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Office of Mineral Resources  
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OMR@la.gov

**Re: Comment**

***DOW LA Gulf Wind, LLC – Public Hearing Operating Agreement in Lafourche/ Terrebonne Parishes***

**Louisiana Docket No. OMR 23-03**

This is to present a comment on behalf of Orleans Audubon Society (OAS) related to the referenced Notice, including the proposed Operating Agreement Template for the referenced projects and any other similar wind energy projects. This comment also addresses the State's entire approach toward implementation of wind energy in near shore areas within Louisiana territorial waters.

In short, Louisiana's use of Operating Agreements in lieu of a formal leasing program for wind energy projects is being conducted in reverse order to the process used to date by all other States and federal agencies to implement wind energy projects. Developers are choosing project sites with no indication of any consideration of environmental impacts beforehand rather than the reverse. In essence, Louisiana has it "backwards." OAS believes Louisiana and the Nation certainly need renewable energy including wind energy, but such projects must be implemented responsibly. Louisiana's responsibility to the environment here is of paramount importance because its coastal zone and territorial waters harbor significant and substantial populations of species of birds, bats, marine mammals, and sea turtles, many of which are of regional, national and global conservation concern.

### **Summary**

While OAS appreciates the State's eagerness to lead the nation in developing wind energy in nearshore waters, we advise that cutting corners, as is currently proposed, will lead to environmental catastrophe of significant scale to potentially stall or halt the project. The State's Operating Agreement approach should be scrapped, and the State should begin to gather environmental data and then pursue a true lease program in line with existing Louisiana law,<sup>1</sup> rather than Operating Agreements. Alternatively, at a minimum, the State should insert a

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<sup>1</sup> Acts No 443, Reg. Sess. 2022

detailed clause in the proposed Operating Agreement Template which will require environmental surveys and monitoring well before siting and construction of wind energy projects so as to prevent and/or minimize adverse impacts on wildlife, particularly avian species. This approach will mirror the approach used by federal agencies as well as other States to date. Any other approach will invite protracted and expensive litigation.

### **Orleans Audubon Society**

OAS is a 501(c)(3) non-profit, charitable organization with over 1000 members representing the following parishes: Washington, St. Tammany, Tangipahoa, St. John the Baptist, Orleans, Terrebonne, Jefferson, St. Charles, St. Bernard, Plaquemines, and Lafourche. As to OAS's standing or interest in this matter, OAS is dedicated to the preservation and conservation of wildlife and wild places not only in its eleven-parish service area, but also throughout the entire southeastern U.S. OAS seeks to foster an understanding and appreciation of nature, particularly birds. OAS's stakehold includes ownership of the Marguerite Moffett Audubon Sanctuary, consisting of 108 acres of brackish marsh and shallow open water, located near Chauvin, Terrebonne Parish, within Louisiana's Coastal Zone.

Consequently, OAS has strong concerns with the construction of wind farms along Louisiana's coast directly in the path of one of the largest migratory flyways in the world, the Mississippi Flyway, which will likely prevent tens of thousands of birds in countless migratory species from entering the usual Louisiana coastal areas en route to areas throughout North America. Louisiana's nearshore wind energy program, as proposed, is certain to cause significant direct mortality when migrating birds collide with wind turbines. OAS is also concerned that wind development will negatively impact and cause direct mortality to two federally Threatened and Endangered shorebird species who rely on Louisiana's coast for their wintering grounds.

Moreover, OAS also has serious concerns about the siting of wind energy near colonial nesting waterbirds due to the associated disruption of their foraging ecology movement and as well as direct mortality from collisions with turbines. This comment will first explain how Louisiana got to this place, briefly summarize coastal Louisiana's importance to birds, and then offer solutions.

### **Avian Impacts Generally**

Birds can be adversely affected by wind turbines due to: (1) displacement or loss of habitat; (2) barrier effects which can have energetic costs if birds reroute daily movements to foraging grounds or seasonal migratory movements to avoid wind turbines; and, (3) direct injury leading to sublethal impairment or mortality, such as through collision with the turbines. The birds affected include shorebirds as they fly parallel to the coast, seabirds which stay primarily offshore but may pass through proposed wind farms to nest on islands, as well as migratory landbird species which cross the Gulf of Mexico once or twice a year. Many species of birds migrating across the Gulf of Mexico launch off from Louisiana coastal areas in the fall when flying to their wintering grounds in Central and South America, and then they return each spring to make landfall in Louisiana coastal areas on their way to breeding grounds in North America.

