

LSU Journal of Energy Law and Resources

Volume 11
Issue 1 *Fall 2022*

2-6-2023

Wave Goodbye to the Jones Act: Why a Waiver of the Jones Act Should and Can be Granted for Offshore Wind Farm Installation

Chad Thornton

Repository Citation

Chad Thornton, *Wave Goodbye to the Jones Act: Why a Waiver of the Jones Act Should and Can be Granted for Offshore Wind Farm Installation*, 11 LSU J. of Energy L. & Resources (2023)
Available at: <https://digitalcommons.law.lsu.edu/jelr/vol11/iss1/11>

This Comment is brought to you for free and open access by the Law Reviews and Journals at LSU Law Digital Commons. It has been accepted for inclusion in LSU Journal of Energy Law and Resources by an authorized editor of LSU Law Digital Commons. For more information, please contact kreed25@lsu.edu.

Wave Goodbye to the Jones Act: Why a Waiver of the Jones Act Should and Can be Granted for Offshore Wind Farm Installation

*Chad Thornton**

TABLE OF CONTENTS

Introduction 248

I. Background 253

 A. The Jones Act 253

 1. History..... 253

 2. Waiver Process and Past Jones Act Waivers..... 253

 B. Offshore Wind Farms 255

 1. Benefits of Offshore Wind Farms v. Onshore Counterparts..... 255

 2. Advantages of GOM Locations– Specifically Louisiana..... 256

 3. Installation Methods..... 258

 a. U.S. Jack-Up with Feeder Barge Support..... 259

 b. Foreign TIV with Feeder Barge Support 260

 c. Distant Port Transit Method 260

 C. Climate Change Impact on National Security 260

 1. Defense Installations, Missions, and Planning..... 262

 2. Societal Instability..... 263

 3. Federal Agencies’ Consensus on Climate Change..... 265

II. Analysis..... 266

 A. Advantages of Waiving the Jones Act..... 266

 1. Efficiency 266

 2. Cost Reduction 268

 3. Safety..... 269

 B. Disadvantages of Waiving Jones Act 271

 1. Allows Employment of Foreign Vessels..... 271

Copyright 2022, by CHAD THORNTON.

* J.D., 2023, Paul M. Hebert Law Center, Louisiana State University. The author extends his sincerest gratitude to his wife Victoria for her unwavering support and encouragement. Without her this publication would not have been possible. Additionally, the author expresses his appreciation to Professor Dean Sutherland for his guidance and insight throughout the writing process.

2. Lengthy Waiver Required	271
III. Solution	272
Conclusion.....	273

INTRODUCTION

Soon after taking office in 2021, President Joe Biden issued an Executive Order requiring the United States (U.S.) to “build a new American infrastructure and clean energy economy.”¹ The President recognized the Gulf of Mexico (GOM) as an important region in this new economy.² Recent studies of the GOM have “yielded promising results for the future of offshore wind energy in this region.”³ In October of 2020, Louisiana Governor John Bel Edwards sent a memo to the Bureau of Ocean Energy Management (BOEM) requesting an intergovernmental task force to “facilitate coordination and consultation among federal, state, and local governments on renewable energy commercial leasing proposals in federal waters offshore of Louisiana.”⁴ BOEM responded by chartering the GOM Intergovernmental Renewable Energy Task Force.⁵ Governor Edwards stated that “Louisiana’s existing infrastructure, workforce, and

1. *Fact Sheet: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs*, WHITE HOUSE (Mar. 29, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/> [https://perma.cc/Z6RD-R NTJ] [hereinafter *Fact Sheet*].

2. *Id.*

3. *Two NREL Studies Find Gulf of Mexico Well Positioned for Offshore Wind Development*, NREL (May 6, 2020), <https://www.nrel.gov/news/program/2020/studies-find-gulf-of-mexico-well-positioned-for-offshore-wind-development.html> [https://perma.cc/7TFT-P2BC].

4. Letter from John Bel Edwards, Governor, State of La., to Dr. Walter Cruickshank, Acting Dir., BOEM (Oct. 21, 2020), <https://www.boem.gov/sites/default/files/documents/renewable-energy/John%20Bel%20Edwards%20-%20BOEM%20Intergovernmental%20Taskforce%20-%20Offshore%20Renewable%20Energy%20for%20Louisiana.pdf> [https://perma.cc/68R6-QRBB].

5. *Gulf of Mexico Intergovernmental Renewable Energy Task Force Charter*, BOEM 1, <https://www.boem.gov/sites/default/files/documents/renewable-energy/Gulf%20of%20Mexico%20Intergovernmental%20Renewable%20Energy%20Task%20Force%20Charter.pdf> [https://perma.cc/EK5U-JM9L].

business community give us a strategic advantage in developing offshore wind in the Gulf of Mexico and all coastal waters of the United States.”⁶

The United States Departments of Interior, Energy, Transportation, and Commerce united to declare a target goal of “deploy[ing] 30 gigawatts (GW) of offshore wind in the United States by 2030.”⁷ Governor Edwards set a goal for Louisiana to be carbon-free by the year 2050.⁸ However, the Jones Act is a major impediment when federal and state governments attempt to utilize offshore wind energy to reach these target dates and achieve wind energy goals.

“The Jones Act” is a common name for section 27 of the Merchant Marine Act of 1920. It provides that “no merchandise shall be transported by water . . . between points in the U.S. . . . in any other vessel than a vessel built in and documented under the laws of the U.S. and owned by persons who are citizens of the U.S.”⁹ Section 27 creates cabotage law or “coastwise trade.”¹⁰ Through an amendment to the Outer Continental Shelf Act,¹¹ Congress stipulated that offshore wind farm installations are

6. Tristan Baurick, *'Louisiana Wind Week' Events to Focus on State's Offshore Wind Power Potential*, NOLA.COM (June 9, 2021, 4:34 PM), https://www.nola.com/news/environment/article_b412e056-c95f-11eb-90ea-435d15e30f8c.html [<https://perma.cc/LE5L-P9MF>].

7. *Fact Sheet*, *supra* note 1.

8. Emma Penrod, *Louisiana Governor Puts State on Path to Net-Zero Emissions by 2050*, UTIL. DIVE (Aug. 21, 2020), <https://www.utilitydive.com/news/louisiana-governor-puts-state-on-path-to-net-zero-emissions-by-2050/583924/> [<https://perma.cc/8LPY-MWRZ>].

9. Merchant Marine Act of 1920 § 27, as amended, 46 U.S.C. § 883.

10. The definition of cabotage law varies internationally. Cabotage law or “coastwise trade” is most commonly used to reference the level in which a nation governs domestic maritime trade to favor domestic shipping. *A Comprehensive Worldwide Study Finds Domestic Maritime Cabotage Laws Are Commonplace Among UN Member States*, AM. MAR. P'SHIP (Sept. 25, 2018), <https://www.americanmaritimepartnership.com/studies/world-cabotage-study/> [<https://perma.cc/N3DQ-ESFY>]. About 80% of international coastlines are governed by some form of cabotage law, but the intended purpose for the enactment of cabotage law varies widely. *Id.* Different nations may utilize cabotage law to enhance national security, promote domestic competition, improve safety, or encourage job creation. *Id.* The phrases “cabotage law” and “coastwise trade” are used interchangeably to describe the governance of maritime cargo shipments between U.S. ports or coastwise points. *Id.*

11. The Submerged Lands Act of 1953 (SLA) recognized state ownership of the natural resources within three miles from state coastlines. *OCS Lands Act History*, BOEM, <https://www.boem.gov/oil-gas-energy/leasing/ocs-lands-act-history> [<https://perma.cc/52X5-386Q>] (last visited Sept. 24, 2022). Coinciding with the SLA, the Outer Continental Shelf Act (OCSLA) grants the federal

“coastwise points” under the Jones Act.¹² Coastwise points include locations permanently or temporarily attached to the seabed intended to produce or support energy production other than oil or gas.¹³ A range of vessels are required to take offshore wind farm construction from planning to completion.¹⁴ Ultimately, the Jones Act governs any vessel that could be used in an offshore wind project. The most significant of these vessels are those needed to construct and install the turbines.¹⁵ Under the new amendment to the Outer Continental Shelf Act, vessels transporting construction components to offshore wind farm sites must comply with the Jones Act.

