Date of Hearing: April 3, 2024

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY
Cottie Petrie-Norris, Chair
AB 3006 (Zbur) – As Amended April 1, 2024

SUBJECT: Energy: offshore wind generation

SUMMARY: Amends the definition of "infrastructure" for purposes of the Governor's annual infrastructure plan to include port infrastructure for offshore wind energy development.

Specifically, **this bill**:

1) Requires the annual California infrastructure plan to include, beginning in an unspecified fiscal year, and an assessment of funding needs for port infrastructure for offshore wind energy development.

2) Requires the Governor, in consultation with specified entities, to assess federal, state, and local funding opportunities, including general obligation bonds and funding from the private sector, that can help build port infrastructure for offshore wind energy development.

EXISTING LAW:

1) Establishes the policy that all of the state's retail electricity be supplied with a mix of RPS-eligible and zero-carbon resources by December 31, 2045, for a total of 100 percent clean energy. Requires the CPUC, in consultation with the CEC, CARB, and all California balancing authorities, to issue a joint report to the Legislature by January 1, 2021, reviewing and evaluating the 100 percent clean energy policy, and every four years thereafter. (Public Utilities Code § 454.53)

2) Defines "infrastructure" real property, including land and improvements to the land, structures, and equipment integral to the operation of structures, easements, rights-of-way, and other forms of interest in property, roadways, and water conveyances. (Government Code § 13101)

3) Requires the Governor to annually submit a five-year infrastructure plan to the Legislature in conjunction with the Governor's Budget. The plan is intended to complement the existing state budget process by providing a comprehensive guideline for the types of projects to be funded through that process. (Government Code § 13102)

4) Requires the infrastructure plan to contain, among other things, information on support for infrastructure needs and an evaluation of the impact of the new state debt on the state's existing overall debt position if the plan proposes the issuance of new state debt. (Government Code § 13102 (c) (2))

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.[1] 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 California Energy Commission (CEC), California Public Utilities Commission (CPUC), and California Air Resources Board (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 OWE.[2] The report notes "The preliminary findings [in the report] are intended to inform state planning and are not intended as a comprehensive nor prescriptive roadmap to 2045… future work will delve deeper into critical topics such as system reliability and land use and further address energy equity and workforce needs."[3] The next joint report will be released in 2025, and one every four years later.

Offshore Wind Technologies. Offshore wind 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.[4] 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.[5]

Offshore Wind in California. Although California has no offshore wind generation currently, the National Renewable Energy Laboratory has identified 112 GW[6] of offshore wind technical potential[7] 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.[8] Off the coast of California, a steep continental shelf and increased wind speeds combine to make floating turbines the primary technically feasible option. Floating turbines employ mooring (cabling) and an anchored substructure underwater which steadies a platform

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[1] Public Utilities Code §454.53
[2] Pg. 41; *Inputs & Assumptions: CEC SB 100 Joint Agency Report*; June 2020.
[3] Pg. 1, CEC, CPUC, & CARB; *2021 SB 100 Joint Agency Report: Achieving 100 Percent Clean Electricity in California: An Initial Assessment*;" March 2021.
[4] Solid monopile foundations are piles driven into the subsurface for stability. Jacket and tripod platforms involve three to four connection points with the subsurface.
[5] Pg. 11; "CEC, "Research and Development Opportunities for Offshore Wind Energy in California." CEC-500-2020-053; August 2020
[6] Pg. 1; Ibid
[7] "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.
[8] Pg. 7 CEC *Research and Development Opportunities for Offshore Wind Energy in California*; CEC-500-2020-053; August 2020.

holding the wind turbine above water. The use of cabling to anchor the turbine allows floating platforms to operate at depths between 60 and 1,300 meters.[9] Depending on the type of floating structure, some assemblage of floating turbines may need to occur offshore, requiring naval cranes and vessels to stabilize such operations, and port infrastructure and specific port water depths.

California Infrastructure Planning Act. The Governor of California is required to annually submit a five-year infrastructure plan to the Legislature in conjunction with the Governor's Budget.[10] The plan is intended to complement the existing state budget process for appropriating funds for infrastructure by providing a comprehensive guideline for the types of projects to be funded through that process. This infrastructure plan contains among other things, information on support for infrastructure needs and an evaluation of the impact of the new state debt on the state's existing overall debt position if the plan proposes the issuance of new state debt.[11]

2022 Five-Year Infrastructure Plan. The plan submitted as part of the 2022-2023 budget witnessed historic investments. California was expected to receive about $14 billion of additional funding from the federal Infrastructure Investment Act. The Administration also proposed investments for clean energy projects in the 2022-23 budget that would make the state more resilient to climate change. This included $45 million from the General Fund that was ultimately approved by the Legislature which allows the California Energy Commission (CEC) to fund activities that advance the development of offshore wind energy in federal waters off California. The CEC has yet to disburse this funding.