## Avian Impacts Specific to Louisiana

Coastal Louisiana is a regionally, nationally and globally important area for birds, and as such, the State is charged with conserving this shared natural resource (Remsen et al. 2019). An incredibly high diversity of migratory birds, approximately 330 species representing 55 families, follow the Mississippi flyway and use Louisiana's coast and near shore waters.

Seventeen species of birds that breed in Louisiana are restricted to the coastal zone, and for eight of these species, coastal Louisiana hosts between 28 to 83% of the North American population north of the Gulf of Mexico (Remsen et al. 2019). With regard to threatened and endangered species, two threatened shorebirds, Red Knots and Piping Plovers, use Louisiana's coastline in their non-breeding seasons are also likely to be impacted by near shore wind.

Radar ornithology has demonstrated that 2.1 billion birds migrate across the Gulf of Mexico each spring (Horton 2019). Trans-Gulf migration (i.e., flying directly across the Gulf of Mexico rather than circumventing it by flying over land) has been confirmed along Louisiana's coastline for a variety of species by using either individual tracking devices or surveys conducted on oil rig platforms (Russell et al. 2005). Migratory bird mortality from collisions with wind turbines is expected to be high because an estimated 200,000 to 321,000 birds per year died from collision with oil rig platforms in the Gulf of Mexico (Russell et al. 2005). We anticipate that collision mortality will be at its highest when adverse weather conditions force migrating birds to fly at lower than normal altitudes.

Coastal Louisiana is of regional, national and global importance to many of the bird species that breed in this region (Remsen et al. 2019). For example, concerning colonial nesting waterbirds restricted to Louisiana's coastal zone, Louisiana's coastal zone supports 70% of the New World Sandwich Tern (*Thalasseus sandvicensis acufavidus*) and 26% of the New World Royal Tern (*Thalasseus maximus maxima*) populations (subspecies designations for the populations occurring in the Americas). At the regional level of the northern Gulf States, Louisiana hosts a substantial portion of the following subpopulations: 83% Sandwich Tern, 71% Forester's Tern, 51% Royal Tern, 48% Tricolored Heron, 47% Brown Pelican, 44% Black Skimmer, 33% Laughing Gull, 28% Least Tern and 5% Reddish Egret. Louisiana's coast zone also hosts large numbers of breeding Little Blue Heron, Gull-billed Tern, and Caspian Tern.