European offshore wind farm projects utilize dual-function vessels to deliver turbine components and construct wind turbines. The U.S. has not produced any coastwise-qualified vessels that can do both.¹⁶ Some previous U.S. offshore wind farm installation projects have been forced to implement a two-vessel process: one vessel to deliver the construction materials and another, non-qualified vessel to complete the turbine construction.¹⁷ For other U.S. offshore wind farm projects, a foreign turbine installation vessel travels from a distant port, installs the wind

government title to the submerged lands under U.S. jurisdiction that are outside of the state-owned boundary. These submerged lands are known as the Outer Continental Shelf (OCS). Passed in 1953, the OCSLA regulates mineral resource exploration and development. In 2020, the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 amended the OCSLA to include non-mineral resources such as wind energy. Gerald Morrissey et al., *CBP Expressly Applies Jones Act to Offshore Wind Projects on Outer Continental Shelf*, HOLLAND & KNIGHT (Feb. 2, 2021), <https://www.hklaw.com/en/insights/publications/2021/02/cbp-expressly-applies-jones-act-to-offshore-wind-projects-on-outer> [https://perma.cc/S3BP-BA6H].

12. Jane Sarma & Katherine Stavis, *U.S. Congress Applies Jones Act to Offshore Wind*, REED SMITH: SHIP L. LOG (Feb. 25, 2021), <https://www.shiplawlog.com/2021/02/25/u-s-congress-applies-jones-act-to-offshore-wind/> [https://perma.cc/9UVA-XFSP].

13. *Keeping Up with the Jones Act*, SPLASH247.COM (Oct. 8, 2020), <https://splash247.com/keeping-up-with-the-jones-act/> [https://perma.cc/44RW-KKNQ].

14. Gerald Morrissey & Vincent Foley, *US Offshore Wind Growth Brings Risk and Opportunity*, 6 THE MARINE INSURER 1, 26 (2021).

15. *Id.*

16. To be a coastwise qualified vessel, the vessel must be built and documented under the laws of the U.S. and owned by citizens of the U.S. Merchant Marine Act of 1920 § 27, as amended, 46 U.S.C. § 883; Morrissey & Foley, *supra* note 14.

17. Morrissey & Foley, *supra* note 14.

turbine, and returns to the foreign port.¹⁸ Both methods lengthen project time frames and increase costs through extended travel or additional vessel requirements.¹⁹

President Biden and Governor Edwards made it clear that addressing climate change is a top priority. On January 27, 2021, President Biden stated, “[t]here is little time left to avoid setting the world on a dangerous, potentially catastrophic climate trajectory” and ordered that “climate considerations be an essential element of United States foreign policy and national security.”²⁰ On May 7, 2021, Governor Edwards announced his plan to join the United States Climate Alliance—an alliance of governors focused on the reduction of greenhouse gas emissions.²¹ With the inefficiency and higher cost of the current offshore wind farm installation processes—a byproduct of the Jones Act—the U.S. and Louisiana are at risk of missing their target dates to be carbon-free and will likely exceed the point in which climate change can be reversed.

The climate change goals and target dates set by the U.S. and Louisiana are not arbitrary. “[W]ithout dramatic action in the next couple of decades, we are unlikely to keep global warming in this century below 2.7° Fahrenheit (1.5° Celsius) compared to pre-industrial temperatures—a threshold that experts say offers a lower risk of serious negative impacts.”²² Offshore wind farms can deliver clean, renewable energy to some of the country’s most populated areas.²³ On February 24, 2020, the National Security, Military, and Intelligence Panel (NSMIP), released a report advising of “high to catastrophic threats to security from plausible

18. Colin Grabow, *The Jones Act Continues to Hamper the Dev. of Offshore Wind Energy*, CATO INST. (May 19, 2021, 10:47 AM), <https://www.cato.org/blog/jones-act-adds-costs-complications-offshore-wind-energy> [<https://perma.cc/L85R-HV3F>].

19. Morrissey & Foley, *supra* note 14.

20. Exec. Order No. 14008, 86 Fed. Reg. 7619 (Jan. 27, 2021).

21. OFF. OF THE GOVERNOR, *Gov. Edwards Joins Bipartisan U.S. Climate Alliance, Commits to Addressing Climate Change at the State Level*, GOV.LOUISIANA (May 7, 2021), <https://gov.louisiana.gov/index.cfm/newsroom/detail/31107> [<https://perma.cc/PC2D-4W4G>].

22. David Herring & Rebecca Lindsey, *Can We Slow or Even Reverse Global Warming?*, CLIMATE.GOV (Oct. 29, 2020), <https://www.climate.gov/news-features/climate-qa/can-we-slow-or-even-reverse-global-warming> [<https://perma.cc/9T W5-NV86>].

23. Liz Hartman, *Top 10 Things You Didn’t Know About Offshore Wind Energy*, OFF. OF ENERGY EFFICIENCY & RENEWABLE ENERGY: WIND ENERGY TECHS. OFF. (Aug. 16, 2022), <https://www.energy.gov/eere/wind/articles/top-10-things-you-didnt-know-about-offshore-wind-energy> [<https://perma.cc/QZN5-GP9T>].

climate trajectories.”²⁴ The NSMIP recommended a course of action to “achieve net-zero global emissions as quickly as possible; build resilience to current and expected impacts; and integrate climate considerations across all areas of security planning.”²⁵ The Department of Energy projects that wind energy could produce a 16% reduction in carbon dioxide emissions by 2030 and a 23% reduction by 2050.²⁶ Offshore wind farms could play an essential role in achieving net-zero global emissions.²⁷ However, until the U.S. builds coastwise-qualified vessels that can efficiently install offshore wind turbines, the Jones Act limitations will continue to impact offshore wind farm installation efficiency and costs.²⁸ The Jones Act thwarts efforts to combat the national security threat created by climate change because it limits available resources for offshore wind farm construction. However, a solution is available: under 46 U.S.C. § 501, the immediate impact climate change poses to national security can justify waiving waterborne vessel cabotage law.

Part I of this comment provides relevant background information on the Jones Act, offshore wind farm installation methods, specific national security consequences of climate change, and national security agencies’ recognition of climate change as an immediate threat.

Part II of this comment analyzes the benefits and drawbacks of waiving the Jones Act. Efficiency, cost, safety, and the temporary status of waivers are discussed to demonstrate the necessity of the proposed solution. Finally, Part II reveals why the threat of climate change outweighs the potential drawbacks of waiving the Jones Act.

To conclude, Part III explains why the Jones Act should be waived in order for the U.S. and Louisiana to effectively combat climate change and the threat it poses to national security.

24. The National Security and Intelligence Panel on Climate Change is a project of the Center for Climate and Security comprised of senior U.S. leaders who have dedicated their careers to anticipating, analyzing, and addressing security threats to the U.S. Kate Guy et al., *A Security Threat Assessment of Global Climate Change*, THE CTR. FOR CLIMATE & SEC. 6 (Feb. 2020), <https://climateandsecurity.org/wp-content/uploads/2020/03/a-security-threat-assessment-of-climate-change.pdf> [<https://perma.cc/DM3H-YF4H>].

25. *Id.* at 7.

26. WIND ENERGY TECHS. OFF, *Wind Vision: A New Era for Wind Power in the United States*, U.S. DEP’T OF ENERGY: OFF. OF ENERGY EFFICIENCY & RENEWABLE ENERGY, <https://www.energy.gov/eere/wind/wind-vision-0> [<https://perma.cc/KKC4-UXRG>] (last visited Sept. 22, 2022).

