GNOwind Alliance

Laissez Le Bon Vent Souffler

THE GNOWIND ALLIANCE - POWER & JOBS FOR THE FUTURE

GREATER NEW ORLEANS INC
REGIONAL ECONOMIC DEVELOPMENT

2022

GNO, INC'S "GNOWIND ALLIANCE"

At over 130 members strong, GNO, Inc.'s GNOwind Alliance aims to develop coastal Louisiana as a global offshore wind energy hub.

Not Comprehensive

THE STRATEGY

The Alliance has five work-streams to help support the region's industry cluster.

COORDINATION	To maintain an active flow of information pertaining to BOEM Task Force activities and commercial opportunities.
ATTRACTION	To promote the region's value proposition to an international audience of OSW firms looking to expand to North America.
INFRASTRUCTURE	To evaluate OSW-specific infrastructure improvements and recommend financing tactics.
WORKFORCE	To advise universities and technical schools on new curricula to respond to OSW-skills demand.
INNOVATION	To facilitate the creation and scaling of new technologies and startups in OSW.

OFFSHORE WIND USES OIL & GAS EXPERTISE

	OFFSHORE OIL & GAS	OFFSHORE WIND
 OFFSHORE MARINE VESSELS	✓	✓
 SCIENCE & ENGINEERING JOBS	✓	✓
 PORT INFRASTRUCTURE	✓	✓
 EQUIPMENT MANUFACTURING	✓	✓
 OFFSHORE FIELD SERVICES	✓	✓

US WIND PROJECTS ALREADY RELY ON LOUISIANA

Block Island Wind Farm made possible by LA companies

Lafayette-based Aries Marine Corp. and Galliano-based Falcon Global LLC are Louisiana liftboat operators that helped develop the nation's first commercial offshore wind farm, Block Island. For that project, Metairie-based Keystone Engineering provided design assistance and Houma-based Gulf Island Fabrication built foundation jackets and piling.

LM Wind Power – Technology Center Americas

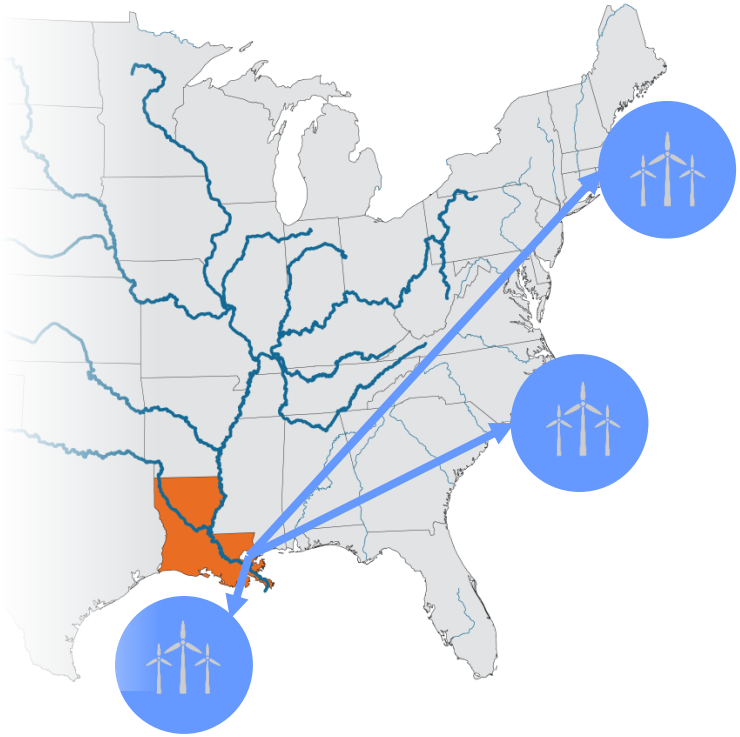
LM Wind Power, a unit of GE Renewable Energy, invested in a new Technology Center Americas facility to develop and test new techniques for designing and building wind turbine blades at its facility on the NASA Michoud campus outside of New Orleans, Louisiana.

Edison Chouest builds first Jones Act compliant SOV

Edison Chouest Offshore (ECO), Ørsted and Eversource announced the execution of a long-term charter agreement for the provision of the first-ever U.S. flagged "Jones Act" compliant Service Operations Vessel (SOV). The SOV will be engineered, constructed and operated by ECO as an integral part of the operation and maintenance of several offshore wind farms.

LOUISIANA ADVANTAGE

At the epicenter of the US offshore maritime sector, coastal Louisiana is the smart location for OSW market leaders.



Ranked 4th among all US states in net technical potential for OSW energy.

Source: *National Renewable Energy Laboratory*

A 70-year legacy in offshore maritime work rooted in safety and innovation.

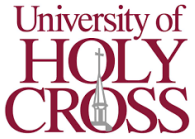
The largest port complex in the western hemisphere with ample site options.

A low-cost business environment and top workforce training programs.

Pro-business and highly coordinated government entities in support of OSW.

THE WORKFORCE PIPELINE

Coastal Louisiana produces a vast quantity of OSW-relevant technical and professional talent through its network of higher education institutions.



