California North Coast Offshore Wind Studies

Social Impacts to Other Communities that Experienced Offshore Wind

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1. INTRODUCTION

Interest in offshore wind energy has increased in recent years due to improvements in technology, consumer and investor confidence, advances in technology, and increased interest in low carbon energy sources. Global production of offshore wind surpassed 18 GW of installed capacity in 2017 (Global Wind Energy Council, 2019). By 2050, the International Renewable Energy Association estimates that installed capacity will increase by 501.8 GW (IRENA, 2018). As of 2018, there were a total of 105 grid-connected offshore wind farms in Europe, and one grid-connected commercial offshore wind farm in the United States (Selot et al., 2019; United States Department of Energy, 2019). There are currently 15 active offshore wind leases in the United States, totaling 21 GW of capacity (Bureau of Ocean Energy Management 2019) that could lead to further domestic development. There are additional plans to open up leasing opportunities in California, Oregon, and Washington.

According to Pew Research Center (2016), 83% of Americans support more development of wind farms. Despite this large support, project development in local communities still faces many hurdles, both in the public and permitting spheres (Storrow 2019; Gloden 2018)**.** A successful project on the West Coast not only faces technological stressors but must also successfully work with local communities and government agencies to address concerns, impacts, and potential community benefits. Understanding the human dimensions of renewable energy development is pivotal not only for project completion, but also for the monetary bottom line as delays in permitting and development processes can drive up project costs (Goodrich et al. 2012). This document explores the literature related to stakeholder perceptions of offshore wind energy both in Europe and the United States. Key lessons are offered to aid future development of renewable energy both in California and beyond.

2. METHODS

The Bureau of Ocean Energy Management (BOEM), under the Department of Interior, manages federal offshore leasing (both renewable and non-renewable) in the United States. There are currently 15 active federal commercial or noncompetitive leases in 9 different states, and 1 expired lease (Table 1). Interim Policy leases were excluded from this review.

Table 1. Offshore wind leases in the United States.

Lessee	*Location*	*Lease Status*	*Number of Leases*
Bluewater Wind Delaware, LLC.	Delaware	Active, Non-Competitive, Site Assessment Phase.	1
Skipjack Offshore Energy, LLC.	Delaware	Active, Non-Competitive, Site Assessment Phase.	1
Deepwater Wind New England, LLC (Block Island Wind Project)	Rhode Island/ Massachusetts	Active, Operations Phase	2
Virginia Electric and Power Company	Virginia	Active, Site Assessment Phase	1
U.S. Wind Inc.	Maryland	Active, Site Assessment Phase	1
RES America Developments Inc.	Massachusetts	Active, Site Assessment Phase	1
Offshore MW, LLC (Vineyard Wind)	Massachusetts	Active, Site Assessment Phase	1
Equinor Wind US, LLC	Massachusetts	Active, Preliminary Term	1
Mayflower Wind Energy, LLC	Massachusetts	Active, Preliminary Term	1
Vineyard Wind, LLC	Massachusetts	Lease in Progress	1
Cape Wind Associates LLC. (Cape Wind Project)	Massachusetts	Relinquished	1
EDF Renewables Development, Inc.	New Jersey	Lease transferred from U.S. Wind Inc. December 2018	1
RES America Developments Inc.	New Jersey	Active, Site Assessment Phase	1
Statoil Wind US, LLC	New York	Active, Site Assessment Phase	1
Avangrid Renewables, LLC	North Carolina	Active, Site Assessment Phase	1

Note: Lease information is provided as currently reported on BOEM's renewable energy website. Information may not reflect all U.S. development and/or legal transfers.

Relevant literature and news coverage of current United States leasing developments (listed above) was used along with information from state projects (such as the University of Maine's Monhegan Island project) and European case studies to synthesize the ways in which stakeholders have interacted with development processes.

