

Relationality and Reciprocity in Civic Design: Public Engagement and Offshore Wind Development in the Gulf of Maine

by

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ABSTRACT

Offshore wind projects are inherently complex, requiring the integration of social, environmental and technical planning. Meaningful engagement with communities is critical to ensuring procedural fairness, trust and equity throughout the development process. Yet, the role of civic design in shaping these outcomes remains unexplored. This thesis investigates how relationality and reciprocity are fostered through the civic design of public engagements for offshore wind development in the Gulf of Maine. Through qualitative analysis of public meeting transcripts – using thematic coding and memo writing in Atlas.ti – this study identifies civic design elements and recurring engagement themes.

The findings highlight relational accountability as a mechanism for building trust, transparency and procedural fairness. They also explore how civic design can support reciprocity, while revealing how structural barriers can undermine relationality. This research demonstrates the possibilities and limitations of civic design in fostering relational and reciprocal public engagements. It concludes with recommendations for incorporating civic design elements that promote sustained, reciprocal relationships, accountability and long-term community involvement in offshore wind development.

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Introduction

Offshore wind has been considered a key component of a comprehensive strategy to move toward an economy that relies on clean energy instead of fossil fuels (Musial, 2010). Over the last two decades, offshore wind development in the United States has been growing steadily with major milestones such as the first grid-connected offshore wind turbine in 2013 and the first U.S offshore wind farm off the coast of Rhode Island in 2016 (Energy.Gov, 2025). As the offshore wind industry has been developing in the United States and globally, researchers have been exploring questions related to the major challenges around the social, technical and environmental dimensions of wind energy (Veers et al., 2022).

One major research question has been focused on how the social dimensions play a role in determining a successful offshore wind project (Veers et al., 2022; Kirkegaard et al., 2023; Clark & Coman, 2023; Hart & Tsang, 2021). Research has found that the success of wind energy heavily depends on how society engages with the development of wind power infrastructure (Kirkegaard et al., 2023). However, even with public input and comments being legally required during different phases of development and community engagement efforts by federal agencies, public satisfaction around community engagement continues to be a challenge (Clark & Coman, 2023; Hart & Tsang, 2021; Wiersma & Devine-Wright, 2014; Paul & Susskind, 2024). Research around the topic of community engagement for wind energy has found that engagement tends to be designed for one-way outreach and awareness building rather than creating space for conversations, two-way engagement, or bidirectional deliberative learning (Hall & Lazarus, 2015; Klain et al., 2015). While other research around community engagement has focused on community benefits as a mechanism to build relationships and trust between developers and communities (Tyler et al., 2021; Devine-Wright, 2012).

However, at the core of public outreach and community benefits, are the concepts of relationality and reciprocity. Through these mechanisms of engaging with community, relationships can be built on trust and respect that provide mutual benefit for all parties. In order to explore more about how relationality and reciprocity are fostered through community engagement, this thesis examines the civic design of public engagements for offshore wind development in the Gulf of Maine. By researching how relationality and reciprocity are a part of the design of public engagements, lessons can be learned about how to shift toward long-term and meaningful engagement that invests in reciprocal relationships.

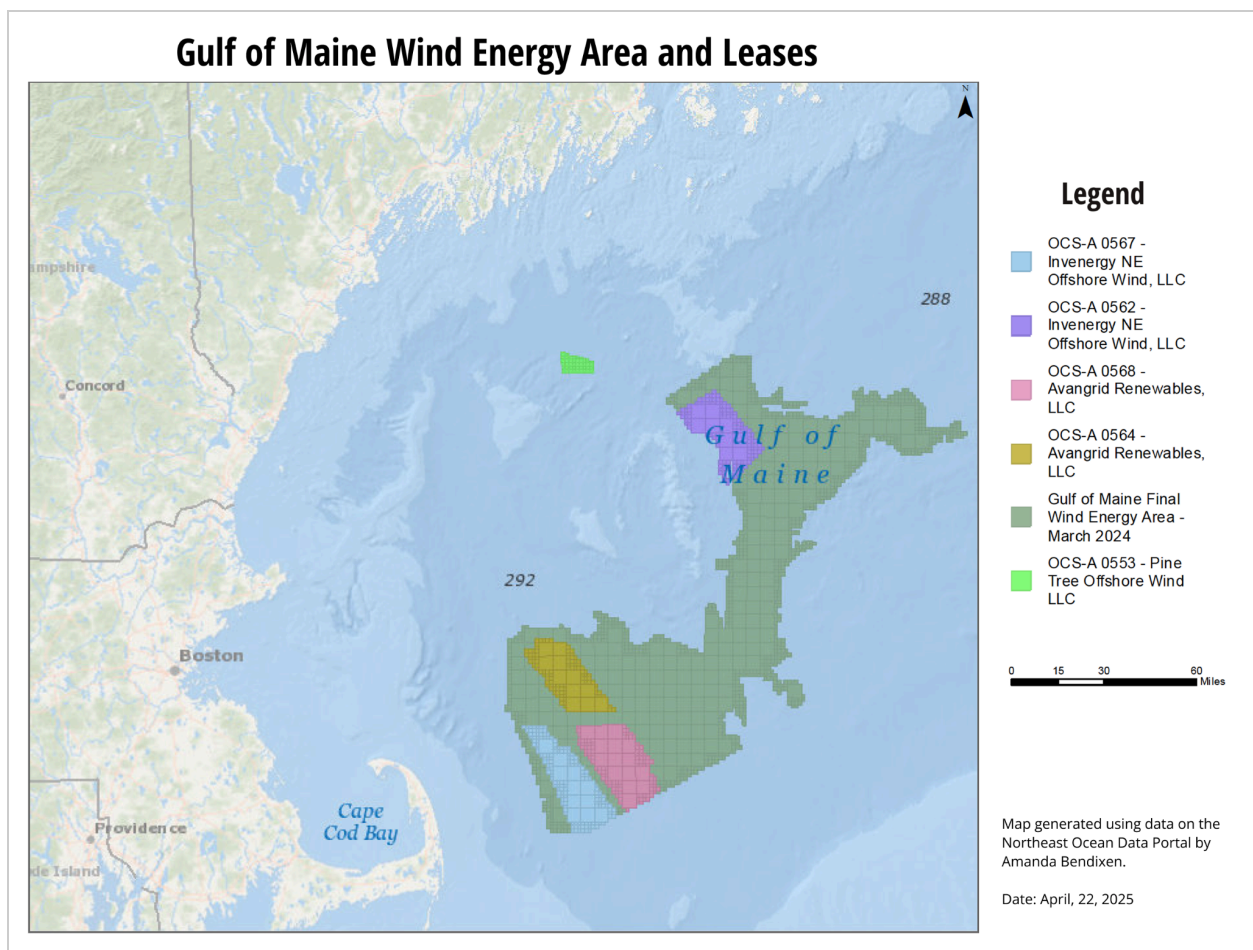
The Gulf of Maine and Offshore Wind Development

