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350 Humboldt and Climate Action California Comments on May-June AB 525 Workshops

Additional submitted attachment is included below.

June 9, 2023

California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: 350 Humboldt and Climate Action California Comments on Ports, Transmission, Permitting and the Urgent Need to Move Faster

Dear Commissioners:

Thank you very much for the opportunity to comment on the several AB 525 workshops held at the end of May and early June. We also thank you for the opportunity to present a summary of our views at the June 2nd workshop.

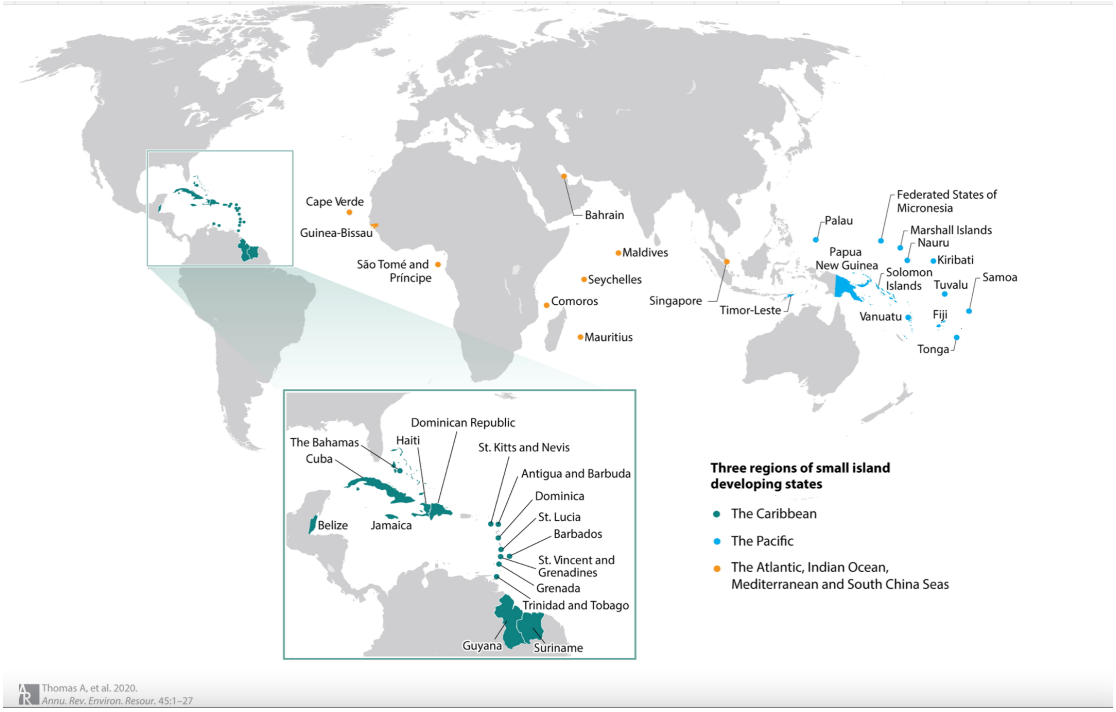
We present our recommendations first, then explain them in more detail.

RECOMMENDATIONS

- *The Commissioners of the CEC should revise their goals and the strategic plan to include at least the CPUC "sensitivity portfolio" of 5 GWs on the central coast and 8 GWs on the north coast, for a total of 13.4 GWs by 2030; the target for 25 GWs should be 2035.*
- *Use cost-benefit calculations that weigh the consequences of positive harm vs. the far greater consequences of delaying action.*
- *Spell out "clean and green" ports in the strategic plan and recommend enforcement mechanisms.*
- *The strategic plan should treat community benefits and equity considerations on a par with workforce or environmental concerns.*
- *Include in the strategic plan draft legislation to ensure that transmission proceeds rapidly enough to meet the overall goal of 13.4 GWs by 2030 and 25 GWs by 2035.*
- *The strategic plan should include draft legislation that permitting for the wind farms, ports and transmission occur in a coordinated framework and with accelerated deadlines in order to achieve the goal of 13.4 GWs of offshore wind power by 2030 and 25 GWs by 2035. The State of California should negotiate the same provisions for BOEM and other relevant federal agencies with the help of California's representatives in Congress.*

A. An Urgent Deadline: We need at least 13.4 GWs of offshore wind power by 2030 if this important new source of electricity is to allow California to meet its clean power goals and do our part in keeping warming to 1.5 °C.