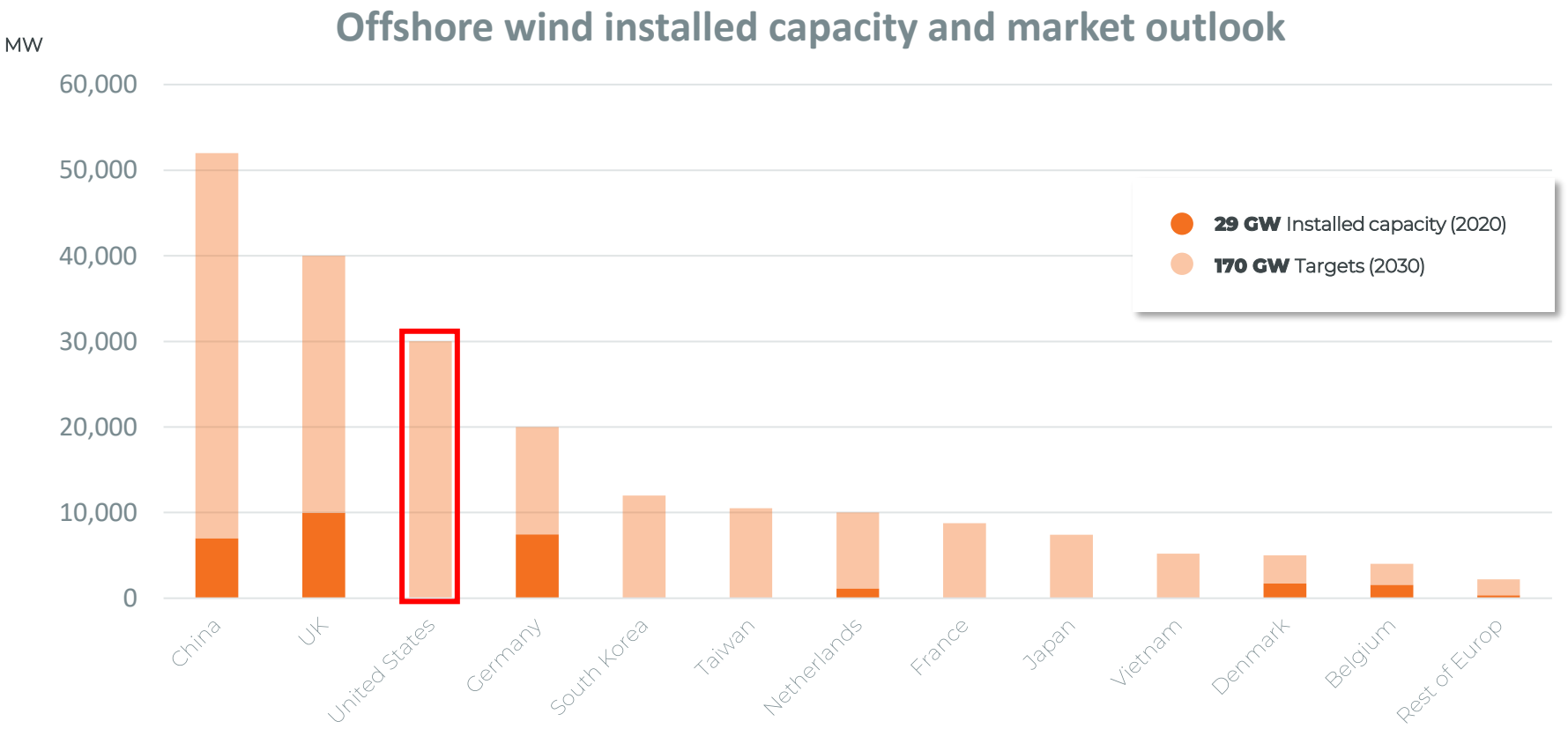
OSW HAS GLOBAL IMPLICATIONS

Technological advancements allow OSW developers to install farms wherever there is moderate wind and coastal population centers.

Source: *Ørsted*

THE NEXT DECADE IN OFFSHORE WIND ENERGY

Countries around the globe have set aggressive targets for new OSW capacity that will result in an estimated $1 trillion of new capital investments.

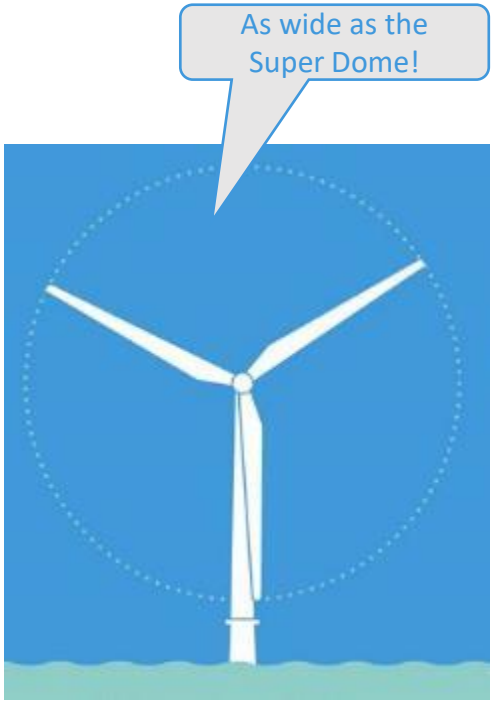


Source: *Global Wind Energy Council*

PRICE COMPETITIVENESS AT SCALE

The cost of OSW-produced electricity has dropped drastically - by 67% in 10 years due to rapid technological advancement.

The first Haliade-X (10MW) nacelle recently rolled out of the production hall in France.