Context

As shown in *Figure 1*, the Gulf of Maine is a region in the North Atlantic, located off the coast of Massachusetts, New Hampshire and Maine in the United States. The Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) are the federal agencies overseeing the development process for the Gulf of Maine which began its development activities in 2019 (BOEM, 2019). BOEM and BSEE are responsible for taking action on offshore wind development in response to state-level procurement mandates. State procurement mandates are statutory requirements for the state to purchase a certain amount of electricity from offshore wind projects on a scheduled timeline. Additionally, states have planning goals which act as aspirational measures but do not require agencies to take any direct action. These state-level offshore wind procurement activities and policies are the main driver of the U.S. offshore wind energy market. As of May 31, 2024, both Massachusetts and Maine have procurement mandates. (McCoy et al., 2024)

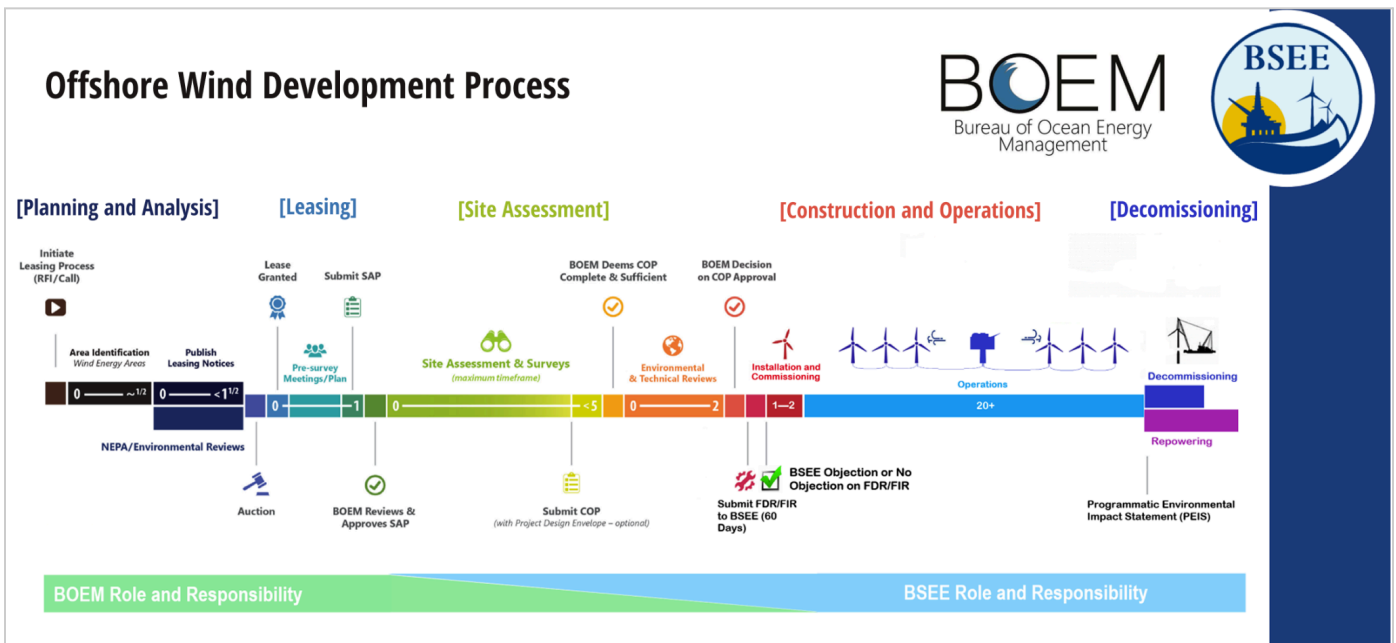
Figure 1

Gulf of Maine Wind Energy Area and Leases



As illustrated in Figure 2, the development process consists of five phases – *Planning and Analysis*, *Leasing*, *Site Assessment*, *Construction and Operations* and *Decommissioning* – with an estimated life cycle of fifty years. BOEM oversees the *Planning and Analysis* to *Construction and Operations* phases and BSEE oversees *Construction and Operations* through *Decommissioning* phases. For the scope of this thesis, the focus will be on the engagement facilitated during the *Planning and Analysis* and *Leasing* phases which was overseen by BOEM between 2019 - 2024.

Figure 2
Offshore Wind Development Process



Note: Adapted from *Overview of BOEM’s and BSEE’s roles for offshore renewable energy* by BOEM (2025).

As of October 2024, the Gulf of Maine has five offshore wind leases. As shown in Figure 1, four leases have been issued for commercial purposes to Invenergy NE Offshore Wind, LLC and Avangrid Renewables, LLC and the fifth lease has been issued for research purposes to the State of Maine to Pine Tree Offshore Wind, LLC. With the leasing phase complete, the development process has moved into the *Site Assessment* phase. As of April 2025, no public engagements have been conducted for this phase (BOEM, 2025).