1. AB 525 requires a strategic plan containing two fundamental elements: The number of gigawatts we believe can be attained and the time frame for doing so. According to the IPCC, the outside date for bringing offshore wind online MUST be 2030—because that is, according to the scientific consensus, the earth's last chance for warming no more than 1.5 degrees Celsius. The 400 billion tonnes carbon budget we "enjoyed" in 2020 is likely to be exhausted by the end of 2030, if not sooner. [1]
2. Here is a reminder of what happens if we exceed 1.5 degrees.
   - We lose our island nations.[2]

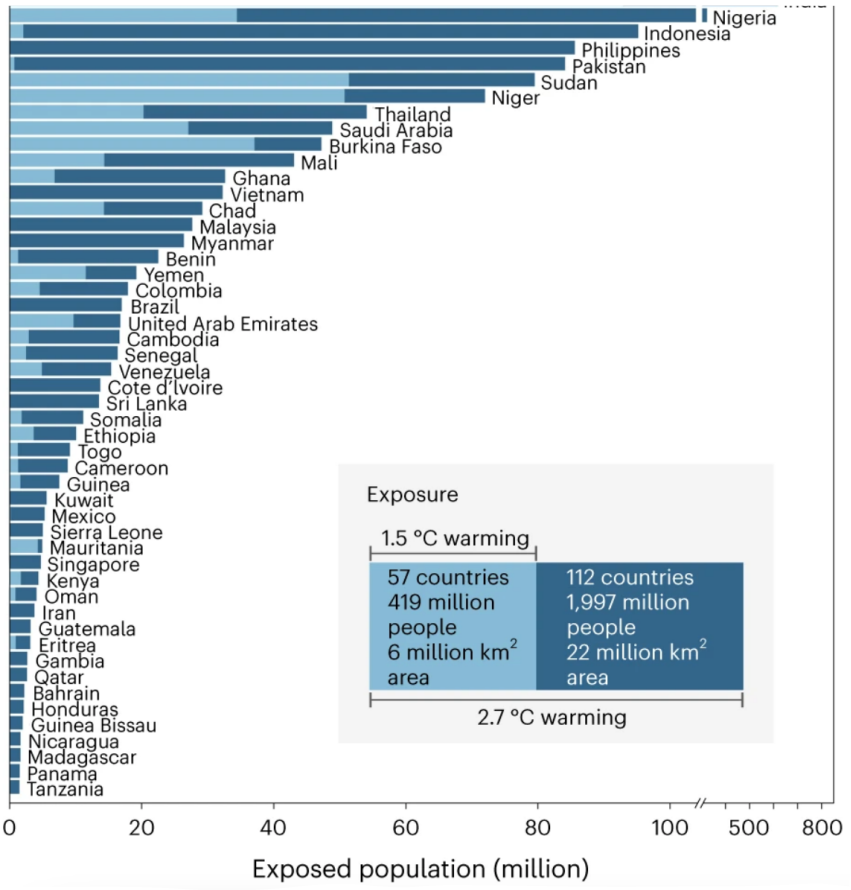


- If we continue on our current trajectory to 2.7 degrees C., the number of people who will be living outside of the human-survivable climate niche of *average* temperatures of 12.7° to 27.2°C. (55° to 81°F.) will almost quadruple from a 1.5°C. increase: from 419

[1] "The residual global carbon budget to remain within 1.5°C of global warming with 67% probability is given as 400 billion tonnes CO2 from the start of 2020. Global CO2 emissions are about 36 billion tonnes per year, and so the 400 billion tonnes CO2 will last just 11 years if no reductions are made, that is, the global CO2 budget runs out at the end of 2030.'' Page 98 of: Climate Change 2021: The Physical Science Basis. Working Group I Contribution to the IPCC Sixth Assessment Report. Technical Report. Summarized by Carbon Independent.org who did the calculation of when the budget would run out. https://www.carbonindependent.org/54.html

[2] Thomas, Adelle, April Baptiste, Rosanne Martyr-Koller, Patrick Pringle, and Kevon Rhiney. "Climate change and small island developing states." *Annual Review of Environment and Resources* 45 (2020): 1-27. https://www.annualreviews.org/doi/pdf/10.1146/annurev-environ-012320-083355

