

GNowind Alliance

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OFFSHORE WIND FAQs

What is wind energy?

- Wind energy is electricity generated by turbines that convert the movement of wind. Wind turbines convert the kinetic energy of the moving wind into electrical energy.

How do wind turbines work?

- The best way to think about a wind turbine is a reverse fan: rather than using electricity to make wind, enormous fans use wind to make electricity. [Take a Look Inside a Wind Turbine](#) to understand the mechanics or view this [Wind Turbine Animation](#) link.
- Wind turbines – collectively a wind farm – can be installed onshore and offshore. Conditions for optimal wind energy production are more prevalent offshore than onshore. For more information, please explore "[How Do Wind Turbines Work.](#)"

Where are wind farms located?

- There are over 71,000 existing wind turbines across the United States, the vast majority of which are land-based (onshore). Two offshore wind farms currently exist in the U.S., and they are in Block Island, Rhode Island (Block Island Wind Farm) and Norfolk/Hampton Roads, Virginia (Coastal Virginia Offshore Wind). **No wind farms exist in Louisiana.**
- Only 3 locations in the United States are eligible for offshore wind energy – the Atlantic coast, the Pacific Coast, and the Gulf Coast. Offshore developers are already installing wind farms along the East Coast, and companies are increasingly looking to the Gulf.
- Offshore wind farms are located in federally owned or state-owned waters. Lease processes and legal regulations can differ slightly between these jurisdictions. Generally, Louisiana state waters extend 3 nautical miles from the nearest land; federal waters extend from this point to 200 nautical miles into the Gulf of Mexico. However, for reef fish fishery management, Louisiana waters extend to 9 nautical miles.

How much energy do wind turbines provide in the United States?

- Wind turbines were the source of about 9.2% of total U.S. utility-scale electricity generation in 2021. For comparison, electricity production in 2021 from wind turbines in Finland [was 11.4%](#) of the nation's electricity generation.
- Total 2021 U.S. electricity generation from wind energy was 380 billion kilowatt-hours (kWh) ([U.S. EIA](#)), which could power approximately 35.6 million households.

Is wind energy reliable?

- Wind energy resources can reliably integrate into industrial operations or a utility provider's grid regardless of resource variability; grid operations are equipped to balance diverse resources. Wind speed variability does not make wind energy unreliable.

Is wind power more expensive than other forms of energy?

- On a national scale, land-based utility-scale wind is one of the lowest-priced energy sources available today. Because electricity from wind farms is sold at a fixed price over a long period of time, wind energy mitigates the price uncertainty that fuel costs add to traditional sources of energy.
- A [2020 National Renewable Energy Laboratory \[NREL\]](#) study indicated that offshore projects in the Gulf of Mexico could become affordable by 2030.

Will investments in and the development of wind energy cause Louisiana taxpayers to spend more on electricity bills? Will wind energy cause home energy prices to increase?

- Analyzing the financial impact of the Block Island Wind Farm can provide important context on the impact on local energy prices. Residents of Block Island, Rhode Island, had their bills cut by about 40% after the instillation of the Block Island Wind Farm.

Why Southern Louisiana?

- Because of its offshore oil and gas supply chain, Louisiana has the expertise and infrastructure to build offshore wind turbines. This allowed eight Louisiana-based companies contributed to the Block Island Wind Farm, the first U.S. commercial offshore wind farm, including the following:
 - T. Baker Smith, LLC – engineering and surveying
 - LM Wind Power – blade testing & power
 - Keystone Engineering Inc. – foundation engineering & drawings
- NREL ranked Louisiana **fourth** in state offshore technical wind potential. Louisiana's shallow continental shelf is ideal for next-generation wind farms, and our state boasts one of the nation's largest shares of deployable offshore wind resources.

What are the immediate opportunities for offshore wind in Southeast Louisiana?

- Wind energy development in South Louisiana is projected to create three distinct economic opportunities. First, businesses related to oil and gas will transition to service offshore wind instillation in other markets, like the Louisiana companies that contributed to the Block Island Wind Farm.
- Using energy generated from offshore wind farms in the Gulf to power industrial manufacturing is a secondary near-term opportunity. Before companies begin integrating wind energy into electrical grids, industrial manufacturers along the Mississippi River will use wind energy as a cleaner alternative to current energy demands.
- Offshore wind presents an opportunity to decarbonize Southeast Louisiana, particularly our industrial corridor. Energy and manufacturing industries in the region along the Mississippi between Baton Rouge and New Orleans consume about 70% of energy produced in the state and produce between 26% and 55% of greenhouse gas emissions. Integrating wind energy into industrial processes is essential to decarbonize the region.

How will investment in wind energy help businesses in Louisiana and the Greater New Orleans area?

