February 20, 2024

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Bureau of Ocean Energy Management
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Submitted electronically via regulations.gov

RE: Sierra Club Comments in Response to Notice of Intent to Prepare a Programmatic Environmental Impact Statement for Future Floating Wind Energy Development Related to 2023 Leased Areas Offshore California [Docket No. BOEM–2023–0061]

Dear Ms. Gilbane:

On behalf of the Sierra Club and our 290,000 statewide members and supporters, thank you for the opportunity to provide these comments on the Bureau of Ocean Energy Management's ("BOEM") December 20, 2023 Notice of Intent to Prepare a Programmatic Environmental Impact Statement for Future Floating Wind Energy Development Related to 2023 Leased Areas Offshore California ("NOI").[1] Sierra Club remains supportive of responsibly sited and equitably developed offshore wind energy as a climate change solution, and we urge BOEM to ensure that any floating wind energy development in California includes thorough evaluation of alternatives and mitigation strategies.

Sierra Club understands the urgent need to transition away from fossil fuel technology to renewable energy. If developed in an environmentally responsible manner with sustained and significant local community benefits and oversight, offshore wind ("OSW") offers substantial opportunities to communities on California's north and central coasts. OSW also stands to benefit communities across California—and particularly in the Los Angeles air basin—who are impacted by the air and water pollution from fossil fuel power plants. The U.S. energy grid has disproportionately harmed people of color and low-income neighborhoods with the negative health impacts that come from living near gas power plants. As more renewable energy technology is brought online to serve electric customers, it will become easier to reduce the use of and retire gas power plants that contaminate air and water while also contributing heavily to poor public health, climate change, and extreme weather. Both California and

[1] Notice of Intent to Prepare a Programmatic Env't Impact Statement for Future Floating Wind Energy Dev. Related to 2023 Leased Areas Offshore Cal., 88 Fed. Reg. 88107 (Dec. 20, 2023) [hereinafter "88 Fed. Reg. 88107"].

President Biden have ambitious and urgent goals to utilize OSW to address these harms, and Sierra Club supports these efforts.

Accordingly, Sierra Club urges BOEM to use the fullest extent of its authority to create an offshore wind industry that:

- Protects wildlife and marine ecosystems by avoiding, minimizing, mitigating, and monitoring impacts over the course of site assessment and project development;
- Consults early and authentically with and delivers community benefits and oversight to Tribes, workers in the fishing industry, people of color, and low-income communities; and
- Maximizes the creation of quality, family-sustaining, union jobs throughout the lifespan of a project.

For the purposes of preparing the draft Programmatic Environmental Impact Statement, Sierra Club provides the following recommendations:

- Incorporate the positive impacts of offshore wind development on meeting state carbon and renewable energy goals and reducing greenhouse gas emissions;
- Incorporate air quality and cost benefits from developing offshore wind with particular benefits to frontline communities;
- Include in the "No Action Alternative" the estimated costs and emissions from alternative clean energy build and the risk of continued reliance on gas plants, including the adverse impacts on frontline communities;
- Require BOEM and project developers to consult with both federally recognized and unrecognized tribes; and
- Avoid, reduce, mitigate, and monitor cumulative impacts to the environment and port communities.

1. Offshore wind development will positively impact California's ability to meet carbon and renewable energy goals at least-cost and reduce the state's reliance on fossil fuel-fired electricity.

a. Federal and state targets require that California reduce greenhouse gas emissions from the electric sector.

The federal and California government have taken some steps to address the crisis, and many parties recognize the potential of offshore wind to displace greenhouse gas ("GHG") emitting sources. The Biden Administration set a target of achieving 30 gigawatts ("GW") of OSW across the country by 2030.[2] California separately has multiple climate laws, namely Senate Bill ("SB") 350 which requires reducing statewide GHG emissions to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.[3] In September 2022, Governor Newsom increased the ambition further with SB 1020, aiming to reach statewide carbon neutrality by 2050.[4] State law SB 100 also requires 100 percent of

[2] The White House, *Fact Sheet: Biden-Harris Admin. Announces New Actions to Expand U.S. Offshore Wind Energy* (Sept. 15, 2022), *available at* https://www.whitehouse.gov/briefing-room/statements-releases/2022/09/15/fact-sheet-biden-harris-administration-announces-new-actions-to-expand-u-s-offshore-wind-energy/.
[3] Sen Bill. No. 250 (Cal. Reg. Sess. 2015-2016).
[4] Sen. Bill No. 1020 (Cal. Reg. Sess. 2021-2022) [hereinafter "SB 1020"].

all retail sales of electricity come from renewable and zero-carbon resources by 2045 and 60 percent of all retail sales be renewable or zero-carbon by 2030.[5] SB 1020 further requires 90 percent renewable or zero-carbon energy by 2035.[6] These efforts are all squarely aimed at reducing greenhouse gas emissions in order to mitigate the climate crisis that California currently faces.

