

Green Acres Diversion AC Commissioners

Meeting Background

Speak up at the Wed, August 14, 2024 Commissioner's
Meeting, 1301 Bacharach Blvd., Suite 206

**Tell the Mayor and
Commissioners you
don't want to be
sold out to Offshore
Wind Developers!**

**If you can't make the
meeting (or even if you
can), send the Mayor
and Council this letter:**

<https://tinyurl.com/AC-Vote-NO>

**Click, Sign & State Your
Address, Then Click Send**

Atlantic Shores Diversion Request

Letter received May 2024

What Is a Diversion Request?

In New Jersey, a diversion request for encumbered land refers to the legal process of seeking permission to use, repurpose, or develop land that is subject to certain restrictions or protections. This is often relevant in cases where the land is encumbered by conservation easements, deed restrictions, or other forms of legal or regulatory limitations intended to preserve its natural state or its use for public purposes.

Atlantic Shores is asking for land that is protected under the Green Acres Program. **Some of this land is public beach land.** With their request, they are proposing alternative land in exchange. The proposed land is supposed to be an equivalent or better parcel of land to be protected in exchange.

What are Green Acres in NJ?

The Green Acres Program was created in 1961 to meet New Jersey's growing recreation and conservation needs. Together with public and private partners, Green Acres has protected well over a million and a half acres of open space and provided hundreds of outdoor recreational facilities in communities around the State.

If a parcel of land that has been purchased with Green Acres money, it is much more difficult to build upon. This makes it important to put as many acres into the preservation as possible. Because municipalities can preserve land at half price or less, many are willing to consider Green Acres to fund land preservation.



Make your voices heard:

Show up at the Monthly Atlantic City Council Meeting and let them your Ward representative know that you say NO to allowing these cables to run through your beach, parks and neighborhood!

When: Wednesday, August 14, 2024 @ 5 om

Where: 1301 Bacharach Blvd., Suite 206

The properties Atlantic Shores is asking our council to vote on “unprotecting” are the following:

- The Beach and Boardwalk next to Ritz Condominiums, (in front of the Beer Gardens)
- Pete Pallitto Field
- Part of Bader Field

This is just part of the area in questions. It all starts when the high voltage cables transition offshore to onshore at the **Atlantic Landfall Site**.



Atlantic Shores (AS) does not indicate their intended use for their parking lot right next to the Ritz Condominiums but they refer to this area as the **Atlantic Landfall Site**.

This is their proposed cable route. **Do you live by the red lines?** If so, you will be inconvenienced for months as they dig the trenches for the cables AND then exposed to **CONSTANT EMF radiation** thereby putting yourself and your family at risk of serious health problems.



What is a “Landfall Site”?

*In the context of offshore wind energy, a "landfall site" refers to the specific location onshore where the subsea cables from offshore wind farms come ashore. These cables, which carry the electricity generated by the wind turbines, are typically buried underground as they make landfall **and then connect to the onshore electrical grid or a substation**. The selection of a landfall site is a crucial aspect of offshore wind farm development because it involves considerations related to environmental impact, ease of access, proximity to existing grid infrastructure, and potential challenges in construction and maintenance.*

So again, Atlantic Shores is very vague about what actually will go on this site and what it will look like. Atlantic Shores intentionally does not include detail on what will be built on this parking lot. Seems it would be important to know the answer to this question and also have full disclosure. But the Atlantic Landfall Site (the parking lot next to the Ritz Condominiums AND Pete Pallitto Field) will look something like this for 2 – 3 years:



<https://www.wbur.org/news/2023/01/19/vineyard-wind-2050-massachusetts-zero-emissions>

Listen to these two videos of **the constant sound** you will hear from these sites:

<https://www.facebook.com/reel/1637569777095760>

<https://www.facebook.com/reel/396499113013387>

www.facebook.com/johnknightva/videos/783249270547911?idorvanity=426215166487190

<https://www.facebook.com/johnknightva/videos/318274404613592?idorvanity=426215166487190>

There will be constant noise and vibrations coming from the construction as they dig their trenches to and try to pull the massive, heavy, high voltage cables through them and connect them in their utility vaults.

If structural damage occurs due to the vibration, and properties need to be condemned, WHO IS PAYING FOR THIS? Is there a plan to move people quickly into other housing and repair their homes?

This is what our beaches will look like once Atlantic Shores start their work (*pictures from the Vineyard Wind Project off the Coast of MA, the Country's first large Offshore Wind Project*).

Coming Soon To Atlantic City Beaches

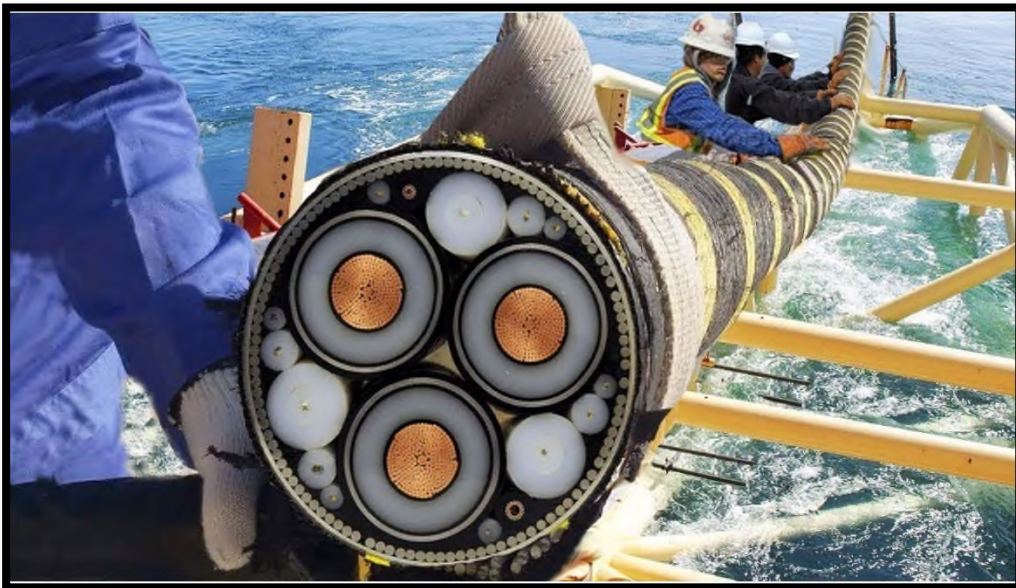


Coming Soon to Atlantic City Beaches



Health Risks of EMF Cables to Atlantic City Neighborhoods

And most importantly, based on current science **there will be significant health risks for our neighbors living in these environmental justice protected areas due to EMF (Electro-Magnetic Frequency) being emitted from high voltage underground cables.**



First, Atlantic Shores LLC fails to use a respected source but instead uses the International Commission for Non-Ionizing Radiation Protection (ICNIRP) guidelines in evaluating EMF exposure. Studies have shown that this organization's guidelines fail to meet fundamental scientific quality requirements and are not suited to set EMF exposure limits. Medical research scientists who study health-based impacts of EMF rely on the World Health Organization (WHO) and the Institute for Research in Immunology and Cancer (IRIC).

Back in 2007 the WHO and IRIC stated that EMF was not harmful. Then in 2011, these scientific institutions classified EMF exposure under a category called "Group 2B". Group 2B states something is "possibly carcinogenic", but that classification comes from studies that were looking at less than a measurement of 3 Milligauss.

Now we have even more recent studies that show that even a small increase in EMF will change health outcomes. **Examples found on PubMed are both meta-analysis of the exposure to EMF related to childhood leukemia and fetal development.**

The first study, titled, Exposure to magnetic fields and childhood leukemia: a systematic review and meta-analysis of case control and cohort studies, published in the journal, Reviews in Environmental Health, was a Childhood Leukemia Metanalysis printed in 2022, including 36,000 children diagnosed with childhood leukemia going back to 1970. The study concluded that statistically significant associations were observed between exposure to ELF-MF (extremely low frequency-magnetic field) and childhood leukemia. Altogether there was a 2-fold increase in childhood leukemia.

The second study was another meta-analysis of 6 studies and only included power line-based EMF exposure. **Children of pregnant women who were exposed to 4 Milligauss or higher were found 14 times more likely to develop all cancers over 4 years.** The results of the study showed that the residential period of more than 4 years near high-voltage power lines before or after birth is an important factor for all in childhood. Material exposure to EMFs significantly increased development disorders in their fetus such as embryonic development. There was a 3.95 times and significant increase in placental apoptosis or cell death. There were 5-fold central nervous system defects and spina bifida increase as well as a significant increase in club foot in the fetus.

These studies represent populations such as children and fetuses whose cells aren't developed, and whose DNA is easily cleaved.

The authors concluded that the 2011 guidelines must be revised to reflect recent studies. Even a small amount of enhancement of exposure will result in unacceptable health consequences of our future generations. EMF exposure is a significant environmental danger for pregnant women and their fetuses.