27. Morrissey & Foley, *supra* note 14.

28. *Id.*

I. BACKGROUND

A. *The Jones Act*1. *History*

The Jones Act is a colloquial name for several provisions of the Merchant Marine Act of 1920.²⁹ Specifically, the Jones Act refers to section 27 of the Act. Named for Senator Wesley S. Jones of Washington—the chairman of the Senate Commerce Committee at the time of the Act’s passage—the Jones Act establishes U.S. marine cabotage law.³⁰ Section 27 provides that all cargo shipped between U.S. ports via water must be carried on a U.S. built ship, owned by U.S. citizens, and exclusively staffed with U.S. citizens.³¹ The Jones Act was originally intended to protect domestic port-to-port trade, which is an essential part of the U.S. economy and an important war time resource.³² When passed in 1920, the Jones Act was protectionist legislation, implemented to safeguard and support America’s ship building and merchant marine industry.³³

2. *Waiver Process and Past Jones Act Waivers*

46 U.S.C. § 501 details a waiver process for navigation and vessel inspection law:

On request of the Secretary of Defense, the head of an agency responsible for the administration of the navigation or vessel-

29. Constantine G. Papavizas & Brooke F. Shapiro, *Jones Act Administrative Waivers*, 42 TUL. MAR. L.J. 317, 319 (2018).

30. JOHN F. FRITTELLI, CONG. RSCH. SERV., RS21566, *THE JONES ACT: AN OVERVIEW*, CRS-1 (2003).

31. *Id.*

32. *Domestic Shipping*, U.S. DEP’T. OF TRANSP. MAR. ADMIN., <https://www.maritime.dot.gov/ports/domestic-shipping/domestic-shipping> [<https://perma.cc/G46W-Z439>] (last updated Mar. 26, 2022).

33. The merchant marine are private ships that, during times of peace, operate in a normal import and export manner. *Frequently Asked Questions About the Merchant Marine*, U.S. MERCH. MARINE, <http://www.usmm.org/faq.html> [<https://perma.cc/2N7W-DF8X>] (last updated Sept. 29, 2014). During times of war, these vessels are utilized to deliver troops and war materials. *Understanding the Jones Act: The America-First Cabotage Policy*, FREIGHT RIGHT (June 17, 2020), <https://www.freightright.com/news/understanding-the-jones-act-the-america-first-cabotage-policy> [<https://perma.cc/4W8J-NHLF>].

inspection laws shall waive compliance with those laws to the extent the Secretary considers necessary in the interest of national defense to address an immediate adverse effect on military operations.³⁴

U.S. Customs and Border Protection (CBP) is responsible for the administration of the Jones Act.³⁵ Requests for waivers are sent to CBP, which then forwards it to the U.S. Maritime Administration (MARAD) and the Department of Homeland Security (DHS).³⁶ MARAD determines if there is an immediate need for a non-U.S. flagged vessel; DHS then makes a determination regarding potential threats to national security.³⁷ Ultimately, the Secretary of DHS determines whether a waiver request satisfies the requirements of 46 U.S.C. § 501.³⁸

Temporary administrative waivers of the Jones Act have been issued in the past.³⁹ For example, Hurricane Katrina resulted in the first temporary waiver issued due to a natural disaster.⁴⁰ Because of the damage caused by Hurricane Katrina, the U.S. lacked an adequate number of coastwise-qualified vessels to meet its oil and gas transportation needs.⁴¹ The Director of Homeland Security approved this waiver by linking the lost production of oil and gas to economic problems and national security.⁴² Similar waivers were granted following Hurricane Harvey to address crude oil needs.⁴³

Past waivers have not been limited to the energy sector. For example, President Trump issued a Jones Act waiver in response to the widespread damage in Puerto Rico caused by Hurricane Maria.⁴⁴ This waiver extended beyond energy to cover the transportation of all products.⁴⁵ Moreover, waivers are not limited to natural disasters. President Obama granted Jones

34. 46 U.S.C. § 501.

35. *Id.* § 501(a); *see also* Morrissey & Foley, *supra* note 14.; Sean T. Pribyl et al., *Jones Act Waivers Following Natural Disasters*, HOLLAND & KNIGHT (Sept. 1, 2021), <https://www.hklaw.com/en/insights/publications/2021/09/jones-act-waivers-following-natural-disasters> [<https://perma.cc/G2F2-5NZY>].

36. Pribyl et al., *supra* note 35.

37. *Id.*

38. *Id.*

39. Papavizas & Shapiro, *supra* note 29, at 318.

40. *Id.* at 340.

41. *Id.*

42. Waiver of Compliance with Navigation and Inspection Laws, 70 Fed. Reg. 53236 (Sept. 7, 2005).

43. Papavizas & Shapiro, *supra* note 29, at 343.

44. *Id.* at 344

45. *Id.*

Act waivers in response to the oil spill caused by the Deepwater Horizon explosion.⁴⁶ Unlike the waivers granted after Hurricanes Katrina and Maria, the waivers issued by President Obama were likely used to quell public pressure; these waivers did not identify a correlation to national defense—a requirement under 46 U.S.C. § 501.⁴⁷

B. Offshore Wind Farms

1. Benefits of Offshore Wind Farms v. Onshore Counterparts

According to BOEM, U.S. offshore wind power potential is approximately 900,000 megawatts, which is equivalent to the maximum combined production limit of all other electric power generation in the U.S.⁴⁸ This estimate considers only one third of the Outer Continental Shelf for possible locations of offshore wind farms. Utilizing more than a third of the Outer Continental Shelf for wind energy production could generate more energy than all other methods combined. Offshore wind turbines are stronger and provide a more consistent source of power than their onshore counterparts, giving offshore wind farms a clear advantage over onshore wind farms.⁴⁹

Since offshore wind farms are capable of producing abundant electricity close to heavily populated regions, the costs associated with transmitting offshore wind electricity will be less than onshore wind farms.⁵⁰ Approximately 87 million U.S. citizens live in coastal counties and parishes adjacent to the Atlantic or Pacific Oceans or the GOM,⁵¹ while most onshore wind farms are located in less populated areas such as the Great Plains region of the U.S.⁵² The farther energy must travel, the more infrastructure is required, which increases the cost of supplying onshore wind energy to heavily populated regions.⁵³

46. *Id.* at 346.

47. *Id.*

48. Nathaniel C. Giddings, *Go Offshore Young Man! The Categorical Exclusion Solution to Offshore Wind Farm Development on the Outer Continental Shelf*, 2 GEO. WASH J. ENERGY & ENVTL. L. 75, 77 (2011).

49. *Id.*

50. *Id.* at 76–77.

51. *Emergency Management Coastal Areas*, U.S. CENSUS BUREAU, <https://www.census.gov/topics/preparedness/about/coastal-areas.html> [<https://perma.cc/SF5T-WNSA>] (last visited Sept. 24, 2022).

52. Giddings, *supra* note 48, at 77.

53. *Id.*

Due to their location, offshore wind farms avoid many of the issues onshore wind farms face. For example, site selection for onshore wind farms is litigated more than any other renewable energy source,⁵⁴ due to the “not in my back yard” (NIMBY)⁵⁵ problems associated with onshore wind farms.⁵⁶ NIMBY problems involve issues related to property values, noise levels, and aesthetics affected by onshore wind farms.⁵⁷ Moving wind farms offshore completely avoids NIMBY site selection issues,⁵⁸ allowing for less restrictive permitting and siting.⁵⁹

There are additional environmental risks associated with onshore wind farms. For example, onshore wind farms have been criticized due to the threat they may pose to migratory birds and some bat species.⁶⁰ Although many of these concerns have been debunked,⁶¹ offshore wind farms pose less of a threat to avian species than their onshore counterparts, since bird communities are less concentrated over open waters.⁶² This should relieve some environmental concerns associated with onshore wind farms.⁶³

2. Advantages of GOM Locations—Specifically Louisiana

There are several advantages to constructing offshore wind farms in the GOM. First, GOM wind farms could provide a direct, clean energy source to heavily populated areas. For example, the GOM's coastal counties and parishes population grew 150% between 1960 and 2008.⁶⁴ During this time period, the coastal regions of Texas, Louisiana, Mississippi, Alabama, and Florida—home to 14 million U.S. citizens—

54. *Id.* at 78.