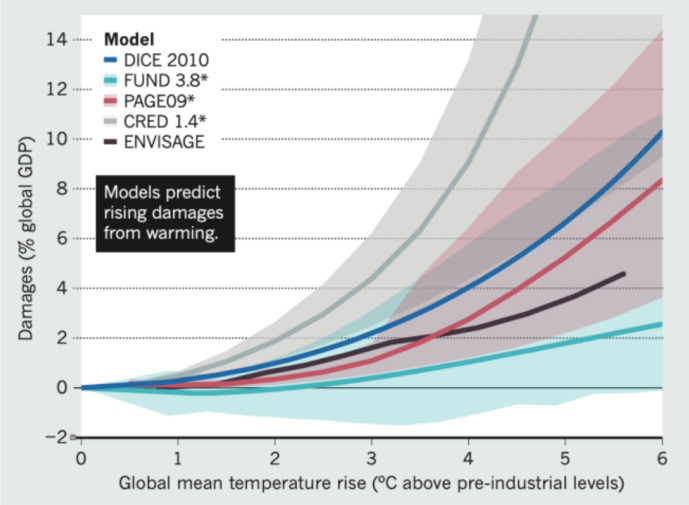
million.to two billion people. That is, a billion and a half more people in an additional 55 countries will be living at *average* temperatures over 81°F. Please see the graph below.[3]



- We increase the likelihood of "tipping points." Melting of the permafrost is already irreversible and two other tipping points may have already occurred. Such events are much more likely when warming over preindustrial times exceeds 1.5°C.[4]
    - Melting of the Greenland Ice Sheet
    - Melting of Arctic Sea Ice
    - Melting of the West Antarctic ice sheet
    - Melting and thawing of East Antarctic sub-glacial basins
    - Melting East Antarctic ice sheet
    - Shifting of the North Atlantic sub-polar gyre / Labrador Sea convection
    - Changes in the Atlantic meridional overturning circulation
    - Death of boreal forests
    - Extinction of low-latitude coral reefs
    - The end of the Amazon rainforest's ability to sequester carbon
    - Massive CO2 and methane releases from melting permafrost

[3] https://www.nature.com/articles/s41893-023-01132-6/figures/5
[4] https://www.science.org/doi/abs/10.1126/science.abn7950 A full-text preprint is available at: https://ore.exeter.ac.uk/repository/bitstream/handle/10871/131584/Tipping%20points.pdf?sequence=1

- Climate scientists have found that every *one* year of delay before the world *reverses* the growth of emissions reduces by *two* years the time we have to reach net zero at or below 1.5°C.[5]
- Climate models show *damage* from global warming increases at a much faster rate than warming; some climate models show a near exponential rate.[6]



This disproportionality has at least two consequences:

a) We must frontload our major efforts for climate mitigation, not push them off past 2030; and

b) If we don't act rapidly, paying for adaptation and reconstruction after climate disasters is going to take up more and more of our resources leaving far too little for mitigation.

3. California's contribution to keeping warming to 1.5°C. must be large in keeping not only with our historical contributions to greenhouse gas emissions but our current ones. The United States is second only to China in current emissions and California is second only to Texas among states.[7]

Recommendation: The Commissioners of the CEC should revise their goals and the strategic plan to include at least the CPUC "sensitivity portfolio" of 5 GWs on the central coast and 8 GWs on the north coast, for a total of 13.4 GWs by 2030; the target for 25 GWs should be 2035.

[5] Nicholas J. Leach, et al. "Current level and rate of warming determine emissions budgets under ambitious mitigation." Nature Geoscience 11, no. 8 (2018): 574-579.
[6] Revesz, Richard L., Peter H. Howard, Kenneth Arrow, Lawrence H. Goulder, Robert E. Kopp, Michael A. Livermore, Michael Oppenheimer, and Thomas Sterner. "Global warming: Improve economic models of climate change." *Nature* 508, no. 7495 (2014): 173-175. https://www.nature.com/articles/508173a
[7] Global emissions: https://worldpopulationreview.com/country-rankings/greenhouse-gas-emissions-by-country State emissions: https://www.eia.gov/environment/emissions/state/

B. ***Specific Proposals for Ports, Transmission and Permitting***

1. *Anticipate climate change effects.* In the many AB 525 workshops we have heard very little about what is likely to happen as a result of climate change and how that might affect many of the issues of concern, especially environmental concerns such as effects on birds, ocean mammals, and fisheries. Here is an example of why we need to be looking at the ocean (and our society) as changing rapidly rather than as a static situation into which offshore wind farms are inserted:

> "Ocean warming has devastated the snow crab fishery in the Bering Sea, dealing an economic blow to the Aleut community of St. Paul, Alaska. Extended heat waves and a loss of sea ice have raised temperatures on the sea bottom, where the snow crabs — which depend on colder water — live. After the Bering snow crab population collapsed last year, St. Paul saw tax revenues fall from $2.5 million to just $200,000, raising questions about the town's future in a world in which ocean heat waves become more frequent. "When is it not a disaster anymore?" says a representative of a local fishermen's association. "When is it just status quo?""[8]

Similarly, while we want to protect birds from wind turbines, the far more pressing need is protecting them from climate change. The Audubon Society estimates 389 species are threatened with extinction from climate change. If we can limit warming to 1.5°C. many of these species will survive.[9] *Offshore wind is a critical component of limiting warming both in California and worldwide, where 380 GWs of offshore wind energy are expected by 2030 and 2,000 by 2050.*[10]

Recommendation: Use cost-benefit calculations that weigh the consequences of positive harm against the far greater consequences of delaying action.

