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AB 525 goals - Possible cost reduction to ratepayers

Additional submitted attachment is included below.

Assembly Bill 525: Evaluating and quantifying maximum feasible capacity of offshore wind and establishing offshore wind megawatt planning goals for 2030 and 2045 Resources Considered (as of March 3, 2022)

Assembly Bill 525 requires the California Energy Commission (CEC) to evaluate and quantify the maximum feasible capacity of offshore wind to achieve reliability, ratepayer, employment, and decarbonization benefits and establish megawatt offshore wind planning goals for 2030 and 2045. The CEC is currently working to meet this requirement by conducting an initial literature review of existing publications and research. As CEC staff continue exploring resources and synthesizing information that will help with meeting the requirements of AB 525, including establishing megawatt offshore wind planning goals, we welcome recommendations of additional studies for our consideration.

In the spirit of an intended constructive recommendation for an additional study (area of investigation is more to the point) directed at achieving both ratepayer and prospectively employment benefits, I encourage CEC's staff to contact the DOE's ARPA-E group regarding their ATLANTIS program - https://arpa-e.energy.gov/technologies/programs/atlantis.

The ATLANTIS (Aerodynamic Turbines Lighter and Afloat with Nautical Technologies and Integrated Servo-control) program is focused on offshore wind turbine technology. Turbine technology might seem outside the CEC's purview, but it seems to warrant consideration in the interest of ratepayers and taxpayers, who will end up paying for whatever is installed, and possibly enjoying employment related opportunities.

Specifically, the ATLANTIS website states: "Floating offshore wind turbine (FOWT) technology has tremendous promise to access wind resources in these areas (*200' deep and deeper*), but the current state of the art for FOWT is too massive and expensive for practical deployment. ATLANTIS seeks to design radically new FOWTs by maximizing their rotor-area-to-total-weight ratio while maintaining or ideally increasing turbine generation efficiency… FOWTs are currently designed to be large and heavy to replicate more familiar onshore wind turbine dynamics, maintain stability, and survive storms. However, this approach fundamentally limits how inexpensive FOWTs can ever become. Radically new designs that do not require a massive floating platform – applying the CCD (*control co-design*) approach of substituting mass by control systems – are needed."

The CEC staff is probably well acquainted with the ARPA-E team. But, if it hasn't been done yet, it seems worthwhile for one or both the CEC and ARPA-E to estimate the magnitude of possible or potential savings associated with ARPA-E's contention. It seems in the mutual interest of the State of California, the U.S. President, and the U.S. to evaluate this issue before committing to a particular course.

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