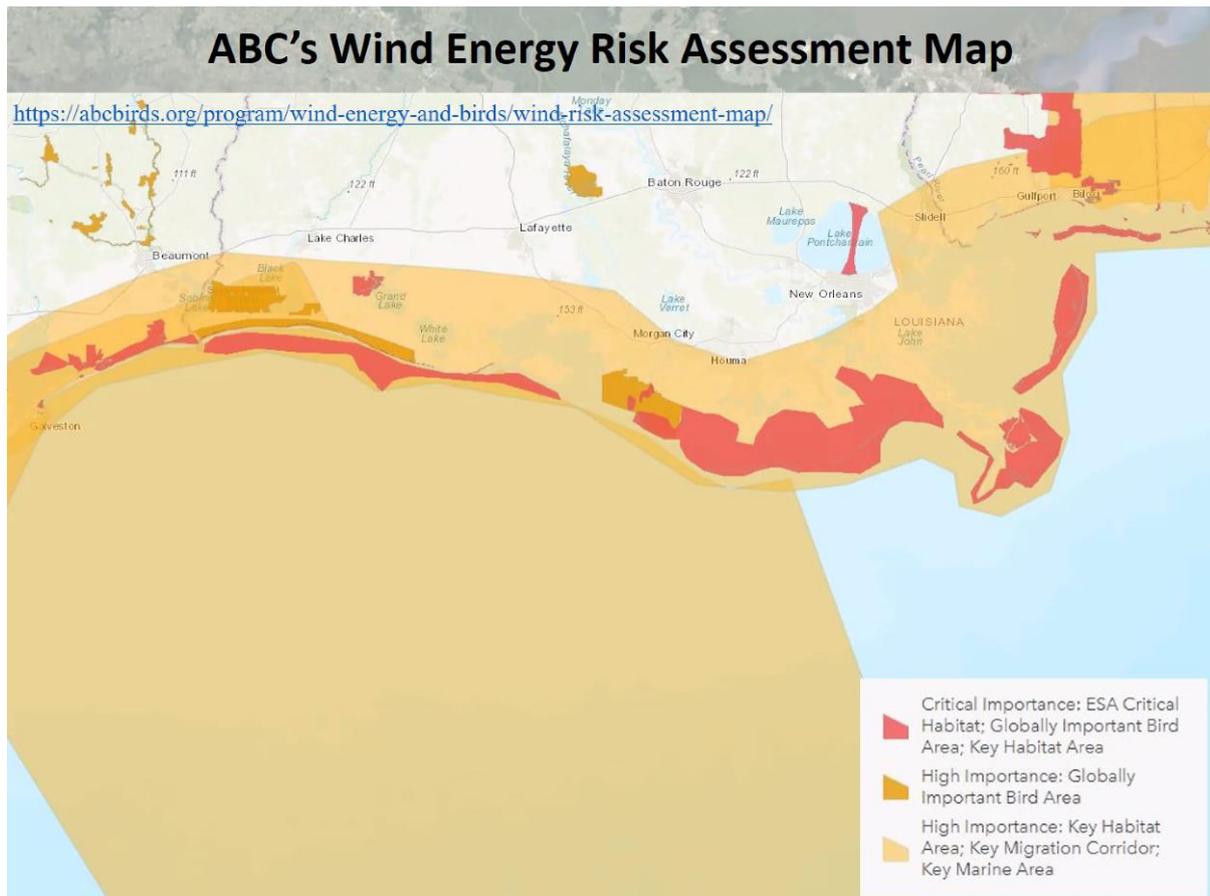
Louisiana's coastal zone is also critically important to the Seaside Sparrow, hosting more than half (55%) of its global population (Remsen et al. 2019). While this secretive, low-flying marsh bird is probably less likely to collide with wind turbines, the impact of wind energy development warrants assessment, especially given the importance of Louisiana's coast to the species' persistence.

Also of concern would be seabirds that frequent Louisiana's territorial waters, particularly in times of Tropical Storms and Hurricanes when large numbers may be carried by strong winds into the interior of Louisiana. These events have the potential for considerable direct mortality due to collision with near shore wind turbines, and this is would be a novel source of mortality for these species. Species likely to be impacted include Magnificent Frigatebird, Northern Gannet and Pomarine Jaeger.

Regarding the two federally threatened shorebirds, the Piping Plover and the Red Knot, the U.S. Fish and Wildlife Service recognizes the importance of Louisiana's coastal zone in that the Designated Critical Habitats for both species traverse the entire area.

OAS also wishes to call attention to a resource developed for the wind energy sector by the American Bird Conservancy (ABC 2023, Figure 1). The ABC created a “Wind Risk Assessment Map” which takes into account avian hot spots and areas considered to be important to birds. The map is specifically designed to guide wind farm siting decisions. When one zooms in to Louisiana’s coastline, it’s clear that **most of the near shore waters are red**, denoting “Critically Important” areas. According to the ABC, “Red areas on the map are crucial breeding and wintering habitat, parks, and other public lands important to birds. These should be avoided as sites for wind project development, or approached with extreme caution.”

**Figure 1.** American Bird Conservancy’s Wind Risk Assessment Map for Louisiana’s coastline.



OAS finds this map to be accurate and would like to alert the State to the fact that the currently proposed wind farm sitings are in red zones, hence underscoring the need for further study and analyses prior to proceeding.