2. *Clean and green ports.* Matt Trowbridge from Moffat and Nichol presented needs regarding offshore wind port infrastructure. When asked about port electrification he replied that all of the options presented assumed "clean and green" ports. The strategic plan must include specifics of what constitutes clean and green. For example, will ships that burn fossil fuels (especially bunker oil) be required to have hookups so that they can be run with electricity from the port? Another option is to use "green" concrete for port construction and as possible in the turbines. And how will the clean and green provisions be enforced? While Moffat and Nichol may assume that everyone will want clean and green, that is an unlikely eventuality unless included in a legislative or regulatory package that specifies the requirements of offshore wind port electrification (and other

[8] https://e360.yale.edu/features/snow-crabs-alaska-bering-sea-climate-change
[9] https://www.audubon.org/news/new-audubon-science-two-thirds-north-american-birds-risk-extinction-due-climate#:~:text=NEW%20YORK%20(October%2010%2C%202019,to%2076%20percent%20of%20them.
[10] https://gwec.net/new-global-alliance-taps-into-offshore-wind-enormous-potential/#:~:text=The%20Global%20Offshore%20Wind%20Alliance%20(GOWA)&text=The%20aim%20of%20GOWA%20is,in%202%2C000%20GW%20by%202050. These estimates may be influenced by industry hopes. In a recent interview, the CEO of Orsted estimate 850GWs by 2050.

carbon reducing measures) and specifies the enforcing entity and penalties for non-compliance.

Recommendation: Spell out "clean and green" ports in the strategic plan and recommend enforcement mechanisms.

3. *Climate justice and equity.* Fossil fuel developments have exploited—and in many cases poisoned—communities living near them. While wind energy is inherently less dangerous, issues of equity during the development of offshore wind must be included in the strategic plan. Currently only the workforce and economic benefits segments of the plan have considered aspects of the larger problem of equity. The strategic plan needs to take a much broader perspective including what has been learned in this process from tribal nations and from fishers.

   Local communities must benefit in ways which are very transparent to their members. If this does not occur, local opposition to the wind developments is likely.[11] As we noted in our previous comments on the economic benefits report, community benefits, climate justice, and equity for local communities must be a priority. Finally, as Schatz researchers noted, rural areas on the coast of northern California and southern Oregon suffer from poor grid reliability. A primary benefit for these communities would be assurance of reliable power.

   Recommendation: The strategic plan should treat community benefits and equity considerations on a par with workforce or environmental concerns.

4. *Transmission delays.* While the AB 525 strategic planning process has appropriately focused on the wind farms, ports, and transmission, assuming all three are integral to the success of offshore floating wind, the agencies concerned with transmission seem to be on a separate track. The AB 525 transmission studies by Schatz and Guidehouse presented in the workshop are certainly helpful, but they are not necessarily coordinated with the CPUC and CAISO. As the very useful GridLab report[12] says: "Bottlenecks on the transmission system can be very costly as the need for clean energy grows rapidly…. Given the long-lead times required for developing new transmission projects, planning for new transmission will need to be initiated well in advance of procurement of the clean energy projects that will eventually use the lines to deliver renewable and zero-carbon energy to customers." For example, procurement for new parts will have to be started well in advance of when they would be used.

   Unfortunately, it is not at all clear that transmission planning for offshore wind by CAISO, the CPUC, and CEC is sufficiently advanced that developers can count on the

[11] Some opposition is based on misinformation: https://www.npr.org/2022/03/28/1086790531/renewable-energy-projects-wind-energy-solar-energy-climate-change-misinformation But most of it is not, which can only be countered by a clear perception of benefit. "We identified 53 utility-scale wind, solar, and geothermal energy projects that were delayed or blocked between 2008 and 2021 in 28 U.S. states." https://www.sciencedirect.com/science/article/pii/S0301421522001471

[12] CEERT/GridLAB Transmission In California March 2023 Report, docketed 5/30/2023.

essential infrastructure being available by the time the wind farms are operative—especially if, as we propose, the schedule be accelerated.