The term 'stakeholder' itself is broad and often contested as a concept (Friedman and Miles 2009; Miles 2012). The public, communities, and the planet as a whole have a 'stake' in acquiring and producing energy, and as the IPCC (2001) points out, also meeting the needs of future generations through sustainable practices. However, the scope of this research aims to identify and describe concerns from immediate or "salient" user groups (as described by Mitchell, Agle and Wood 2003) who have already engaged in projects across the United States and who are expected to engage in projects on the West Coast of the United States. The stakeholder groups were identified by the research team as: government stakeholders, environmental groups, fishermen, labor, local business, and the energy industry. This review covers public perceptions of development, stakeholder concerns, benefit perceptions, and strategies for development.

3. OFFSHORE WIND: LESSONS FROM THE UNITED STATES

Massachusetts is currently the state with the most active offshore leases in the United States. Perhaps the most famous of those leases, however, is the Cape Wind Project, which is the only relinquished lease out of six total offshore leases in the state. The Cape Wind example provides much needed insight on stakeholder interactions with the offshore development process in the United States—particularly for viewshed concerns. Cape Wind Associates LLC secured the first offshore wind lease in the United States in 2010 after working extensively with the Army Corps of Engineers and the Minerals Management Service (now BOEM) beginning in 2001. The proposed project off the coast of Nantucket Sound generated swift debate about climate change, renewable energy placement, and existing coal facilities (Phadke 2010). Wealthy and influential stakeholders, concerned about visible turbines and corresponding property values, aimed to delay the development of the Cape Wind project by investing in opposition groups (Davison 2018). Both project proponents and opponents used viewshed imagery to sway public opinion to their side (Phadke 2010). Surveys conducted by Cape Wind Associates to assess stakeholders' feelings towards the proposed Cape Wind project showed that initial support of the project was around 55% in 2002. However, by 2005 a different survey conducted found that public support had flipped to 55% opposed two years later (Alessi 2017; Firestone and Kempton 2007). The most common reasons for opposition were potential wildlife impacts, viewshed, and impacts to the recreational and commercial fishing industries (Alessi 2017; Firestone and Kempton 2007). After years of delay, stakeholder opposition, and over two dozen lawsuits, the developer relinquished its lease and power purchase agreement in 2015 (Davison, 2018; Endemann and O'Neill 2018).

Other developers in Massachusetts are taking lessons from the Cape Wind controversies. The Vineyard Wind project is a proposed 800 MW wind farm located in federal waters between Martha's Vineyard, MA, and Block Island, RI. The proposed project was formed out of a community cooperative, Vineyard Power, that exists to provide local ownership of renewable energy projects and enhance local decision making (Klain et al. 2017). The cooperative worked with the local community on issues that ultimately lead to the end of Cape Wind, such as distance from shore and visual impacts (Klain et al. 2017). In 2015, BOEM awarded a federal lease to Offshore MW, LLC, with a 10% price reduction for the community benefits agreement negotiated with Vineyard Power (Klain et al. 2017). The project is currently in its site assessment phase, and stakeholders are being engaged.

Local commercial fishermen are particularly concerned that the Vineyard Wind project would disrupt existing fishing lane agreements between lobsterman and trawlers (Abel 2018). To address these concerns, the developer has reduced the planned wind farm's footprint by 20% and changed the turbine placement to allow for easier transit to the south of Martha's Vineyard (Cape Cod Today 2019). The Responsible Offshore Development Alliance (RODA), a coalition of fishing industry participants concerned with loss of fishing opportunities, has emphasized that they are more concerned with creating dedicated transit routes through all, not just one, of the proposed wind farm lease areas in Massachusetts. RODA has since signed a 10-year memorandum of understanding with the Bureau of Energy Management (BOEM) and the U.S. National Oceanic and Atmospheric Administration (NOAA) Fisheries that establishes a collaborative effort to engage with fishing community on offshore wind energy development on the Atlantic Coast (NOAA 2019).