55. “Not in my backyard” indicates opposition to development by residents in the vicinity of the proposed development site. *See* P. HUBBARD, INTERNATIONAL ENCYCLOPEDIA OF HUMAN GEOGRAPHY 444–49 (Rob Kitchin, Nigel Thrift, 1st ed. 2009) This argument has been directed towards developments such as factories, incinerators, and mobile phone towers. *Id.*

56. Giddings, *supra* note 48, at 78.

57. *Id.* at 77.

58. *Id.* at 78.

59. Tania Carolina Pinon Venegas, *Floating Turbines: The Next Generation of Offshore Wind Farms*, 16 TEX. J. OIL GAS & ENERGY L. 71, 76 (2021).

60. GRANTHAM RSCH. INST. ON CLIMATE CHANGE & THE ENV'T, *What Are the Pros and Cons of Onshore Wind Farms?*, THE LONDON SCH. OF ECON. & POL. SCI. (Jan. 12, 2018), <https://www.lse.ac.uk/granthaminstitute/explainers/what-are-the-pros-and-cons-of-onshore-wind-energy/> [<https://perma.cc/VK8B-UCX5>].

61. *Id.*

62. Venegas, *supra* note 59.

63. *Id.*

64. *Emergency Mgmt. Coastal Areas*, *supra* note 51.

grew at twice the rate of the entire U.S. population.⁶⁵ Second, established industries in the GOM make the region attractive for offshore wind farm production. Governor Edwards' spokesperson, Christina Stephens, explained this reasoning by stating that “[w]e are well positioned to support a fledgling wind industry in the Gulf of Mexico by leveraging the transportation, construction, [and] engineering expertise already associated with our traditional fuels production operations offshore.”⁶⁶ Additionally, the calmer waters and mild climate of the GOM would reduce the exposure of crews and turbines to severe weather conditions in comparison to the Atlantic and Pacific regions.⁶⁷ The combination of these factors increases accessibility and lowers the costs associated with the operation and maintenance of offshore wind farms.⁶⁸ This increases the availability of turbines and facilitates increased energy production overall.⁶⁹

Governor Edwards recently indicated that Louisiana could lead the nation's effort to combat climate change. Prior to traveling to Scotland for the 26th United Nations Climate Change Conference (COP26),⁷⁰ Governor Edwards said:

No other state in our nation is more affected by climate change, but it's also true that no other state is better positioned to be a solution to the problems facing our world . . . I want world leaders to know that in Louisiana we have the most productive manufacturing workforce in the nation . . . [t]his same workforce

65. *Id.*

66. Valerie Volcovici & Nichola Groom, *U.S. Explores Wind Energy Potential in Gulf of Mexico*, REUTERS (June 8, 2021, 11:18 PM), <https://www.reuters.com/business/energy/us-explores-wind-energy-potential-off-gulf-mexico-2021-06-08/> [<https://perma.cc/GC5K-RY74>].

67. Walter Musial et al., *Offshore Wind in the US Gulf of Mexico: Regional Economic Modeling and Site-Specific Analyses*, BOEM 13 (Feb. 2020), https://espis.boem.gov/final%20reports/BOEM_2020-018.pdf [<https://perma.cc/NF9Q-V2U5>].

68. *Id.*

69. *Id.*

70. The United Nations Climate Change conference is a combination of intergovernmental meetings aimed at setting world carbon reduction goals. Mark Schleifstein, *At COP26, John Bel Edwards Tries to Position Louisiana as a Magnet for Clean Energy*, NOLA.COM, https://www.nola.com/news/environment/article_931207b8-38e7-11ec-9e8b-9ff7a0eb900b.html [<https://perma.cc/Y2W9-GV7Y>] (last updated Oct. 31, 2021, 11:43 AM). The main goals of COP26 are to get governments to commit to carbon reduction goals for 2030 and to agree to help fund carbon reduction efforts for developing countries. *Id.*

can build wind farms.⁷¹

Governor Edwards believes that Louisiana has an obligation to lead the fight against climate change since it produces more carbon dioxide gas emissions per capita than any other state, and over twice the national average rate.⁷² He believes the effects of climate change on Louisiana are visible because of the rise in sea-level and the aftermath of Hurricanes Laura, Ida, and Delta.⁷³ At COP26, Governor Edwards wanted other world leaders and corporations to know Louisiana is embracing methods to combat climate change and, “if they want to make a profound difference in the short term, that they should come to Louisiana.”⁷⁴ Louisiana’s established energy and manufacturing industries combined with its staggering carbon dioxide production make it an attractive location for immediate carbon reduction efforts.⁷⁵

3. Installation Methods

The NSMIP placed an emphasis on achieving net-zero emissions as soon as possible,⁷⁶ but the Jones Act presents significant obstacles to efficiently construct offshore wind farms.⁷⁷ Without available U.S. flagged installation vessels, offshore wind farm developers are left with only three viable construction options: (1) a U.S. jack-up with feeder barge support; (2) a foreign turbine installation vessel (TIV) with feeder barge support; or (3) a distant port transit method. Currently, building U.S. offshore wind farms requires one of the two feeder barge systems or a foreign TIV distant transit method.⁷⁸ The feeder barge options require

71. Greg Hilburn, *Louisiana Gov. John Bel Edwards is Traveling to the Climate Change Conference in Scotland*, DAILY ADVERTISER, <https://www.theadvertiser.com/story/news/2021/10/25/louisiana-governor-john-bel-edwards-scotland-climate-change-conference/8544261002/> [https://perma.cc/5LPC-3MZV] (last updated Oct. 25, 2021, 4:55 PM).

72. Schleifstein, *supra* note 70.

73. *Id.*

74. *Id.*

75. *Id.*

76. Guy et al., *supra* note 24.

77. Morrissey & Foley, *supra* note 14.

78. Feeder barges carry the offshore wind turbine building components to a U.S. flagged or foreign flagged European turbine installation vessel. Kirk Moore, ‘Superfeeder’ Design Offers Jones Act Solution for Offshore Wind Developers, WORK BOAT (June 15, 2020), <https://www.workboat.com/offshore/superfeeder-design-offers-jones-act-solution-for-offshore-wind-developers> [https://perma.cc/X33P-C7EU].

either a distant transit by a non-coastwise TIV from a foreign port to the installation site where it will be supplied by U.S. flagged feeder barges⁷⁹ or a U.S. jack-up platform supplied by feeder barges.⁸⁰ All current methods decrease the construction efficiency and increase cost.⁸¹ This impedes the NSMIP's objective to "achieve net zero carbon emissions as quickly as possible."⁸²

a. U.S. Jack-Up with Feeder Barge Support

A jack-up vessel with feeder barge support requires feeder barges to deliver wind farm components to a U.S.-built jack-up vessel.⁸³ Jack-up vessels require tugboats to transport and position them at the construction site.⁸⁴ These vessels lower retractable legs to the seabed and lift or "jack-up" the vessel into the air.⁸⁵ The jack-up remains stationary since its legs anchor to the seabed.⁸⁶ Then, feeder barges carry components from port to the construction site where the jack-up vessel is located.⁸⁷ While this strategy is likely the most cost-efficient of the available strategies, the jack-up system is limited to shallow and intermediate depths and may lack the crane capacity to lift large wind turbines needed for deep water installation.⁸⁸

79. Morrissey & Foley, *supra* note 14.

80. *Assessment of Vessel Requirements for the U.S. Offshore Wind Sector*, DOUGLAS-WESTWOOD 110 (Sept. 24, 2013), https://www.energy.gov/sites/prod/files/2013/12/f5/assessment_vessel_requirements_US_offshore_wind_report.pdf [<https://perma.cc/4AMW-YP6W>] [hereinafter *Assessment of Vessel Requirements*].

81. Morrissey & Foley, *supra* note 14.

82. Guy et al., *supra* note 24.

83. Jack up barges are watertight, floating platforms with retractable legs that attach to the seabed. Ajay Menon, *What are Jack Up Barges—Everything You Ever Wanted to Know*, MARINE INSIGHT (Apr. 26, 2021), <https://www.marineinsight.com/offshore/jack-up-barges/> [<https://perma.cc/T2MJ-3QKG>]. Jack up barges are the most common type of offshore platform. *Id.* The buoyancy of these platforms allows them to lift heavy objects such as turbines, drilling platforms, or other barges. *Id.* Crews can work and live on this platform. Jack up vessels are primarily used in shallow or intermediate depths, with optimal performance at depths of less than 120 meters. *Id.*; *Assessment of Vessel Requirements*, *supra* note 80.