Atlantic Shores is planning to run EMF cables on the exact beaches, parks, where young mothers who may be expecting another child and fathers bring their children to play. Atlantic Shores LLC is planning to run EMF cables through residential neighborhoods and next to the Sovereign public school building. Is Atlantic Shores LLC going to guarantee that the children who live, play and go to school in these areas are safe?

Atlantic Shores has stated in their documents that these export cables will operate at peak loads at up to 349mG versus the studies which determined that 4mG is potentially dangerous. Have you had

neighborhood meetings with these underserved communities to inform them of these dangers to the health and welfare, most importantly their children?

Consider this published information From the BOEM report (2011-09 - Effects of EMFs From Undersea Power Cables On Elasmobranchs and Other Marine Species) regarding EMFs and their power cables and their effect on humans.....they don't even understand their effects on marine, life.

Here is what they have to say:

CUMULATIVE IMPACTS:

"This study examined the potential effects of the exposure of marine organisms to multiple power cables. Most offshore renewable energy projects are likely to be installed near areas of human population density and the present focus for offshore wind projects is along the Atlantic coast from Virginia to Maine. Several projects are under development in southern New Jersey and Delaware so there is the potential for several export cables, as well as interconnecting cables, in a small geographic area.

Behavioral response to EMFs and the significance of that response at the population level is not yet understood. Extrapolating from a single exposure to multiple exposures can only be speculative at this time. It is presently believed that marine organisms can be roughly divided into three behavioral groups for the purposes of this type of analysis: coastal migrants, onshore-offshore migrants, and resident species (or life stages)."

Seriously? One big science experiment on humans and marine life while utilizing our tax dollars to do it! SPEAK UP NOW!

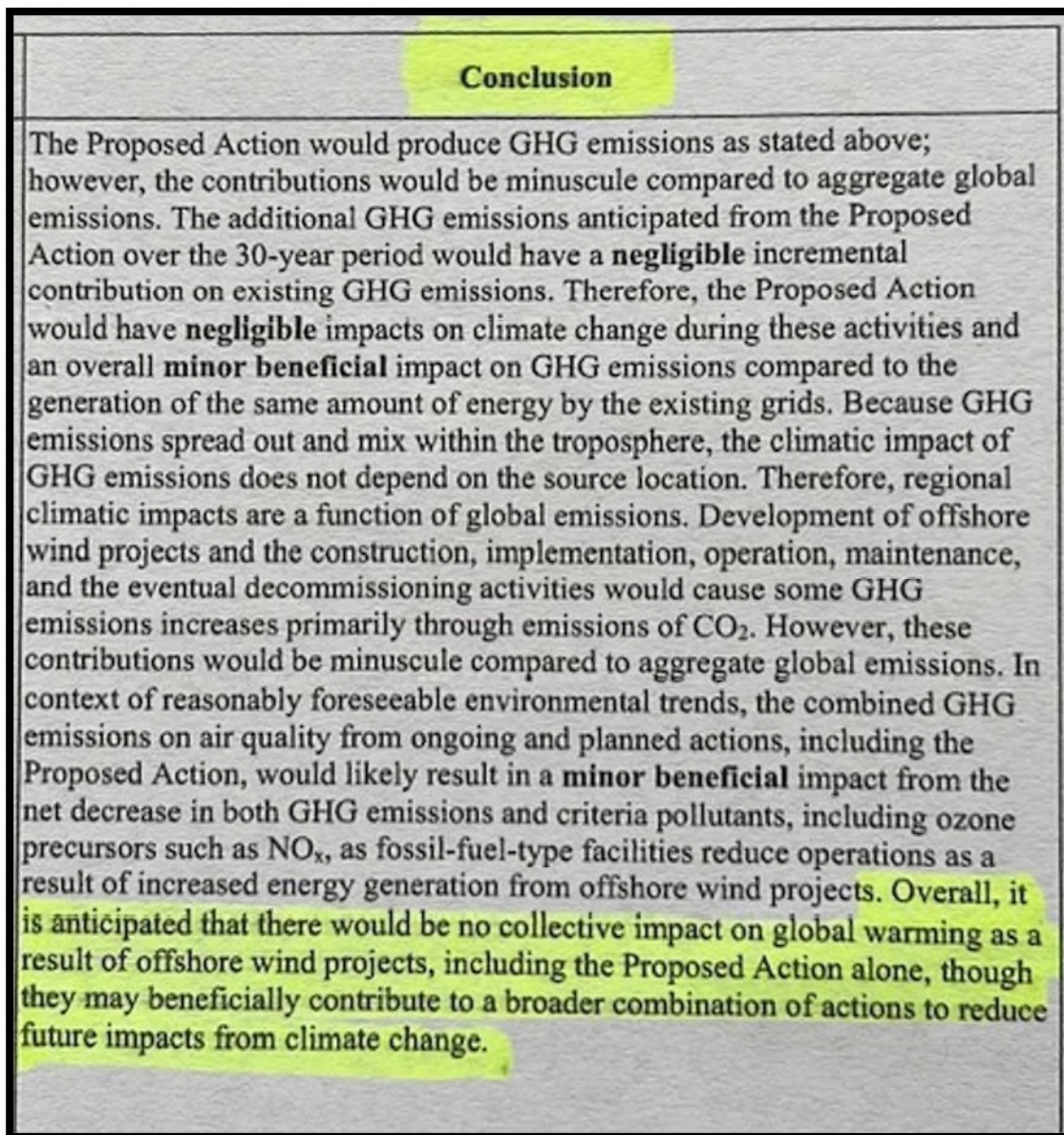
In accordance with Green Acres rules, all written comments **must be submitted by July 9, 2024** to Paula Geletei, City Clerk, 1301 Bacharach Blvd., Atlantic City, New Jersey 08401 or at pgeletei@acnj.gov.

A copy of any written comment must also be submitted to the Green Acres Program at PublicLandCompliance@dep.nj.gov. Please include "Atlantic Shores" in the subject line. Email comments are preferred, but comments may also be mailed to: New Jersey Department of Environmental Protection, Office of Transactions and Public Land Administration, Public Land Compliance Section, 401 East State Street, 7th Floor, Mail Code 401-07, P.O. Box 420, Trenton, New Jersey 08625-0420.

The City of Atlantic City ("City") will hold a virtual public hearing on Tuesday, June 25, 2024, at 6:00 p.m. Members of the public may participate in the hearing via video conference or by telephone. Those who wish to participate via video conference may access the hearing at <https://bit.ly/green-acres-offshore> (note: if manually typing in, please use all lowercase text).

A toll-free dial-in option is available as well, via calling (877) 853-5247, and entering 823 4121 1062 as the webinar ID, and 469898 as the passcode. If using one-tap mobile, please use +3017158592,, 82341211062#. Those planning to offer comments at the hearing may sign up to do so during the hearing.

To read the detailed comments Defend Brigantine Beach, LLC. submitted August 10, 2023 when fighting the Green Acres Diversion request in 2023, [Click on this link](#) for FULL details of our objections to this disastrous project and GREEN Acres diversion request.



*From the BOEM (Bureau of Ocean Energy Management) report regarding Vineyard Wind 1 Project.
The Atlantic Shores project will have the same outcome.*



For additional information and reports, please go to our website DefendOurBeachesNJ.org and click on the "Get Informed" tab (DefendBrigantineBeach.org/get-informed/).

Date: August 10, 2023

To: PublicLandCompliance@dep.nj.gov

From: Defend Brigantine Beach, INC
P.O. Box 562, Brigantine, NJ 08203
Defendbrigantinebeach@gmail.com

Defend Brigantine Beach, INC is a nonprofit, nonpartisan organization representing thousands of citizens who are invested in the wellbeing of the New Jersey coastal communities and ocean off the New Jersey Coast. The organization believes in responsible green energy solutions to fight climate change and our mission is to educate the public on the benefits and costs of the solutions. We are defending shore communities from the offshore wind projects which we believe will devastate our beach experiences, local economies, and the local marine environment, while significantly raising our utility rates. We respectfully submit these comments and questions for the Atlantic Shores application to the NJ Department of Environmental Protection for the diversion of portions of certain Green Acres encumbered parcels owned by Atlantic City.

Sincerely,

President: Kate Finnegan
Treasurer: Suzanne Moore
Secretary: Tom Jones
Trustee: Cindy Peckarick

Public Comments for Green Acres Diversion in Atlantic City for the Atlantic Shores Project

Pursuant to N.J.A.C. 7:36-26.1(d), Atlantic Shores LLC does not demonstrate that their proposed diversion is for a project that will either fulfill a compelling public need....by mitigating a hazard to the public health, safety or welfare; or, yield a significant public benefit.... by improving the delivery by the local government unit, nonprofit, or by an agent thereof, of essential services to the public or to a segment of the public having a special need.