### Wind Farms in Federal Offshore Waters

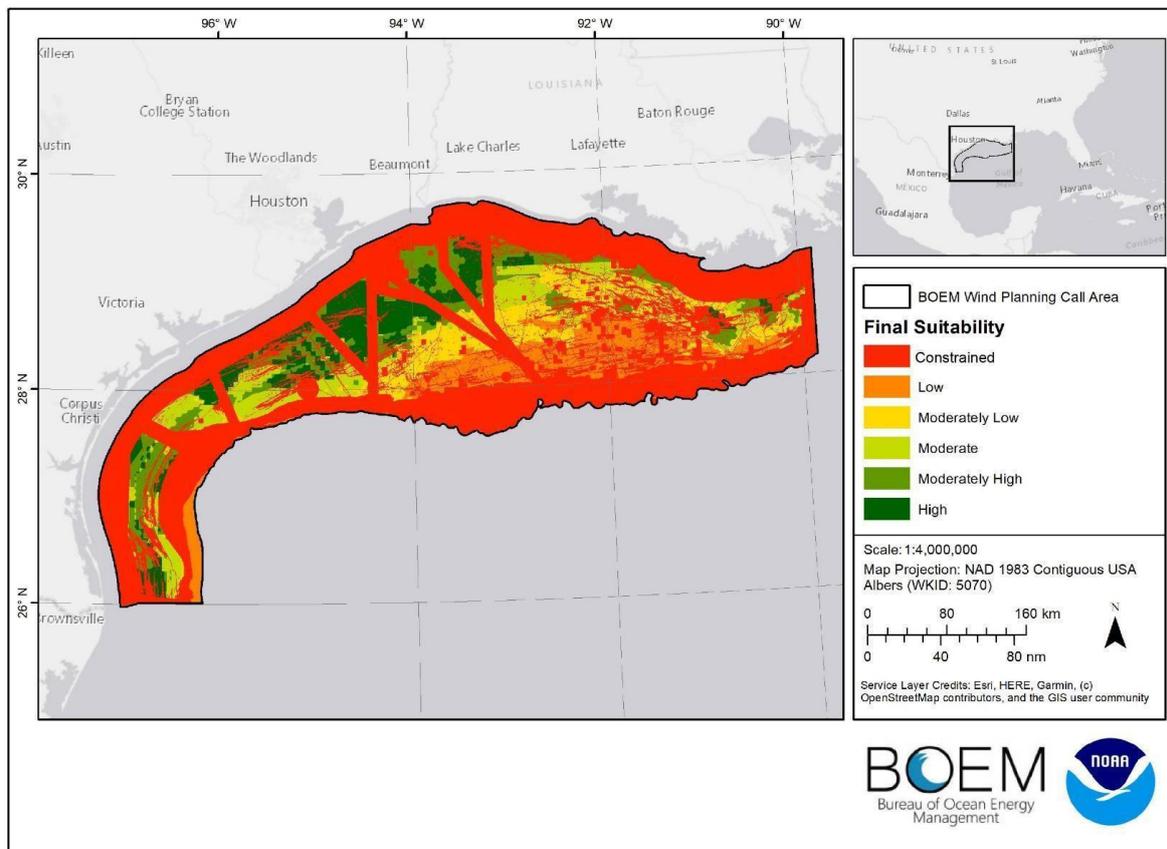
BOEM’s federal program along the nation’s coasts has progressed cautiously so as to take into account potential environmental impacts from both the construction and operation of the turbines, as well as the deployment of cables on the sea bottom which transmit the generated power to shore based facilities. Because this program constitutes a “major federal action” under the National Environmental Policy Act (“NEPA”), a comprehensive Environmental Impact Statement (“EIS”) was performed which resulted in many scientific studies on impacts to

marine mammals, fisheries and avian species including both seabirds and migratory birds in many areas along the Atlantic Coast and the Great Lakes as well as the Gulf Coast.

As a result of the environmental studies and the preventative measures taken to reduce adverse impacts, it normally requires a seven year process from the initial lease to the Record of Decision from BOEM allowing the project to proceed. As of summer 2023, there are only two operating turbines in federal waters off Virginia, and those are merely experimental in nature. Many other federal offshore wind energy projects are in various planning or approval phases along the coasts of New York, New Jersey, Massachusetts, Maryland and elsewhere. On October 27, 2023, BOEM announced four finalized Wind Energy Areas in the Gulf of Mexico.

Notably, NOAA's and BOEM's (2023) extensive modeling which produced a comprehensive site map to guide site selection recommends avoidance of coastal and near shore sitings (Figure 2). In fact, BOEM's spatial modeling analysis for Wind Energy Areas (WEAs) to identify potential WEAs in the Gulf of Mexico specifically recommended complete avoidance for a 20 nm buffer from the coastline, in large part because this area was identified as an important area for a number of coastal bird species.