- A single 600-megawatt wind farm off the Louisiana coast would produce an estimated 4,470 jobs and \$445 million in economic output for Louisiana during the construction phase, according to NREL. Operations on one farm would contribute 150 new permanent jobs, along with an estimated \$14 million annually.
- Wind is a natural extension of the Greater New Orleans energy industry and employs many of its related work and sectors. With LM Wind Power developing the world's largest turbine blades in New Orleans East, wind is an advanced manufacturing opportunity that will support Louisiana's reputation as a leader in environmental management.
- Industrial producers along the Mississippi River will gain access to a more diversified and cleaner source of energy, and these businesses will be the first consumers of renewable wind energy produced.

Will wind turbines affect the natural wildlife of Louisiana: birds and fisheries?

- Migratory birds killed by wind turbines occur substantially less frequently than those killed in collisions with communication towers, power lines, or buildings. The impact of wind development on birds has been greatly reduced by improvements in turbine design and siting.
- There are limited impacts imposed on a marine ecosystem or seafood supply from offshore wind. Representatives in Louisiana's recreational fishing industry have indicated support for the development of wind energy in the Gulf of Mexico, since turbines may be able to function as artificial reefs and attract fish.

Will development of wind energy in South Louisiana compete with workforce and talent demand from oil and gas industries?

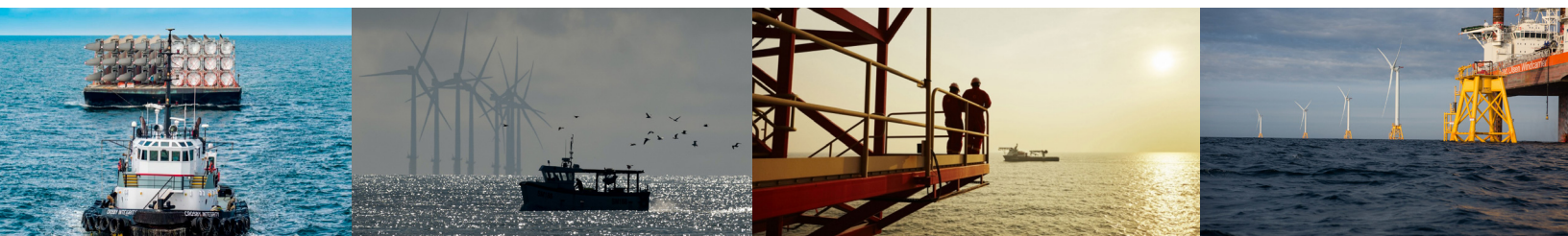
- Wind energy development on Louisiana's Gulf Coast will diversify energy sources, and alternative energy sources will remain necessary alongside wind turbines. Gov. Edwards on this point has announced, "Instead of working against oil and gas companies, we are working with them. In Louisiana, that will look like offshore oil platforms and wind turbines side by side."
- Once Louisiana's largest and high-paying industry, oil and gas now employs just 1.5% of the state's workforce ([MIT Report](#)). Employment in oil and gas has been declining since 2014 and took another huge hit from the COVID-19 pandemic ([LSU Manship School](#)). Wind energy can capitalize on the available employment with industry expertise.
- Jobs and skills in wind energy are transferable, meaning that Louisianians who previously worked in oil and gas or supporting companies have the opportunity to reapply their knowledge and skills to offshore wind.

What are the state and federal government doing to advance offshore wind energy?

- Gov. John Bel Edwards established in November 2020 the **Climate Initiatives Task Force**. The development of wind energy off the coast of Louisiana will play a critical role in realizing the Task Force and Governor's ambition to reach net zero greenhouse gas emissions by 2050.
- Gov. Edwards in June 2022 signed into law HB165, which creates a legal framework to allow offshore wind leasing in state waters, as well as a revenue sharing mechanism between companies and the state.
- President Biden launched in June 2022 a Federal-State Offshore Wind Partnership with eleven East-Coast governors. The first task of the partnership is to identify expansion opportunities for offshore wind supply chains. Visit the [White House Fact Sheet](#) for more information.

What is GNO, Inc. doing to advance the development of wind energy?

- GNO, Inc. is committed to helping companies do business in the Greater New Orleans region, and this includes the attraction, retention, and expansion of wind energy developers off the coast of Louisiana.
- GNO, Inc. organizes, manages, and oversees the GNOwind Alliance which is comprised of 180+ organizations that provide the expertise to grow the region and state as an energy leader. RWE Renewables officially partnered with the GNOwind Alliance in May 2022 to help establish an offshore wind supply chain in Louisiana. For more information regarding the GNOwind Alliance, including a calendar of events for the wind industry visit gnowind.org.
- GNO Wind Alliance is already supporting workforce programs that train workers to transfer skills from oil and gas to wind energy through partnership with academic and industry partners
- In June 2022, GNO, Inc. led a business trip to Rhode Island to visit the Block Island Wind Farm. Participants observed the role and potential for Louisiana to be the supply chain for offshore wind in America, and the trip's webpage serves as your opportunity to get up to speed on all things wind!
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