In addition, wind-specific targets further underscore the potential role of offshore wind in California's decarbonization efforts. In July 2022, Governor Newsom directed the California Energy Commission ("CEC") to set a planning goal for achieving 20 GW of offshore wind by 2045 while "account[ing] for the needs of all those who use and care about California's precious coastal resources."[7] The CEC, after conferring with Governor representatives, set a preliminary goal of 25 GW of new OSW by 2045 in its final 2022 Scoping Plan, expecting that this goal would require approximately 1,300 turbines.[8]

Recent independent and government research further confirms that offshore wind can play a critical role in meeting those targets cost-effectively and with potentially more limited adverse impacts than alternative resources. For example, in 2019, one report used the same capacity expansion model used by California state agencies and found that incorporating 7-9 GW of offshore wind by 2040 would produce approximately $1-2 billion in ratepayer savings on a net present value basis.[9]

This finding, in part, led to state research on offshore wind. In 2021, the 2021 Joint Agency SB 100 Report analyzed multiple portfolios and sensitivities and found that offshore wind was included in the recommended portfolio as part of the least-cost portfolio.[10] That report projected that nearly all available wind resources, including both onshore and offshore, were selected by the model and emphasized that resource portfolio diversity, both technological and geographical, generally lowers total resource costs.[11] The report stated, "Across all scenarios, the maximum available long-duration storage, in-state wind, and offshore wind resources made available to the model are selected."[12]

The California Air Resource Board's 2022 Scoping Plan ("Plan") set out multiple planned actions to reach the state's climate goals, including actions particular to offshore wind. The Plan emphasized that

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[5] Sen. Bill No. 100 (Cal. Reg. Sess. 2017-2018).
[6] SB 1020.
[7] Governor Gavin Newsom, *Letter to Chair of the Cal. Air Res. Bd.* at 2 (July 22, 2022), *available at* https://www.gov.ca.gov/wp-content/uploads/2022/07/07.22.2022-Governors-Letter-to-CARB.pdf.
[8] Cal. Air Res. Bd., *2022 Scoping Plan for Achieving Carbon Neutrality*, App. B at 41 (Dec. 2022), *available at* https://ww2.arb.ca.gov/resources/documents/2022-scoping-plan-documents [hereinafter "2022 Scoping Plan"] ("Using a projected generating capacity of 15 MW per turbine, the 20 GW of offshore wind capacity envisioned in the proposed Scoping Plan could equate to about 1,300 turbines (Office of Energy Efficiency & Renewable Energy 2021), though a greater number of turbines could be installed if the individual generating capacity of some or all of the deployed turbines is less than 15 MW.").
[9] Energy and Env't Econ. (E3), *Econ. Value of Offshore Wind Power in Cal.* at 6 (Aug. 2019), *available at* https://www.ethree.com/wp-content/uploads/2019/09/2019-08-08_E3-Castle-Wind-Offshore-Wind-Value-Report-FINAL.pdf.
[10] Liz Gill et al., *2021 SB 100 Joint Agency Rep., Achieving 100 Percent Clean Elec. in Cal.: An Initial Assessment,* Cal. Energy Comm'n (Sept. 3, 2021), *available at* https://www.energy.ca.gov/publications/2021/2021-sb-100-joint-agency-report-achieving-100-percent-clean-electricity [hereinafter "2021 Joint Agency SB 100 Report"], included as Attachment 1.
[11] *Id.* at 16.
[12] *Id.* at 83.

reaching these targets will require record-breaking levels of annual clean energy deployment for nearly a decade. Accordingly, the Plan set a goal of deploying 25 GW of offshore wind by 2045, noting that incorporating a significant measure of offshore wind resources would "fortify the resiliency of the electrical grid as the state moves to decarbonize the energy and transportation sectors."[13] It also cited a number of mitigation measures to incorporate throughout the state's efforts, noting that the state is not blind to development challenges, including permitting, environmental impacts, possible impacts to recreation, temporary impacts due to construction, and more.[14] Sierra Club supports these goals and sees responsibly sited and equitably developed offshore wind as a resource critical to addressing climate change in California.

b. The avoided greenhouse gas emissions through offshore wind development have quantifiable benefits.