The Gulf of Maine's Civic Infrastructure and Engagement

As of March 2025, BOEM has organized or participated in over 70 external meetings (40 in-person) specifically for the Gulf of Maine region throughout the *Planning & Analysis* and *Leasing* phases between 2019-2024 with communities of interest including Tribal Nations, fishing communities (commercial and recreational) environmental non-government organizations, maritime (shipping and commercial) and the general public (BOEM, 2024). BOEM has expressed that they value public participation. For example, in the Proposed Sale Notice General Public meeting on May 23, 2024, BOEM staff stated, “This is your time to be heard. We consider public input to be a critical component of safe and responsible offshore energy resource management”. BOEM has communicated verbally and through the time, energy and resources dedicated to engagement activities that they are invested in public participation. BOEM’s multi-pronged approach to engaging civil society and governments involves three initiatives that make up the offshore wind civic infrastructure:

1. **Public meetings** with the general public, specific community groups and Tribal Nations.
2. **Public comments** submitted via regulations.gov, a public participation tool managed by the federal government.
3. **Gulf of Maine Intergovernmental Renewable Energy Task Force** a government-to-government group chartered to facilitate coordination and consultation among federal, state, local and tribal governments regarding the wind energy leasing process on the Outer Continental Shelf in the Gulf of Maine (BOEM, 2019).

Based on the quantity of public meetings and multiple initiatives for engagement to date, BOEM has invested a significant amount of time into public engagements throughout the development process in the Gulf of Maine. However, simply facilitating or participating in public engagements doesn’t guarantee those processes will be successful. The quality and design of the engagements are essential components to its success. As highlighted in the literature, public participation around offshore wind projects continues to be a challenge and proves to be an area of improvement (Firestone et al., 2020; Firestone et al., 2012; Fleming et al., 2022; Gonyo et al., 2021; Bingaman et al. 2022; Paul & Susskind, 2024).

Public Perception and Participation

Research has found that a key component to positive public perception and participation in offshore wind projects is community engagement (Firestone et al., 2020; Firestone et al., 2012; Fleming et al., 2022; Gonyo et al., 2021). As exhibited in two studies focused on Rhode Island, community engagement contributes to building trust and public support which is cultivated by perceived

procedural fairness and an active engagement process (Bingaman et al., 2022; Firestone et al., 2020). Procedural fairness involves transparent and equitable decision-making throughout the development phases as well as trust in state government (Firestone et al., 2020). An active engagement process involves sustained involvement throughout the development lifecycle. These engagements must contribute to procedural fairness by providing transparency into the process as well. Public opinion tends to change over time which means engagement must be sustained and consistent through the planning process (Bingaman et al., 2022). An additional study by Firestone et al. (2012), examined process fairness for two offshore wind projects, Cape Wind off the coast of Massachusetts and Bluewater Wind off the coast of Delaware. The study found a statistical relationship between satisfaction with the process and support for the outcome. A fair process with sustained, active community engagement are essential components for garnering public support of an offshore wind project. Even with research suggesting the importance of an active engagement process that contributes to procedural fairness, the mark continues to be missed. As shown in an offshore wind stakeholder assessment with individuals along the Atlantic coast, Paul and Susskind (2024) found that various stakeholders were expressing a lack of quality stakeholder engagement and missed opportunities to engage meaningfully. Additionally, stakeholders were unsure of next steps to accommodate all parties and expressed a desire for strategies for fostering collaboration among stakeholders. The sentiments expressed by stakeholders along the Atlantic coast can be seen in other studies around public participation and perception of offshore wind which further signals the design of engagements as a point of challenge (Bingaman et al., 2022; Firestone et al., 2020; Firestone et al., 2012; Fleming et al., 2022; Gonyo et al., 2021).

Another component of public perception and participation are community members' relationship to 'place', specifically the ocean (Kempton et al., 2005; Devine - Wright, 2005; Bates & Firestone, 2015). In a study conducted to understand citizens' responses to the failed Cape Wind project off the coast of Cape Cod, Massachusetts, residents shared the importance of the sea to them (Kempton et al., 2005). Place is a form of identity and people are intrinsically tied to the land on which they live their daily lives (Tuck & McKenzie, 2015). However, wind development alters and disrupts someone's relationship to 'place' (Devine - Wright, 2005). Haggett et al. (2020) analysis of engagement between offshore wind projects and fisheries in the United Kingdom and the United States highlights this sentiment. For the fishing community, fishing for a living not only defined where they lived and sold their fish, but it also defined where they spend most of their time – the sea. This facet of the fishing community was important to considering potential impacts of offshore wind projects on fishers. Acknowledging and respecting the importance of someone's relationship to place proves to be an important factor when considering offshore wind development. Depending on communities' relationship to the ocean, their perception of the development will differ in either a positive or negative way (Bates & Firestone, 2015).

The success of participatory processes heavily depends on understanding power dynamics of a place, participants values, the way participants construct knowledge and the type of knowledge they consider valid (Reed et al., 2017). The literature around public participation and perception have suggested the importance of procedural fairness, sustained and active community engagement that garners trust and respectful treatment of communities' relationship to the ocean.

Efforts to Build Relationality and Reciprocity in Offshore Wind Development

Community benefits and community engagement play a role in fostering relationality and reciprocity in offshore wind development. Community benefits, provided by the developer, are a mechanism for engaging with local communities and building public support (Tyler et al., 2021; Devine-Wright, 2012). However, communities and developers have different perceptions of community benefits. Määttä (2024) analyzed community and developer perspectives on community benefits in Scotland and found that communities perceived community benefits as compensation and worried about the voluntary nature of community benefits, while developers saw them as benevolent gifts but worried about how they might impact project viability. This analysis suggests making community benefits mandatory or rethinking the role of community benefits in order to preserve the relationship and trust between developers and community. While community benefits can be a mechanism for fostering a sense of reciprocity, how they are regulated and issued are central to building and maintaining positive relationships. Community benefits, in conjunction with bidirectional deliberative learning, which involves participants learning from each other while reconciling technical expertise with citizen values, can improve the quality of interactions between communities, government agencies and developers during renewable energy siting (Klain et al., 2015). Klain (2015) found that decision processes were more effective when participants were able to engage in bidirectional deliberative and collaborating on shared outcomes such as community benefits.

Additionally, two aspects are needed for a just energy transition that also contribute to reciprocal relationships – distributional justice and procedural justice. Distributional justice requires an accounting for the impacts and benefits from new projects. Procedural justice ensures those affected are acknowledged and have active roles in decision making. As highlighted in the analysis of US and UK based fishing communities, it was important to have meaningful inclusion of fisheries representatives in planning and decision-making and to incorporate a collaborative approach to offshore wind projects (Haggett et al., 2020). While this study focused on fisheries, these recommendations could translate to other community groups involved in offshore wind development such as Tribal Nations. Efforts to build relationality and reciprocity in offshore wind development have focused on community benefits and community engagement from a high-level but research has not

focused on the actual design of these processes and the role of civic design in fostering relationality and reciprocity.