The ATLANTIC SHORES project will not improve regional air quality through a net reduction of regional air pollution over the project, will not provide artificial reef habitats for a diverse habitat without destroying our natural sustainable fish habitat and food source, will not reduce enough carbon emissions to impact global climate change in any way, and will not protect natural resources in the State. Atlantic Shores purpose of the project justifies the offshore wind project based on its ability to fulfill New Jersey's mandate for "renewable" energy. Meeting a political mandate differs rather significantly from combating climate change.

The first point of our testimony is on behalf of the thousands of residents included in the climate justice in Atlantic City climate justice areas whom we believe have little or no knowledge of what ATLANTIC SHORES is planning to do to their neighborhoods. Based on what we have researched, this hearing was only publicized in the Press of Atlantic City, the Atlantic Shores website, and on the Atlantic City website for only one week prior to this hearing, as well as a few scattered signs along the boardwalk. We can only assume that this is the way you wanted it to be, instead of reaching out personally to the climate justice populations of Atlantic City who will be most affected by your actions by taking away their parks and recreational areas, closing their beaches, and tearing up their streets to bury electric cables that will run through their neighborhoods and past children's schools and community centers.

Based on recent Census data, there are 16,000 households in Atlantic City with a median income of \$29,700 and a 37% poverty rate. Of those 16,000 households 32.7% are black, 31.6% are Hispanic, and 16.8% are Asian. This totals and ~81% Minority Population who will be significantly affected and disrupted by the actions you describe in your Scoping Documents. But I suspect that you already know that based on the choices you made when selecting these sites, you intend to claim.

The people of Atlantic City have Civil Rights, many of which are documented in both Federal and State laws, as well as in the Atlantic City Code. It is called Environmental Justice and it has been made into Law to protect this population. And it must be abided by in considering the adverse implications to the people of Atlantic City with regard to what you intend to ask for in these Scoping Hearings. So, let's start at the top.

FIRST: The Federal Government has underscored the importance of Environmental Justice in Executive Order 12898, which directed all federal agencies to prioritize the achievement of Environmental Justice as part of their missions.

SECOND: At the State level, New Jersey has stated that it must continue the crucial work of furthering the promise of environmental justice. To that end, under Governor Phil Murphy's Executive Order No. 23 (2018) (EO 23), it requires the executive branch to ensure that the principles of environmental justice are at the heart of all NJ programs and policies.

THIRD: The Department of Environmental Protection (The DEP) issued "Furthering the Promise: A Guidance Document for Advancing Environmental Justice Across State Government" in October 2020.

According to DEP Laws: Environmental Justice requires fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, in the development, implementation and enforcement of environmental laws, regulations and policies. This goal can only be achieved when everyone enjoys the same degree of protection from environmental and health hazards and has equal access to the decision-making processes in the places they live, learn, and work, and recreate in a community of concern; the presence of disproportionate environmental and public health stressors; and the absence or lack of environmental and public health benefits.

Specifically, the Law directs the DEP to determine how to address these permit applications based on a comparative analysis that determines if the additional environmental or public health stressors from the permitted action would, together with the baseline stressors already impacting the community, cause or contribute to adverse cumulative environmental or public health stressors within that Community.

FOURTH: There are several Statutes in the Atlantic City Code which must be adhered to for this project:

Chapter 21A Environment

Every Atlantic City resident has an equal right to a healthy and safe environment. This requires that our air, water, land, and food be of a sufficiently high standard so that individuals and communities can live healthy, fulfilling, and dignified lives. The duty to enhance, protect and preserve Atlantic City's environment rests on **the shoulders of government, residents, citizen groups and businesses alike... NOT Atlantic Shores.**

Right to know: The community has a right to know complete and accurate information on potential human health and environmental impacts associated with the selection of products, services,

operations, or plans. **The burden of supplying this information lies with the proponent (Atlantic Shores), not with the general public.**

Atlantic City Ordinance Chapter 21B Environmental Commission discusses the role of the Atlantic City Environmental Commission. The purposes of the Environmental Commission are to: Promote the protection and conservation of land, air, water, and other natural resources within the territorial limits of the city. Such promotion shall consist of educating the public and advising the City government about the best methods for protecting and conserving these resources.... (and most importantly), Promote the protection of public health by educating the public and advising City government about environmental health hazards.

Atlantic City Ordinance Chapter 7 Equal Opportunity Employment

All firms, corporations, partnerships or any combination thereof wishing to do business with or in the City of Atlantic City shall present to the city, bid for public contract or response to request for proposals, upon application for development opportunity, an equal employment opportunity affidavit and must agree to make a bona fide effort to utilize minority contractors and suppliers paying prevailing wages. All firms, corporations, partnerships, or any combination thereof wishing to do business with or in the City of Atlantic City utilizing government funding, tax abatement or any other means of government or public funds or guaranty shall make a good faith effort to utilize a minimum of 10% minority contractors and/or suppliers.

Atlantic Shores has failed to demonstrate that they have complied with these Federal, State, and City ordinances. What commitments have been made to ensure that the environmental justice populations are guaranteed protection of their health and well-being, their safety, and the provision of well-paying jobs? How has ATLANTIC SHORES ensured that the environmental justice populations have been fully informed of the environmental impacts of the project? Where is the ATLANTIC SHORES' data to support that the climate justice affected populations have been fully informed and understand the environmental impacts? What measurements does ATLANTIC SHORES use to conclude that the environmental justice populations have been informed?

Net Negative Impact on Coastal Economy

Atlantic Shores fails to address the wind development project's negative impact on Atlantic City's and Atlantic County's tourist economy. The loss of tax revenues will reduce the local governments' ability to provide essential services to the public and especially the public in Climate Justice Areas.

According to information in the BOEM's DEIS the construction and installation of up to 200 WTGs, up to 10 OSSs, and 1 met tower within the lease area would contribute to impacts on recreational fishing and boating. These structures are in addition to other offshore wind projects in the geographical analysis area (nearby leases OCSA-0498,0532,0549,0538,0539,0541,0542,0482), which will collectively install 897 WTGs, 20 OSSs or met towers, and 1725 miles of submarine cables and 1510 miles of interarray cable between 2023-2030. The offshore structures would have a long-term, adverse impact on recreational fishing and boating and fishing through the risk of allision, risk of gear entanglement, damage, or loss; navigational hazards; space use conflicts; presence of cable infrastructure; and visual impacts. Also stated is that the wind structures could have beneficial impacts on recreation through fish aggregation and reef effect but could have negative impact due to fish aggregation which could lead to additional natural predation and increasing fishing effort, resulting in a decrease in fish stocks. The project would install an estimated 289 acres of scour protection for foundations and 294 acres of offshore export cable hard protection increasing the risk of entanglement with fishing gear. The risk to recreational boating from the addition of scour and cable protection would be localized, continuous and long term.

Atlantic Shores and BOEM use one study to back up their claims that the new ocean structures could provide new opportunities for offshore tourism by attracting recreational fishing and sightseeing. The Study, *Analysis of the Effects of the Block Island Wind Farm on Rhode Island Recreation and Tourism Activities*, by Smythe et al., 2018, is nothing more than a qualitative study based on a review of newspaper articles, focus groups and other participant observation techniques. The study contains no jobs, GDP or other tourism economic data. There is no measure of significance for its conclusions. The study is also based on a wind farm consisting of only 5 wind turbines, height of 659 ft, 3.8 miles from the southern tip of the island where there are large cliffs and insignificant beaches compared to the rest of the island. The popular beaches and boating areas are much further away in locations on the other side and further north on the island. To use this study to support this conclusion is a mockery of science backed arguments.

In fact, all studies regarding tourism used by Atlantic Shores are based on visualizations of offshore wind turbines that are on average close to half the size of the 15 Gw turbines that will be installed by Atlantic Shores. The studies use various distances, and the turbines are laid out in similar grid patterns as the Atlantic Shores project, but all have much fewer turbines. One survey in study by the University of New Hampshire (2020) had no visualizations at all. Only one study (by Lutzeyer et al., 2017) had any analysis on participants' behavior related to nighttime views and the study showed a statistically significant impact on participants' avoidance (55%) of ocean rental properties when they were shown both daytime and nighttime views. In the BOEM DEIS this study is falsely misrepresented in a statement, "it did not specifically address the relationships between lighting, nighttime views, and tourism for WTGs 15 or more miles from shore." The agency fails to mention that the wind turbines are only 5 Mw (around 500 ft tall compared to the 1040 ft tall 15 Mw turbines that will be installed by Atlantic Shores. Therefore, the turbine used in the study would be the equivalent of being half the distance. The results of the study absolutely reflect the relative impact of the Atlantic Shores project. The BOEM agency further misrepresents the comparison of the Atlantic Shores project to the study, stating that "more than 95% of the WTG positions likely to be presented based on anticipated wind lease area build-out in the geographic analysis area would be more than 15 miles from the coastal locations with view of the WTGs." Again, the agency is ignoring the fact that the turbines are half the size of those used by Atlantic Shores, and the grid patterns are very similar. The visualizations of the turbines from the front to the back of the grid would be the same in similar grid patterns. This lack of omission on the size comparison of the turbines could be considered as gross negligence on the part of Atlantic Shores and the BOEM agency.