Under Supplementary Information/Summary of Potential Impacts, the NOI states "Beneficial impacts are also expected, including the creation of new habitat, job creation, and the potential reduction in carbon emissions when renewable energy replaces carbon-based energy generation."[15]

The beneficial impacts of reducing carbon emissions go beyond meeting climate targets and complying with state law. Clean energy projects like offshore wind projects stream benefits constantly through their basic operation because they reduce the need for emitting energy resources. The electricity produced by renewable energy avoids carbon dioxide (CO_2) emissions that cause climate change and the accordant variety of environmental impacts.

The climate crisis has battered California in recent years with wildfires, heat waves, drought, flooding, and storm surges, with no sign of abatement. Record levels of carbon dioxide in the atmosphere have been broken time and again in recent months,[16] and California ranks in the top five states suffering the greatest economic effects from climate-related natural disasters.[17] As University of California, Los Angeles climate scientist Aradhna Tripati notes, her research shows "absolutely that what is happening is not normal."[18] The crisis requires urgent action by every level of society, including federal and state government.

Sophisticated climate impact assessment models are now available to project the dollar-denominated value of projected social, economic, and physical costs of carbon emissions. For example, the U.S. Environmental Protection Agency ("EPA") relied on a new impact assessment model that

[13] 2022 Scoping Plan, App. B at 138
[14] *See, e.g.,* 2022 Scoping Plan, App. B at 40-41, 251, 253.
[15] 88 Fed. Reg. at 88108.
[16] Nat'l Oceanic and Atmospheric Admin., *Broken Record: Atmospheric Carbon Dioxide Levels Jump Again* (June 5, 2023), *available at* https://www.noaa.gov/news-release/broken-record-atmospheric-carbon-dioxide-levels-jump-again (citing 424 parts per million carbon dioxide measurements at Mauna Loa Observatory).
[17] Allison R. Crimmins et al., *Fifth Nat'l Climate Assessment,* U.S. Global Change Rsch. Program (2023), *available at* https://doi.org/10.7930/NCA5.2023.
[18] Alejandro Lazo, *No Place is Safe: New Nat'l Rep. on Climate Change Details Sweeping Effects,* CalMatters (Nov. 14, 2023), *available at* https://calmatters.org/environment/climate-change/2023/11/climate-change-california-national-climate-assessment/#:~:text=California%20ranks%20among%20the%20top,all%20linked%20to%20climate%20change.

projects the Mortality Costs of Carbon ("MCC")[19] to raise their Social Cost of Carbon figure from $50 to $200, which will substantially increase the environmental impact assessment of fossil fuel projects. It can also be used to increase the environmental benefit assessment of the carbon avoidance from clean energy projects. Most importantly, the MCC model calculates actual physical impacts as opposed to just economic costs. It projects the number of human mortalities avoided per ton of CO_2 emissions expected to be avoided by the proposed California offshore wind projects results.

Climate change is having a profound and far-reaching impact on our planet. Here is a breakdown of some major categories of impacts across various spheres:

- Extreme weather events: Heatwaves, droughts, floods, wildfires, and storms are becoming more frequent and intense, impacting people, infrastructure, and ecosystems.[20]
- Biological losses: Climate change is driving species extinction and disrupting ecosystems, impacting food webs, natural carbon sequestration, the spread of pests and diseases, agriculture, forests, and human health.[21]
- Economic losses: Climate change damages infrastructure, disrupts industries (agriculture, tourism), and increases insurance costs, leading to significant economic losses.[22]
- Food and water security: Changes in precipitation patterns, heat stress, and pests threaten agricultural productivity, impacting food and water security and nutrition, particularly in vulnerable communities.[23]
- Mass displacement: Extreme weather events and sea level rise displace people from their homes and communities, leading to humanitarian crises and social unrest.[24]
- Marine heatwaves and ocean acidification: More frequent and intense marine heatwaves are causing mass coral bleaching, impacting fisheries, shellfish, corals plankton production and even creating dead zones where marine life cannot survive.[25]

Climate change is a global crisis, and action is urgently needed to address it. Sierra Club encourages BOEM to incorporate into its Programmatic Environmental Impact Statement ("PEIS") both the quantifiable and qualitative impacts that floating offshore wind development in California is reasonably likely to produce.