84. *Assessment of Vessel Requirements*, *supra* note 80.

85. *Id.*

86. *Id.*

87. *Id.*

88. *Id.*

b. Foreign TIV with Feeder Barge Support

A foreign TIV is capable of both transporting and installing turbine components, but this approach utilizes foreign-flag TIVs combined with qualified American feeder barges to comply with the Jones Act.⁸⁹ The foreign vessel navigates from a foreign port to a U.S. construction site. Then, the foreign TIV offloads components from the U.S. feeder barge for installation.⁹⁰ Foreign TIVs are capable of installing turbines where the water is too deep for U.S. jack-ups and when the turbine components are heavier and taller than U.S. jack-up cranes can handle.⁹¹ This method is more expensive than using a jack-up with feeder barges due to the travel and overhead expense of the foreign TIV paired with multiple component delivery vessels.⁹²

c. Distant Port Transit Method

Because foreign vessels are not allowed to conduct coastwise trade out of U.S. ports, foreign TIVs utilized for U.S. offshore wind farm construction must operate out of foreign ports.⁹³ During a recent offshore wind farm project off the coast of Virginia, developers circumvented the Jones Act coastwise points limitation by operating out of Halifax, Canada.⁹⁴ This method required delivering and loading the turbine equipment onto a foreign TIV at a foreign port before taking it to the U.S. installation site.⁹⁵ Such inefficient methods cause the U.S. to fall behind other nations in the development of offshore wind farms.⁹⁶

C. Climate Change Impact on National Security

The Department of Defense (DoD) has recognized that climate change not only affects military missions but also impacts defense installations

89. *Id.*

90. *Id.*

91. *Id.*

92. *Id.*

93. Grabow, *supra* note 18.

94. Peter, *Bigroll Beaufort.*, HALIFAX SHIPPING NEWS.CA (Apr. 27, 2020), <https://blog.halifaxshippingnews.ca/2020/04/duetomorrow-bigroll-beaufort.html> [<https://perma.cc/XK7D-MHV8>].

95. *Id.*

96. Grabow, *supra* note 18.

and domestic and international societal stability.⁹⁷ Secretary of Defense Lloyd J. Austin III stated, “[t]here is little about what the Department does to defend the American people that is not affected by climate change. It is a national security issue, and we must treat it as such.”⁹⁸

The National Aeronautics and Space Administration (NASA) provided a temperature model showing indisputable evidence of global warming.⁹⁹ Increased global temperatures coincide with an increase in frequency of extreme weather events.¹⁰⁰ Other models reach this same conclusion, prompting the National Academy of Sciences (NAS) to conduct a consensus study on the matter.¹⁰¹ The NAS reported that “[i]t is now often possible to make and defend quantitative statements about the extent to which human-induced climate change . . . has influenced either the magnitude or the probability of occurrence of specific types of events or event classes.”¹⁰² One analysis focused on the extreme rainfall and flood event that occurred in Baton Rouge, Louisiana in August of 2016, finding the deluge to be 40% more likely as a result of elevated greenhouse gas levels.¹⁰³

In terms of national security, the U.S. focuses on preparing for the risks associated with climate change, rather than the causes of climate change.¹⁰⁴ The severe impacts of extreme weather events—such as drought, famine, and flooding—requires the U.S. military to consider the effects of climate change.¹⁰⁵ Loss of stability is the primary danger

97. OFF. OF THE UNDER SEC’Y OF DEF. FOR ACQUISITION & SUSTAINMENT, 9-D30BE5A, REPORT ON EFFECTS OF A CHANGING CLIMATE TO THE DEPARTMENT OF DEFENSE 16 (2019).

98. *Statement by Secretary of Defense Lloyd J. Austin III on Tackling the Climate Crisis at Home and Abroad*, U.S. DEP’T OF DEF., (Jan. 27, 2021), <https://www.defense.gov/News/Releases/Release/Article/2484504/statement-by-secretary-of-defense-lloyd-j-austin-iii-on-tackling-the-climate-cr/> [<https://perma.cc/93CE-DZBW>] [hereinafter *Statement by Secretary of Defense*].

99. NASA created a video loop of global temperature change. Rebecca L. Khislinger et al. *Extreme Weather and Climate Change*, 50 ELR 10963, 10966 (2020). A color-coded progression turning from blue, the cooler side of the 1950 average, to red, the higher end, shows a gradual rise in temperature. *Id.* By 2019, most of the globe is shaded in red, indicating that the average temperatures have exceeded those of 1950. *Id.*

100. *Id.*

101. *Id.*

102. *Id.*

103. *Id.*

104. James Stuhltrager, *Global Climate Change and Nat’l Sec.*, 22 NAT. RES. & ENV’T 36 (2008).

105. *Id.*

imposed by extreme weather events since enemies could exploit the U.S. during these unstable times.¹⁰⁶ The effects of global climate change impact all areas of U.S. military operations.¹⁰⁷

1. Defense Installations, Missions, and Planning

The National Oceanic and Atmospheric Administration (NOAA) observed increasing global air, surface, and oceanic temperatures, linking these findings to rising sea-levels.¹⁰⁸ The global mean sea-level (GMSL) rose approximately eight inches over the past 100 years with evidence of an accelerated rate since 1993.¹⁰⁹ Rising sea-levels, flooding, and storm surges pose a threat to U.S. coastal military installations.¹¹⁰ These climate change effects increase the risk of disruption to transportation and energy infrastructures, major military operations, and hurricane evacuation routes.¹¹¹

The DoD operates over 1,700 coastal military installations that could be directly impacted by rising sea-levels.¹¹² In the 2019 *Report on Effects of a Changing Climate to the Department of Defense*, the DoD analyzed 79 military installations that play a critical role in military operations, two-thirds of which are susceptible to current or future flooding.¹¹³ The DoD provides resources to climate change assessment and response.¹¹⁴ These resources are directed toward missions, funding, and capabilities involved in risk-management planning that spans all levels of defense.¹¹⁵ Extreme weather-induced damage to defense facilities hinders the military's ability

106. *Id.* at 36–37.

107. *Id.*

108. MARGARET TUCKER & G. JAMES HERRERA, CONG. RSCH. SERV., IF11275, *MILITARY INSTALLATIONS AND SEA-LEVEL RISE* (2019) (rising sea-levels are attributed to water expansion caused by rising temperatures and melting ice sheets and glaciers).

109. *Id.*

110. *Findings from Select Federal Reports: The National Security Implications of a Changing Climate*, THE WHITE HOUSE: PRESIDENT BARACK OBAMA 2 (May 2015), https://obamawhitehouse.archives.gov/sites/default/files/docs/National_Security_Implications_of_Changing_Climate_Final_051915.pdf [<https://perma.cc/YQ8E-JGRV>] [hereinafter *Findings from Select Federal Reports*].

111. *Id.*

112. TUCKER & HERRERA, CONG. RSCH. SERV., *supra* note 108.

113. OFF. OF THE UNDER SEC'Y OF DEF. FOR ACQUISITION & SUSTAINMENT, *supra* note 97, at 16.

114. *Id.* at 17.

115. *Id.*

to respond to a crisis; physical damage to military base landscapes disrupts training grounds.¹¹⁶ To achieve its goals, the DoD recognized that “[it] must be able to adapt current and future operations to address the impacts of a variety of threats and conditions, including those from weather and natural events.”¹¹⁷ The DoD has begun updating defense infrastructure to adapt the installations to climate change impacts.¹¹⁸

2. Societal Instability

The United Nations High Commissioner for Refugees (UNHCR)¹¹⁹ reported that weather related disasters have displaced 203.4 million people between 2008 and 2015.¹²⁰ The United Nations Framework Convention on Climate Change (UNFCCC) recognized that forced displacement leads to political and societal instability.¹²¹ The DoD’s 2014 Quadrennial Defense review explained that climate change can cause future devastation of homes, lands, and infrastructure.¹²² The effects of climate change act as a “threat multiplier,” intensifying poverty, environmental degradation, political instability, and social tensions.¹²³ These stressors can weaken

116. Brian La Shier & James Stanish, *The National Security Impacts of Climate Change*, 10 J. NAT’L SEC. L. & POL’Y 27, 33 (2019).