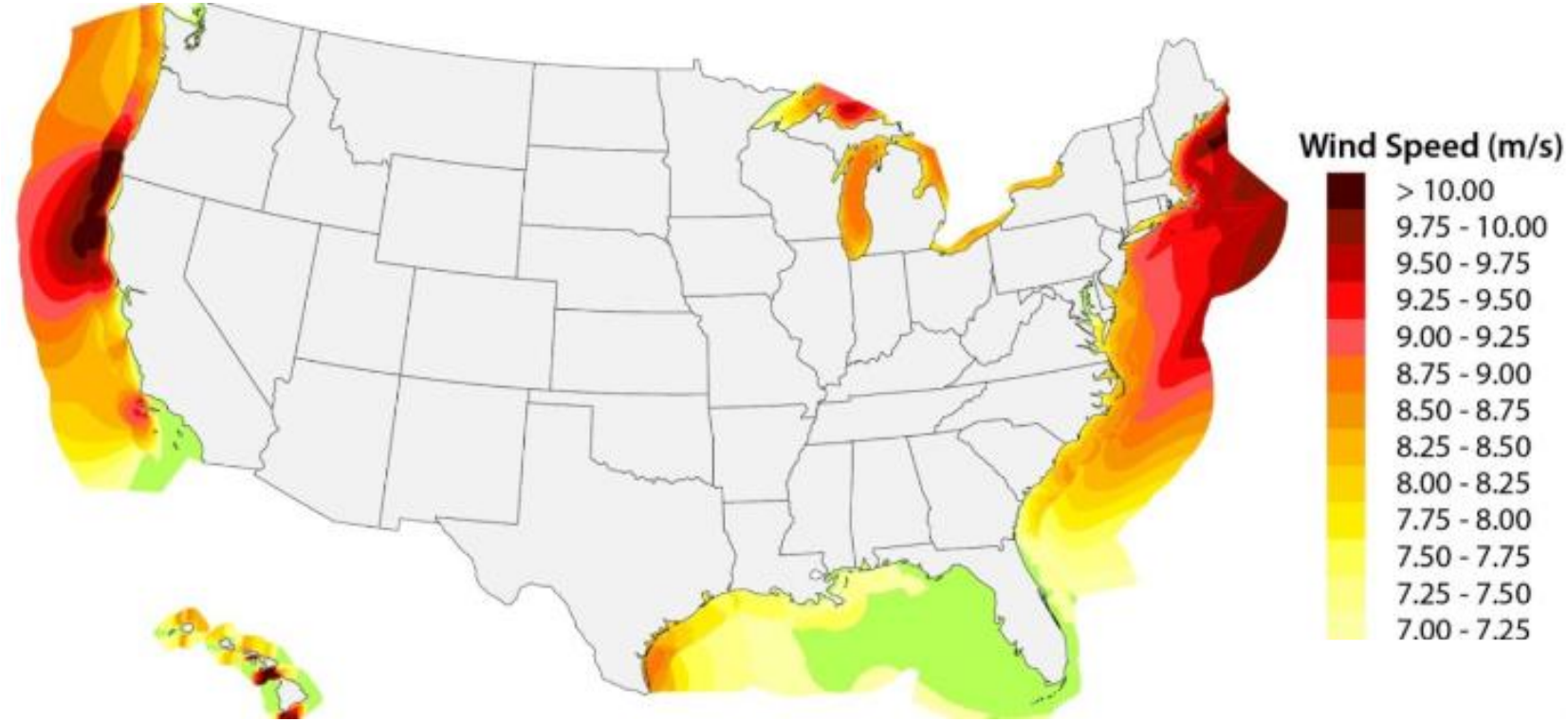


H: 853 ft. Diameter: 722 ft.