Research Questions

This thesis seeks to explore the questions:

- How does the civic design of public engagements for offshore wind development in the Gulf of Maine foster relationality and reciprocity between parties involved in the development process?
 - What is the civic infrastructure for offshore wind development in the Gulf of Maine?

Theory of Change

Community engagement is a critical component for designing with communities to create equitable and resilient outcomes (Knox-Hayes et al., 2021). However, community engagement designed for one-way outreach and awareness building can leave communities frustrated with the process and generate a lack of public support (Hall & Lazarus, 2015). By examining the design of public engagements for offshore wind development in the Gulf of Maine, lessons can be learned about how to shift toward long-term and meaningful engagement that invests in building reciprocity and relationality between the environment, community groups, Tribal Nations, government agencies and developers by creating space for conversations, mutual benefit and accountability.

Theoretical Frameworks

This thesis is grounded by two theoretical frameworks - *Relational Systems Thinking* and the *Civic Design Framework* - to assess the quality and design of public engagements.

Relational Systems Thinking

To anchor this research, I engaged with an Indigenous standpoint theoretical framework developed by Melanie Goodchild (2022), an Anishnaabekwe systems thinking and complexity scholar called *relational systems thinking*. Goodchild offers the spirit of engaging with relational systems thinking as a dynamic interface model to transcend binary and hierarchical thinking, in the sacred space between worldviews, in order to embrace a complexity mindset informed by Indigenous wisdom (Goodchild, 2022). This framework emphasizes the interconnectedness and interdependence of systems. To understand a system, it is essential to recognize and consider the relationships between all elements rather than analyzing them in isolation. In contrast to linear, cause-and-effect models, relational

systems thinking emphasizes the network of relationships that create a system and the interactions between elements that shape outcomes of the system. All elements in a system are interdependent which means the health of one part of a system depends on the health of the whole system and its interactions. Systems aren't static and evolve over time as relationships between components change. Applying relational system thinking emphasizes relationships, reciprocity and the interconnectedness of all beings. Relational systems thinking offers a shift from reductionist thought to a more holistic approach to understanding and working on complex social, environmental and technical planning efforts such as offshore wind development.

Civic Design Framework

To analyze the civic design of the public engagements, I engaged with the scholarship of We Who Engage, a MIT lab headed by Ceasar McDowell called the Civic Design Framework (2021). The Framework was created as a tool for municipalities, community organizations and public-facing institutions as they work to facilitate decision-making in a transparent, equitable and just way to move toward a new form of civic infrastructure to sustain and improve democratic processes. I am employing this framework as a method to evaluate the civic design of the public engagements for offshore wind development in the Gulf of Maine by generating an understanding of the types of conversations and design principles being utilized or underutilized in the process. The Civic Design Framework has been organized by *Conversation Types* (Table 1) and *Design Principles* (Table 2).

Table 1. Conversation Types

Framing	Create a shared understanding of an issue. Framing conversations can be one of the more important types because they directly impact which action may or may not be appropriate in a given situation.
Ideation	Offer possible solutions to a particular issue, challenge or policy. These conversations are an opportunity for people to witness their collective intelligence and creativity rather than making a decisions
Prioritizing	Weigh the value of choices by identifying an array of actions or paths forward to find an equitable improvement. These options might come from the previous ideation conversation or another process.
Deciding	Agreeing on a path forward by weighing the trade-offs based on values. Open conversations with the public about these trade-offs can turn a debate into an opportunity to build connections which can help the public live with the final outcome even if it wasn't what they expected or originally wanted..
Implementing	Following through on commitments by giving the public an opportunity to be in these conversations around implementation. The public has an integral role in implementing the decisions that impact them.
Monitoring	Being accountable by monitoring results of the decision to ensure the effectiveness and equity of the decision over time.

Table 2. Design Principles

Systemic Change	Designing for systemic change entails creating conditions to enable the public to address underlying structures that lie beneath the surface and examine the challenge from a systemic perspective.
Ecological Networks	An engagement process that embraces the values and patterns found in nature that can support us in understanding the interconnectedness of life. It is important to strengthen the capacity of people to understand and experience our connection to each other and our environment.
Collaboration	Designing a process where participants are required to work together to imagine, plan, decide and implement solutions as a collective.
Multiple Forms of Expression	Allows people with different backgrounds and abilities to connect and contribute using their preferred form of expression.
Analog + Digital	Support engaging in either analog or digital ways to connect with others and build community.
Equity	Understanding that our histories and traditions do not provide the same opportunities for everyone to be present and raise their voice.
Healing	Creating space to acknowledge how public processes have repeatedly and systematically harmed those at the margins of society and creating new systems to mitigate future harm.
the Margins	Centering the experiences and knowledge of marginalized people and groups. A process designed to work for those at the margins, will likely work for those in the middle as well.