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[19] U.S. Env't Prot. Agency, *Rep. on the Soc. Cost of Greenhouse Gases: Estimates Incorporating Recent Sci. Advances* at 81, 131 (Sept. 2022), *available at* https://www.epa.gov/system/files/documents/2022-11/epa_scghg_report_draft_0.pdf.

[20] Intergovernmental Panel on Climate Change, *AR6 Synthesis Rep., available at* https://www.ipcc.ch/report/sixth-assessment-report-cycle/ (last visited Feb. 20, 2024).

[21] Food and Agric. Org. of the United Nations, *Climate Change, available at* https://www.fao.org/climate-change/en/ (last visited Feb. 20, 2024).

[22] The World Bank, *Climate Change, available at* https://www.worldbank.org/en/topic/climatechange/overview (last visited Feb. 20, 2024).

[23] World Food Program, *Climate Action, available at* https://www.wfp.org/climate-change (last visited Feb. 20, 2024).

[24] United Nations Children's Fund, *The Climate-Changed Child, available at* https://www.unicef.org/reports/climate-changed-child (last visited Feb. 20, 2024).

[25] United Nations, *How is Climate Change Impacting the World's Ocean?, available at* https://www.un.org/en/climatechange/how-climate-change-impacting-world%E2%80%99s-ocean (last visited Feb. 20, 2024).

2. Offshore wind development will reduce reliance on gas-fired power plants, providing air quality and cost benefits across California with particular benefits to frontline communities.

California has faced unsafe levels of air pollution for decades, with most of the state's counties in nonattainment status ranging from marginal to extreme—the most dangerous category analyzed by the EPA.[26] Communities in and near greater Los Angeles and the Central Valley face some of the most excessive air pollution in the country. Ventura county is in serious nonattainment for ozone levels. Los Angeles County communities face severe to extreme nonattainment status for ozone. Kern and San Bernardino Counties both face serious nonattainment status for particulate matter and severe to extreme levels of ozone. Even coastal communities closest to the Central Coast wind energy area face unhealthy levels of air pollution. For example, San Luis Obispo County is currently in marginal nonattainment status for ozone.[27] Dangerous air pollution is a widespread health crisis in California, and no community is immune.

A significant portion of air pollution comes from the electric sector—particularly gas plants, nearly 75 percent of which are perniciously sited in or near disadvantaged communities.[28] These emissions are particularly intense during times of grid stress, including days of extreme heat. The state currently relies on these gas plants to maintain grid reliability, despite the exhaust of dangerous pollutants into frontline communities. Gas plants emit dangerous levels of nitrogen oxides, which cause respiratory problems, asthma, and hospital admissions.[29] These emissions also react with other atmospheric gases to produce particulate matter[30] and ozone,[31] which cause respiratory distress, heart attacks, strokes, and premature death. These emissions also lead to acid rain, air haze, and water pollution.[32]

The impacts of gas plants on frontline communities are particularly severe. Short-term exposure to gas plant emissions can cause wheezing, coughing, shortness of breath, and asthma attacks.[33] Long-term exposure damages multiple physiological systems with devastating effects, including cognitive declines, increased risk of Alzheimer's disease, neurodevelopment disorders, coronary artery disease, heart attacks, strokes, blood clots, lung cancer, chronic obstructive pulmonary disease, chronic kidney disease, endocrine disruption, diminished fertility, miscarriages, premature birth, and low birth rate.[34]

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[26] U.S. Env't Prot. Agency, *Green Book, Current Nonattainment Counties for All Criteria Pollutants*, *available at* https://www3.epa.gov/airquality/greenbook/ancl.html (last visited Feb. 20, 2024).
[27] *Id.*
[28] Brightline Def., *Cal. Offshore Wind: Winding Up for Econ. Growth & Env't Equity* at 13 (Dec. 2020), *available at* https://static1.squarespace.com/static/62a3cf9943d092298cc7dec6/t/637c124e877a1774bd66c8dc/1669075544016/Brightline-OffshoreWind-Report-12-6-2020.pdf, included as Attachment 2.
[29] U.S. Env't Prot. Agency, *Basic Info. About NO_2*, *available at* https://www.epa.gov/no2-pollution/basic-information-about-no2 (last visited Feb. 20, 2024) [hereinafter "U.S. Env't Prot. Agency, *Basic Information About NO_2"]*.
[30] U.S. Env't Prot. Agency, *Health and Env't Effects of Particulate Matter (PM)* (last updated Aug. 23, 2023), *available at* https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm.
[31] U.S. Env't Prot. Agency, *Health Effects of Ozone Pollution* (last updated May 24, 2023), *available at* https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution.
[32] U.S. Env't Prot. Agency, *Basic Information about NO_2.*
[33] Clean Energy Grp. & Strategen, *The Peaker Problem: An Overview of Peaker Power Plant Facts and Impacts in Boston, Philadelphia, and Detroit* (July 27, 2022), *available at* https://www.cleanegroup.org/publication/peaker-problem/, included as Attachment 3.
[34] *Id.* at 13-14.