Further South, the Block Island project in Rhode Island remains the only developed commercial offshore wind farm in the United States. Before the project was even proposed, Rhode Island began a marine spatial planning (MSP) project that engaged local communities to gather relevant data about state waters, including stakeholder and fisherman usage (Klain et al. 2017). The subsequent Rhode Island Ocean Special Area Management Plan acted as a common and accepted dataset with which to negotiate (Klain et al. 2017). A survey conducted in Rhode Island indicated that coastal communities feared that the installation of the Block Island Wind Farm would negatively impact tourism and be an "eyesore" (URI

2019). Stakeholders in Rhode Island believed that in order to mitigate for the impacts caused by offshore wind, that community benefits including jobs, apprenticeships, and educational opportunities needed to be made available to them (Klain et al. 2017). Local consultants were hired to work with the community to address concerns and develop intentional community benefits, such as connecting the community to the larger grid, and including fiber optic cables for high speed internet. These early engagements with stakeholders and community benefits are credited with the ultimate development of the project (Klain et al. 2017).

During the construction phase itself, over 300 local unionized workers were employed (Benson 2017). This included over 200 skilled construction and trade workers, and over 100 logistics workers (Gould and Cresswell 2017). The union workers were paid between $28 and $40 per hour and were also provided benefits (Bragg 2017). Since the project has been in its operations phase, recreational fishermen have reported increased chartering and fishing activities as artificial reefs and fish populations gather around the wind array (Vaughan 2018). However, a survey conducted by the University of Rhode Island noted that while recreational fishermen viewed the wind turbines positively, commercial fishermen viewed them mostly negatively (Detz 2019). Both recreational and commercial fishermen agreed that there was an increase in boat activity near the project site due to "wind tourists" and recreational fishermen. However, the commercial fishermen viewed the increase in activity as a hindrance to their fishing operations. Moreover, commercial fishermen had the added concern of avoiding entanglements between their gear and offshore wind project cables and equipment. Ultimately, the wind farm left commercial fishermen with less space to conduct business due to the increase in activity from recreational fishermen and tourist boats (Detz 2019). Since the completion of the Block Island Wind Farm, planning for additional projects has begun throughout the New England area.

Finally, offshore wind energy efforts in Maine and Maryland also offer lessons for development in the West Coast. The Monhegan Island project in Maine is a wind farm in state waters that has utilized community use mapping, frequent public meetings, site exchanges between fishermen and developers (Klain et al., 2015; Island Institute, 2018). Unexpected changes in scale, however, and communications breakdowns have led to increased tensions between fishermen and developers (Klain et al. 2015). Some have requested the consideration of job training compensation for those fishermen who may lose their jobs due to the proposed project (Maine Coast Fishermen's Association, 2012). In Maryland, US Wind Inc. has secured a federal lease 17 miles off Ocean City and plans to produce 250 MW of power (US Wind Inc. 2019). During BOEM's Maryland Call for Information and Nominations (CIN) fishing groups were concerned about further loss to fishing ground, lack of outreach by developers to relevant fishing associations, and were concerned that the leasing area in question is outside of federal spatial planning efforts (DiDomenico 2011; Frulla et al. 2011).

4. OFFSHORE WIND: LESSONS FROM EUROPE

Offshore wind energy development in Europe is distinctly more robust than in the United States. Europe has 105 grid-connected offshore wind farms, the majority of which are fix bottom and fairly close to shore (Selot et al. 2019).

Developer engagement with fishing communities in Europe has come with ups and downs. The impacts to commercial and recreational marine fishing communities in Europe vary by country based on project-specific restrictions. In Belgium, fishermen aren't allowed to come within 500 meters of any offshore wind farm, which some fishermen say concentrates fishing practices into smaller and smaller areas (Bolongaro 2017). In the UK, fishermen are allowed to fish throughout the farm except during times of construction and maintenance. However, some fishermen claim that they've seen a decrease in fish populations near recently constructed farms, stating that areas formerly abundant with fish are now barren (Bently, 2018). Some coastal areas were not mapped for baseline data to monitor the effects of the arrays on fish populations. However, areas that were mapped show that the biggest impacts to populations come during the construction phase (Bently 2018). To avoid fishing disputes, Denmark requires developers to

compensate fishermen for any loss of fishing ground due to an offshore wind development project. In some cases, this has worked to bring developers and fishermen to the table early to avoid impacts, build mutual understanding and trust, and avoid unnecessary fees (Lund, n.d.; Danish Energy Agency, 2018).