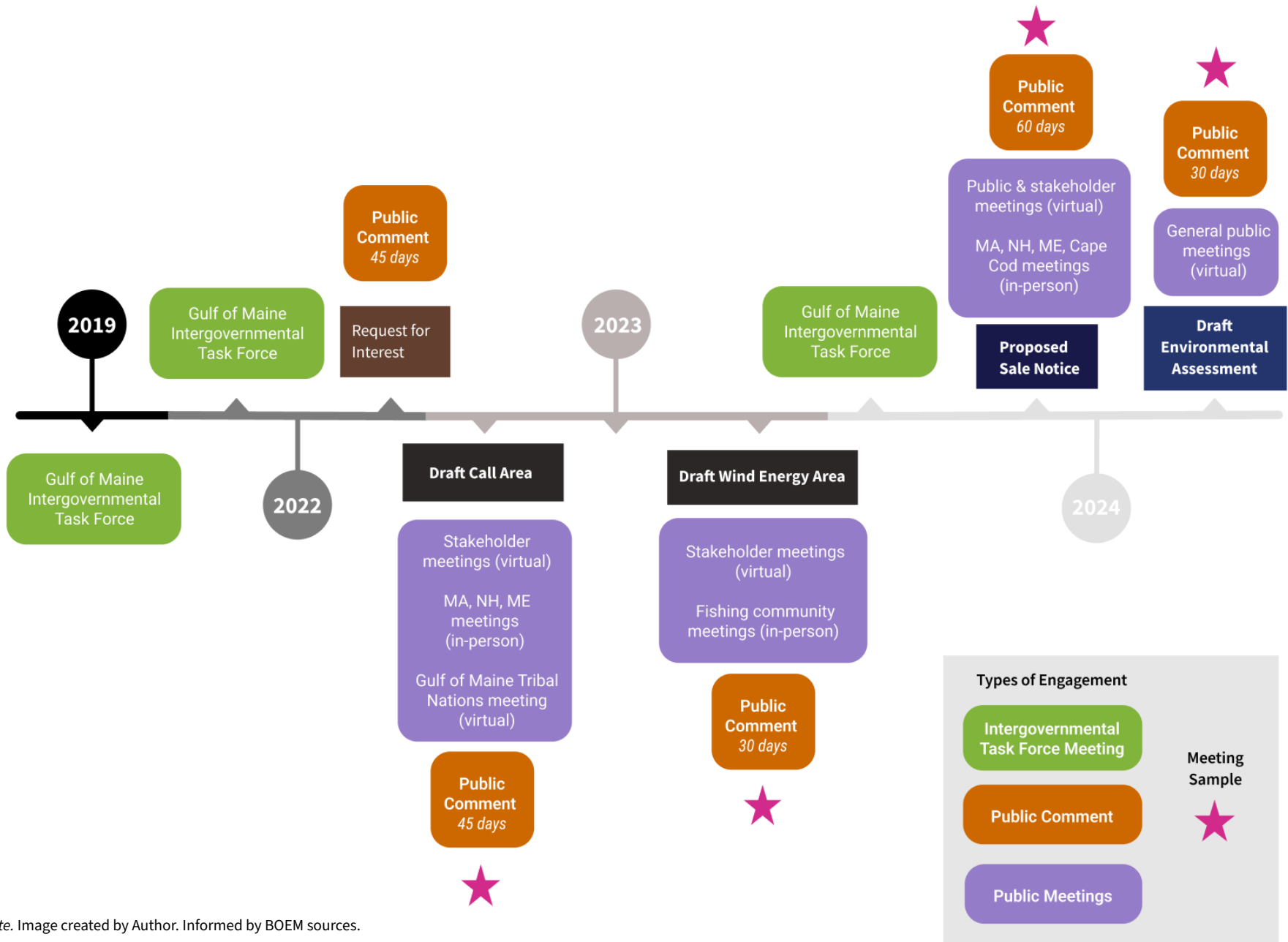
Methodology

Civic Infrastructure Mapping

To explore how the design of public engagements fosters relationality and reciprocity for offshore wind in the Gulf of Maine, the analysis began with identifying components of the civic infrastructure. Civic infrastructure refers to the systems, organizations and networks that facilitate civic engagement and participation. Elements of civic infrastructure include public spaces, community organizations, and communication platforms that support democratic participation and collective action (Kaufman et al., 2022). Civic infrastructure builds social trust and acts as a place of dialogue between various parties with differing viewpoints (We Who Engage, 2021). After reviewing the offshore wind planning documents and reports about engagement in the Gulf of Maine from BOEM, I developed an integrated civic infrastructure and development process timeline as illustrated in *Figure 3*. The timeline showcases different features of the Gulf of Maine offshore wind civic infrastructure by showing each component – public comment, public meeting and intergovernmental task force meeting – and at what point in the development process each component of the civic infrastructure occurs. *Figure 3* displays a clear pattern, during every step in a phase, such as *Draft Call Area* during the *Planning and Analysis* phase, engagement meetings with either stakeholder groups, general public and/or Tribal Nations are held in parallel with a public comment period. In addition to public comments and engagement meetings, another element of the civic infrastructure was the Gulf of Maine Intergovernmental Task Force. The Task Force, composed of government-to-government leaders, convenes to discuss offshore wind development in the Gulf of Maine once a year, based on the occurrences between 2019-2024. While the Task Force focuses on government-to-government relations, the meetings are open to the public. All three of these components encompass the civic infrastructure of the offshore wind development in the Gulf of Maine which acts as points of entry for citizen participation

Figure 3

Gulf of Maine Civic Infrastructure and Planning Integrated Timeline



Note. Image created by Author. Informed by BOEM sources.

Public Meetings Analysis

After mapping the civic infrastructure, I collected all publicly available meetings that were led by BOEM. After reviewing the collection of thirty-seven meetings, I selected a sample of four meetings as shown in Table 3. These samples were selected to represent each step of the *Planning & Analysis* and *Leasing* phases that had public meetings – *Draft Call Area, Draft Wind Energy Area, Proposed Sale Notice, Draft Environmental Assessment* – as illustrated in *Figure 3*. Three of the samples were general public meetings and one sample for the *Draft Call Area* was a stakeholder specific meeting with the mobile gear fishing community because a general public meeting wasn't conducted. General public meetings were preferred for the dataset because they were more inclusive of a variety of participants.

In order to assess the design of public meetings, I used Atlas.ti, a qualitative analysis software, to code the public meeting transcripts which I copied from the meeting recordings posted on BOEM's YouTube site. The codebook (see Appendix I) for the analysis was developed based the following components: 1) theoretical frameworks - civic design framework and relational system thinking, 2) themes across the literature review, 3) identifier codes such as 'facilitator' or 'public' and 4) common topics in the field such as 'ocean health' and 'wind energy area'. The codebook was developed with these components in mind to assess relationships between the different elements during public meetings.

The codes were divided into six categories:

1. **Reciprocity** - To identify moments related to mutual give and take.
2. **Relationality** - To identify moments related to relationships being strengthened or weakened.
3. **Civic Design Elements** - To see what elements of civic design are being used such as conversation types and design principles.
4. **Participants** – To understand who was a part of the engagement.
5. **Topic** – To understand what participants discussed.
6. **Challenges and Barriers** - To identify any obstacles to meaningful participation.

By coding the transcripts to assess the civic design of public engagement, recurring civic design elements and recurring engagement themes began to emerge.

