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Natural Resources Defense Council
Comments to the California Energy Commission
IEPR on Off-Shore Renewables
May 25, 2016

Good afternoon, Commissioners.

My name is Elizabeth Murdock. I am the Director of the Pacific Ocean Initiative at the Natural Resources Defense Council. I am honored to be able to participate in this workshop today and thank you for the opportunity.

I would also like to commend the California Energy Commission for coordinating this workshop at this particular time, when we are beginning to look more seriously at the prospect of developing renewable energy off the California coast. Accurately assessing the benefits, challenges and impacts of off-shore renewable energy development is essential to ensuring the long-term protection of our marine resources—from marine wildlife to fragile ocean ecosystems to the human communities that depend upon them. It is important to take time to identify and understand the processes that are needed to ensure that offshore renewables are developed in the most environmentally responsible manner possible. And it will also be important to identify what we do not yet know and determine how to obtain the best scientific information to inform site selection, project scale, project design and mitigation strategies.

The Natural Resources Defense Council **supports the development of offshore wind** because of its environmental and economic benefits. The availability of offshore wind energy will facilitate our country's move away from fossil fuels, which *have* caused—and continue to cause—devastating damage to the environment. We also strongly believe that offshore wind energy **can and should be developed in an environmentally responsible manner that protects vulnerable species and ocean habitats**.

Because development of offshore renewable energy is new to the West Coast, many of us are just beginning to examine the issues associated with its development—from responsible siting to potential impacts to wildlife, habitats and recreational and commercial fishing activities. On the East Coast, NRDC has been actively engaged in the emergence of off-shore wind energy. We have been strong advocates for responsible wind-energy development, as well as for federal policies to promote responsible siting and minimize the impacts of site characterization and site assessment. In California, NRDC has been deeply engaged both in advancing California's Renewable Portfolio Standards (which require that the state meet a goal of 50% renewable energy by 2030) and in the responsible development and siting of *terrestrial* wind energy.

Today, I would like to highlight some of the ways NRDC has worked to promote responsible wind development in the Atlantic Ocean and then share with you some of our policy priorities and "lessons learned" from our work, in the hopes of informing our process here in California.

Overview of East Coast Engagement

On the East Coast, NRDC has played a leading role in helping to shape federal policies to promote responsible wind energy development. There, BOEM facilitated a stakeholder process to identify and designate Wind Energy Areas (WEAs) that were "smart from the start": a process that evaluated areas in the ocean where wind energy was *viable* against other factors, such as avoiding sensitive ocean habitats and avoiding conflicts with shipping lanes, fishing areas and Department of Defense restricted areas.

Once a Wind Energy Area has been designated, BOEM holds auctions for the right to develop an offshore wind project within these areas. Prior to leasing, BOEM prepared Environmental Assessments. Lessees then produce a site assessment plan (SAP), which BOEM must approve, then subsequently conduct site assessments and develop a Construction and Operations Plan, which BOEM also must approve. Ultimately, lessees submit a final proposal to BOEM, which the agency can either approve, modify or deny. This process has allowed the public to be involved both during the broader assessment of where it is appropriate to consider developing wind energy, as well as in response to specific proposed projects.

(It is also important to note here that, in the Mid-Atlantic and Massachusetts Wind Energy Area processes, initial environmental assessments were regional and focused on site assessment and characterization. Additional environmental review will be required prior to construction and operation.)

NRDC has advocated that BOEM develop **standardized, best management practices and mitigation measures** for Wind Energy Areas, including extensive communication and consultation during Wind Energy Area identification, project design, and site characterization and site assessment activities. We have also advocated for **mandatory lease terms** that require specific protections for species like the critically endangered North Atlantic right whale, such as: seasonal prohibitions on activities that cause acoustic disturbances; vessel speed restrictions to reduce the likelihood of ship strike; in addition to exclusion zones, mandatory observers and aerial surveys at limited times of year. We have also completed **agreements with some wind developers to secure additional, voluntary mitigations** to protect these endangered whales. Finally, while our work thus far has focused on mitigating impacts from the site assessment and characterization of off-

shore wind development, we have begun a conversation with the East Coast development community about construction and operations.