Offshore wind Report. 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 August 2022, the CEC approved a planning goal of 2,000 to 5,000 megawatts of offshore wind energy capacity by 2030, and 25,000 megawatts by 2045.[12] In January 2024, the CEC released a *Draft Strategic Plan for Offshore Wind Development* in three volumes, and is currently taking public comment on this plan.[13] The draft plan includes, in Chapter 6 of Volume II, an assessment of the investments necessary at California's ports to enable the development of offshore wind energy.

COMMENTS:

1) *Author's statement.* According to the author, "AB 3006 requires the Governor to include an assessment of funding for offshore wind port infrastructure in the Five-Year Infrastructure Plan to ensure the state meets its ambitious clean energy goals and the California Energy Commission's AB 525 seaport plan. Offshore wind brings many economic and environmental opportunities. However, the development of the industry faces unique challenges that require thorough planning and timeline accountability.

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[9] Pg. viii; Optis, et al. *2020 Offshore Wind Resource Assessment for the California Pacific Outer Countinental Shelf*, National Renewable Energy Laboratory; NREL/TP-5000-77642 BOEM 2020-043; October 2020
[10] Government Code § 13102
[11] Government Code § 13102 (c) (2))
[12] Pg. 61, CEC, "Offshore Wind Energy Development off the California Coast: Maximum Feasible Capacity and Megawatt Planning Goals for 2030 and 2045," CEC-800-2022-001-REV, August 2022.
[13] See *Draft Strategic Plan for Offshore Wind Development,* issued in CEC Docket 17-MISC-01, January 19, 2024.

Given the immense scale of offshore wind energy and prevailing budgetary constraints, a comprehensive, long-term analysis and financial planning are crucial to be able to meet our offshore wind development and clean energy goals."

2) *Offshore wind planning in California.* The CEC has set a target of building up to 5 GW of offshore wind energy capacity by 2030 as part of California's plan to meet its clean energy and climate goals. Meeting this goal will require long-term strategic planning and investments. Given the current budget deficit, it is important for the State to create opportunities to leverage federal funding for offshore wind port infrastructure.

3) *When to begin?* This bill would amend the definition of "infrastructure" to include port infrastructure for offshore wind energy development and would require the 5-year infrastructure plan to include, beginning in an unspecified fiscal year, an assessment of funding needs for port infrastructure for offshore wind energy development. However, this bill does not currently specify the year by which the definition of infrastructure be included in the 5-year infrastructure plan. *As such, the author and committee may wish to specify that beginning with the 2026-2027 fiscal year, port infrastructure shall be included in the 5-year infrastructure plan submitted in conjunction with the Governor's annual budget proposal.*

4) *Prior Legislation.*

AB 3 (Zbur) requires the CEC to prepare a report that identifies potential alternatives, analyzes, and makes recommendations regarding procurement mechanisms and procurement strategies for offshore wind energy projects to be financed, entitled, constructed, and operated within the timeframes necessary for meeting the state's carbon neutrality goals. Status: Chapter 314, Statutes of 2023.

SB 1020 (Laird) establishes interim targets for the statewide 100% clean energy policy. Additionally requires state agencies to accelerate their 100% clean energy policy goal by 10 years. Status: Chapter 361, Statutes of 2022.

SB 1253 (Melendez) additionally requires the infrastructure plan to set out infrastructure priorities relating to specified flood prevention and maintenance. Status: Chapter 195, Statutes of 2022.

AB 525 (Chiu) requires the CEC to establish 2030 and 2045 planning goals, as specified, for electricity generated by offshore wind. Additionally requires the CEC, in coordination with specified agencies, to develop a five-part strategic plan for offshore wind development and to submit the plan to the Natural Resources Agency the Legislature by June 30, 2023. Status: Chapter 231, Statutes of 2021

SB 100 (De León) established the 100% Clean Energy Act of 2017 which increases the Renewables Portfolio Standards (RPS) requirement from 50% by 2030 to 60% and creates the policy of planning to meet all of the state's retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045, for a total of 100% clean energy. Status: Chapter 312, Statutes of 2018.

AB 1473 (Hertzberg) Requires the Governor to annually submit a five-year infrastructure plan to the Legislature in conjunction with the Governor's Budget. The plan is intended to complement the existing state budget process for appropriating funds for infrastructure by providing a comprehensive guideline for the types of projects to be funded through that process. Status: Chapter 606, Statutes of 1999.

REGISTERED SUPPORT / OPPOSITION:

Support

California Association of Port Authorities
California Wind Energy Association
Offshore Wind California

Opposition

None on file.

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