Source: *GE Renewables*

EACH COAST HAS UNIQUE OSW OPPORTUNITIES

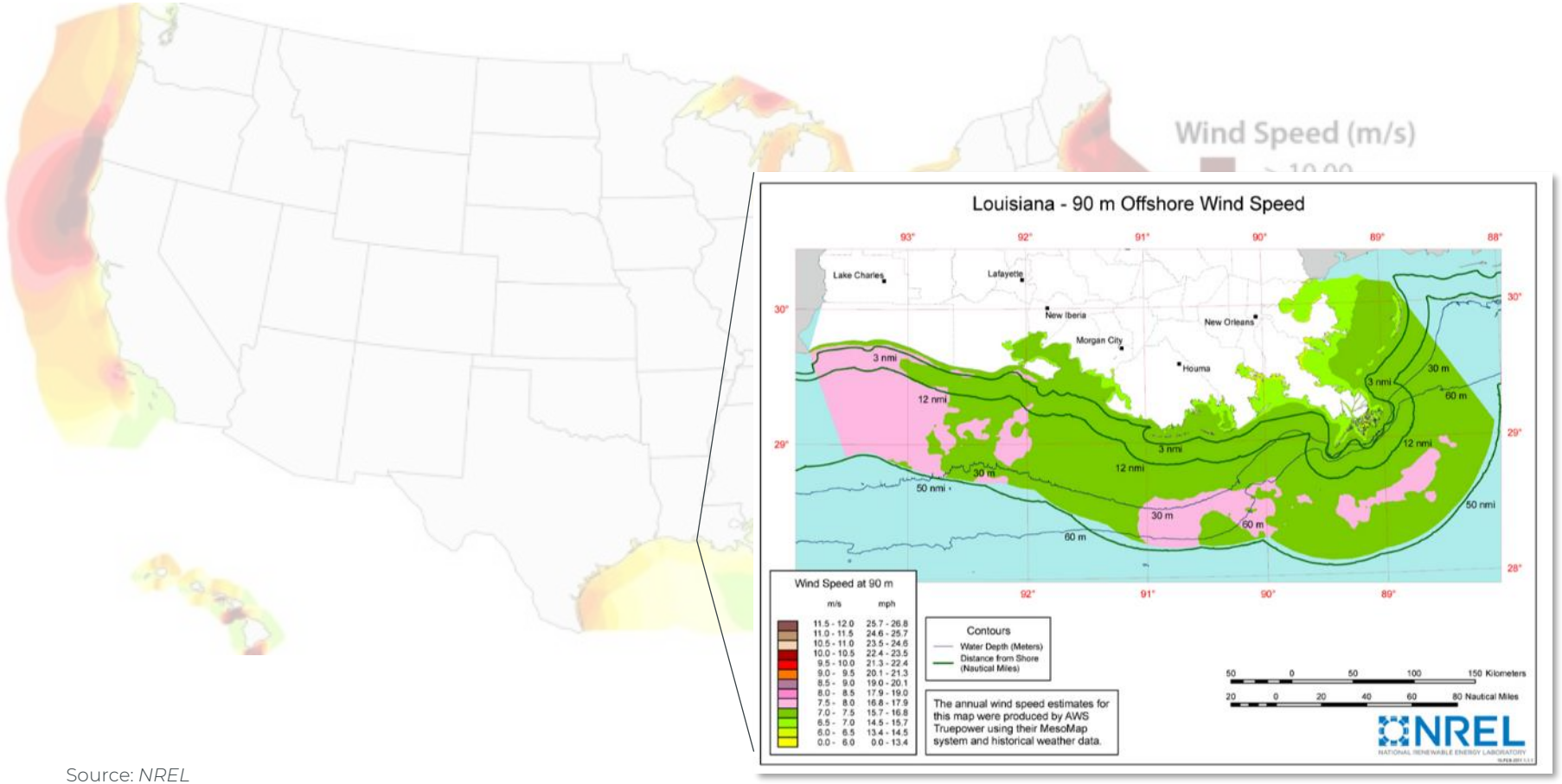
While wind speeds are favorable along each coast, other factors such as water depths, energy demand, and electricity costs influence feasibilities.



Source: *NREL*

EACH COAST HAS UNIQUE OSW OPPORTUNITIES

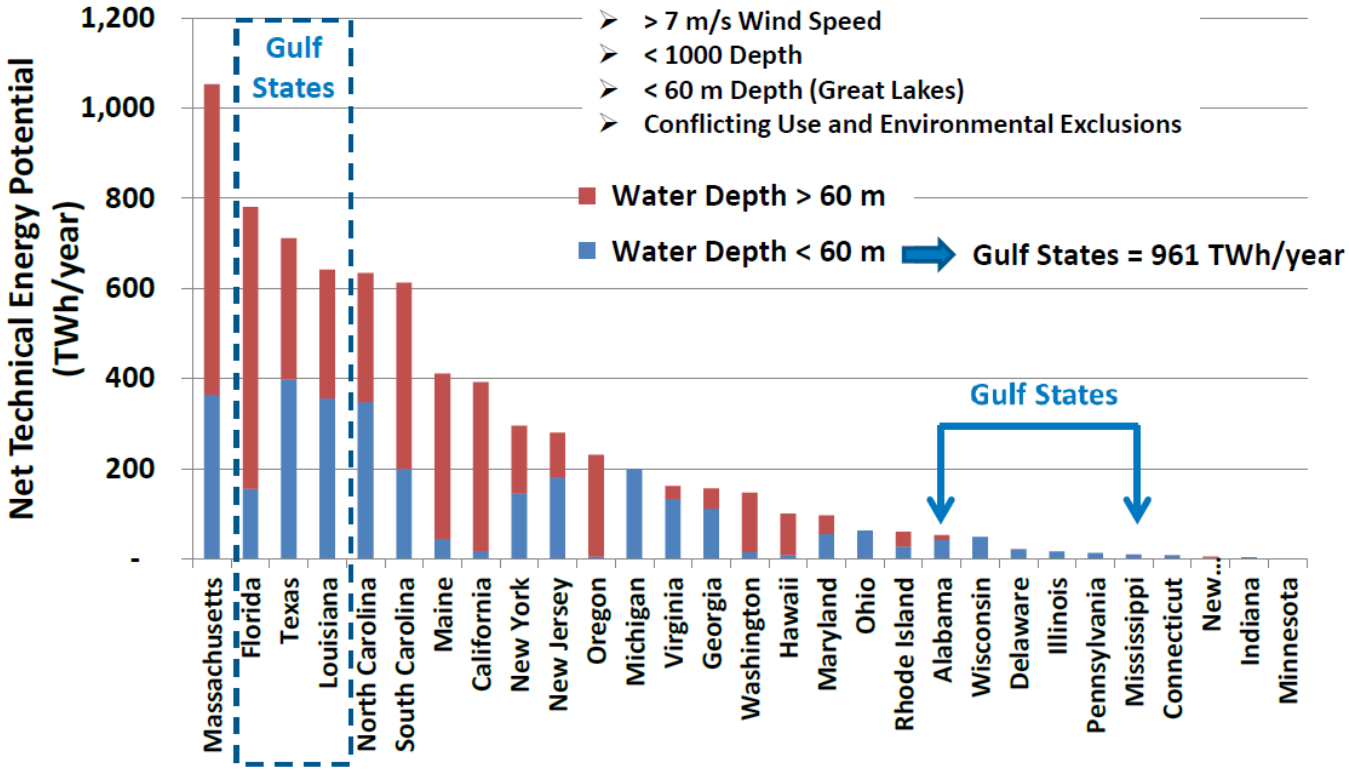
Louisiana has a unique advantage given the Gulf shallow waters.