Table 3. Gulf of Maine Public Meeting Samples Between 2023 -2024

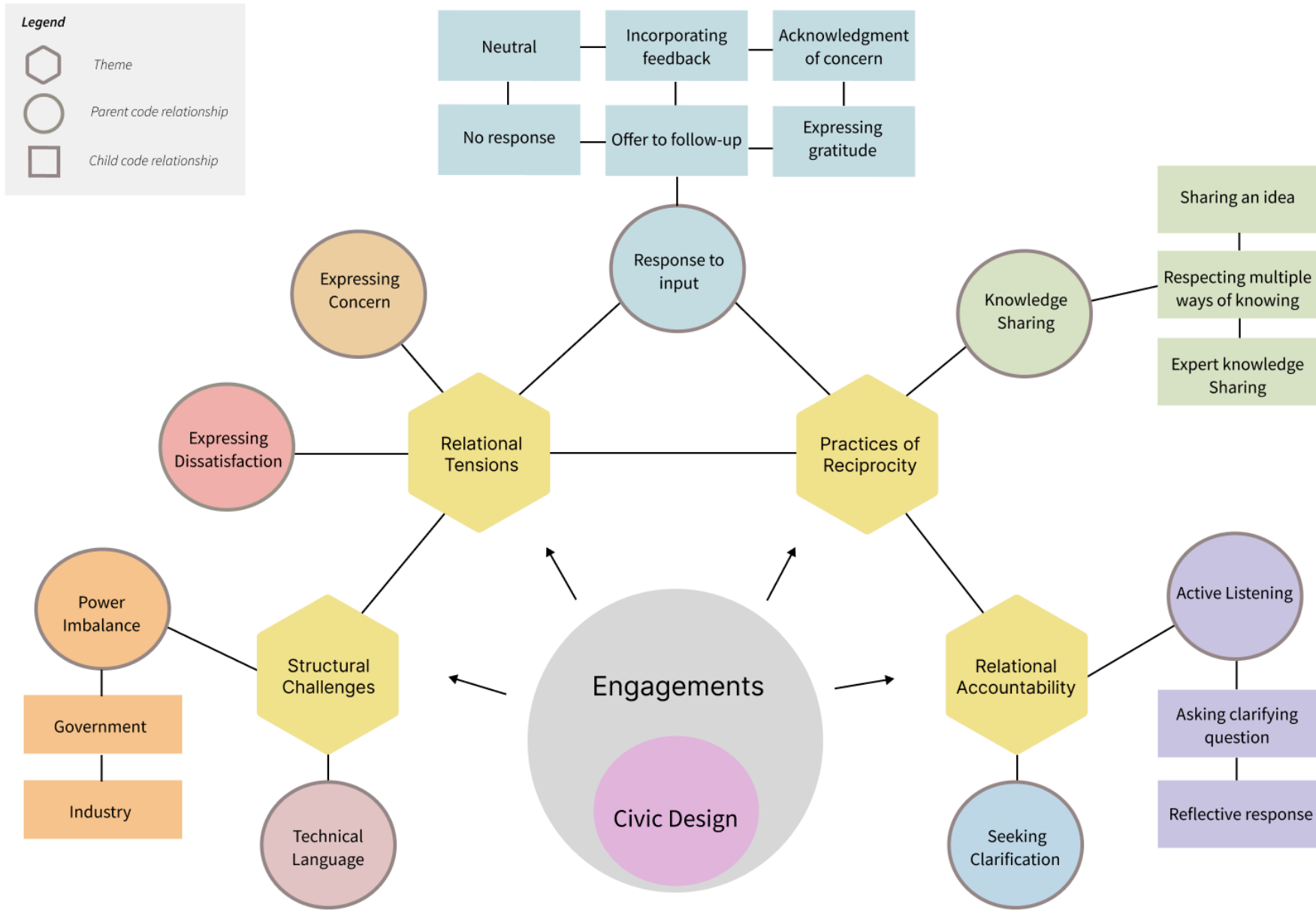
Meeting Sample	Date	Description	Phase
#1: Draft Call Area - Mobile Gear	January 30, 2023	In late January 2023, BOEM held 6 virtual engagements and 3 in-person engagements in MA, NH and MA about the Federal commercial leasing process for offshore wind in the Gulf of Maine with specific stakeholder groups. This is one of those 6 virtual meetings with fishing community members focused on mobile gear.	Planning & Analysis
#2: Wind Energy Area - General Public	November 1, 2023	Between November 1-3, 2023 BOEM held 6 virtual meetings to provide information and collect input on the draft Wind Energy Area and the Secondary Areas for Further Analysis. This public meeting was the first meeting open to all audiences. Then they held 5 additional meetings with specific stakeholder groups. Between the 6 meetings, ~487 people were in attendance.	Planning & Analysis
#3: Proposed Sale Notice - General Public	May 23, 2024	Between May 23 - June 11, 2024, BOEM hosted 5 virtual meetings with the general public, commercial fisheries, recreational fisheries and highly migratory species, environmental organizations, and the shipping and maritime industry to share information and receive input on the Gulf of Maine Proposed Sale Notice. ~262 people participated in the virtual meetings.	Leasing
#4: Draft Environmental Assessment Public Meeting	July 8, 2024	On June 21, 2024, BOEM published a notice of availability (NOA) of a draft Environmental Assessment (EA) in the Federal Register along with a 30-day public comment period. During the public comment period, BOEM hosted 2 virtual meetings to allow the public to learn more about the draft EA, ask questions, and provide oral testimony (BOEM, 2024).	Leasing

Results and Analysis

The research question explores how civic design plays a role in fostering relationality and reciprocity during public engagements for offshore wind development in the Gulf of Maine. In order to explore this question, this section focuses on identifying civic design elements found through the analysis of public meeting transcripts along with four themes that emerged as a result of thematic coding and memo writing. The civic design elements explored in the following section include: spaces for dialogue and relationship-building, inclusive process and timing, accessibility and language, and feedback loops and responsiveness. The four themes, as illustrated in *Figure 4*, include practices of reciprocity, relational accountability, relational tensions and structural challenges. The thematic network map, illustrated below in *Figure 4*, centers civic design at the heart of engagements which facilitates the flow of the engagement, leading to different interactions and experiences between participants. The arrows point outwards to the four themes along with the corresponding parent codes and child code relationships that fall under each theme. This diagram illustrates the interconnectedness of an engagement and how civic design underpins these interactions.