Jobs

According to the advertisements on Atlantic Shores website, job numbers are a keystone achievement of the offshore wind turbine factory program. Atlantic Shores website advertises that collectively Atlantic Shores Projects 1 and 2 are expected to create more than 22,290 full-time equivalent jobs or FTE's. And indirectly create more than 11,810 FTE's. What your website conveniently does not advertise is that this is the summary of FTEs over span of 20 years. This actually translates into approximately 1100 direct jobs per year. However, the New Jersey Board of Public Utilities Report on New Jersey Offshore Wind Solicitation #2 dated May 25, 2021, states that the actual jobs guaranteed by Atlantic Shores LLC Offshore Wind South project **are ZERO jobs during wind farm construction and only 88 Operations jobs over a 20-year period.**

Jobs Lost and Negative Impact on GDP

What Atlantic Shores also fails to address are the number of jobs and negative impact on the local economy GDP that will be lost because of this project. Based on studies identified in Atlantic Shores COP and BOEM DIES, there will be cumulative tourism and fishing jobs lost during construction and during the operation of the wind development project.

The following are calculations on the Impact on Atlantic County Tourism Economy Based on Several Surveys (including BOEM's) of public reaction to visible turbines. The references, explanation of scientific studies and calculations to support the summary of jobs and GDP impact is presented after the bullet points (V1 – V9).

- Rental Demand Loss: 50% of prior renters would not rent again with turbines visible regardless of rent discount. Including Atlantic City, Atlantic County annual rental income loss could be \$17.2 M (10%) to \$68.9 M (30%). Excluding Atlantic City, Atlantic County annual revenue loss could be \$4.5M (10%) - \$17.9M (40%). Excluding Atlantic City, lost rental income NPV over 20 years could be \$65M - \$261M.^{V1, V2}
- Tourism Revenue, Job Losses, and Tax Losses: ^{V3, V4, V5, V6}
 - 16.5% - 24% would not visit Atlantic County beach town, which could be a loss of:
 - 8,700-12,700 jobs or 175,000 -255,000 job years over the assumed 20 year project life
 - \$1.3 – \$1.9B in annual revenue or NPV of \$17.4 B - \$25.5 B over the project life
 - \$142 - \$206 million government tax loss revenue over the project life
- Wind Turbines will not be a Significant Tourist Attraction based on survey participants not willing to pay more for rental property with a view of wind turbines.^{V1}
- Casino Consolidation: Bricks and mortar operating losses for casinos may cause further consolidation in Atlantic City, and tourism losses and tax impacts will be escalated further.
- Large Energy Cost Increase for Fragile Seasonal Tourism Businesses^{V8}
- Recreational Fishing Revenue= \$19M/ YR to the NJ economy. How will this be impacted during years of construction and operation? ^{V7}
- Cancellation of Annual Farley Marina Jimmy Johnson Fishing Tournament, Annual Atlantic City Air Show, Beach Concerts, and other Beach Centric Entertainment Events, Bars and Restaurants is unknown.^{V9}

References: Visible and Shore Community Impact of Stationary Turbines and Calculation of Economic Impact Using Available Studies

ACTUAL STUDIES AVAILABLE FOR CALCULATIONS OF TOURISM LOSS ARE BASED ON A COMBINATION OF WIND TURBINE SIZE, DISTANCE AND NUMBER THAT IS MUCH SMALLER AND MUCH LESS OF A NEGATIVE IMPACT ON VISUAL RESOURCES AND SCENIC VIEWS THAN THE ATLANTIC SHORES AND OCEAN WIND 1 PROJECTS WILL HAVE ON THE JERSEY SHORE COMMUNITIES.

ATLANTIC SHORES MADE NO ATTEMPT TO REPEAT ANY SURVEYS OR STUDIES USING VISUAL SIMULATIONS BASED ON ACTUAL WIND TURBINE SIZE, DISTANCE AND NUMBERS FOR ATLANTIC SHORES SOUTH PROJECTS WHICH WAS AVAILABLE ON BOEM WEBSITE IN 2022 (ATLANTIC SHORES SOUTH). IN ADDITION, VISUALIZATIONS WERE PREPARED FOR THE CUMULATIVE IMPACT OF THE 550-850 WIND TURBINES THAT WILL BE VISIBLE FROM VARIOUS COMMUNITIES ARE NOT ACURATE AND ONLY A COPY OF THE VISUALIZATIONS SINGL ATLANTIC SHORES PROJECT.

DUE TO THE LACK OF ANY STUDIES THAT INCLUDE SURVEYS USING VISUALIZATIONS OF THE ATLANTIC SHORES PROJECTS, ANALYSES WERE PREPARED USING THE EXISTING STUDIES BY EXTRAPOLATING THE DATA FROM EACH STUDY BASED ON THE SIZE, NUMBER AND DISTANCE OF THE WIND TURBINE PROJECT COMPARED TO THE ATLANTIC SHORES WIND TURBINE PROJECT.

V1. North Carolina State University, the Amenity Costs of Offshore Wind Farms- Evidence from a Choice Experiment, Lutzeyer et. al., August 2017. <https://cenrep.ncsu.edu/cenrep/wp-content/uploads/2016/03/WP-2017-017.pdf>

This study included visualization of 64, 100 and 144 total wind turbines, 5 Mw (around 500 ft tall compared to 1040 ft tall for 15 Mw Atlantic Shores turbines) sized wind turbines with daytime and nightttime views. Wind turbine visualizations were located at various distances from shore including 5, 8, 12 and 18 miles. Based on an extrapolation of the size difference, the comparable distance used in the study would be 5 miles.

The nighttime views increased the visual disamenties and avoidance of rental properties with views of the wind turbines. Participants were divided into categories: 55% never wanted a view from a rental property no matter how much rent was discounted, 23% would

tolerate some view along with various discounts, and 21% would rent with a view all the time. No participants would pay more rent to see the wind turbines. This may impact Jersey Shore significantly if increased electric costs based on offshore wind rates will increase rental rates. Lastly, the study notes that choices will depend on whether vacationers have an alternative location for their vacation, and this factor will impact the results. Along the eastern seaboard, vacationers have a significantly large number of options for vacation locations within driving distance that will not have 1040 ft high wind turbines starting 9 miles off the beach along with 722 turbines in ocean viewshed from the beach.

V2. Based on Atlantic County Rental Income

The model lists a wide range of income losses because of unknown rental market supply and demand elasticity factors. For example, other tourists may be willing to rent properties at discounted rental rates. The mix of renters who would not return in combination with new renters who may rent properties at various discounts are examined by Lutzeyer et. al., in North Carolina State University Study (V1). The table below has two calculations: one with Atlantic City and one excluding Atlantic City. The percentage of vacation versus full time resident renters

is known for Brigantine. Based on Brigantine City Records, in 2023, 2000 properties were listed as “summer” (vacation) rentals. It is not known what portion of the monthly rental income is attributed to the properties in the table for Brigantine. The data in the table is from 2020.

Vacation Rental Income Losses in Atlantic County									
Coastal City	Rental Properties (1)	Monthly Rental \$ (1)	Annual Rental \$Millions	NPV 20 YR Loss	Coastal City	Rental Properties (1)	Monthly Rental \$ (1)	Annual Rental \$Millions	NPV 20 YR Loss
Atlantic City	11,793	\$900	\$127.4						
Brigantine	1,096	\$1,208	\$15.9		Brigantine	1,096	\$1,208	\$15.9	
Long Port	40	\$1,677	\$0.8		Long Port	40	\$1,677	\$0.8	
Margate	579	\$1,310	\$9.1		Margate	579	\$1,310	\$9.1	
Ventnor	1,579	\$1,006	\$19.1		Ventnor	1,579	\$1,006	\$19.1	
Total Atlantic County	15,087		\$172.2		Total Atlantic County	3,294		\$44.9	
Economic Loss 10%			(\$17.2)	(\$250.8)	Economic Loss 10%			(\$4.5)	(\$65.3)
Economic Loss 20%			(\$34.4)	(\$501.6)	Economic Loss 20%			(\$9.0)	(\$130.1)
Economic Loss 30%			(\$51.7)	(\$752.3)	Economic Loss 30%			(\$13.5)	(\$195.9)
Economic Loss 40%			(\$68.9)	(\$1,003.1)	Economic Loss 40%			(\$17.9)	(\$261.2)

Assumed Vacation Rental Inflation Rate is 3% and NPV Discount Rate is 6%

[\(1\) City Data.com](#)

V3. Global Insight, Inc. an Assessment of the Potential Costs and Benefits of Offshore Wind Turbines, prepared for the State of New Jersey, September. 2008

<https://www.state.nj.us/bpu/pdf/announcements/njoswt.pdf>

The study used a survey with a visualization based on 3.6MW (model first used in Ireland in 2004) wind turbines, hub height of 73.5M vs. 175M (ATLANTIC SHORES) and rotor diameter of 104M vs. 280M (ATLANTIC SHORES). For Atlantic County participants were shown turbines 3 and 6 miles off the coast of Atlantic City on clear and hazy days. The number of wind turbines in the study was 80, compared to 200 turbines for ATLANTIC SHORES project with a total cumulative impact of 730 visible turbines. Assumption in the study was that the turbines will not be seen from other shore towns outside of Atlantic County. For wind turbines located 3 miles Offshore, 16.5 % of Atlantic County Visitors were more likely not to visit.