Source: *NREL*

LOUISIANA HAS ENORMOUS POTENTIAL

The combination of shallow waters and moderate wind speeds places Louisiana fourth in net technical energy potential.



Musial, W. et al. ***2016 Offshore Wind Energy Resource Assessment for the United States.*** NREL/TP-5000-66599. http://www.nrel.gov/docs/fy16osti/66599.pdf

Source: *NREL*

LOUISIANA INTERGOVERNMENTAL TASK FORCE

The Edwards Administration paved the way for the exploration of offshore wind energy in the Gulf of Mexico with a Task Force request to BOEM.

Office of the Governor
State of Louisiana

JOHN BEL EDWARDS
GOVERNOR

P.O. Box 94004
BATON ROUGE, LOUISIANA 70804-9004
(225) 342-7015
GOV.LA.GOV

October 21, 2020

Dr. Walter Cruickshank
Acting Director
Bureau of Ocean Energy Management
Department of the Interior
1849 C Street, NW
Washington, D.C. 20240

RE: BOEM Intergovernmental Taskforce (Offshore Renewable Energy) for Louisiana

Dear Dr. Cruickshank:

I am writing to request establishment of an intergovernmental task force for offshore renewable energy for the State of Louisiana. The purpose of the task force would be to facilitate coordination and consultation among federal, state, and local governments on renewable energy commercial leasing proposals in federal waters offshore of Louisiana.

I hereby designate Harry J. Vorhoff of the Governor's Office – Coastal Activities as the primary point of contact for Louisiana. Mr. Vorhoff will work with BOEM to establish the task force and coordinate involvement of state agencies and local governments. Mr. Vorhoff can be contacted at (225) 342-6952 or harry.vorhoff@la.gov.

Louisiana looks forward to working with BOEM on establishment of the task force.

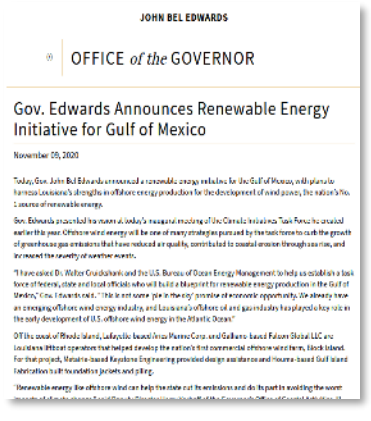
Sincerely,

John Bel Edwards
Governor

cc: Michael Celata, Regional Director, Gulf of Mexico, Bureau of Ocean Energy Management
Tom Harris, Secretary, Louisiana Department of Natural Resources
Don Pierson, Secretary, Louisiana Economic Development
Chip Kline, Executive Assistant to the Governor for Coastal Activities

LOUISIANA IS STARTING THE PROCESS

The Offshore Renewable Energy Task Force ensures local input and oversight throughout the planning and operation stages.


JOHN BEL EDWARDS

OFFICE *of the* GOVERNOR

Gov. Edwards Announces Renewable Energy Initiative for Gulf of Mexico

November 09, 2020

Today, Gov. John Bel Edwards announced a renewable energy initiative for the Gulf of Mexico, with plans to harness Louisiana's strengths in offshore energy production for the development of wind power, the nation's No. 1 source of renewable energy.

Gov. Edwards announced his intent at today's inaugural meeting of his Climate Initiatives Task Force, he created earlier this year. Offshore wind energy will be one of many strategies pursued by the task force to curb the growth of greenhouse gas emissions that have reduced air quality, contributed to coastal erosion through sea rise, and increased the severity of weather events.

"I have asked Dr. Walter Cruickshank and the U.S. Bureau of Ocean Energy Management to help us establish a task force of federal, state and local officials who will build a blueprint for renewable energy production in the Gulf of Mexico," Gov. Edwards said. "This is not some pie in the sky promise of economic opportunity. We already have an emerging offshore wind energy industry, and Louisiana's offshore oil and gas industry has played a key role in the early development of U.S. offshore wind energy in the Atlantic Ocean."

Off the coast of Rhode Island, Lafayette based Ariss Marine Corp. and Gulfport based Falcon Global LLC are Louisiana-based operators that helped develop the nation's first commercial offshore wind farm, Block Island. For that project, Metairie-based Keystone Engineering provided design assistance and Houma-based Gulf Island Fabrication built foundation jackets and piling.

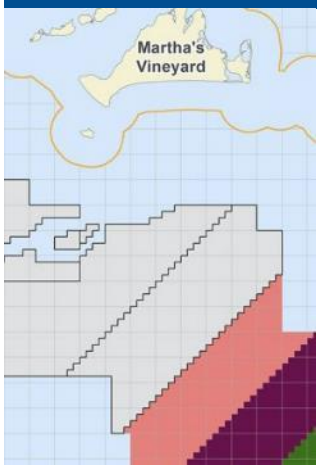
"Renewable energy like offshore wind can help the state cut its emissions and do its part in avoiding the worst

