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Save LBI Urges the NJ BPU to Deny Approval for the Close-to-Beach Atlantic Shores South Project to Prevent Airborne-Noise-Related Injury and Persistent Annoyance to Thousands of New Jerseyans

BEACH HAVEN, NEW JERSEY, January 7, 2025 – Save Long Beach Island (Save LBI), the non-partisan citizen’s watchdog group dedicated to protecting our oceans and New Jersey Shore communities from the destructive impacts of the Atlantic Shores projects and perhaps others, today presented the key results of airborne noise-impact studies and called on the New Jersey Board of Public Utilities (BPU) to reject a bid from Atlantic Shores Offshore Wind for additional taxpayer subsidies to erect 200 wind turbines off the coast of southern Long Beach Island (LBI), Brigantine, and Atlantic City, starting only 8.7 miles from the shoreline.

The first-of-its-kind in-depth research found that airborne noise generated during the construction and operation of the 1,000-foot-tall turbines would put public health at risk and create a major nuisance for local communities.

Background: Even though the Atlantic Shores South project will be situated closer to shore communities than anywhere else in the world, the developer did not do an assessment of the shore and inland noise levels and related impacts on persons from the pile driving of turbine foundations or from the long-term operation of the 200-wind-turbine complex. Such noise assessments have been conducted for wind projects farther offshore.

The developer dismissed any potential for onshore noise impacts, using phrases including "onshore noise from offshore activities will be negligible" and "operational noise from the offshore turbines will not be audible onshore." But no modeling report was provided. This

left investors, regulators, and the public completely unaware of the potential for widespread intrusive industrial noise pollution.

This grave omission led Save LBI to engage two expert noise consultants, XI Engineering and Rand Acoustics, LLC, and an auditory health expert to conduct an independent analysis. Four studies were conducted: two by XI Engineering on operational and pile driving noise, one by Save LBI, and a fourth study by Rand Acoustics on operational noise.

The noise health and significant annoyance impact to persons onshore revealed by these studies is summarized below. The findings are startling and, alone, should give decision-makers ample reason to disapprove this project.

The Impact of Long-Term Turbine Operations: The Xi Engineering study showed that modelled audible noise levels from turbine operation will reach at least 45 dBA (decibels weighted for human hearing) for many residents and exceed American National Standards Institute (ANSI) criteria for low-frequency noise. The decibel (dBA) is a logarithmic scale used to measure noise that also accounts for human hearing at different frequencies. A change of 10 dBA means the actual noise energy or intensity has increased tenfold. In frequent times of favorable atmospheric conditions even higher operational noise levels that exceed NJ standards can be expected.

The analytical acoustic review by Rand Acoustics corroborated the first study's operational noise numbers and provided independent professional estimates of excessive onshore noise from the offshore turbines. That review found:

- Intrusive noise levels appear certain to exceed the New Jersey night noise limit of 50 dBA at hundreds of homes onshore. This is expected to occur on roughly one-third of the nights per year during "inversion conditions" when factoring in the strong noise fluctuations documented by wind-industry consultants. Inversion conditions occur frequently in summer when the air temperature and wind speed increase with height above the water and accentuate the noise travel.
- The intrusive noise onshore from the 200 offshore turbines is all low-frequency noise, heard as a rumbling, thumping sound that easily penetrates homes.
- Sleep disruption, noise annoyance, and degraded quality of life appear certain over a widespread area of the New Jersey shore due to intrusive low-frequency noise that can be heard indoors. It appears probable that sleep and amenity will be adversely impacted for hundreds and potentially thousands of New Jersey residents a significant portion of the year.
- Perceptible, highly annoying noise-induced rattle appears certain at residences in the nearest shoreline locations. Hotels, especially those facing the ocean, may experience

intrusive low-frequency noise indoors, with unwanted noise more likely during the evening and night hours.