117. OFF. OF THE UNDER SEC’Y OF DEF. FOR ACQUISITION & SUSTAINMENT, *supra* note 97, at 2.

118. *Id.* at 11.

119. The UNHCR is the UN agency dedicated to refugees, forcibly displaced communities, and stateless people. *About Us*, UNHCR, <https://www.unhcr.org/en-us/about-us.html> [<https://perma.cc/CL6C-9UL2>] (last visited Sept. 24, 2022). Established in 1950, the UNHCR works to ensure that all who have been displaced have the right seek asylum and refuge during times of need.

120. Julie Kim, *Reframing Humans (Homo Sapiens) in International Biodiversity Law to Frame Protections for Climate Refugees*, 42 WM. & MARY ENVTL. L. & POL’Y REV. 805, 810 (2018).

121. The UNFCCC is the parent treaty to both the 1997 Kyoto Protocol and the 2015 Paris Agreement. *About the Secretariat*, UNITED NATIONS CLIMATE CHANGE, <https://unfccc.int/about-us/about-the-secretariat> [<https://perma.cc/B45G-K8TV>] (last visited Sept. 24, 2022). This secretariat is part of the United Nations and focuses on humanitarian issues. The UNFCCC was created in 1992 and achieved near universal membership, including 197 nations. It provides expertise in the analysis and review of climate change information with the goal of promoting the Paris Agreement implementation and building climate action partnerships. Kim, *supra* note 120.

122. Julia Toscano, *Climate Change Displacement and Forced Migration: An International Crisis*, 6 ARIZ. J. ENVTL. L. & POL’Y 457, 460 (2015).

123. *Id.*

unstable governments and incubate terrorist organizations.¹²⁴ In response, there could be forced mass migration.¹²⁵ Forced migration increases the risk of conflict and social unrest.¹²⁶ As migrants look to supplement dwindling resources, their efforts could ignite violent fights over basic necessities,¹²⁷ as evidenced by the conflict in the Darfur Region of Sudan.¹²⁸ The crisis in Darfur has been dubbed as “The First Climate Change Conflict.”¹²⁹ Desertification and drought exacerbated by climate change rendered this region unable to support the Darfurian population.¹³⁰ Forced migration also poses a direct risk to U.S. national security.¹³¹ In the U.S., increased border security could be required to handle migration of displaced individuals.¹³²

Health risks associated with climate change can destabilize populations.¹³³ Research into the impact of climate change on national security revealed a link between warming temperatures and increased vulnerability to heat stress, infectious disease, and pollution.¹³⁴ Regions not prepared for climate change will experience an increase in injury and death associated with extreme events due to disrupted access to healthcare.¹³⁵ Public health research also forecasts disease spreading to populations unaccustomed or unequipped to battle the resulting illnesses.¹³⁶ Additionally, climate change creates new environments for

124. Stuhltrager, *supra* note 104, at 37.

125. *Id.*

126. Toscano, *supra* note 122.

127. *Id.* at 473.

128. The conflict in Darfur stems from a combination of political, economic, and environmental factors. Climate change is noted as a factor of the drought-related migration that created the competition for resources. Ahmad Sikainga, ‘The World’s Worst Humanitarian Crisis’: *Understanding the Darfur Conflict*, ORIGINS (Feb. 2009), <https://origins.osu.edu/article/worlds-worst-humanitarian-crisis-understanding-darfur-conflict> [<https://perma.cc/Q9GF-N5YN>]. Drought has caused this region to experience violence and death leading to the displacement of approximately five million Darfurians. Shier & Stanish, *supra* note 116.

129. Chase Sova, *The First Climate Change Conflict*, WORLD FOOD PROGRAM USA, <https://www.wfpusa.org/articles/the-first-climate-change-conflict/> [<https://perma.cc/BVJ6-GULA>] (last updated Dec. 19, 2020).

130. *Id.*

131. Shier & Stanish, *supra* note 116.

132. *Id.*

133. Guy et al., *supra* note 24.

134. *Id.*

135. *Id.*

136. *Id.*

disease vectors, such as mosquitoes with increased precipitation, exposing more people to water borne diseases.¹³⁷ Public health changes impact population stability—a national security factor.

3. Federal Agencies' Consensus on Climate Change

The DoD is not alone in its assessment. Other security-related government agencies recognize climate change as an immediate threat to national security. On July 8, 2015, the Subcommittee on Oversight and Management Efficiency, a division of the U.S. House of Representatives Committee on Homeland Security, held a hearing where witnesses from DHS agreed that “climate change poses very real security risks to the U.S. homeland.”¹³⁸ Some government agencies have created branches focused solely on climate change’s impact on national security.¹³⁹ In 2012, former Director of the Central Intelligence Agency, Leon Panetta, stated, “[w]ith regards to climate change . . . what we developed at the CIA was an intelligence branch of the CIA that focused on that issue actually for intelligence purposes, because of the implications that these changes might have with regards to national security.”¹⁴⁰ Not only is climate change included in national security discussions, but national security branches have created departments dedicated to analyzing climate change and its effect on national security. There is an overwhelming consensus that climate change will continue to impact global stability, increasing threats to national and state security. Mitigating or slowing the effects of climate change is not enough; instead, it is necessary to shift the focus to reversing climate change and its accelerating effects.

137. *Id.*

138. Caitlin Werrell & Francesco Femia, *DHS to Congress: Climate Change a Threat Multiplier to Global Sec.*, THE CTR. FOR CLIMATE & SEC. (July 9, 2015), <https://climateandsecurity.org/2015/07/dhs-to-congress-climate-change-a-threat-multiplier-to-global-security/> [<https://perma.cc/3PAY-4QJ5>].

139. Caitlin Werrell & Francesco Femia, *U.S. Secretary of Defense Leon Panetta on Climate Change and National Security*, THE CTR. FOR CLIMATE & SEC. (Mar. 5, 2012), <https://climateandsecurity.org/2012/03/u-s-secretary-of-defense-leon-panetta-on-climate-change-and-national-security/> [<https://perma.cc/4JKB-A6VC>].

140. *Id.*

II. ANALYSIS

Reversing climate change requires a departure from current methods of energy production.¹⁴¹ National security agencies recognize that the effects of climate change pose an immediate threat to U.S. national security at home and abroad.¹⁴² President Biden and Governor Edwards have taken the initiative to change the current trajectory of the Earth's climate.¹⁴³ Some of these initiatives focus on constructing offshore wind farms in the GOM.¹⁴⁴ However, the Jones Act limits the extent and rate of implementing alternative methods of energy production in U.S. waters.¹⁴⁵

The U.S. is quickly falling behind other regions in the development of offshore wind energy.¹⁴⁶ Without coastwise qualified TIVs, the U.S. and Louisiana will struggle to meet their approaching climate goals. To achieve these goals, foreign TIVs must operate in U.S. coastal waters without restraint from the Jones Act. Under 46 U.S.C. § 501, cabotage law must be waived because climate change poses an immediate threat to national security.

A. Advantages of Waiving the Jones Act

1. Efficiency

Feeder barge methods require component-carrying barges to travel between ports and installation sites.¹⁴⁷ Then, heavy at-sea lifts must move materials from barges to the jack-up platform or foreign TIVs.¹⁴⁸ Shipping components from port to installation sites is inefficient: it requires port loading of barges, transferring barges to the installation site by tugboat, positioning barges for offload, and offloading components to the installation vessel before installation begins. Allowing foreign TIVs to operate out of U.S. ports eliminates several steps of this process. Foreign TIVs can be loaded in ports with multiple turbine components, travel to installation sites, and complete installation without the assistance of other

141. Herring & Lindsey, *supra* note 22.

142. See *Findings from Select Federal Reports*, *supra* note 110.

143. See Exec. Order No. 14008, 86 Fed. Reg. 7619 (Jan. 27, 2021); OFF. OF THE GOVERNOR, *supra* note 21; *Fact Sheet*, *supra* note 1.