Actual ATLANTIC SHORES wind turbines dimensions are 2.7 times (rotor diameter) and 2.4 (hub height), An extrapolation of the hub and rotor heights translates the 3.0 miles to 8.1 miles. This is very close to the 8.7-mile distance from Brigantine, NJ. Factoring in the distance equivalency and more than double the visible wind turbine size for the ATLANTIC SHORES project and 9 times more visible wind turbines for future planned offshore wind projects, the number of participants’ negative responses are conservative and should be even higher.

V4. University of Delaware, Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism, sponsored by the Bureau of Ocean Energy Management (BOEM), Parsons & Firestone, March, 2018

(using the data for smaller, closer turbines with the same line of sight as those proposed for Brigantine)

<https://espis.boem.gov/final%20reports/5662.pdf>

Survey used visualizations of 100 , 6Mw turbines each with a height of 547 ft. The Atlantic Shores turbine height is 1040 ft. or 1.9 times the height of turbines used in the study. Adjusting the distance through simple extrapolation, equivalent distance of 5 miles would be 9.5 miles, given the difference in turbine size. Atlantic Shores turbine distance is 8.7 miles. In addition, there will be 750-850 turbines in the view of the Atlantic County beaches (cumulative impact), thus, results in this study are conservative estimates. According to the survey results, there is a 24% trip loss at 5 mile (equivalent 9.5 miles for 1040 height turbine) distance. At a distance of 5 miles, any offsetting positive response is negligible.

V5. [Tourism Economics, An Oxford Economics Company, The New Jersey Visitor Economy 2022, March 2023](#)
Visit [New Jersey.com](#), [Economic Impact \(visitnj.org\)](#)

V6.

Atlantic County: Reduction in Tourism						
Atlantic County	2022 Annual Tourism \$	Tourism Jobs	Fiscal Tax Impacts	NPV of Tourism \$ over 20 Yrs	FTE Job Years over 20 Years	NPV of Fiscal Tax Impacts over 20 Yrs
Current	\$ 7.8 billion	53,021	\$860 million	\$104.7 billion	1 1 million	\$11.5 billion
\$ Impact (16.5%)	(\$1.3) billion	(8,748)	\$142 million	\$17.4 billion	(175,000)	(\$1.9) million
\$ Impact (24%)	(\$1.9) billion	(12,725)	\$206 million	\$25.5 billion	(255,000)	(\$2.7) billion

Assume 2% Growth Rate and 6% Discount Factor

16.5% reduction based on Global Insight Study(see V3) and 24% reduction based on Parsons & Firestone Study (V4)

V7 [Atlantic Shores Offshore Wind South Draft Environmental Impact Statement: Chapters 1-4 \(boem.gov\)](#)

Table 3.6.1-31. For-hire recreational fishing revenue in New Jersey in comparison to the combined Project 1 and Project 2 WTAs, 2010–2018¹

Year	Revenue in New Jersey (thousands of dollars) ¹	Revenue from WTAs (thousands of dollars) ²	Percentage of Revenue from WTAs
2010	\$55,509	\$13	0.02
2011	\$62,526	\$34	0.05
2012	\$61,825	\$23	0.04
2013	\$102,472	\$15	0.01
2014	\$97,175	\$16	0.02
2015	\$88,203	\$28	0.03
2016	\$33,359	\$10	0.03
2017	\$36,089	\$9	0.02
2018	\$49,439	--	--
Average	\$65,177	\$19	0.03

Sources: (1) NMFS 2022d, (2) NMFS 2022b.

Notes:

Available for-hire recreational revenue data for New Jersey were limited to the period of 2010–2018.

Years with no revenue from the WTAs are indicated by "--"

V8

[For Release: Revised Cost Estimates Show Energy Master Plan Will Cost \\$1.4 Trillion, Sending the State Back to the Drawing Board | Affordable Energy For NJ \(naffordableenergy.com\)](#)

[AENJ Email 2/20/23: Governing By Press Release | Affordable Energy For NJ \(naffordableenergy.com\)](#)

[AENJ Email 6/5/23: Back Door Gas Stove Ban | Affordable Energy For NJ \(naffordableenergy.com\)](#)

V9 [Atlantic City Airshow to return Aug. 24 \(pressofatlanticcity.com\)](#)

Further Potential Loss of Jobs based on Atlantic Shore South Impact to the AC Casinos

Atlantic Shores ignores their projects' impact to Atlantic City casino tourism. The beaches and ocean view are an attraction and provide a competitive advantage for Atlantic City casinos. Atlantic City is known as a waterfront destination city for casino tourists as a result. Atlantic City remains the 2nd largest casino industry behind Las Vegas. ATLANTIC SHORES project and other planned offshore wind projects will have a major adverse impact on the view from the casino ocean front rooms, restaurants, beach bars and other ocean front activities which will be dominated by a large and highly visible array of wind turbine generators. The state of the "bricks and mortar" casino industry in Atlantic City is fragile. First, the onslaught of online gaming has cannibalized the bricks and mortar casino tourists in Atlantic City. Second, there are 14 licensed casinos in Pennsylvania. Several are in scenic areas such as ski resorts. Others are adjacent to large urban and suburban areas such as Philadelphia. A new, 510,000 square foot casino with 200 hotel rooms was built next to the sports stadiums in Philadelphia. Pennsylvania casinos offer the same entertainment and fine dining as Atlantic City casinos. Lastly, the NY State casino market is expanding which will bring more competition to the industry. Local industry experts proposed a solution to invest in Atlantic City's ocean front experience. The ATLANTIC SHORES project is in direct conflict with this solution. [Atlantic City investments a must as New York casinos loom, gaming panel says \(pressofatlanticcity.com\)](http://pressofatlanticcity.com).

Not only do the Casinos add billions to the tourist economy, but they have also supported billions of dollars in other related industries including construction and manufacturing. Just in the last several years, Casinos have invested \$1 billion in hotel room renovations, constructing new restaurants and updated amenities. If the Casino management and leadership continue to believe that the Atlantic City casino market is sustainable, they will continue to invest in and expand their facilities. The construction created thousands of jobs over the years. The ATLANTIC SHORES DEIS and the COP do not provide any statistics related to the employment of construction of construction employees, many of them union members related to casino renovation and construction projects. [Atlantic City Casino Owners Still Spending Millions On World Class Resort \(playnj.com\)](http://playnj.com)

Atlantic Shores has no reference that there was consideration given to whether their project is consistent with the Atlantic City casinos' strategic, marketing and investment plans.

Casino contraction in 2014-16 resulted in a reduction of casino revenues from \$5.2 billion to \$2.6 billion. This had a significant impact on the local economies. As a result of this contraction, Atlantic City was on the verge of bankruptcy and taken over by the State in 2016. The takeover was renewed by the Governor in 2021. The Atlantic County government debt rose from \$132 million to \$203 million and the equalized value of property fell from \$56 billion to \$35 billion. Atlantic County tax rate is now double the Cape May County rate. The residents now have the burden of filling the gap in taxes caused by the casino contraction. In 2016 the Casino Property Tax Stabilization Act replaced casino property taxes payments in lieu of taxes (PILOT). Currently Casinos are involved in a lawsuit to get the online gaming and sports betting revenues excluded from the PILOT program therefore there is a possibility that future taxes would only apply to bricks and mortar gambling revenues. The final decision will increase the importance of closely examining the impact ATLANTIC SHORES projects will have on gambling tourism bricks and mortar operations in Atlantic City.

The casinos are owned by national and industry brand casino industry corporations. If the bottom line of the bricks and mortar activities no longer makes business sense due to negative impacts of the wind turbines, the casino investors will cut their losses in Atlantic City, concentrate on their other casino locations, and there will be further contraction in Atlantic City. This will lead to much greater economic impact than the calculated 16.5%- 24% tourism loss including construction jobs and other indirect related jobs and industries.