On the environmental side, laws in the United Kingdom are stringent and robust. For migratory bird populations, each wind farm is addressed differently based on the different species' migratory patterns. Additionally, the decommissioning of offshore wind turbines will need to follow the Decommissioning of Offshore Renewable Energy guidelines, which require them to be reused, recycled, or incinerated with energy recovery (Hussain, 2019).

In Germany, offshore wind farms are facing criticism and even lawsuits for their potential environmental and wildlife impacts (Burghardt, 2019). German environmentalists are particularly concerned about marine avian habitat in relation to siting of North Sea offshore wind farms. To ensure the safety of the avian population, expert technical analysis and biological surveys are required for every environmental impact report, and projects are not accepted if they pose significant adverse effects. Additionally, all projects must follow a set of measures including selecting least noise-intensive foundations and banning all noise-producing construction during mating and calving periods for marine mammals (Burghardt, 2019). Debate continues about the economic viability of offshore wind in Germany, especially after considerations of reduced subsidies have led to investor exists (Frohlingsdorf, 2013).

5. STAKEHOLDER CONCERNS

Stakeholder concerns about offshore wind development are described in the following sections.

5.1 Perceptions of Environmental Impacts

In a 2009 survey, Belgian residents and tourists were asked about perceptions of offshore wind both generally and in relation to localized development. Researchers found that when residents were asked about which pieces of information they'd most like to receive about offshore wind, 56.5% said that information about the project's effects on nature and the environment were the most important. Second were costs and benefits (Degraer et al. 2013). Indeed, the relationship between a project's environmental costs and community benefits is an interesting one. Firestone and Kempton (2007) found that negative environmental impacts played the largest role in overall opinion of the development of offshore wind in Cape Cod, MA. However, clearly defined and communicated community benefits, such as low-cost local power generation, had the most impact moving a resident from opposition to support (Firestone and Kempton 2007; Haggett 2011). If benefits are not clearly defined, then those surveyed in the Cape Cod case were unconvinced that the environmental impacts are worth the development (Firestone and Kempton 2007).

5.2 Visual Impacts and Site Attachment

Multiple projects have received opposition from the public because of the potential visual impacts caused by wind farms (URI 2019; Davidson 2018). However, having a strong connection to the location that a project will be implemented affects stakeholder's acceptance of the project even if they cannot see the turbines from their own home (Firestone et al. 2012). A common concern amongst stakeholders is that offshore wind development will deter tourism in coastal locations or decrease property values. According to the 2017 fall Goucher Poll, 11% of the 671 Maryland residents interviewed indicated that the offshore wind turbines would make them "less likely" to vacation in the coastal town of Ocean City (Goucher 2017). However, 12% said they would be "more likely" to vacation in Ocean City and three quarters of the interviewees specified that seeing turbines over the horizon would "make no difference" to their decision (Goucher 2017). Lutzeyer et al. (2018) determined that individuals would not pay more to rent a vacation home with a view of turbines, and that rental values losses of up to 10% are possible for properties with utility scale wind farms within 8 miles of shore. However, a study of the Block Island Wind Farm showed positive economic impacts with regards to tourism (Carr-Harris and Lang, 2019).

Carr-Harris and Lang (2019) concluded that vacation rentals and revenue increased in the area from before construction. Results indicate that property renters saw an average seven-night increase in their AirBnb bookings on Block Island during the tourist months of July and August, which relates to a $3,490 increase in revenue per Block Island rental property when compared to control cities. Despite this, the U.S. House Appropriations Committee adopted an amendment to the 2018 Interior Appropriations bill that would prevent the use of federal funds to assess project sites and construction plans for wind farms less than 24 nautical miles from Maryland's shoreline (Delony 2017). Congressman Andy Harris introduced the amendment because of fears that the two proposed wind farms, planned to be 12 and 17 nautical miles from Maryland's coastline, would negatively impact tourism and property values.