**Figure 2.** NOAA's and BOEM's Final Suitability modeling results for the Call Area. Red color indicates those areas where layers with a score of 0 occurred due to conflict with ocean activity. Green color indicates areas of highest suitability.



## Wind Energy in State Waters

In contrast, *state* offshore wind programs in some areas are proceeding quickly. The first state-waters wind farm is found in Rhode Island, known as the Block Island Wind Farm, was built in 2016 and has five operating turbines. That project was made possible because Rhode Island had developed a Special Area Management Plan (or “Ocean SAMP”) ahead of time which serves as a federally recognized coastal management and regulatory tool. Using the best available science, the Ocean SAMP provides a balanced approach to the development and protection of Rhode Island’s ocean-based resources. It should be noted that Louisiana fabrication yards, contractors and lift-boats built much of that farm and should be ready to assist in the Louisiana wind energy efforts.

Meanwhile, on August 10, 2022, in a 6-1 decision, the Ohio Supreme Court ruled in favor of the Icebreaker Wind Project on Lake Erie, affirming that project’s state permit was correctly granted, allowing that project to proceed. Ohio’s Icebreaker Wind is a unique wind energy project – the first offshore wind facility in the Great Lakes, the first freshwater wind farm in North America, and only the second state near shore wind project in the entire U.S.

More recently this past October, the RI Coastal Resources Management Council approved by unanimous vote the 804-megawatt (MW) New England Wind project developed by Connecticut-based energy company Avengrid. The project would install 84 turbines in a lease area 14 miles south of Martha’s Vineyard, and deliver electricity via a buried export cable that would make landfall in Hyannis, Mass. Except for a small portion of the export cable, the project is located entirely outside of Rhode Island state waters.

It is the first wind project to be considered by CRMC’s executive body without input from the Fisherman’s Advisory Board (FAB), a stakeholder group staffed by recreational and commercial fisherman and representatives from other related marine industries. A member of that Board resigned in protest in August, alleging state regulators were ignoring their own regulations to approve offshore wind projects that would be harmful to the environment and the fishing industry. This is a good example of a decision that will likely lead to litigation due to the lack of public input on fishing and environmental impacts.

Similarly in New Jersey, in 2018, when Governor Phil Murphy sought to make New Jersey a leader in clean energy, particularly wind energy, in that state in near shore waters, the state Board of Utilities refused to approve a pilot project 2.8 miles off Atlantic City, N.J. In its decision, the Board cited the opposition of local environmental groups, New Jersey Audubon, including the National Wildlife Federation, and the American Littoral Society, among others, as well as the cost to taxpayers.<sup>2</sup>

“Pursuing offshore wind as an element of the state’s response to climate change has a place in the agenda, but it cannot be done at the cost of our coastal and marine wildlife,” said Tim Dillingham, executive director of the American Littoral Society.<sup>3</sup> Moreover, the N.J. Department of Environmental Protection had conducted extensive studies on how birds and marine wildlife would be impacted by offshore wind farms, and essentially found the potential harm to wildlife is minimized the farther the turbines are located offshore.<sup>4</sup>

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<sup>2</sup> Tom Johnson, “*N.J. rejects Atlantic City Offshore-wind project for third time...too pricey*”, WHYY NJ Spotlight (12/19/2018)

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

But even further *offshore* from the New Jersey coast, developers again failed to properly consider environmental impacts. As a result, more recently the County of Cape May and several local tourism and fishing business groups sued the U.S. Department of the Interior in New Jersey federal court, seeking to stop construction on Danish developer Orsted’s multi-billion dollar Ocean Wind project.<sup>5</sup> The county said underwater noise and vessel strikes during construction will harm endangered North Atlantic right whales and sea turtles, and that rotating wind turbine blades would kill migrating birds.<sup>6</sup> Shortly thereafter, the developer cancelled all of its projects, citing supply chain issues and rising interest rates.<sup>7</sup> Orsted then took a \$4 billion loss on the project.<sup>8</sup> These experiences from other states should serve as a cautionary tale and certainly be instructive for Louisiana. They should also encourage the concept of developers and environmental groups working together for wind energy.