Atlantic Shores' ignorance of their project's visual impact on the casino tourism industry is negligent in its lack of consideration of the financial health of Atlantic City. This is information from the Atlantic City Bond Rating, which indicates the risk of contraction in the casino industry.

https://www.moodys.com/research/Moodys-upgrades-Atlantic-City-NJs-issuer-rating-to-Ba2-outlook-Rating-Action--PR_907843127

FACTORS THAT COULD LEAD TO A DOWNGRADE OF THE RATING

- Contraction in the casino industry
- Material deterioration in reserves and liquidity
- Withdrawal of state oversight and inability to independently manage operations

Fossil Fuel Industry Jobs in Atlantic City

Atlantic Shores does not address how many jobs will be lost related to the fossil fuel industry in Atlantic City. South Jersey Gas has a significant presence in Atlantic City. South Jersey Gas returned to its hometown of Atlantic City in late 2018 with the construction of its new headquarters on Atlantic Avenue in the University District as part of the Atlantic City Gateway project. Construction on the building began in 2017 as part of the Atlantic City Gateway project — a \$210 million public-private redevelopment initiative on 270,000 square feet of land. Approximately 200 employees work in the building, which features modern workstations, training facilities, meeting spaces, and amenities for employees such as a cafe and a fitness center.

[South Jersey Gas Opens New Headquarters in Atlantic City | Jersey Digs](#)

What will happen to South Jersey Gas and their investment in Atlantic City as their customer base is greatly diminished as a result of the State's Energy Master Plan which is fast tracking the elimination of fossil fuels? How many jobs will be eliminated by the forced reduction in gas fueled heating systems and appliances.

So we ask, what is the impact of job gain and job loss to the economy of Atlantic City and Atlantic County? If there is a net job loss for the climate justice populations that Atlantic Shores offshore wind factory project is so greatly disrupting, why is Atlantic Shores requesting to destroy the communities?

Damage to Atlantic City Neighborhoods Related to EMF Cable Installation

The installation of onshore cabling including trenching, horizontal direct drilling and jack and bore will result in the degradation of tourist area and underserved population in Atlantic City. The landfall site will eliminate a parking lot covering an entire block in Atlantic City. According to the NOAA survey, 49% of tourists ranked convenient parking as very important as a beach characteristic. You intend to claim close to 2.5 acres of these residents' valuable parkland, plus a temporary impact for another 11 acres of parkland. Purchasing land as a potential replacement outside of Atlantic City as a replacement does absolutely nothing for Atlantic City. The installation of onshore cabling including trenching, horizontal direct drilling, and jack and bore will result in significant degradation of neighborhoods, and destruction of tourist areas, recreation areas and most importantly the climate

justice populations in Atlantic City. This project will not be just disruptive, it will add significant noise, air pollution, diminished access, dust and dirt which will be a nightmare for the residents.

Health Risks of EMF Cables to Atlantic City Neighborhoods

And most importantly, based on current science there will be significant health risks for our neighbors living in these environmental justice protected areas because of EMF (Electro-Magnetic Frequency) emitted from high voltage underground cables.

First, Atlantic Shores LLC fails to use a respected source but instead uses the International Commission for Non-Ionizing Radiation Protection (ICNIRP) guidelines in evaluating EMF exposure. Studies have shown that this organization's guidelines fail to meet fundamental scientific quality requirements and are not suited to set EMF exposure limits. Medical research scientists who study health based impacts of EMF rely on the World Health Organization (WHO) and the Institute for Research in Immunology and Cancer (IRIC).

Back in 2007 the WHO and IRIC stated that EMF was not harmful. Then in 2011, these scientific institutions classified EMF exposure under a category called "Group 2B". Group 2B states something is "possibly carcinogenic", but that classification comes from studies that were looking at less than a measurement of 3 Milligauss.

Now we have even more recent studies that show that even a small increase in EMF will change health outcomes. Examples found on PubMed are both meta-analysis of the exposure to EMF related to childhood leukemia and fetal development.

The first study, titled, ***Exposure to magnetic fields and childhood leukemia: a systematic review and meta-analysis of case control and cohort studies, published in the journal, Reviews in Environmental Health***, was a **Childhood Leukemia Metanalysis printed in 2022**, including 36,000 children diagnosed with childhood leukemia going back to 1970. The study concluded that statistically significant associations were observed between exposure to ELF-MF (**extremely low frequency-magnetic field**) and childhood leukemia. Altogether there was a 2 fold increase in childhood leukemia.

The second study was another meta-analysis of 6 studies and only included power line based EMF exposure. Children of pregnant women who were exposed to 4 Milligauss or higher were found 14 times more likely to develop all cancers over 4 years. The results of the study showed that the residential period of more than 4 years near high-voltage power lines before or after birth is an important factor for all in childhood. Material exposure to EMFs significantly increased development disorders in their fetus such as embryonic development. There was a 3.95 times and significant increase in placental apoptosis or cell death. There were 5-fold central nervous system defects and spina bifida increase as well as a significant increase in club foot in the fetus.

These studies represent populations such as children and fetuses whose cells aren't developed, and whose DNA is easily cleaved.

The authors concluded that the 2011 guidelines must be revised to reflect recent studies. Even a small amount of enhancement of exposure will result in unacceptable health consequences of our future generations. EMF exposure is a significant environmental danger for pregnant women and their fetuses.

Atlantic Shores is planning to run EMF cables on the exact beaches, parks, where young mothers who may be expecting another child and fathers bring their children to play. Atlantic Shores LLC is planning to run EMF cables through residential neighborhoods and next to the Sovereign public

school building. Is Atlantic Shores LLC going to guarantee that the children who live, play and go to school in these areas are safe?

Atlantic Shores has stated in their documents that these export cables will operate at peak loads at up to 349mG versus the studies which determined that 4mG is potentially dangerous. Have you had neighborhood meetings with these underserved communities to inform them of these dangers to the health and welfare, most importantly their children?

Atlantic Shores Project Impact on Climate change for Climate Justice Populations and other NJ Coastal Populations

Atlantic Shores has provided no evidence that its project will improve the conditions of the climate justice area in Atlantic City or any areas along the coastline. There have been no statements in the Atlantic Shores documents that assert that the project will reduce flooding, reduce severe weather events or stop the ocean from rising at the Jersey Shore. In fact the NJ governor's goal of 11 GW of Offshore Wind by 2040, according to Atlantic Shores calculation of emission reductions, will reduce only 22 Million Metric Tons of CO2 emissions each year which is only.04% of the world's annual global emissions.

Incorrect assumptions on the emission reductions could further reduce the Atlantic Shore's calculation of its impact on climate change. For example, there is no discussion regarding the use of fossil fuel plants as backup and the increase in emissions because of the use of low efficiency (increased carbon emission) peaker plants.

Also, it is evident that calculations are based on weak assumptions at best. According to a January 31, 2023 news article, offshore wind developers are just starting to study their emissions by partnering with the Carbon Trust, Offshore Wind Sustainability Joint Industry Programme. Offshore wind companies have not even developed an industry backed methodology and guidance to measure and address the carbon emissions associated with offshore wind farms throughout their lifecycle, including emissions from the manufacturing of materials and installation of wind farms.

Atlantic Shores provides no discussion in its assumptions regarding leading edge erosion of its blades which will be even greater than typical blades due to their larger size and higher tip speed in a saltwater environment. This will further reduce the capacity factor of the turbines and require more fossil fuel as a backup. Scientific study in August 7, 2021, by Asbjorn Solbert, Bard-Einar Rimereit and Jan Erik Weinbach concludes that the erosion is exponential for larger turbines with higher tip speed.

Lastly, Harvard University Researcher David Keith published papers in the journals , *Environmental Research Letters* and *Joule*, concluding that generating capacity of large-scale wind farms is overestimated because of the interaction between wind turbines and the atmosphere. He argued that each wind turbine creates a "wind shadow" behind it where air has been slowed down by the turbine's blade, thus becoming less efficient. Professor Keith also found that large scale wind turbine projects warm the surface temperature as a result of wind turbine actively mixing the atmosphere near the ground and aloft while simultaneously extracting from the atmosphere's motion.

Projects will mostly provide energy to households outside of Atlantic City, Atlantic County and the entire Jersey Shore Area.

Governor Murphy's goal is to generate 11,000 Megawatts of electricity from ocean wind turbines (a/k/a green energy) off the New Jersey coast by 2040. The wind developers' marketing materials

measure their project's energy benefit in "units of households". For example, a typical developer will state that its project "will provide electricity for "X" number of homes".

[Office of the Governor | Governor Murphy Signs Executive Order Increasing Offshore Wind Goal to 11,000 MW by 2040 \(nj.gov\)](#)

Similar to the Atlantic Shores Project, According to the Ocean Wind 1 Project, Orsted claims that its 100 turbines will produce 1100 MWs and will provide energy for 500,000 households.