What Several Years of Noise from Pile Driving Turbine Foundations into the Seabed Means: Xi Engineering created a new, accurate air/water/sediment model for the 15-meter-diameter (49-foot) monopile foundations Atlantic Shores plans to use. The company derived noise-source levels based on the hammer energies required, which increase with the pile driving cycle and the pile height, which decreases as the foundation is embedded, and used an accepted airborne noise-propagation model to predict noise levels at the shore.

The results of that analysis demonstrates with a high degree of confidence that the Atlantic Shores South project will impart widespread 45 dBA-plus noise levels in nearby shore towns during pile driving. For several hours a day, the modelled noise levels from pile driving will reach and exceed 55 dBA in Brigantine, NJ and 49 dBA in Beach Haven, NJ, easily exceeding the 50 dBA ordinance in Brigantine. Considering the enhanced noise propagation that will occur under atmospherically favorable conditions — **factors not considered by the standard model** — even higher levels and longer durations of noise levels can be expected.

The noise health expert concluded that noise levels ranging from 32 dBA to 53 dBA “have been documented as leading to a variety of acute and chronic adverse health conditions that include annoyance, sleep disturbance, stress and hypertension, and impaired learning and memory. Noise not only causes annoyance, sleep disturbance, or reductions in quality of life, but also contributes to a higher prevalence of the most important cardiovascular risk factor for arterial hypertension and the incidence of cardiovascular diseases.” The expert’s report further concluded that the “approval of either of the proposed wind projects (South or North) is inadvisable, as there is a high probability that numerous onshore residents of Long Beach Island will be negatively impacted by high annoyance and adverse health effects, not the least of which is chronic sleep disturbance.”

Lawsuit Filed: Save LBI has filed a lawsuit against Atlantic Shores to protect a number of plaintiffs residing in Brigantine and Long Beach Island from noise-related injury and annoyance. “The modelling results of pile-driving-induced noise are quite compelling; noise levels will reach and sometimes exceed 55 dBA in coastal towns such as Brigantine, NJ, with 50 dBA levels frequently experienced on Long Beach Island,” noted Thomas Stavola, Jr. Esq., the attorney representing Save LBI. “These projections should not be taken lightly. As the medical literature and testimony from our own expert indicates, such noise levels could cause many injurious effects to health, especially in the susceptible subgroups”.

“What’s also important to note — and this is explained by our expert Dr. Stern in the lawsuit — is that noise levels are likely to be periodically higher than raw model output indicates during conditions favorable to atmospheric noise propagation. These conditions recur at semi-regular intervals, especially in the spring and summer, and can increase noise levels by 10 to 17 decibels,” Stavola said. “And besides the audible component of the wind turbine-generator-

induced noise, people will also experience low-frequency and infrasonic (below the range of human hearing) sound energy, which has been shown to negatively impact health,” he added. “These perturbing noise effects were not adequately studied by Atlantic Shores in this region, and this lawsuit seeks to hold them accountable for that dereliction.”

Conclusions: “It should not require a lawsuit to get the New Jersey BPU and elected officials to act responsibly,” said Save LBI’s Bob Stern. “No responsible official would allow this level of injury and discomfort to its citizens. The results of these noise studies put the final nail into the coffin of this ill-conceived project — adding to the nails representing the ruined NJ shoreline, lost tourism, imperiled whales, the risk of impaired vessel navigation, impaired air defense radars at Gibbsboro, to name but a few of the many destructive impacts of the Atlantic Shores South project. In service to the public, the New Jersey BPU must not endorse this project.”

About Save LBI

Save Long Beach Island (Save LBI) is an organization of citizens and businesses on and off the Island working together to protect the ocean and Long Beach Island and neighboring communities from the destructive impact of the Atlantic Shores project and potentially other offshore wind projects. As a not-for-profit, non-partisan entity, we do not endorse any political candidates but vigorously pursue policies and actions that protect the Island and New Jersey communities. The organization is led by Beach Haven resident Bob Stern, a Ph.D. engineer with experience in environmental law who previously managed the U.S. Department of Energy’s office overseeing environment protection related to energy programs and projects. Save LBI is fighting to stop the ill-conceived Atlantic Shores projects. Please visit SaveLBI.org to join the fight and consider making a donation.

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