### Wind Energy in Louisiana

On July 20, 2023, the Department of the Interior (DOI) announced it would hold the first-ever offshore wind energy lease sale in the Gulf of Mexico. The areas which were to be auctioned by the federal Bureau of Ocean Energy Management (“BOEM”) on August 29, 2023, have the potential to generate approximately 3.7 GW, and power almost 1.3 million homes with clean, renewable energy. DOI plans to deploy 30 gigawatts (GW) of offshore wind energy by 2030 and reach a carbon-free electricity sector by 2035. The areas to be auctioned included a 102,480-acre area in federal offshore waters 44 miles from the coast south of Lake Charles, Louisiana. A lease for that area has now been awarded.

The State of Louisiana is now moving at an even faster pace than RI and Ohio. *The Advocate* recently quoted Governor John Bel Edwards as saying, “I believe they can be set up in state waters several years before they would be successful in federal waters.” Meanwhile, in Executive sessions of the Mineral Board in which the public does not participate, the State has continued to negotiate with developers for Operating Agreements. These negotiations have led to the subject operating agreements with Mitsubishi-owned Diamond Offshore Wind (“DOW”) and the Danish global energy firm Vestas under the name Cajun Wind. Kontiki Winds, a Norwegian company operating in Louisiana under the name Pelican Winds has now bowed out. Other companies are expected to pursue projects in Louisiana as well. At present, these Operating Agreements contemplate near shore areas in state territorial waters of Cameron, Terrebonne and Lafourche Parishes.

### Louisiana’s Wind Energy Legislation

In the Regular Session of 2022, the Louisiana Legislature passed Act 443 sponsored by Representative Jerome Zeringue, which amended and reenacted La. R.S. 41:1732 *et seq.* to implement a formal state wind leasing program. The Act also amended La. R.S. 30:209 to allow

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<sup>5</sup> Reuters, “Orsted offshore wind farm hit with lawsuit by New Jersey county,” (Clark Mindock) (10/17/23)

<sup>6</sup> *Ibid.*

<sup>7</sup> AP, “Orsted scraps 2 offshore wind power projects in New Jersey, citing supply chain issues,” (10/31/23)

<sup>8</sup> CNBC, “Orsted cancels two New Jersey offshore wind projects, takes \$4 billion writedown,” (11/1/23)

the State to enter into “operating agreements” with private entities for wind projects. LDENR then issued a Notice of Intent (“NOI”) issued earlier this year announcing rulemaking for regulations under that Act which will provide guidelines for the wind energy leasing program. These proposed wind energy lease regulations include some consideration for environmental impacts with regard to the nomination of proposed project sites and the “packet” which must accompany such a proposal. As those regulations state in pertinent part:

**§711. Nomination of State Lands and Water Bottoms for Wind Lease**

*D. 7.a Summary of the environmental issues including, but not limited to, avian and baseline noise levels, the environmental impact of the placement of wind turbines and other equipment necessary for the exploration, development and production of wind energy, and the steps proposed to minimize the environmental impact, along with any supporting environmental impact documentation....<sup>9</sup>*

Still, that regulation does not specify **how** environmental impacts would be determined and this remains an open question.

But the Operating Agreements contemplated by the alternative statutory scheme of Act 443 have no such applicable regulations and certainly no requirements related to environmental impacts. In fact, the Operating Agreement approach included in Act 443 appears to allow for a complete “end around” any environmental considerations prior to siting decisions.

As a result, for projects subject to Operating Agreements environmental impacts will likely not be addressed until the 404/Coastal Use Permit process is underway, well after a site has been chosen and substantial investments of time, resources and funds have already been made, making a change in siting unlikely. Under that scenario, any environmental impacts will become a mere afterthought, and addressed only with a “Band-Aid” approach toward attempted mitigation of the substantial and irreversible harm to any number of species. Of significance, this approach will no doubt invite expensive and protracted litigation.

Indeed, unlike the federal programs and the Rhode Island programs which undertook major studies of environmental impacts **before** leasing began, Louisiana is implementing its wind energy program in reverse if not backwards. To date, the State has undertaken few studies to determine the environmental impacts of near shore wind farms but is still preparing to issue the subject Operating Agreements at locations of the developers’ choosing based solely on economic considerations rather than environmental impacts which could otherwise be minimized if not avoided altogether by better siting decisions based upon sound science.