Although studies indicate that wind farms may impact the renting prices and revenue of vacation properties, studies from the Lawrence Berkeley National Laboratory (LBNL) show that there were no significant effects to property values that were within a 10-mile proximity of land-based wind facilities (Hoen et al. 2013). Furthermore, there was no statistical evidence that property values were affected during the post-announcement/pre-construction or post construction phases of each project. LBNL refined these results by working with the University of Connecticut to analyze the impacts of wind farms on property values in urban areas of Massachusetts (Atkinson-Palombo and Hoen 2014). They determined that operating turbines near properties in urban areas did not impact their property values.

Implementing wind farms in a community may disrupt or threaten the connection that community members have with a location or the association with their identity. The outcome of emotionally attaching oneself to a location is called place attachment and relating one's self-identity to the physical and symbolic aspects of a location is place identity (Devine-Wright 2009). Firestone et al. (2012) conducted surveys with community members close to the Cape Wind and Bluewater Wind projects located in Massachusetts and Delaware, respectively, to gather information about public acceptance of offshore wind through time. The results for opposition or support of the wind farms for people that would live close to or be able to see the project varied between the two communities. However, the feelings of place attachment (Cape Cod, 94%; Delaware Ocean are, 97%) and place identity (Cape Cod, 70%; Delaware Ocean are, 77%) were similar in both areas (Firestone et al. 2012). They concluded that the location that one feels emotionally invested in is not necessarily where one lives, but may be the water the project is planned to be developed in. For example, the public may feel a weaker attachment to the open ocean than they do to enclosed or semi-enclosed areas, such as sounds and bays. Many researchers disagree about how these concepts fit in with larger 'Not in My Back Yard' reactions to localized development in general (Larson and Krannich 2016). Regardless of the term, research is clear that people's relationship to their environment, and the ocean itself, can impact support or opposition for a project (Haggett 2011; Firestone et al. 2012; Devine-Wright 2009).

5.3 Fishing Industry Concerns

On the fishing side, a 2019 study by the European Maritime Spatial Planning Platform summarizing fishing conflicts concluded that the top concerns were damage to both the developers equipment and fishing gear, re-distribution of fish, negative ecological and monetary consequences, and concerns about the longevity of the fleet both economically and culturally (European MSP Platform, 2019). The commercial and recreational fishing sectors are generally concerned that offshore wind farms may negatively impact their fishing operations, either by disrupting established fishing lanes, by directly removing productive fishing grounds, or by indirectly impacting fish behavior (Botkin-Kowacki, 2018). On the other hand, these changes may not always be negative as some studies show that platforms can serve as artificial reefs (Vaughan 2018).

5.4 Electricity Costs

As the development of wind farms continues, stakeholders are concerned with how project costs will impact their electricity rates. As renewable energy projects are developed, changes in the regulatory

climate and scale can affect ultimate power purchasing agreements and consumer price (Sekularac, 2011; Trodson 2018). Changes in price, especially when stakeholders were promised cheaper rates, can erode community trust long term (Falcon 2018; Young 2019). In response to resident's concerns that they would not be able to afford basic living expenses, such as food, rent, and medicine, because of the increase in their bills, the Newport City Council passed a resolution asking the Rhode Island Public Utilities Commission to explain the increase in the electric bills of mainland residents (Trodson 2018). Although stakeholders were concerned with higher electricity prices in this case, some portion of the population is willing to pay more for renewable electricity than they are for energy produced using fossil fuels (Leiserowitz et al. 2014; Farhar 1999). The level of transparency for energy prices is important to stakeholders. Additionally, long term project needs, such as grid expansion and power usage, can also affect both ratepayers and developer's capital costs (Kerler 2018).

6. STAKEHOLDER PERCEPTIONS OF BENEFITS

There are various forms of community benefits from offshore wind farms. Munday et al. (2011) categorize community benefits as (1) "conventional economic benefits", (2) "flows of financial benefits to local communities", including payments directly from developers, (3) "in-kind contributions to local assets and facilities", (4) "provisions of other local services", and (5) "involvement in the development process." Klain et al. (2017) identified potential community benefits from stakeholders in three different New England islands and included: community funds, community ownership, jobs, apprenticeships, studentships, and discounts on electricity.