Task Force Request

Launched June 14, 2021

Planning & Analysis

Target Date: Q4 2022



Leasing

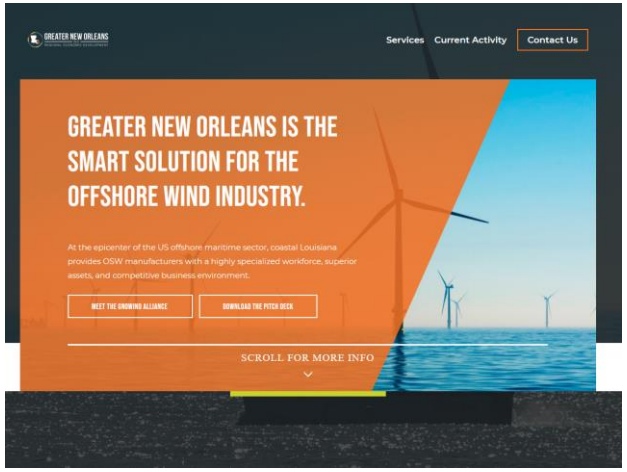
Site Assessment

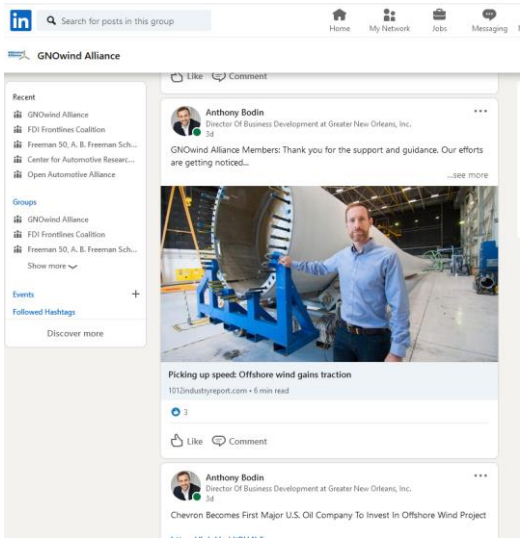
Construction & Operations

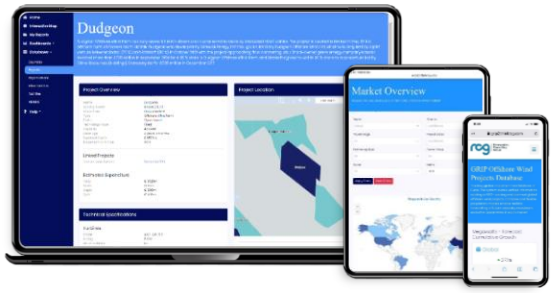
Offshore Renewable Task Force Oversight

GNOWIND ALLIANCE EFFORTS TO-DATE

The GNOwind Alliance is executing strategic initiatives to communicate the regional value proposition while providing added valued to the industry.







Dedicated Landing Page

locate.gnoinc.org/wind/

LinkedIn Newsfeed

https://www.linkedin.com/groups/9025500/

Supplier Database

(forthcoming)

THE NEXT WAVE IN ENERGY JOBS

Coastal Louisiana has a once-in-a lifetime opportunity to dominate the next generation of marine energy jobs.

Michael Hecht: Wind power generation has a great future in the Gulf of Mexico

BY MICHAEL HECHT **JUN 17, 2021 - 6:00 PM** 2 min to read

1 of 2

Windmill blades prepared for transportation sit at the Associated Terminals on Weinberger Road in Chalmette, 2019.

STAFF PHOTO BY DAVID GRUNFELD

GNO Inc. says Louisiana is prime for wind power future

By Rob Masson

Published: Jul. 6, 2021 at 4:17 PM UTC | Updated: Jul. 6, 2021 at 6:23 PM UTC

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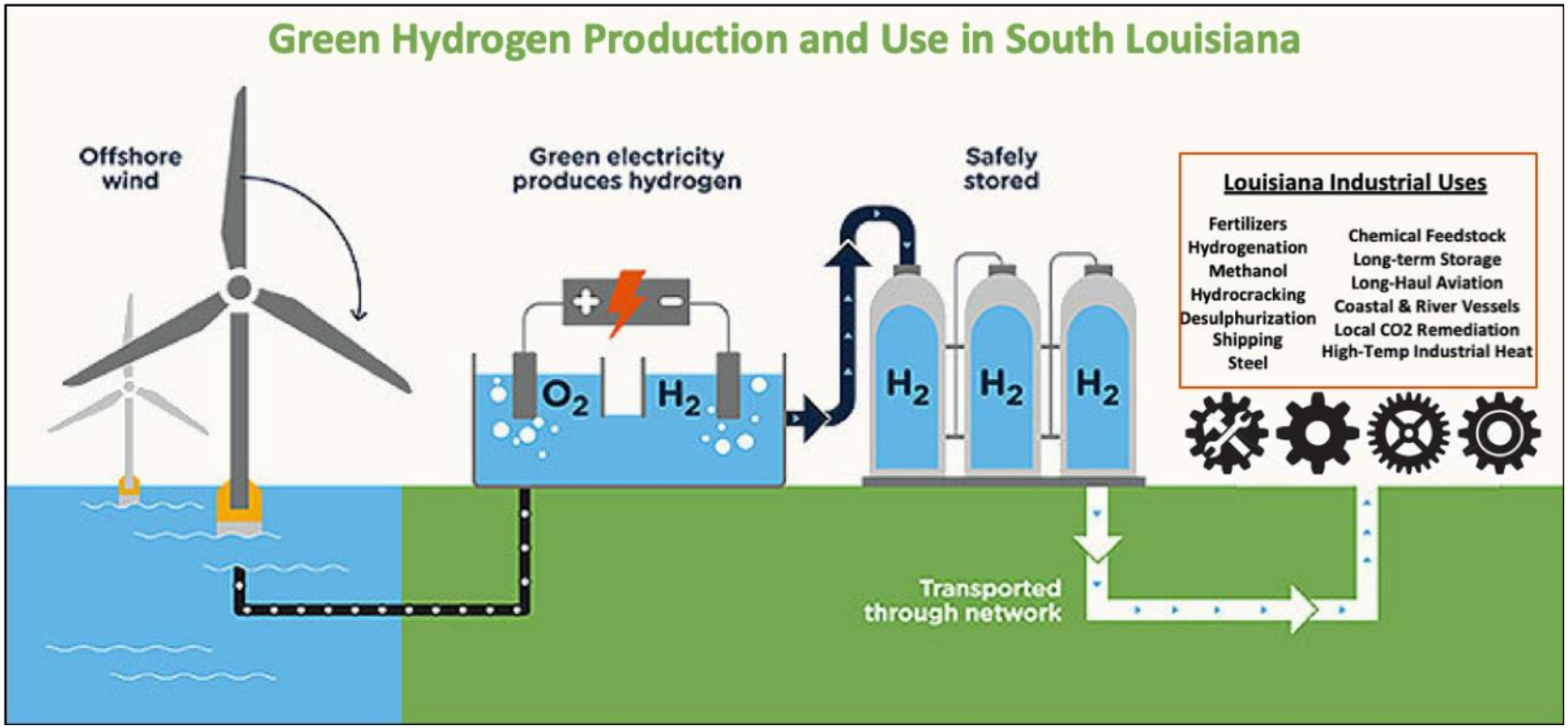
ECONOMIC IMPACT