Stated bluntly, there is absolutely no indication that there was any consideration of environmental impacts whatsoever when these companies chose their respective project areas as set forth in the Public Notices for these Operating Agreements, nor is there any indication

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<sup>9</sup> 49 LR 982, 984 (May 20, 2023)

there will be consideration of environmental impacts when the specific sites are chosen within those areas.

The State's approach to date using Operating Agreements also raises significant questions regarding governmental oversight best capsulized in the Latin expression, "*Quis custodet custodes?*" ("Who guards the guards?"). Indeed, under the operating agreements, LDENR will

be administering itself: LDENR will act as landowner and joint venturer; LDENR's Office of Mineral Resources will be the regulator; and LDENR's Office of Coastal Management will issue the CUP Permits to itself and the developer. It is difficult to see how this incestuous situation does not constitute a conflict of interest and suggests a likely environmental disaster if allowed to proceed in this fashion.

In sum, if the Operating Agreement approach becomes the sole pathway for developing wind in coastal Louisiana, it appears the State and interested developers will circumvent the entire wind lease program and all of its statutory and regulatory requirements related to environmental impacts as well as real opportunities for public input or effective governmental oversight; that is, unless a clause is added to require surveys and monitoring for environmental impacts.

### **Avian Surveys and Monitoring**

The information Louisiana needs to adequately assess the risks that near shore wind energy poses to birds in the Gulf of Mexico is lacking. At present there is insufficient data gathered together into one data base related to: 1) migratory bird species which cross the Gulf of Mexico and/or coastal Louisiana in either direction, north and south, 2) colonial nesting waterbirds breeding along Louisiana's coast, 3) federally Threatened and Endangered species of shorebirds wintering along Louisiana's coast, and 4) seabirds using state waters. Moving forward, the data currently available from any number of sources, must be tapped, augmented and analyzed, and additional studies are needed before any siting decisions are made for wind energy projects in Louisiana territorial waters.

Specific data needs include gaps in our knowledge concerning migration ecology, colonial waterbird breeding ecology and wintering ecology of shorebirds. More studies are needed on the timing of migration, flight altitudes and pathways of migratory birds for trans-Gulf migrants. Data specific analyses specific to flight altitude and weather conditions would be directly applicable. For colonial waterbirds, we need to identify activity hotspots and we need more studies on breeding home range sizes, foraging distances and routes, and flight behaviors, including altitudes.

Concerning federally Threatened shorebirds, while some data are available for Piping Plover and Red Knot use of Louisiana's coastal zone, we lack data concerning their wintering home ranges and foraging ecology. We also need data to assess the vulnerability of Seaside Sparrows to wind development in Louisiana's state waters. More study is needed to understand the movement ecology of seabirds using Louisiana's waters, especially in response to Tropical Storms and Hurricanes, which will likely require individual tracking devices. Numerous technologies available to add to these data.

Available resources include a wide variety of remote sensing capabilities such as LIDAR and Doppler Radar which can detect flocks of birds. There are also inexpensive acoustic monitoring devices to identify migratory species as they pass or stay behind. Satellite and GPS transmitter devices placed on individual birds can give constant monitoring information (e.g., data transmitted via satellites and the ARGOS system or GSM and cell tower technology)

which can be loaded into a geographical information system (“GIS”) for visual analysis. Finally, aerial photogrammetric studies have been effectively used to determine altitude of birds in flight as well.

Tagging of birds with nano tags or other small tags now allows in some cases for gathering of information in tags (requiring recapture to retrieve the data) or transmitting location data to tag monitoring towers available from vendors such as MOTUS to record the movement of particular tagged birds. More sophisticated geolocator tags are also available which provide location and migratory route data to satellites. These include light-level geolocators giving location data based upon sunlight, and atmospheric pressure geolocators which determine location and altitude using recorded barometric pressure that is analyzed in the context of weather information to determine fly routes. Tag technology has been further enhanced because tags are constantly shrinking in size which allows for tagging smaller species such as Chimney Swifts. Finally, battery life continues to be extended which allows for more data to be obtained over greater periods of time and distance.

Sadly, the State has yet to tap into all of this available technology on a meaningful level. This has to happen before responsible siting can occur.