144. See Letter from John Bel Edwards, *supra* note 4.

145. *Assessment of Vessel Requirements*, *supra* note 80.

146. Grabow, *supra* note 18.

147. *Assessment of Vessel Requirements*, *supra* note 80.

148. Morrissey & Foley, *supra* note 14.

vessels or a need to return to port. Time is of the essence to combat climate change, thus, the most efficient methods available should be implemented.

To best utilize a TIV, the TIV must remain offshore, performing installation duties for as long as possible.¹⁴⁹ Both the feeder vessel method and the method of loading a TIV with enough components to complete multiple installations allow for a TIV to remain offshore for longer periods of time to optimize efficiency.¹⁵⁰ However, when a barge is used as a feeder vessel, metocean conditions can cause delays.¹⁵¹ Dynamic amplification can delay transferring components from barges to a TIV.¹⁵² When using a crane to transfer components, wave activity can reduce crane lifting capacity and operating radius.¹⁵³ These effects limit cranes already operating near capacity and can delay installation.¹⁵⁴ Metocean conditions not only affect crane operations, but also restrict component transportation, personnel transfers, and the position of feeder vessels.¹⁵⁵

149. F. Sevilla et al., *Optimization of Installation, Operation and Maintenance of Offshore Wind Projects in the U.S.*, GARRAD HASSAN 30 (Dec. 19, 2014), <https://www.osti.gov/servlets/purl/1333103> [<https://perma.cc/DNN5-LKTQ>].

150. *Id.*

151. Metocean conditions include atmospheric conditions like wind speed, wind shear, and turbulence as well as other weather conditions such as temperature, precipitation, and humidity. DNV-GL, METOCEAN CHARACTERIZATION RECOMMENDED PRACTICES FOR U.S. OFFSHORE WIND ENERGY 20 (2018), <https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/Metocean-Recommended-Practices.pdf> [<https://perma.cc/8KMY-ZETH>]. Marine conditions such as waves, sea currents, water levels, sea ice, and marine growth are also metocean conditions. Metocean data is required to determine many aspects of offshore wind farm construction such as vessel selection, crane operations, positioning of construction vessels, and personnel transports. Sevilla et al., *supra* note 149.

152. Cranes operating offshore are exposed to harsh conditions while lifting loads from supply vessels that move up and down with ocean waves. D.E. Charrett & A.M. Hyden, *Dynamic Factors for Offshore Cranes*, OFFSHORE TECH. CONF. (May 2, 1976), <https://onepetro.org/OTCONF/proceedings-abstract/76OTC/All-76OTC/OTC-2578-MS/46675> [<https://perma.cc/T484-92PE>]. Ocean movement amplifies the stress crane components can withstand. *Id.* The design of a crane considers the magnitude of ocean movement stress through the use of dynamic factors. *Id.* “A dynamic factor is the value by which the static load is multiplied to account for the dynamic effects of crane and load motion.” *Id.* Dynamic factors increase with the amount of motion the load experiences in transit, and the weight a crane can support decreases with dynamic amplification factors. Sevilla et al., *supra* note 149.

153. Sevilla et al., *supra* note 149.

154. *Id.*

155. DNV-GL, *supra* note 151, at 42.

Overall, the susceptibility of barges to these metocean conditions reduces efficiency. Allowing foreign TIVs to operate out of U.S. ports is more efficient, since TIVs are capable of transporting components without a transfer lift from feeder barges that are affected by metocean conditions. TIV cranes are built specifically for turbine installation and are less susceptible to metocean conditions.

2. Cost Reduction

Currently, employing foreign TIVs as single installation vessels or in the feeder method requires long transit from distant ports.¹⁵⁶ Both feeder barge systems require multiple vessels throughout installation.¹⁵⁷ Each vessel involved requires a crew and bears its own additional operating cost. Allowing foreign TIVs to operate out of U.S. ports by waiving cabotage law would eliminate the distant transit required for foreign TIVs between projects and reduce their fuel and labor costs. Also, eliminating the need for multiple vessels and allowing a single foreign TIV to work out of a U.S. port for the entire installation process would reduce operating costs.

A study by the New York State Energy Research and Development Authority in July 2018 compared the cost of using a feeder barge system versus a TIV for offshore wind farm construction off the coast of New York.¹⁵⁸ TIV use costs approximately 7% less than an inshore feeder barge system.¹⁵⁹ The New York study showed that a TIV installation method would save approximately \$3,000,000 over the course of installing 100 offshore wind turbines.¹⁶⁰ Using larger TIVs allows for more turbines to be loaded per trip.¹⁶¹ This method helps reduce the costs associated with

156. *Assessment of Vessel Requirements*, *supra* note 80.

157. *Id.*

158. COWIN. AM., INC., *Inshore Feeder Barge Conceptual Feasibility Study for Offshore Wind Farms*, N.Y. STATE ENERGY RSCH. AND DEV. AUTH. iii (July 2018), <https://www.google.com/url?client=internal-element-cse&cx=018067764286465601005:6kze-mifwrc&q=https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Offshore-Wind/Inshore-Feeder-Barge-Conceptual-Feasibility-Study.pdf&sa=U&ved=2ahUKEwi2lcmYsd75AhW-1WoFHTLOBWYQFn0ECAQQAQ&usg=AOvVaw37QFTZrw5imokVr94y-UYm> [<https://perma.cc/TH2V-KR9N>].

159. *Id.* at 46.

160. *Id.* at 45.

161. Sevilla et al., *supra* note 149.

multiple loads on smaller vessels such as feeder barges.¹⁶² Waiving cabotage law eliminates the use of multiple vessel barge feeder systems.

3. *Safety*

Implementing a barge feeder system for offshore wind turbine installation presents several safety issues. The heavy lift required between a delivery barge and a jack-up vessel or foreign TIV can lead to vessel damage, marine pollution, and even human casualties.¹⁶³ At-sea transfers also present unnecessary safety risks to vessel crew members.¹⁶⁴ As with any lifting process, the main safety concern for crew members arises from falling objects—a concern that increases during offshore lifts.¹⁶⁵ Falling objects present the risk of crushing crew members near the crane, and a dropped construction component could damage the vessel, thereby endangering the entire crew.¹⁶⁶ Offshore lifts from unstable barges are unnecessary when employing a TIV. Heavy lifts implemented by TIVs are performed in a stable environment, reducing the risk to crew members and the vessel.

162. *Id.* at 31.

163. Morrissey & Foley, *supra* note 14.

164. *Id.*

165. *Offshore Wind and Marine Energy Health and Safety Guidelines*, RENEWABLE UK 194 (2014), https://cdn.ymaws.com/www.renewableuk.com/resource/collection/AE19ECA8-5B2B-4AB5-96C7-ECF3F0462F75/Offshore_Marine_HealthSafety_Guidelines.pdf [<https://perma.cc/5AHP-UJQZ>].

166. *Id.*

What causes these safety issues? Waterborne vessels are exposed to six degrees of freedom.¹⁶⁷ Ships are subject to forces from all directions.¹⁶⁸ Waves, currents, and winds can cause safety issues and disrupt the transfer and positioning of construction components.¹⁶⁹ Additionally, while barges are typically used to transport goods, the unloading of heavy wind turbine components amidst these forces can create an unstable transfer by shifting the center of gravity for both vessels.¹⁷⁰ TIVs have legs that reach the seafloor, thereby stabilizing the TIV during construction.¹⁷¹ When considering the thousands of components to transfer from barges to installation vessels, each lift and transfer presents an added risk.¹⁷² TIVs eliminate dangerous steps in offshore wind farm construction by streamlining offshore operations and promoting safer construction techniques.¹⁷³ Foreign TIVs can be loaded while docked, creating a safer work environment for vessels and crews. TIVs are unique in that they can both transport the installation components and provide a stable crane and installation platform.¹⁷⁴ Therefore, waiving cabotage law promotes a safer work environment during offshore wind farm installation.