These effects are even more pronounced on days of extreme heat. During a ten day of extreme heat in late summer 2022, 107 of California's gas plants emitted an average of 214,000 tons of carbon dioxide, 30,000 pounds of nitrogen oxide, and 2,200 pounds of sulfur dioxide; the carbon emissions alone are equivalent to running 43,000 vehicles for a year.[35] Researchers estimated that the emissions from the studied gas plants during this 10-day period alone caused between $12.3 to $27.8 million in negative health impacts.[36]

California regulators and grid operators will not allow these gas plants to retire until there are sufficient clean energy alternatives in place to backfill them. Newly passed California law requires state regulators to plan for the development of new clean energy resources specifically to displace gas plants in the most populated parts of the state.[37] The California Public Utilities Commission ("CPUC") regulates state utilities and has been ordering clean energy procurement that aims to fulfill state climate and electricity targets, directing utilities to plan for long-lead time resources, including offshore and out of state wind.[38]

There is a considerable risk that these resources face delays in buildout, leading to continued or increased reliance on the state's gas plants. State agencies regularly emphasize that meeting our climate targets will require years of consistently breaking clean energy deployment records year over year.[39] Multiple utilities cite delays in building "long lead time resources," which include offshore wind, geothermal, and other emerging technologies.[40] In addition, local transmission constraints are often met with gas plants close to population centers; unless clean energy resources are sited within the same load pockets, existing gas plants will continue to meet those needs.[41] Recent data from the California Independent System Operator suggests that projected gas usage in 2032 could exceed 60 percent of

[35] Regenerate Cal., *Cal.'s Underperforming Gas Plants* at 6 (2023), *available at* https://drive.google.com/file/d/1xyqpy_bYthWj3fuPC_M6HFQQocYyTrW2/view, included as Attachment 4.
[36] *Id.*
[37] Cal. Pub. Util. Code § 454.57(e)(4).
[38] Cal. Pub. Utils. Comm'n Decision (D.) 21-06-035 (ordering 1,000 MW of net qualifying capacity of long-duration storage resources and another 1,000 MW of "clean firm" resources that could deliver power at a minimum capacity factor of 80 percent); D.23-02-040 (modifying the long-lead time resources deadline to June 1, 2028).
[39] 2022 Scoping Plan at 202 ("Annual build rates (over the 2022–2035 period) for the Scoping Plan Scenario will need to increase by about 60 percent and over 700 percent for utility solar and battery storage, respectively, compared to historic maximum rates. To reach the 2045 target, the state will need to quadruple its current level of wind and solar capacity. This does not include capacity associated with hydrogen production nor mechanical CDR [carbon dioxide removal], which was modeled off-grid.").
[40] *See* Cal. Pub. Util. Comm'n Decision 24-02-047 at 95 (Feb. 20, 2024), *available at* https://docs.cpuc.ca.gov/SearchRes.aspx?docformat=ALL&docid=525918033 [hereinafter "IRP Decision (Feb. 20, 2024)"] (citing concerns from stakeholders that load-serving entities are facing delays in procuring long-lead time resources because these projects have "longer permitting timelines, material supply constraints, potential for interconnection delays, and unavoidably long construction periods"). The California Public Utilities Commission voted to approve Proposed Decision Revision 1 at the February 15, 2024 Voting Meeting, but the final decision has not been issued as of the time of this filing.
[41] *See, e.g.,* Cal. W. Grid Dev. LLC, Opening Comments on Admin. Law Judges Oct. 5, 2023, Ruling Seeking Comments on Proposed 2023 Preferred Sys. Plan and Transmission Planning Process Portfolios at 4 (Nov. 13, 2023).

summer hours by 2032 in Western Los Angeles.[42] Without a plan to transition away from gas plants, California's reliance on these polluting resources will continue and possibly increase.