As recent AB 525 workshop presentations and the GridLab report make clear, there are some exciting, if challenging, ways both to use DC power, especially in underwater transmission lines, and to upgrade existing transmission lines using existing towers.

We are unclear as to what process must occur to integrate transmission planning and development in the time frame for offshore wind development. The worst outcome would be that projects have to adjust to the delays in transmission build-out, putting actual generation of wind power past the 2030 point. We request that the strategic plan be very specific about the process, including any new MOUs or legislation, needed to closely tie transmission to the total port and windfarm development cycle. To fail to do so will not only be costly, but it will actually imperil the whole project.

Recommendation: Include in the strategic plan draft legislation to ensure that transmission proceeds rapidly enough to meet the overall goal of 13.4 GWs by 2030 and 25 GWs by 2035.

5. *Permitting.* Permitting issues differ somewhat for the windfarms themselves, port facilities and transmission.

   a. *Transmission*: The GridLab report concludes: "CEERT recommends that the Legislature consider extending the provisions of AB 205 to transmission projects of over 200 kV that are determined to be needed by the CAISO to meet California's GHG reduction and clean energy goals." Two recent bills seek to streamline the transmission permitting process in California: SB 619 (Padilla) and SB 420 (Becker). We agree that it makes sense that the permitting of transmission for offshore wind be within the AB 205 framework. We suggest amending SB 619 (Padilla) to accomplish this. The CEC will need additional staff in the budget process if this occurs.

   b. *Ports:* Even after the workshop presentations, the permitting process for ports is unclear, both for existing ports being modified to support offshore wind (as in Humboldt Bay) and proposed new ports. Again, it is not reasonable to have separate permitting processes for what is an integrated project comprising windfarms, port facilities and transmission. Unfortunately, the permitting report focused only on permitting of the windfarms. **It is unclear to us the best way to fold port facility permitting into a consolidated process.**

   c. *Windfarms.* The April 28th revised permitting report is an improvement on the first report. All of the methods proposed for speeding up the permitting seem useful. One aspect that did not seem to be considered was how to consolidate the requirements put upon the individual leaseholders. For the most part the environmental and other effects that might be required for CEQA, NEPA or Coastal Commission or BOEM review will differ little for the leaseholders at each site (Humboldt, Morrow Bay, or Crescent City, etc.). Provision should be made to avoid duplication.

   d. *CEQA.* The Governor recently proposed a series of reforms of CEQA for large infrastructure projects. While it is unlikely that these will pass as a package, some significant streamlining of CEQA for major renewable energy projects, particularly

offshore wind, is required if we are to meet our clean energy goals. Such streamlining need not reduce environmental and other protections, but it should shorten deadlines, including for lawsuits. It is possible, too, that the timetable for NEPA approval will be reduced to one to two years through the federal Deficit Reduction Act of 2023. We believe legislation is required to clarify the reforms necessary to act quickly in matters of "overriding public interest."[13] This includes building into the permitting process the presumption that utility scale renewable energy is required to avert accelerating climate catastrophes. Cost-benefit analyses that use the new social cost of carbon and discount rates[14] will make it clear the enormous consequences of failing to act and act quickly.

Recommendation: The strategic plan should include draft legislation that stipulates permitting for the wind farms, ports and transmission occur in a coordinated framework and with accelerated deadlines in order to achieve the goal of 13.4 GWs of offshore wind power by 2030 and 25 GWs by 2035. The State of California should negotiate the same provisions for BOEM and other relevant federal agencies with the help of California's representatives in Congress.

Thank you for considering these comments. We would welcome an opportunity to discuss our recommendations. Please reach out to Daniel Chandler, dwchandl@gmail.com, if that is a possibility.

Respectfully submitted,

Daniel Chandler, Ph.D.

350 Humboldt Steering Committee

Janet Cox, CEO

Climate Action California

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[13] "Overriding public interest" is the phrase used in radically reducing the permitting time under the new REPowerEU regulations. See "Europe Puts Fast Permitting of Renewables at the Heart of its Energy Security Plan." WindEurope, May 2022. https://windeurope.org/newsroom/press-releases/europe-puts-fast-permitting-of-renewables-at-the-heart-of-its-energy-security-plan/

[14] https://www.eenews.net/articles/epa-floats-sharply-increased-social-cost-of-carbon/#:~:text=The%20Biden%20administration%20has%20been,increasing%20that%20number%20to%20%24190.&text="This%20is%20a%20whole%20new,a%20senior%20attorney%20at%20Earthjustice. Also see the UC Berkeley analysis from 2022 at: https://www.nature.com/articles/s41586-022-05224-9. The social cost of carbon in these analyses range from 185 to 195 dollars per tonne.