If Louisiana captured 10% of the offshore wind market.

Source: *Business Network for Offshore Wind*

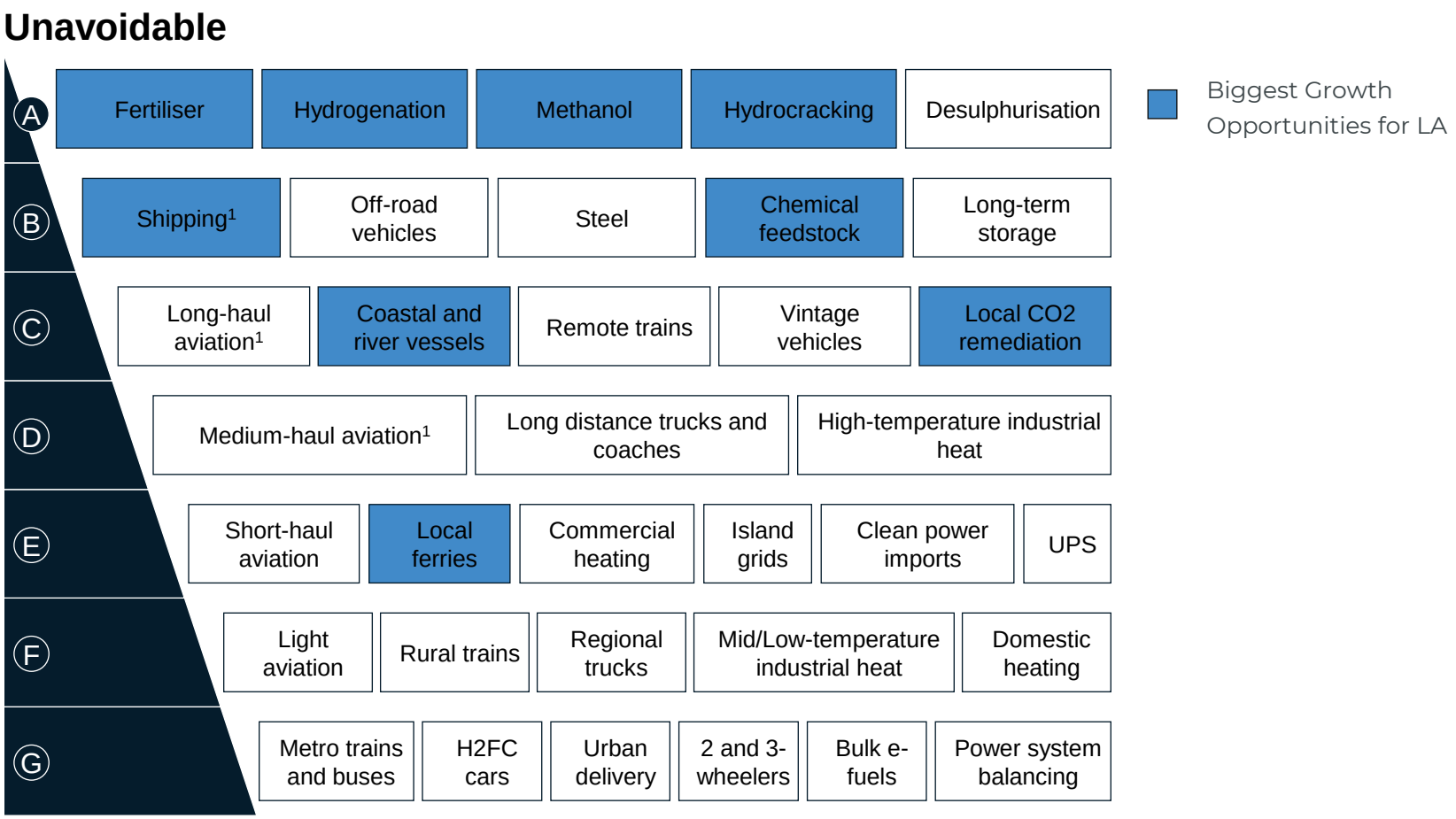
CLEAN HYDROGEN PRODUCTION

Green hydrogen is made from renewable electricity and water and creates zero CO2 (versus traditional hydrogen made from coal or natural gas); demand is expected to soar over 1,000% by 2050, per Goldman Sachs.