Recommendations for California Off-Shore Wind Development

The work that NRDC and other environmental organizations have done on the East Coast has been integral to promoting smart siting and minimizing impacts from wind energy development. As we consider the possibility of developing wind and other off-shore renewables in California, NRDC offers the following recommendations:

1. First: Renewable energy will always have some types of environmental impacts. In the ocean, these impacts can include:

- Acoustic disturbances that can cause injury; temporarily or permanently interfere with marine mammals' ability to communicate or process sound; and may also affect other marine life, such as sea turtles and fish;
- Acoustic disturbances that displace marine mammals, shifting them to areas with higher risk of ship-strike or predation;
- Bird and bat mortality, due to collisions with wind turbines;
- Vessel strikes that can kill or injure marine mammals;
- Potential impacts from cables associated with turbines; and
- Impacts to ocean ecosystems, important habitats and sensitive marine life, including significant geologic features, fragile reefs and ancient corals.

For these reasons, **sound siting of any wind-energy project is <u>paramount</u>**. Siting decisions must be made based upon the best available scientific information about the wildlife and environmental resources present and the best strategies to avoid, then mitigate, impacts.

2. Second: Conducting comprehensive environmental review of any proposed project is critically important, so that we have a strong understanding of what the environmental impacts will be. Environmental review should **examine a full range of potential impacts**, including potential harm to marine mammals, sea turtles, fish, birds and bats. Agencies should also adopt appropriate mitigation measures where necessary to avoid threats to vulnerable species, including mandatory lease conditions to protect sensitive species.

3. Third: The process of developing off-shore renewables should be **guided**—to the greatest extent possible—**by a holistic, science-based process that identifies areas of high environmental importance and/or sensitivity,** as well as areas of potential conflict.

In an ideal world, this holistic, landscape-level, science-based evaluations would happen first, rather than developing renewables solely in reaction to specific proposed projects.

- NRDC has been deeply involved in regional ocean planning efforts on the East Coast, which seeks to collect and integrate broad data to help inform ocean management. At its best, regional ocean planning can also provide comprehensive, science-based information to help identify which areas are appropriate for industrial activities, such as off-shore wind energy, and which are not.

- *The Commission may also be interested to note that the State of Rhode Island implemented its own targeted planning process to assess where off-shore wind would or would not make sense creating a Special Area Management Plan (SAMP) under the state Coastal Zone Management Act. Through this process, the state looked not only within state waters but beyond—and ultimately obtained federal approval for the SAMP. This was a very public process which helped to expedite siting and was driven by the state and might provide an interesting model for California to consider.*

- On the West Coast, regional ocean planning efforts are only in the earliest stages, so this process will not be able to inform some of the first-generation off-shore wind project proposals that are under consideration today; however, we believe this planning process *should* be done and that it can inform later wind development processes as they unfold on the West Coast. **In the absence of a comprehensive, science-based ocean planning effort, conducting scientific monitoring, data collection and evaluation is crucial.**

4. Fourth: Ensure early and ongoing input from stakeholders. Lack of early public input can result in significant investments of time and money by companies, while early and ongoing stakeholder engagement can help to resolve conflicts earlier in the process.

5. Fifth: Ensure the quality and consistency of environmental reviews. It is important that the NEPA process encompass strong, data-based evaluation of impact—including analysis of cumulative impacts. NEPA analysis should also include a full range of alternatives, including proposed project, no action, alternative sites, projects of reduced size and configuration, and alternatives that include phasing the project based on successfully meeting specific benchmarks before proceeding from one phase to the next.

6. Sixth: Establish strong monitoring processes that can identify impacts and enable ongoing improvements in project design and development. This should also include post-construction monitoring, so that we can have a better understanding of actual impacts during assessment, construction and operations--and have the opportunity to manage adaptively in order to reduce future and/or ongoing impacts.

Conclusion

In summary, we commend the CEC for beginning the process now of identifying what processes, data and other information will be required in order to **support responsible development** of off-shore wind and other renewable energy along the California coast. While it is still "early days" for off-shore renewables on the West Coast, it is not too early to be asking these questions. Most importantly, we urge the Commission to leverage its role in the future development of off-shore renewables to ensure that California promotes **comprehensive, science-based processes that can identify and protect our most precious marine life and habitats,** thus ensuring that the development of off-shore renewables is a net benefit for the State and the oceans.

Thank you again for the opportunity to comment.