Offshore wind resources offer unique potential to facilitate the retirement of these gas plants if the output from these plants can be accessed and relied upon by the many California communities currently hosting gas plants. Multiple California gas plants are located on or very near to the coast, including the state's remaining once-through cooling gas plants and the Diablo Canyon Nuclear Generating Station. Despite state law requiring these plants to close, all have received extensions due to concern about grid reliability. Accordingly, new renewable resources will need to be developed before these resources can be retired. Offshore wind development could support the state's efforts to reduce greenhouse gas emissions and to prevent continued dangerous air pollution on frontline communities.

3. The "No Action Alternative" should include estimated costs and emissions from alternative clean energy build and the risk of continued reliance on gas plants, including the adverse impacts on frontline communities.

Sierra Club recommends that BOEM's "No Action Alternative" include the estimated cost and emissions impacts from building alternative renewable resources as well as the risk of continued or increased reliance on gas plants. As noted in the section above, California state law requires agencies to meet greenhouse gas reduction targets, and state agencies have evaluated multiple pathways—nearly all of which rely on massive deployment of new renewable energy resources.

Nearly every scenario evaluated by state regulators includes the development of new offshore wind resources, but the 2021 Joint Agency SB 100 Report evaluated scenarios where offshore wind is not developed. The Joint Agency's base case included significant solar, battery storage, and offshore wind. But the projected results from excluding offshore wind resulted in the optimization software choosing alternative renewable resources, including 2 GW of additional geothermal resources and significantly more solar and battery storage resources: 22 GW additional solar capacity and 15 GW of additional battery storage.[43] In total, excluding offshore wind resources would require nearly twice the energy capacity (37 MW) of the energy capacity set by the base case scenario (20 GW). Excluding new offshore wind resources increased the overall system costs by $60 billion, and the projected average cost of energy would likely increase by $0.16/kWh.[44] The primary contributor to these increased costs were associated with the additional solar and storage resource costs.[45]

In addition to the financial costs of deploying these alternative renewable resources, this large buildout will require vast land area to supply, with considerable environmental impacts. The land area needed to provide 22 GW of additional solar capacity beyond the base case scenario could be enormous—a back of the envelope calculation suggests 275 square miles assuming the full capacity is met with large scale solar development.[46] Distributed scale solar would require slightly more space but at least some

[42] *Id.*
[43] 2021 Joint Agency SB 100 Report at 90.
[44] *Id.* at 89.
[45] *Id.*
[46] Sean Ong et al., Land-Use Requirements for Solar Power Plants in the United States, Nat'l Renewable Energy Lab (2013), *available at* https://www.nrel.gov/docs/fy13osti/56290.pdf (Noted that Large PV (>20 MW) has a

portion of this development could occur on the existing built environment. All new renewable resources will pose financial and environmental impacts, and if offshore wind is excluded, then other new resources will be needed to meet current state law.

Under a "No Action Alternative," the staggering amount of alternative renewable resource build is reasonably likely to lead to project delays, forcing California to continue or increase its reliance on gas plants. As noted above, California utilities are already facing delays in developing long lead time resources like offshore wind and geothermal resources.[47] Clean energy buildout has already faced delays, and increased pressure to develop solar and battery storage could further slow progress. As a result, there is a real and current risk that alternative renewable resources (other than offshore wind) will not be available in time to meet state and national goals, and lead to continued gas plant reliance.

The costs associated with continued or increased reliance on California's gas plants should be incorporated into the "No Action Alternative." As noted in Section 2 above, gas plants spew dangerous air emissions into frontline communities, emitting greenhouse gases, criteria pollutants and toxic air pollutants, causing short- and long-term health impacts on frontline communities, and frustrating the state's attempts to comply with the Clean Air Act and state climate law. The health impacts from 107 of the state's gas plants during a 10-day 2022 heat wave alone imposed between $12.3 to $27.8 million in negative health impacts.[48] The "No Action Alternative" should acknowledge the risk that these impacts continue due to the additional challenges of reaching climate and Clean Air requirements without the support of offshore wind development.

Accordingly, Sierra Club recommends that the potential impacts of a "No Action Alternative" include:

- Dramatically more renewable energy build than already planned across the state: 2 GW of additional geothermal capacity, 22 GW additional solar capacity, and 15 GW of additional energy storage,
- Increased energy costs of $60 billion to meet state climate targets, and
- Costs associated with the risk of continued or increased state reliance on gas plants.

4. The PEIS should require BOEM and project developers to consult with both federally recognized and unrecognized tribes.