Fast facts

Ocean Wind 1 will power New Jersey with 1,100 MW of renewable energy

That's enough power approximately 500,000 homes per day

	# of Turbines	MW	Homes Powered
Ocean Wind 1	100	1000	500,000
Extrapolation	1000	11000	5,000,000

[Ocean wind 1 fast facts \(oceanwindone.com\)](#)

By extrapolating these numbers, the result is that 11,000 MWs will require 1000 turbines which will provide enough energy for 5,000,000 households. The image below shows the number of wind energy projects planned for off the coast of New Jersey.

Please note, according to the news article in the link below, it is claimed that 4000 wind turbines will be needed to meet the 11,000 MW goal, but the author states that Governor Murphy's math is "fuzzy."

[Under Phil Murphy's clean energy plan, New Jersey can expect at least 4,000 wind turbines offshore \(shorenewsnetwork.com\)](#)

Although this is an overly simplistic statistic, it is consistent with offshore wind developers' data and explanations used throughout their industry. Suffice it to say, this calculation - based on the industry's methodology for explaining their projects' "clean energy" benefit - suggests that the 11,000 megawatts of offshore wind energy will more than meet the electricity needs of the State.

According to the latest census, there are 132,000 households in Atlantic County and there are 3.7 million households in the whole state of New Jersey. Atlantic County will use 4% of the "clean energy" produced by the wind turbines. Therefore, 96% of the "clean energy" will be exported to the state outside of the boundaries of Atlantic County communities. Including Cape May and Ocean County households increases the total Jersey shore households to 11% of the State's energy needs. Thus, 89% of the clean energy will be benefiting areas outside of Atlantic, Cape May and Ocean Counties.

Fishing Industry and Loss of Food Source

The surfclam fishing industry is one of the largest clamming industries in the United States and employs many residents of the climate justice areas. According to a Rutgers Study, offshore wind farms could reduce Atlantic City's surfclam fishery revenue by 25%.

[Offshore wind could shrink Atlantic City's surfclam revenue, study says - WHY?](#)

This excerpt below, expresses the concerns of the Mid-Atlantic Fishery Management Council, in their *Atlantic Surfclam and Ocean Quahog Fishery Performance Report, April 2022*:

"Wind Development The clam advisors are concerned about the BOEM (Bureau of Ocean Energy Management) wind farm leasing process and potential impacts to historically important fishing areas. The industry's opportunities to engage with developers on wind array siting relative to the most productive clam fishing beds has not been productive. This resistance in cooperation lends to the notion that the clam fishery and the ocean wind developers cannot coexist as the developers have made no attempt to give the clam industry any consideration in their layout of their arrays and the spacing between the turbines which will make it unsafe for clam vessels to work within wind farms. Siting is critical in terms of ensuring reasonable fishing access. It has been the experience of the clam industry that any communications by BOEM, wind energy developers, or state regulators is purely perfunctory and true mitigation efforts will not be made. In the New England and Mid-Atlantic region, offshore wind development is out of control. The industry feels that no matter how hard they try to engage with developers on these issues, their input is not being considered or incorporated into the siting and development process. The spatial and operation requirements of the fishery (considering things like weather, tides, safety, etc.) need to be accounted for to ensure access to the wind arrays, but at present that is not happening. These arrays become de-facto Marine Protected Areas and the Councils and industry have nothing to say about how the fishing grounds are managed within the arrays. Unlike finfish, clams do not move, so once the vessels cannot fish in an area those resources are lost to the fishery and the value it brings to the economy. These areas are also likely to be lost to survey data further impacting the biomass estimates of the fishery. The Council needs to consider the biological impacts on the fishery itself, and other cumulative environmental effects that may occur. These should include things like productivity of the resource, larval displacement, scour and sediment suspension, hydrographic changes, and effects of sounds and other pressures on the zooplankton community (which includes food for clams). In addition, in water structures from offshore wind or other types of closures (e.g., GSCHMA) will result in vessels having to travel further and having a larger carbon footprint."

[d_FPR_for2022_SurfclamOceanQuahog.pdf \(squarespace.com\)](#)

A paper by researchers in the Institute for Coastal Systems in Germany used numerical modeling to show how wind wakes may change local conditions. In the North Sea paper, researchers say their modeling studies show that expanding offshore wind installations.

"will substantially impact and restructure the marine ecosystem of the southern and central North Sea. Changing atmospheric conditions will propagate through ocean hydrodynamics and change stratification intensity and pattern, slow down circulation and systematically decrease bottom shear stress."

[Wind turbines will affect base of ocean food chain, study predicts | National Fisherman](#)

The fishing industry in New Jersey is highly regulated and monitored by using fish surveys which dictate commercial and recreational fish quotas. There is no solution available for the inability to perform the fish surveys after the wind turbines are installed. This will further add to the demise of a sustainable seafood industry. Clamming and scallop industries are at high risk of elimination because

of the cable trenching and the installation of 1.4 acres of stone at the base of each turbine and hard surface protection over the ocean cables.

Toxic Substances in Ocean Water Impacting Climate Justice Areas in Atlantic City and Other Coastal Areas

Leading edge erosion of turbine blades results in a substantial release of fiberglass and epoxy particles that will contaminate the marine food web. These microplastics contain the harmful bisphenol A (BPA) and the “forever” PFAS chemicals. The marine food web accumulates and magnifies these toxic substances. Moreover, heavy metals from the corrosion protection on the turbines will leach into the water, further compromising the health of marine life.

Increased Air Pollution in Climate Justice Areas

According to the American Lung Association, Atlantic County has one of the lowest air pollution levels in New Jersey. The climate justice areas will be affected by the Atlantic Shores project’s local pollution more than any other area.

[12 NJ Counties Ranked Among Worst Air Quality In The USA: Report | Rumson, NJ Patch](#)

How will the vessel and road traffic from constructing and maintaining 400-500 wind energy bases and turbines off our coast impact the air pollution in Atlantic County? Below is the table of ocean vessels that will be used for just the Atlantic Shore South Project. According to Atlantic Shores South COP

“Currently, maximum estimates for the total number of vessels required for any single offshore construction activity range from two vessels for scour protection installation to up to 16 vessels for OSS installation. For export cable installation, it is currently estimated that up to six vessels could be operating at once. Across the Projects, if all construction activities were occurring concurrently (which is unlikely), a total of 51 vessels could be present at any one time.”

According to Construction Timelines in Atlantic Shores South and Orsted Ocean Wind 1 Projects construction plans, many of the construction phases will be running currently for both projects. Construction will continue to increase air pollution as Atlantic Shores North and Ocean Wind 2 projects are constructed. Reporting is absent for increased air pollution and there is no mention of on shore road traffic vehicles and their pollution. On shore pollution from construction and maintenance vehicles is equally ignored.

Major Impact to Historical Properties in or near Climate Justice Areas

According to BOEM, Climate Justice Areas in Atlantic City will be near the largest number of historical properties listed in its Cumulative Historic Resources Visual Effects Analysis document. The climate justice areas will be in or close to more historic properties negatively impacted by the cumulative effects of offshore wind projects than any other community. The significant negative impact to the integrity of the historical properties in Atlantic City is a public detriment and is a hazard to public welfare. Section 106 of the NHPA requires the consideration of the impacts of Atlantic Shores offshore wind development on the integrity of properties either listed or eligible for listing on the NRHP U.S. Code 36 CFR Part 800- Protection of Historic Properties – the process known as the Section 106 review. The Atlantic Shores project will negatively impact the feeling of the historic properties such that it will significantly impact the historic properties’ expression of the aesthetic or historic sense of a particular period of time. Based on the viewshed analysis of historical properties, it is determined that

the reduction in visual resources will have a direct negative impact on the scenic view and integrity of these properties which can clearly not be mitigated.

This document doesn't include the lighthouse in Atlantic City in the historical property list. How many more properties in the climate justice areas were omitted from the list?

[*Atlantic Shores Offshore Wind South DEIS Cumulative Historic Resources Visual Effects Analysis.pdf](#)

Further Degradation of Beach Experience near Climate Justice Areas and Other Coastal Areas

Atlantic Shores Project will result in further degradation of beaches areas as follows:

1. Reduced Wind Speed at the Shore

Small turbines, 7% reduction 6 miles downwind of wind complex. Large turbines, 26% reduction 9 miles downwind (same distance from shore to turbines here and fewer wind turbines)

2. Wave Height Decreases with Wind Speed

Local Air Temperature Increase will be 1.1 degrees 28 miles downwind of moderate size turbines.

3. Airborne Wind Turbine Noise to Persons

Noise propagates more effectively over water than land, annoying at the beach and causing sleep disruption.