Figure 4

Civic Design and Engagements: Themes and Relationships



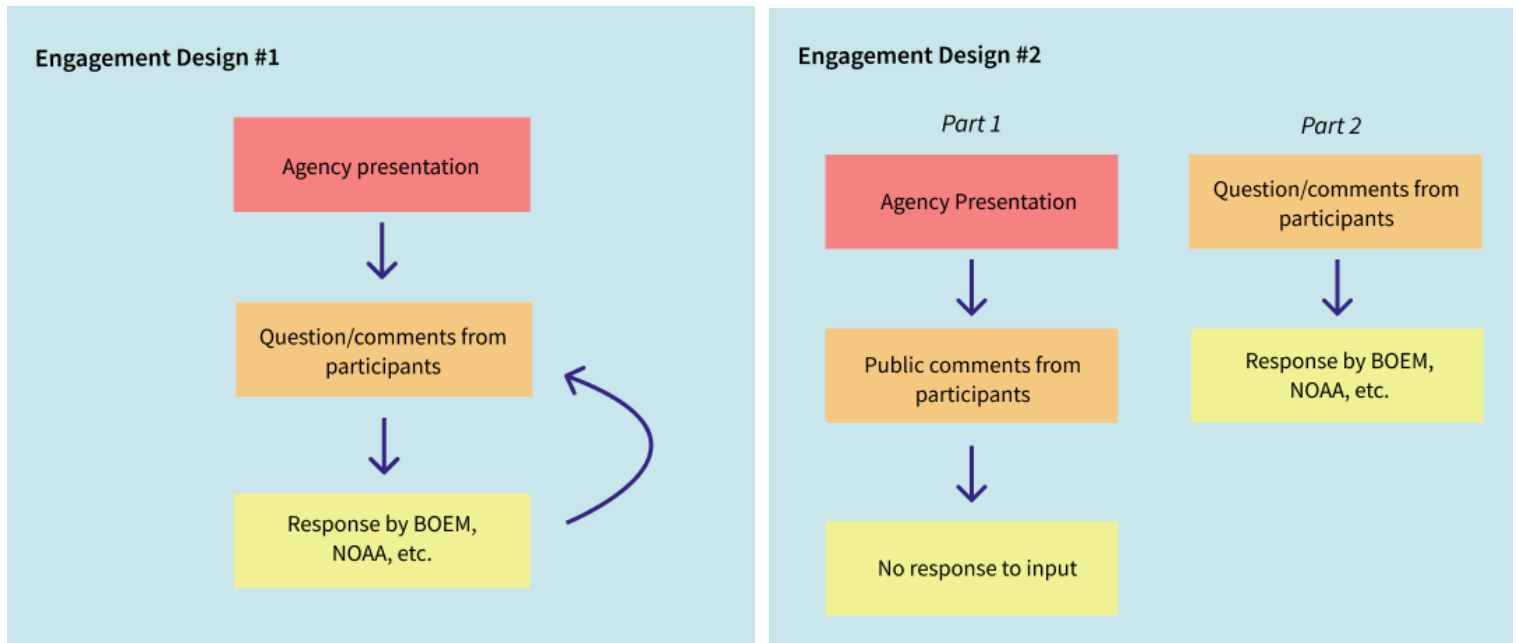
Note: Image created by Author.

Civic Design Elements

The civic design of public engagements, features a range of formats and design elements. How participants experienced these design elements influenced how relationality and reciprocity were experienced. After analyzing the sample transcripts along with meeting documents such as agendas, summaries and slides, a composition for the civic design began to emerge. Along with the civic design elements and composition, key groups engaged through these meetings included BOEM, NOAA-NCCOS, Consensus Building Institute (Facilitator), General Public, Fishing Community, Local & State Government, Research & Academia, Nonprofit, Advocacy & NGOs. Other key groups and communities involved in offshore wind development but not represented in this study due to limitations include Tribal Nations and the shipping and commercial maritime industry. As illustrated in *Figure 5*, the meeting samples follow two engagement designs. Meeting sample #1-#3 followed engagement design #1 which began with BOEM presenting information on the relevant phase, then the facilitator opening the floor to questions and/or comments from attendees and BOEM addressing those questions and/or comments, repeat. Meeting sample #4 followed engagement design #2, which began the same, a presentation by BOEM then participants sharing public comments, however in this design, no follow-up was permitted by BOEM. A second part of the engagement included the facilitator opening the floor for questions and comments with responses from BOEM. As a result of the structure of the meetings, those giving presentations, sharing information or facilitating such as BOEM, were predominantly speaking throughout the engagements. Civic design approaches for these meetings were intended to inform the public about the phase of the development process and gather feedback to inform decision making.

Figure 5

Gulf of Maine Public Engagements: Engagement Design #1 and Engagement Design #2



Note. Image created by Author.

Spaces for Dialogue and Relationship-Building

As a result of the engagement design, spaces for dialogue were limited and there were missed opportunities for relationship-building. As exhibited in Meeting Sample #4: Draft Environmental Assessment, which followed engagement design #2, the structure of the meeting led to a lack of response to public comments, which seemed impersonal especially given the nature of some public comments that were expressing concern on an issue. At one point during the meeting, an attendee from the general public shared the inefficiency of the design of the engagement, they said, “I don’t understand why you’ve placed the question and answer session following the session for public comment. Shouldn’t you allow the public to first ask for clarification on certain items before asking them their thoughts about those same items?”. BOEM responded by explaining that the meeting was structured to answer frequently asked questions first, before opening it up to comments and questions. This engagement wasn’t designed for any type of dialogue which led to opportunities for meaningful dialogue being missed. The design generated a one-sided engagement (Hall and Lazarus, 2015) that focused on awareness building and only pulled the community in for limited input. The design limited interaction between attendees and only allowed for interactions with the hosts. Through the lens of the civic design framework, there were major gaps in the design of these engagements. The engagements weren’t generating much conversation between participants or bidirectional deliberative learning (Klain, et al. 2015) as much as they were designed to share

information, solicit feedback and provide answers to questions. These engagement designs demonstrate a lack of designing for *collaboration*. Even if the intention to engage the community was well-meaning, the process and design of the meetings fell short in meaningfully building reciprocity in the engagement and in turn, the development process.

