>11</sup>

*Workforce Skills* — The Workforce Development Institute identified 74 different occupations for the offshore wind workforce requiring a broad range of skill sets.<sup>12</sup> A portion of offshore wind construction occurs at sea, subject to federal regulations. The remainder of the supply chain, manufacturing, transportation, and on-shore activities, which constitute approximately two-thirds of the potential workforce, will be subject to state-level standards. A workforce with the right skill sets will require training that matches the pace of deployment for offshore wind, particularly for the construction and supply chain workers. The planning and development of training programs and facilities will need to align with industry training needs and development timelines to maximize the effectiveness of the available workforce.

*Workforce Safety Requirements* – Offshore wind project activities are conducted both onshore and offshore. Onshore workers manufacturing and handling large components and offshore workers installing turbines and operating vessels will be required to have proper safety training.<sup>13</sup> As such, the responsibility for workforce safety is delineated among both federal and state entities.<sup>14</sup> The United States Geological Survey is primarily responsible for inspecting and overseeing U.S. vessels that support offshore wind installation, operations, and maintenance. The California Division of Occupational Safety and Health (Cal/OHSA) oversees onshore worker safety. Several offshore wind construction jobs are relevant to both Cal/OHSA and the Bureau of

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<sup>9</sup> Pg. 1; California Energy Commission, “California Energy Commission Draft Commission Report”. January 2024

<sup>10</sup> Flint et al; Offshore Wind Energy Development in Federal Waters Offshore the California Coast: Maximum Feasible Capacity and Megawatt Planning Goals for 2030 and 2045. August 2022.

<sup>11</sup> Pg. 1; California Energy Commission, “California Energy Commission Draft Commission Report”. January 2024

<sup>12</sup> Gould, Ross and Eliot Cresswell (Workforce Development Institute). May 2017. New York State and the Jobs of Offshore Wind Energy.

[https://wdiny.org/Portals/0/New%20York%20State%20and%20The%20Jobs%20Of%20Offshore%20Wind%20Energy\\_%20WDI2017.pdf?ver=2017-05-03-150746-023](https://wdiny.org/Portals/0/New%20York%20State%20and%20The%20Jobs%20Of%20Offshore%20Wind%20Energy_%20WDI2017.pdf?ver=2017-05-03-150746-023).

<sup>13</sup> Pg. 170; California Energy Commission, “California Energy Commission Draft Commission Report”. January 2024

<sup>14</sup> The agencies with oversight include the Bureau of Ocean Energy Management, Bureau of Safety and Environmental Enforcement, United States Coast Guard (USCG), and California Division of Occupational Safety and Health (Cal/OHSA).

Safety and Environmental Enforcement. However, certain specific training courses may meet certification requirements of multiple governing agencies. Given the multiple jurisdictional responsibilities, effective safety training will depend on partnerships between government entities, industry, educational and training institutions, and the community.

#### COMMENTS:

- 1) *Author's Statement.* According to the author, "Offshore wind is a unique, multi-benefit opportunity for our state that will help us meet our climate goals, support and improve our communities, create new jobs, and grow our economy. In order to achieve the ambitious goals we have set for ourselves, we must take immediate action, but our approach must be thoughtful and decisive in order to ensure that we bring this tremendous new energy resource online sustainably and responsibly. Fortunately, our state issued a strategic plan for offshore wind development earlier this year, so that we can deliver this new source of energy as efficiently as possible, in order to meet our renewable energy production goals for 2030 and 2045. In order to build these offshore wind farms, we will need a skilled workforce trained in various aspects of construction, maintenance, and operations specific to offshore wind energy. AB 2212 implements recommendations from the report focusing on the development of training facilities to ensure that workforce needs near ports can be met and facilitate convenient access for trainees. The bill also requires the commission, in consultation with industry experts and educational institutions to develop training curricula tailored to the specific needs of the offshore wind industry."
- 2) *Scope of Training Facilities.* The three call areas for offshore wind in federal waters off the coast of California are the Humboldt area on the North Coast, and the Morro Bay and Diablo Canyon areas off the Central Coast. The Offshore Wind Strategic Plan examined existing ports along the California coast and found that more than 16 large and 10 small port terminal sites may be needed to support California's offshore wind planning goal of 25 GW by 2045.<sup>15</sup> These include the Port of LA, Port of Stockton, Port of Benicia, and Port of Humboldt among many others. This bill requires offshore wind workforce safety training facilities to be strategically located near ports engaged in offshore wind development activities to facilitate convenient access for trainees and to support the workforce safety training needs of the industry. However, the definitions of the training centers as provided by this bill seem to be broad and as such, there is lack of clarity on the scope of these training facilities.
- 3) *Funding.* In 2021, the Federal Consolidated Appropriations Act of 2021 made \$230 million available from the United States Department of Transportation's Port Infrastructure Development Program. \$205 million of this funding is reserved for grants to coastal seaports and Great Lakes ports.<sup>16</sup> The federal Inflation Reduction Act of 2022 included more than a billion dollars of tax incentives for investments in offshore wind production and manufacturing (including \$426 million to Humboldt for construction of

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<sup>15</sup> Pg. 27; California Energy Commission, "California Energy Commission Draft Commission Report". January 2024

<sup>16</sup> U.S. Dept. of Transportation, "U.S. Department of Transportation Announces Funding Availability for Port Infrastructure Development Program." <https://www.transportation.gov/briefing-room/us-department-transportation-announces-funding-availability-port-infrastructure>

the onshore facilities to support the building and operation of offshore wind turbines off the Humboldt County Coast.

In December 2022, the Bureau of Offshore Energy Management held a competitive auction for five lease areas off the coast of California. The lease sale included winning bidders receiving a 20 percent credit for committing to monetary contribution to programs or initiatives that support workforce training programs for the floating offshore wind industry, the development of a U.S. domestic supply chain or both. This credit will result in over \$117 million in investments for these programs. However, funding specifically for workforce safety training for facilities is yet to be provided.

The bill requires the CEC, in collaboration with relevant state agencies, to oversee the allocation and use of funds from general obligation bonds, community benefit agreements, or private dollars for the development of these training facilities. Given the ambiguity of the scope of training facilities and a lack of a specific funding source, this legislation could benefit from further engagement with government entities, industry, educational and training institutions, and the community.

- 4) *Double Referral*. This bill was previously heard in the Assembly Committee on Natural Resources on April 22nd, 2024, where it passed 9-1-1.

#### **REGISTERED SUPPORT / OPPOSITION:**

##### **Support**

Harbor Association of Industry and Commerce (HAIC)  
South Bay Association of Chambers of Commerce

##### **Opposition**

None on file.

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