Research shows that stakeholders expect different forms of compensations based on how strongly they were impacted by offshore wind development (Charlene et al. 2014). Stakeholders may expect compensation even when there is not a direct link to their perceived impacts from offshore wind development. For example, the hotel industry in one municipality desired compensation from the same tax revenue fishermen would receive in order to renovate their establishments and bring them up to code (Charlene et al. 2014). In England and Wales, authorities can set "Planning Obligators" that require monetary amounts from developers to address certain mitigation and infrastructure projects on existing infrastructure within a municipality (Aitken 2010). As noted in the case study examples above, community benefits can also include jobs or apprenticeships, project add-ons such as high-speed internet, and compensation to local entities (Klain et al. 2017).

While working with communities to develop co-benefits or benefits packages can have a positive effect on development, developers should be mindful about how to approach conversations about community benefits packages as a whole. Municipalities or communities geographically close to a project do not constitute all interested or affected parties involved (Aitken 2010). Furthermore, to some communities and stakeholders, benefits packages can be seen as an inappropriate way to buy off local communities and ram projects through permitting processes (Bristow et al. 2012).

7. TRIBAL PARTICIPATION

Both federally recognized and non-federally recognized tribes play a role in development of offshore wind in the United States. Tribes have unique regulatory abilities to affect development. To start, the Advisory Council on Historic Preservation (ACHP) regulations, as required by section 106 of the National Historic Preservation Act (NHPA), require that tribes be consulted at every step of the development process (Suagee, 2010). However, statute does not "prohibit adverse effects" from occurring (Suagee, 2010). In addition, the Native American Graves Protection and Repatriation Act (NAGPRA) requires that a project be stopped if evidence of a burial site is found (Suagee, 2010).

Tribes can have important and long-standing relationships with the ocean and land areas that offshore wind energy development can take place, and can utilize these regulatory frameworks to defend their heritage. The impact of tribes in the development process should not go unrecognized.

In the Cape Wind case, the Mashpee Wampanoag and the Wampanoag Tribe of Gay Head petitioned the federal government to declare that all of Nantucket Sound as a historic site due to their traditional "sunrise ceremonies" that would be impeded by the view of the turbines (Kimmell and Stalenhoef 2011). While the Minerals Management Service (now BOEM) did find that the tribes had a claim to viewshed concerns, they felt that the issue could be mitigated without listing all of the sound. Eventually, however, the MMS were overruled by the Keeper of the National Register and a contentious back and forth ensued until then Secretary of Interior, Ken Salazar, stepped in and allowed the project to go forward (Kimmell and Stalenhoef 2011). The total project delay due to the NHPA process totaled 18 months (Kimmell and Stalenhoef 2011). During the Rhode Island marine spatial planning process, the Narranganset Tribe worked with the state to provide relevant cultural resources information, including oral histories of the ocean and bay use (Mather et al. 2012). The Ocean SAMP was then utilized in negotiations and stakeholder discussions of the Block Island Wind project itself (Klain et al. 2017).

In her assessment of Tribal involvement in marine protected area planning processes in Washington and British Columbia, Singleton (2009) noted that "the prevailing assumption that all relevant 'stakeholders' can be jointly incorporated into a collaborative process is misleading, given that there are significant differences in legal rights and other political capacities among the various 'stakeholders'" She noted specifically that the political status of Tribes made it inappropriate to incorporate them in planning processes as just another stakeholder. The involvement of Tribes in the Marine Life Protection Act (MLPA) planning process was contentious until the development of a separate government-to-government consultation process led by the state (Rosales 2011). Lessons from that process could be incorporated into planning for offshore wind.