Sierra Club urges BOEM and project developers to consult with both federally recognized and unrecognized tribes in order to address impacts to tribal communities and to prevent project delays. This is necessary to obtain free, prior, and informed consent from Tribes for offshore wind development. The development of floating offshore wind energy development in California's five leased areas could impact places and resources that are important to Native American tribes and tribal communities, including tribes not currently recognized by the federal government. Early collaborative coordination may produce a shared understanding of alternatives and mitigation measures that support the responsible development of

Capacity-weighted average land use of 7.9 acres/Mwac). Accordingly, one GW of large PV would require roughly 7,900 acres or 12.5 square miles; multiplying that acreage by 22 yields approximately 275 square miles.

[47] IRP Decision at 95 (Feb. 20, 2024).

[48] *Id.*

offshore wind energy without delay or subsequent challenges. Sierra Club urges BOEM to fully engage these tribes and community members in a way that proactively describes potential impacts and allows for a meaningful opportunity for members of the tribes to weigh in on the proposal.

We further recommend that BOEM go beyond formal, government-to-government consultation requirements to ensure that the concerns of community members are considered as part of this process. The Department of Interior and its component Bureaus are charged with trust responsibility and treaty rights to protect American Indian and Alaska Native Tribal interests, and accordingly the Department has stated: "The Departments will collaborate with Indian Tribes to ensure that Tribal governments play an integral role in decision making related to the management of Federal lands and waters through Tribal consultation, capacity building, and other means consistent with applicable authority."[49]

BOEM's renewable energy regulations at 30 C.F.R Part 585 set forth a large number of requirements for coordination and consultation with Tribes in connection with the issuance and administration of leases, rights-of-way, and easements. This includes committing to coordination and consultation with "any affected Indian Tribe prior to issuing OCS renewable energy leases"[50] as well as "identify[ing] areas for environmental analysis and consideration for OCS renewable energy leasing in consultation with any affected Indian tribes."[51] The Department of Interior has further instructed that other BOEM regulations include general "cooperate and consult" provisions which, "though they do not expressly reference Tribes, may be broadly read as doing so."[52] In addition, BOEM has also issued guidance to identifying areas of tribal use and significance that could be impacted by offshore renewable energy siting.[53]

It is also important to note that the Department of Interior has directly issued its Bureaus flexibility in how it involves Tribes. For example, in Order 343, the Department stated that it grants them "substantial leeway to involve Tribes in its decision-making processes," including implementation decisions.[54]

> *For example, a Tribe could formulate, propose, and execute habitat restoration projects in an area where the Tribe holds reserved treaty rights, with a limited role for BLM in developing the proposals, so long as the BLM retains the authority for approval over individual projects. In addition, project approvals may be made contingent on Tribal consent as long as there is a reasonable connection between the Tribe's jurisdiction*

[49] U.S. Dep't of Interior, United States Dep't of Agric., Order No. 3403: Joint Secretarial Order on Fulfilling the Trust Resp. to Indian Tribes in the Stewardship of Fed. Lands and Water (Nov. 15, 2021), *available at* https://www.doi.gov/sites/doi.gov/files/elips/documents/so-3403-joint-secretarial-order-on-fulfilling-the-trust-responsibility-to-indian-tribes-in-the-stewardship-of-federal-lands-and-waters.pdf.
[50] 30 C.F.R. § 585.203.
[51] 30 C.F.R. § 585.211(b).
[52] U.S. Dep't of Interior, Off. of the Solicitor, *Final Rep. on Co-Stewardship Auths.* at 39 (Nov. 2022), *available at* https://www.doi.gov/sites/doi.gov/files/-final-legal-rvw-v-final-pdf-508.pdf.
[53] D. Ball, et al., *A Guidance Document for Characterizing Tribal Cultural Landscapes,* OCS Study BOEM 2015-047 (Nov. 30, 2015).
[54] *See, e.g.,* U.S. Dep't of Interior, Bureau of Land Mgmt., Permanent Instruction Memo No. 2022-011 (Sept. 13, 2022), *available at* https://www.blm.gov/sites/default/files/docs/2022-09/PIM2022-011%20+%20attachment.pdf.

and the BLM's decision (such as a nexus between the proposed action and the Tribe's off reservation treaty rights).[55]

Sierra Club urges BOEM to interpret this substantial leeway to include working proactively with tribes that are not recognized by the federal government. In particular, we recommend that BOEM also consult with tribes listed on the California Native American Heritage's ("CNAH") contact list. Both federally recognized tribes and the tribes listed by the CNAH hold traditional knowledge that centers environmental solutions and can better inform both state and federal decisions. Systemic racism has long impacted these tribes as well as other marginalized racial and ethnic groups across the state through extractive industries, exploitation, and structural underinvestment. To ensure that offshore wind development does not further exacerbate these inequities, we urge BOEM to broaden its list of consulted tribes and communities.