- Continual Turbine Operation Measurement Study:
 - o 1 operating turbine = 118 dBs/Vesta-236 15-megawatt turbine Specifications AND 7 turbines = 126.3 dB
 - o Noise loss over 9 miles = 73 dB
 - o Net noise = 53.3 dB
 - o Night time noise level is 50 dB
 - o 3 dB difference doubles the noise intensity to the receiver
- Construction Pile Driving
 - o 137 dB, 10.7 dB higher than the 7-turbine array used above for operational noise example.
 - o Noise loss over 9 miles = 73 dB which results in a noise level at the shore of 64 dB, close to the daytime standard of 65 dB, or equal to the noise of a vacuum cleaner

Footnotes:

Stoelinga et. al., "Estimating Long-Range External Wake Losses in Energy Yield and Operational Performance Assessments Using the WRF Wind Farm Parameterization", ArcVera Renewables, 2022

References

Wake studies around a large offshore wind farm using satellite and airborne SAR M.B. Christiansena,*, C.B. Hasager a
Risø National Laboratory, Wind Energy Department, Frederiksborgvej 399, P.O. Box 49, DK-4000 Roskilde, Denmark –
merete.bruun.christiansen@risoe.dk

LETTERS, Micrometeorological impacts of offshore wind farms as seen in observations and simulations S K Siedersleben¹, J K Lundquist^{2,3}, A Platis⁴, J Bange⁴, K Bärffuss⁵, A Lampert⁵, B Cañadillas⁶, T Neumann⁶ and S Emeis¹ ¹ Karlsruhe Institute of Technology, Institute of Meteorology and Climate Research, Atmospheric Environmental Research (IMK-IFU)

Johansson, Sound propagation Around Off-Shore Wind Turbines, 2003.

Offshore Airborne Sound Assessment Revolution Wind Offshore Wind Farm prepared for Revolution Wind, LLC 56 Exchange Terrace, Suite 300 Providence, RI 02903.

Wind Energy Projects will Essentially be the Equivalent of Federal Government Condemnation of the Beaches in Climate Justice Areas

The populations of climate justice areas use the beaches located in Atlantic City for their recreation. The beaches in Atlantic City are free. There is no fee-based badge or pass needed to visit. According to 2019 NOAA study mentioned in the tourist section of this document, 57% of people rank scenic beauty or view as a very important beach characteristic. Climate Justice Areas will have the largest cumulative visual impact of any other area of New Jersey or perhaps the country. There will be 876 wind turbines visible from the Atlantic City Boardwalk. There are more visual wind turbines than any other area, probably more than along other areas located in the eastern coast. The Atlantic Shores project will add substantial visual clutter and the movement of rotor blades will become the focus of the view. The wind turbines will become the dominant feature in the seascape compared to the existing water resources, landform and user activity. As a result, the beaches once enjoyed by minority and low-income families will be essentially condemned by the industrialization of the ocean view and the major negative impact to the low income and minority population's enjoyment of the beaches.

Cost of Offshore Wind is Based on Bad Assumptions

The total cost of delivery to the grid is an unknown (to the public because it is redacted in the power purchase agreement contracts) assumption in the PPA energy price agreements with the NJ BPU. The PPA agreements state that the rates will be adjusted once the energy is connected to the grid. The risk of the cost is minimized for Atlantic Shores because there is maximum cost responsibility but there is no maximum cost responsibility for rate payers. The cost burden on rate payers is open-ended.

Atlantic Shores project documents fail to address cost issues with its connection to and upgrading of the PJM Grid. The Center on Global Energy Policy is begging for money to overhaul the PJM grid needed to effectively operate with offshore wind. In NJ and MD.

“These federal initiatives come at a critical time to support state-led efforts. Both Maryland and New Jersey are part of the same mega electricity market, known as PJM Interconnection, which runs a combined electric grid that stretches across all or part of 13 states and the District of Columbia. State policy makers occupy a special position in PJM, with the ability to demand inclusion of transmission projects, considered necessary to meet state public policies, directly into the PJM transmission expansion process. Transmission projects sponsored by state actors can bypass time-consuming hurdles, such as battles over cost allocation and siting, and take advantage of PJM's competitive transmission solicitation process to achieve better prices for consumers..... Still, significant barriers remain to actually building an offshore grid. First, offshore wind transmission solutions aren't cheap. The type of multistate offshore transmission highway envisioned in the DOE's groundbreaking report is likely to run into the tens of billions of dollars, significantly more than any single state—or even a

collection of states—is likely going to be willing to fund on its own Federal policy makers will likely need to identify sources of funding to make a transmission backbone a realistic possibility.”

<https://www.energypolicy.columbia.edu/an-offshore-wind-super-grid-for-the-east-coast/c>

Recent NJ legislation provided an estimated \$1.4 billion for the Orsted Wind Developer on the backs of the ratepayers which is \$2,800 per household based on the 500,000 households they state will be powered by the project. Atlantic Shores is asking for the same. The precedent has been set to continue to find new sources of funds to give to the wind companies at the expense of the rate payers and taxpayers.

<https://www.inquirer.com/news/nj-offshore-wind-tax-credits-whales-20230630.html#:~:text=The%20act%20allows%20for%20a,used%20by%20offshore%20wind%20developers.>

Many wind developers are backing out of their power purchase agreements stating that inflation has greatly impacted their costs. According to Bloomberg, before bonus tax credits, costs associated with US offshore wind projects have risen 57% since 2021 due to inflation in components and labor costs, as well as rising interest rates.

Shell Oil is a partner in Atlantic Shores LLC. At Shell Oil's May 2023 stockholder meetings, by a margin of 4-1, stockholders voted against the company's green/renewable plan/program/emphasis. According to Bloomberg (July 13, 2023), Also reported is that Shell is exploring options for its global renewable power operations, including the potential stake sale to outside investors, or separating the business into a more independent unit. The new CEO, Wael Sawan, is shifting focus to investments in fossil fuels. How will the turmoil in this company, who is a partner in this project, impact the viability of the project? Who will guarantee that the company will not take disastrous cost cutting shortcuts which will result in outcomes that will eventually harm the rate payers and populations impacted by them?

What is the financial viability of the Atlantic Shores project? What are the assumptions used in the LCOE for the Atlantic Shores solicitation #2 with the NJBPU? What are the assumptions used for infrastructure costs and how have they increased? What are the assumptions of the fixed operation and maintenance cost assumptions and how have they increased? What is the discount rate or cost of capital assumptions for the project and how has this changed? What is the assumption for insurance costs and how has this increased? What is the assumption for the connection and system usage charges and how have they changed? What is the load factor assumption and is it realistic? How realistic are the assumptions for wind blade life and replacement? How will the changes in these assumptions impact rate payers? Since the utility costs will impact the underprivileged the most, what is Atlantic Shore's plan to address the increased costs?

How will residents of Atlantic City and other coastal areas as well as the state of New Jersey afford the offshore wind energy bills? How will businesses at the shore, many who have to survive on a four month summer tourist industry, afford the offshore wind energy bills?

Conclusion

Based on all the issues presented in our comments, we see absolutely no merit in any level of Government - including the proposed New Jersey Department of Environmental Protection's approval of Atlantic Shores LLC Green Acres diversion permit - because Atlantic Shores clearly violates Environmental Justices rights, and to our knowledge Atlantic Shores has done little to satisfy New Jersey Federal, State, or Atlantic City laws which protect the populations living in the environmental justice areas from the impending destruction and potentially serious health issues Atlantic Shores

intends to bring to this community's beaches, streets, parks and neighborhoods. This is not just a commentary; this is Environmental Law protecting the citizens of New Jersey.

In addition, Atlantic Shores has not addressed numerous significant negative impacts their project will have on the coastal populations including but not limited to public health, safety or welfare; nor, the significant public detriment by interfering with the local government's ability to deliver services as a result the negative impact of the project on the Atlantic City, Atlantic County and New Jersey Coastal economies.

A few attendees at the July 26, 2023, public scoping meeting stated that testimony regarding populations in climate justice areas, minority and low-income populations was racist. These attendees were critical of those speakers addressing the inadequacies of Atlantic Shores treatment of populations in the climate justice areas of Atlantic City.

It is important to ensure that the affected residents of Atlantic City and other coastal towns were well represented. Atlantic Shores claims it has done the minimum necessary to meet public notice requirements of the Scoping Input Session, but they have not demonstrated that populations in environmental justice areas have been fully informed of the environmental impacts of the offshore wind project.

We believe that all coastal populations will be significantly negatively impacted by the project and have been mistreated by Atlantic Shores and Government Agencies. On the other hand, the federal, state, and local governments have awarded protection to the populations in climate justice areas through laws and regulations for very good reasons. If there are critics who believe that our written comments are racist, then they also believe that the laws and regulations and the reasons for implementing them are racist. Those critics should communicate their objections to the laws that protect the populations in climate justice areas to their government officials or they can vote for political candidates who support eliminating laws and regulations protecting minority, low income and populations in climate justice areas.