167. A ship at sea moves in six degrees of motion: heave, sway, surge, roll, pitch, and yaw. The first three are linear motions. Heaving is the linear motion along the vertical Z-axis, swaying is the motion along the transverse Y-axis, and surging is the motion along the longitudinal X-axis. Rolling is a rotation around a longitudinal axis, pitching is a rotation around the transverse axis, and yawing is a rotation around the vertical axis. Jan Babicz, *Encyclopedia of Ship Technology*, WÄRTSILÄ 560 (2015), https://www.wartsila.com/docs/default-source/marine-documents/encyclopedia/wartsila-o-marine-encyclopedia.pdf?utm_source=web&utm_medium=web&utm_term=marine&utm_content=encyclopedia&utm_campaign=encyclopedia [<https://perma.cc/MK4K-6D3H>]; *Feeder Barges Set to Build the Future of OSW in the USA*, SEA OF GRAVITY (Aug. 26, 2020), <https://blog.seaofgravity.com/2020/08/offshorewind-jones-act-vessel-line-up.html> [<https://perma.cc/S6MH-5CFQ>] [hereinafter *Feeder Barges*].

168. Ajay Menon, *Ship Motions—The Ultimate Guide*, MARINE INSIGHT (May 29, 2021), <https://www.marineinsight.com/naval-architecture/ship-motions/> [<https://perma.cc/FF4S-WZNU>].

169. *Feeder Barges*, *supra* note 167.

170. *Id.*

171. Justine Calma, *The US Offshore Boom Will Depend on These Ships*, THE VERGE (Feb. 23, 2021, 11:01 AM), <https://www.theverge.com/22296979/us-offshore-ships-wind-boom-installation-vessels> [<https://perma.cc/AY3L-BE22>].

172. *Feeder Barges*, *supra* note 167.

173. Sevilla et al., *supra* note 149, at 51.

174. *Feeder Barges*, *supra* note 167.

B. Disadvantages of Waiving Jones Act

1. Allows Employment of Foreign Vessels

Senator Wesley Jones, for whom the Jones Act was named, specified that the 1920 Merchant Marine Act “expresses the thought, desire, purpose and aim of the American people . . . to lay the foundation of a policy that will build up and maintain an adequate merchant marine in competition with the shipping world.”¹⁷⁵ His statement alludes to a purpose of protecting the American shipping industry from foreign competition. Waiving the Jones Act for foreign TIVs would encroach on this foundational principle. Recently, U.S. leaders expressed their continued support for the Jones Act. During the March 25, 2021 House Transportation and Infrastructure Committee hearing, the U.S. Secretary of Transportation, Pete Buttigieg, stated “I strongly support the Jones Act . . . because it makes sure that cargoes moved between U.S. ports travel on vessels that are built, owned, and crewed by Americans . . . we’ll be doing everything we can to support that industry, as well as our Merchant Marine.”¹⁷⁶

However, permitting foreign TIVs to fully participate in offshore wind farm installations will not restrict true port-to-port U.S. shipping, nor exclude U.S. participation in offshore wind farm installation. All methods of installation must continue to be utilized. By allowing foreign participation, installation can proceed at a faster rate. Disapproval of international participation must be overlooked as this waiver seeks to combat a threat posed to all nations. A focus on the health of the Earth’s climate must supersede shipping and merchant marine concerns.

2. Lengthy Waiver Required

Past waivers issued in response to hurricanes and oil spills were subject to short and specified time frames.¹⁷⁷ Because there are no U.S. coastwise-qualified TIVs, a waiver for foreign TIVs likely needs a larger window than those granted in the past.¹⁷⁸ This could be unnerving for the U.S. maritime industry. However, even lengthy waivers are temporary, and a waiver under these circumstances would only allow foreign vessels

175. Papavizas & Shapiro, *supra* note 29.

176. SEAFARERS INT’L UNION, *Buttigieg: ‘I Strongly Support the Jones Act,’* SEAFARERS (Mar. 26, 2021), <https://www.seafarers.org/buttigieg-i-strongly-support-the-jones-act/> [<https://perma.cc/WKR8-36MN>].

177. Papavizas & Shapiro, *supra* note 29.

178. Morrissey & Foley, *supra* note 14.

to operate in the wind farm installation industry. Relaxing cabotage law will not allow a permanent intrusion of foreign vessels in the offshore wind turbine installation sector or true U.S. port-to-port shipping. This waiver need only last as long as necessary to establish an adequate fleet of U.S. TIVs. As of the date of this Comment, there is one U.S. TIV under construction.¹⁷⁹ However, more efficient methods of offshore wind farm construction must begin immediately. One Jones Act compliant vessel under construction can not meaningfully contribute to reversing the effects of climate change under President Biden and Governor Edward's timetables. The U.S. and Louisiana must employ as many TIVs as feasible to reach their carbon zero goals. As the fleet of U.S. TIVs increases, the waiver can be reevaluated and canceled once U.S. vessels meet the demand.

III. SOLUTION

A waiver is the best solution to the impediments imposed by the Jones Act because it is the only solution that focuses on the immediate impacts of climate change. The dramatic and horrific impacts of climate change may not be readily apparent in the U.S. or Louisiana, but regions like Darfur offer a preview of what is to come. Population displacement, environmental degradation, and societal tensions will increasingly affect the world. There is a consensus among U.S. defense agencies that these effects of climate change threaten national security, and the window for action is closing. All methods of reversing climate change should be considered. Where possible, inefficient approaches should be replaced with the methods that could immediately begin to reverse the effects of climate change. Without a waiver, the Jones Act will continue to promote construction of offshore wind farms through inefficient methods that disregard the urgency of the climate change emergency.

Current offshore wind farm construction methods, whether the feeder barge system or through foreign TIVs, prolong the reversal of climate change. The Jones Act forces offshore wind farm construction projects to implement inefficient approaches. A waiver would allow offshore construction projects to forgo the use of multiple vessels or distant travel in exchange for a construction process that is safer, more cost effective,

179. Dominion Energy is currently constructing the first Jones Act-qualified US TIV. Michelle Lewis, *The US Gets a Game-Changing Offshore Wind Farm Installation Vessel*, ELECTREK (June 1, 2021, 1:09 PM), <https://electrek.co/2021/06/01/the-us-gets-a-game-changing-offshore-wind-farm-installation-vessel/> [<https://perma.cc/8YTF-QDPB>]. The *Charybdis* is a coastwise-qualified TIV scheduled for completion in late 2023. *Id.*

and more efficient in the time-sensitive goal of reversing climate change. The national and state governments have recognized that immediate measures must be taken to reverse climate change, but the Jones Act will continue to thwart the most effective means of achieving national and state goals.

Both the U.S. and Louisiana have set aggressive timelines to dramatically reduce their carbon emissions. If these goals are to be achieved, prompt action must be taken. Climate change is an immediate threat to national security that meets the criteria for a cabotage law waiver. As seen by past waivers, this solution will not take months or years to implement—it only requires approval. Failing to overlook the temporary disadvantages of a Jones Act waiver ignores the bigger picture. Economic and permanence fears must be set aside for the dangers presented by climate change. Waiving the Jones Act will allow the U.S. and Louisiana to achieve their aggressive goals. The time for action is now.

CONCLUSION

The full participation of foreign vessels in the construction of offshore wind farms requires a waiver of cabotage law. These waivers are only allowed when the exclusion of foreign vessels would present an immediate threat to national security. Climate change has been recognized by national security agencies as posing an immediate threat to the security of the United States. Excluding foreign ships from full participation in offshore wind farm construction impedes the effort to combat climate change. As the window of opportunity to reverse climate change narrows, all efforts—even those contrary to industry principles—must be implemented. Future generations could face severe consequences without present action. Waiver of the Jones Act for offshore wind farm construction is an immediate solution that will reduce carbon emissions and help reverse climate change.