H2 END-USE NEW INDUSTRY ATTRACTION

South Louisiana has a competitive advantage in a number of the most appealing opportunities on the Clean Hydrogen Ladder.



1. Via ammonia or e-fuel rather than H2 gas or liquid

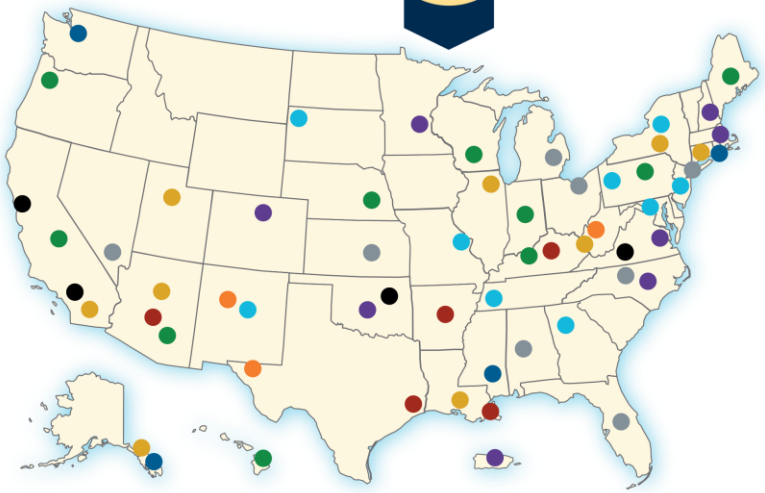
HYDROGEN HUB CONCEPT

South Louisiana can become a global leader in producing and storing green hydrogen by leveraging its competitive advantages, using offshore wind as the clean power source, and employing its industrial base as the customer.

FINALISTS

BUILD BACK BETTER REGIONAL CHALLENGE
EDA

AMERICAN RESCUE PLAN



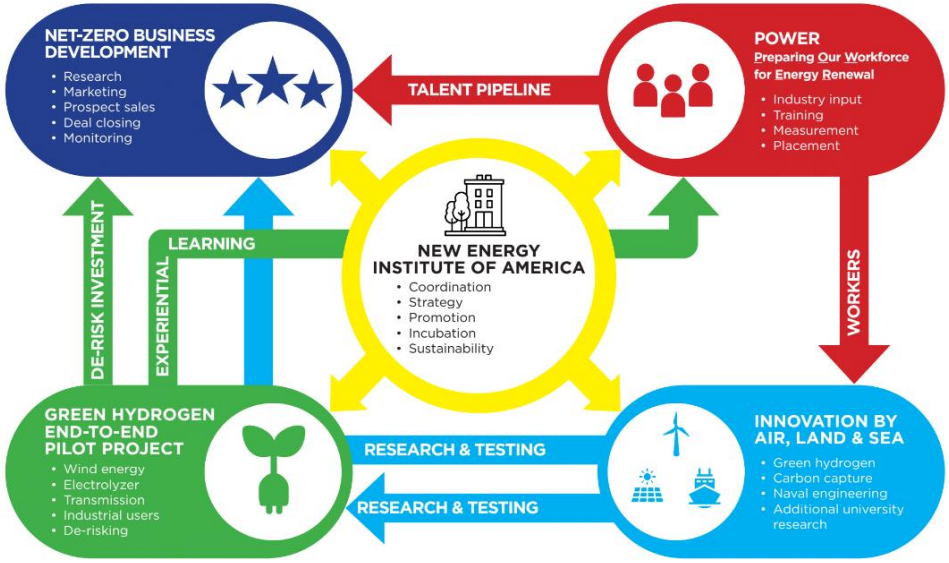
Key

- ADVANCED MANUFACTURING
- AEROSPACE and DEFENSE
- AGRICULTURE and NATURAL RESOURCES
- BIOTECHNOLOGY and BIOMANUFACTURING
- ENERGY and RESILIENCE
- HEALTH CARE and DIGITAL HEALTH
- INFORMATION TECHNOLOGY
- TRANSPORTATION, CONSTRUCTION, and LOGISTICS
- WATER and BLUE ECONOMY

Dots mark the lead institution of finalists

H2theFUTURE

ENERGY TRANSFORMATION IN SOUTH LOUISIANA



COMMON MISCONCEPTIONS

What everyone should know about offshore wind energy.

Fact or

• *"You can install wind turbines on decomissioned oil & gas platforms, right?"*	• Unfortunately, that's not possible. O&G platforms weren't designed to support massive vertical structures.
• *"Won't hurricanes destroy wind farms in the Gulf?"*	• Actually, GE received the first typhoon certification paving the way for a GoM hurricane insurance market.
• *"Offshore wind energy is too expensive to compete with natural gas."*	• Similar to solar, offshore wind energy is experience a rapid cost decline – production cost decreased 67% in 10yrs.
• *"Offshore wind turbines kill massive amounts of migratory birds!"*	• Feral cats kill vastly more migratory birds that wind turbines and new installations factor in migratory flows.

THANK YOU

GREATER NEW ORLEANS INC
REGIONAL ECONOMIC DEVELOPMENT

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