In addition, Sierra Club and the California Environmental Justice Alliance have previously recommended to the CEC that their consultations include proactive outreach to community-based organizations ("CBOs") and environmental justice ("EJ") advocates; we repeat that recommendation to BOEM here. We suggest that the PEIS requires the agency and project developers to proactively engage and meet with CBOs and EJ advocates. This measure will minimize the risk that these organizations are adversely impacted by projects by enabling these groups to identify potential impacts and conflicts early in the process, allowing all parties to identify alternatives. This measure could potentially decrease delays from problems emerging late in the process.

BOEM has stated a commitment to gathering input from stakeholders at previous virtual meetings, and we urge the agency to deliver on those commitments by working to incorporate concerns and recommendations from all potentially impacted communities. Accordingly, we recommend that BOEM requires both the agency and project developers to proactively engage federally recognized tribes, tribes listed in the CNAH contact list, CBOs, and EJ advocates.

5. Cumulative environmental and port community impacts can and should be evaluated in every scenario and mitigated, we support efforts from other parties to identify those mitigation measures.

Federal agencies are obligated to consider direct, indirect, and cumulative effects of major federal decisions as well as reasonably foreseeable results,[56] and accordingly BOEM must consider the cumulative effect of potentially developing multiple floating offshore wind projects off the California coast. Given the importance of quickly and responsibly developing offshore wind resources, we urge BOEM to incorporate protective mitigation measures into both its programmatic and individual project environmental impact statements. These comments do not attempt to detail the necessary conservation and port community mitigation measures necessary, but we do aim to uplift comments from other parties that do.

Sierra Club supports many of the comments from other conservation parties. Responsible development of offshore wind energy: (i) avoids, minimizes, mitigates, and monitors adverse impacts on

[55] *Id.*
[56] 40 CFR 1508.1(g), 87 Fed. Reg. 23453, 23469-70 (Apr. 20, 2022).

wildlife and habitats, (ii) minimizes negative impacts on other ocean uses, (iii) includes robust consultation with Native American tribes and communities, (iv) meaningfully engages state and local governments and stakeholders from the outset, (v) includes comprehensive efforts to avoid impacts to underserved communities, and (vi) uses the best available scientific and technological data to ensure science-based stakeholder-informed decision making. In particular, we uplift the comments from Natural Resources Defense Council, Brightline Defense, and others that aim to incorporate mitigation and monitoring requirements that address adverse impacts on wildlife, habitats, other ocean uses, and underserved communities. We urge BOEM to incorporate these mitigation measures into the final PEIS.

In addition, we uplift comments by other parties that recommend the consideration of cumulative impacts on port communities. Sierra Club and the California Environmental Justice Alliance ("CEJA") submitted detailed comments to the California Energy Commission on how to support port communities in Assembly Bill 209 ("AB") (included as Attachment 5), providing multiple possible measures to mitigate adverse impacts to frontline communities. These mitigation measures include but are not limited to:

- Prioritizing projects that plan to use 100 percent zero-emissions trucks and port equipment during project construction, operation and maintenance.
- Prioritize projects that expand clean energy port infrastructure.
- Prioritize projects that monitor air quality for all offshore wind-related waterfront operations.

Sierra Club recognizes that BOEM does not have direct jurisdiction over port activities, but still recommends that BOEM incorporate into the PEIS the reasonably likely impacts to shore communities and accordingly incorporate the recommendations included in the comments to the CEC in response to its AB 209 workshops. Including these recommendations will maximize community benefits associated with offshore wind while strengthening community outreach and engagement. Early and collaborative coordination with state agencies will help ensure the responsible development of offshore wind energy without undue delay.

6. Conclusion

Sierra Club supports BOEM's efforts to tier its National Environmental Policy Act process and incorporate both programmatic and individual project environmental impact statements. Climate change is producing an urgent need to ensure that offshore wind is deployed rapidly, equitably and responsibly where it is technically feasible. This emerging technology, if developed equitably and responsibly, holds enormous potential to decrease the adverse impacts that our current reliance on fossil fuels imposes on all Californians, particularly frontline and disadvantaged communities. For the sake of our environment and ourselves, we support BOEM's efforts to move forward with a Programmatic Environmental Impact Statement for floating offshore wind development to identify reasonable mitigation measures and plan a pathway towards responsible offshore wind development.

Sincerely,

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