8. LESSONS FOR SUCCESSFUL ENGAGEMENT

Project developers in the United States, as noted above, have used a variety of strategies to successfully engage local communities, including utilizing collaborative marine special planning techniques, hiring local consultants, and facilitating mutual learning spaces where stakeholders feel heard. Klain et al. (2015) specifically recommend making mutual learning accessible from the very beginning as it allows for a place where communities can voice their concerns early in the project design process, where political and scientific knowledge can be shared and understood by all audiences, and where increased dialogue can lead to mutual understanding. Indeed, listening and incorporating concerns are key principles of public participation (IAP2 2018).

Marine Spatial Planning (MSP) is increasingly being utilized to mitigate conflict over multiple and conflicting ocean uses (O'Hagan 2011). In Germany, MSP was utilized early in the process as the nation grappled with long term energy goals and existing ocean uses. Incorporating information sharing, and potential spatial planning, into the West Coast development process may positively impact project support overall, especially as support relates to stakeholder engagement.

Fairness and trust are pivotal pieces of development puzzle. When community members are able to provide input on project planning, project outcomes are perceived as a fairer and the development process is seen as being more "open and transparent" (Firestone et al. 2018; Ordonez-Gauger et al 2018). The California Marine Life Protection Act implementation process is one example of trust playing a direct role on not only outcome support but also project legitimacy itself. Ordonez-Gauger et al. (2018) found that Northern California fishermen specifically had higher levels of satisfaction with the process if they had trust in the entity in charge. This suggests that cooperative work with local entities (as is the case with Vineyard Wind) or at least hiring local consultants (such as the Block Island Wind Farm) might increase legitimacy and trust in the West Coast development process. A summary of key lessons gained from this literature review is included in Table 2.

Table 2. Summary of key lessons from the literature review.

#	*Lesson*
1.	Effectively managing stakeholder and public concerns is crucial for the success of offshore wind developments; public and stakeholder opposition can lead to the delay or cancelation of projects.
2.	Involving stakeholders early and often throughout the process is important; designing a clear process to maintain this engagement including hiring community liaisons may be helpful.
3.	Trust in the process and implementing entity is important for success; projects with more local involvement and control appear more likely to be supported.
4.	Regular, effective, honest communication from the developer and supporting government agencies about the project can be important to reduce the spread of misinformation and increase trust in the process.
5.	Conducting marine spatial planning (or some other open and public planning process) to inform site selection can reduce conflict and controversy later in the process.
6.	People living near the coast have strong place attachment which can make concerns around visual impacts strong drivers in implementation processes.
7.	Native American Tribes have connections to the ocean and land areas for proposed wind projects and as such have a unique stake in project outcomes; it may not be appropriate to treat Tribes as another "stakeholder" as they have a unique political status and various state and federal laws relate to Tribal consultation and potential impacts.
8.	Fishermen have a range of concerns that may need to be addressed including: loss of important fishing grounds, crowding in other fishing grounds due to displacement, impacts on transit zones, impacts of projects on the health of marine resource populations and their habitats, encroachment of wind activities on working-waterfront spaces, and loss of fishing industry jobs or income linked to the other impacts.
9.	It may be important to involve fishermen early in conversations about community benefits packages or other methods to address impacts to their industry; they may have creative and contextually appropriate ideas about how the packages could be designed.
10.	Approach conversations about community benefits packages in a broad and open way, as unexpected stakeholders may be interested in being included in such discussions
11.	Environmental effects rank among some of the highest public concerns about offshore wind; transparency about environmental impacts and appropriate design to reduce or mitigate those impacts could be important for public acceptance.

9. CONCLUSION

How and when stakeholders and communities are included in development processes can have a significant effect on ultimate project success. In the case of offshore wind energy, stakeholders have various concerns ranging from biological impacts, to viewshed concerns, to loss of fishing ground. A process that allows stakeholders to feel heard, a process that is flexible to change based on feedback, and a process that includes trustworthy actors is pivotal in addressing these concerns. Projects already underway, as well as projects that have been unsuccessful, have shown that more than technology is needed. What is needed is open ears and a flexible and collaborative processes that keeps everyone engaged and keeps everyone heard.

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