### **Ongoing Wind Energy Studies on Environmental Impacts**

In connection with the development of wind energy projects along the Atlantic Coast, the Regional Wildlife Science Collaborative for Offshore Wind (RWSC) was cooperatively established. It is led by four Sectors—federal agencies, states, eNGOs, and the offshore wind industry. The RWSC supports research and monitoring on wildlife and offshore wind by:

- Developing an *Integrated Science Plan for Wildlife, Habitat, and Offshore Wind Energy in the U.S. Atlantic* that reflects the research and data collection needs of the four Sectors with input from the science community
- Coordinating and aligning funding to meet those priorities
- Ensuring appropriate data and standards are in place to support science priorities

The Collaborative’s Science Plan aggregates information about ongoing and pending offshore wind and wildlife data collection and research activities occurring in U.S. Atlantic waters. To capture this information dynamically, the Subcommittees are supporting the RWSC Offshore Wind & Wildlife Research Database, which is continually updated as new projects and data collection efforts begin. The Database is focused on recent and active projects in U.S.

Atlantic waters that were funded to address offshore wind and wildlife or habitat interactions, and it compiles information about each project's overall goal(s), geographic area of focus, methods used, funders, principal investigators, and other details.

The State of Louisiana should not proceed with any siting decisions until a similar Collaborative is established for the Louisiana coast and coastal waters, if not the Gulf of Mexico, and that collaborative issues a Science Plan similar to what has been developed for several areas along the Atlantic coast.

### **Environmental impacts Clause**

Toward this goal of obtaining the best available data on environmental impacts from wind energy projects in Louisiana waters along the coast, the State should insert a clause in the Operating Agreement Template that requires each Operator to undertake certain studies, surveys and monitoring. The results of these efforts should be delivered in a summation report to the State. The Operator should also make available to the State after appropriate QA/QC procedures, all of its data to a central data base or storage area maintained by the State, as it is gathered. Such a clause related to birds might read as follows:

#### *Environmental Impacts--Avian*

*Operator shall, working closely with the Louisiana Department of Wildlife and Fisheries, make best efforts at obtaining and analyzing available data concerning known, likely or potential environmental impacts from wind energy projects on marine life including mammals and sea turtles, coastal nesting colonial waterbirds, federally threatened Piping Plover and Red Knot, as well as impacts on existing flyways and migratory routes for birds transiting the Gulf of Mexico between North America and Central/South America in any direction. Operator shall obtain data using the best available technology concerning these impacts on resident and/or migrating species, which data shall be shared contemporaneously with State agencies for such time periods designated by State agencies. At the conclusion of the time period and before any construction shall have occurred, Operator shall generate printed studies to be made available online to include the following:*

- Regional/local context relating to Gulf of Mexico and Louisiana;
- Potential impacts of offshore wind development to marine megafauna (collision, displacement, underwater noise disturbance);
- Birds at risk – species and vulnerability;
- Marine mammals – species and vulnerability;
- Other animals, such as sea turtles and bats (Solick and Newman 2021) to consider;
- International examples of comparable developments;
- International good practice across industry relating to development;
- Baseline surveys to characterise the pre-construction site;
- Decision making and predicted impacts – modelling data (theoretical);
- Construction issues including landfall relating to environmental impact;
- Mitigation (design and in-built);
- Compensation for adverse environmental impacts.

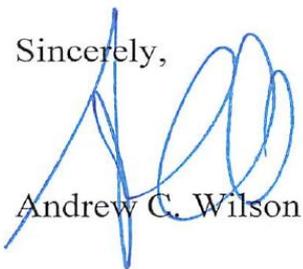
Data collection and communication of the same along these lines should provide the necessary data for sound, unbiased scientific decision-making on siting, and in steps necessary to avoid or minimize adverse environmental impacts. Obtaining, storing and sharing such data will greatly enhance public confidence in the State's emerging wind energy program, particularly among eNGOs such as OAS. The bottom line is that the State should only implement wind energy projects responsibly, addressing all potential environmental impacts, in line with OAS's concerns as set forth above.

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At this time, OAS greatly appreciates the opportunity to comment on these Notices and the Operating Agreement Template and the program generally. Should there be any questions or should any additional information, documentation or clarification concerning this comment be required, please feel free to contact the undersigned at your convenience.

Sincerely,  
  
Andrew C. Wilson

Conservation Committee Chair  
Orleans Audubon Society

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