Inclusive process and timing

The timeline for public meeting engagement was rigid because the timing had to align with public comment periods (30, 45 or 60 days) and state-level offshore wind procurement mandates. In-person and virtual meetings are conducted during these windows to gather feedback on the step in the phase as illustrated in *Figure 3*. This timeline makes the process rigid and inflexible. However, BOEM demonstrated they are responsive to feedback if an opportunity to engage was missed. For instance, during Meeting Sample #3: Proposed Sale Notice - General Public, two residents of Cape Cod, Massachusetts expressed concern with a lack of engagement in Cape Cod given the proximity of the offshore wind projects in the Gulf of Maine. BOEM responded by acknowledging the concern and later scheduled an in-person meeting on Cape Cod towards the end of the public comment period. This example shows a responsiveness to input and an ability to actively listen which contributes to building stronger relationships with communities. However, in the following Meeting Sample #4: Draft Environmental Assessment, two additional Cape Cod residents shared that additional engagement, particularly around the environmental assessment, needed to take place in Cape Cod. No evidence of a follow-up or response to this comment was demonstrated.

Additionally, a handful of attendees shared concern around the pace of offshore wind development and missing critical scientific information around how offshore wind projects will affect the ocean and surrounding environmental habitats. During the Meeting Sample #4: Draft Environmental Assessment, an attendee from the general public, expressed how it was challenging that all those attending and who live around the Gulf of Maine put in a lot of effort and time to not harm the aquatic life including putting regulations on fishing. Yet, with the development of offshore wind in the region, regulations weren't as strict and there didn't seem to be enough research to ensure there wasn't environmental harm. They said, "it seems absolutely crazy to me to not [have a vote...], it's very discouraging that it seems like this is [getting pushed and rushed through] and what's the big rush here?". This example illustrated the challenge of rigid timelines and moving through phases with a top-down approach. A lack of horizontal power structure led to a number of participants being frustrated with the pace of development and lack of voting power. These examples demonstrated the challenges around creating an inclusive process with a rigid timeline that is determined by systematic structures such as state-level procurement mandates.

Accessibility and Language

The engagements were designed with two design principles from the Civic Design Framework (We Who Engage, 2021) that contribute to accessibility – *analog and digital* formats and opportunities for *multiple forms of expression*. A strength of the civic design includes BOEM providing opportunities for in-person and virtual meetings during each step in a phase. This allowed for a larger number of attendees to join regardless of location. Additionally, this allows for people to participate with multiple forms of expressions by either sharing their feedback verbally in-person or virtually, writing in the video chat or by public comment. The language used throughout the engagement was split between technical and simple terminology during expert presentations and responses to input. This was a challenge given the technical nature of offshore wind projects and a potential area of improvement for civic design. While technocratic jargon was used, experts demonstrated efforts to explain important information.

Feedback loops and Responsiveness

When examining the design mechanisms for responding to participant feedback, the format leveraged during each meeting determined the responsiveness to input. For example, meeting samples #1-3, followed engagement design #1, which allowed for BOEM or NOAA-NCCOS to meaningfully respond generating moments of reciprocity through *active listening, knowledge sharing, offers to follow-up, expressing gratitude and acknowledgment of concern*. In contrast, meeting sample #4, followed engagement design #2, leading to more moments of relational tensions due to *no response to input*. This finding demonstrated that engagement design #1 generates more practices of reciprocity than engagement design #2. Design features in engagement design #2, such as public comments without response generate relational challenges and undermine the effectiveness of building reciprocal relationships through engagement.

Engagement Themes

Theme #1: Practices of Reciprocity

Reciprocity refers to the practice of exchange for mutual benefit. The findings demonstrated reciprocity being practiced through two mechanisms: *knowledge sharing* and *responses to input*. When observing trends in the type of response to input across all the meeting samples, the top three most frequently observed responses were either *neutral* in tone, *expressing gratitude* and/or *incorporating feedback*. A *neutral* response in this case doesn't hinder reciprocity but it doesn't necessarily build it in the same way as *expressing gratitude* and *incorporating feedback* which shows respect for the participant who took time and effort to share a comment.

Another pattern when examining practices of reciprocity was *knowledge sharing*. *Knowledge sharing* was demonstrated mainly by BOEM or NOAA-NCCOS, as a result of the engagement design because they were giving presentations and providing responses to questions and comments. Interestingly, both attendees and hosts recognized multiple ways of knowing during the meeting samples demonstrating an acknowledgement and respect for differing knowledge systems such as fisher's ecological knowledge. These practices of reciprocity are important for building trust and relationships. Through reciprocity, relationality can develop in meaningful ways. People feel respected and more open to project outcomes that might be different than what they expected going into an engagement process.

Theme #2: Relational Accountability

Relational accountability refers to the accountability fostered as a result of relationships. When people are in relationship with one another they take more accountability for their responsibilities and actions. The cultivation of relational accountability through engagements supports the development of procedural fairness and trust. The mechanisms identified for building relational accountability include *active listening*, *seeking clarification*, *acknowledging concern*, *offering to follow-up* and/or *incorporating feedback*. Active listening was demonstrated over 30 times in Meeting Sample #2: Draft Wind Energy Area and Meeting Sample #3: Proposed Sale Notice which followed engagement design #1. In Meeting Sample #4: Draft Environmental Assessment, there were zero demonstrations of *active listening* which could be a result of engagement design #2. The same trend was observed for the type of responses to input. *Active listening* through a *reflective response* co-occurred with a *response to input* that was either *acknowledging concern*, *incorporating feedback*, *expressing gratitude*, *neutral* or *promising to follow-up*. *Active listening* through a *clarifying question* was demonstrated alongside a *neutral response*, *expressing gratitude* or *incorporating feedback*. Design of engagements can support the development of relational accountability by providing opportunities for participants to actively listen, share knowledge and collaborate. Through collaborative processes, relationships are built and thus promotes more accountability between those involved.

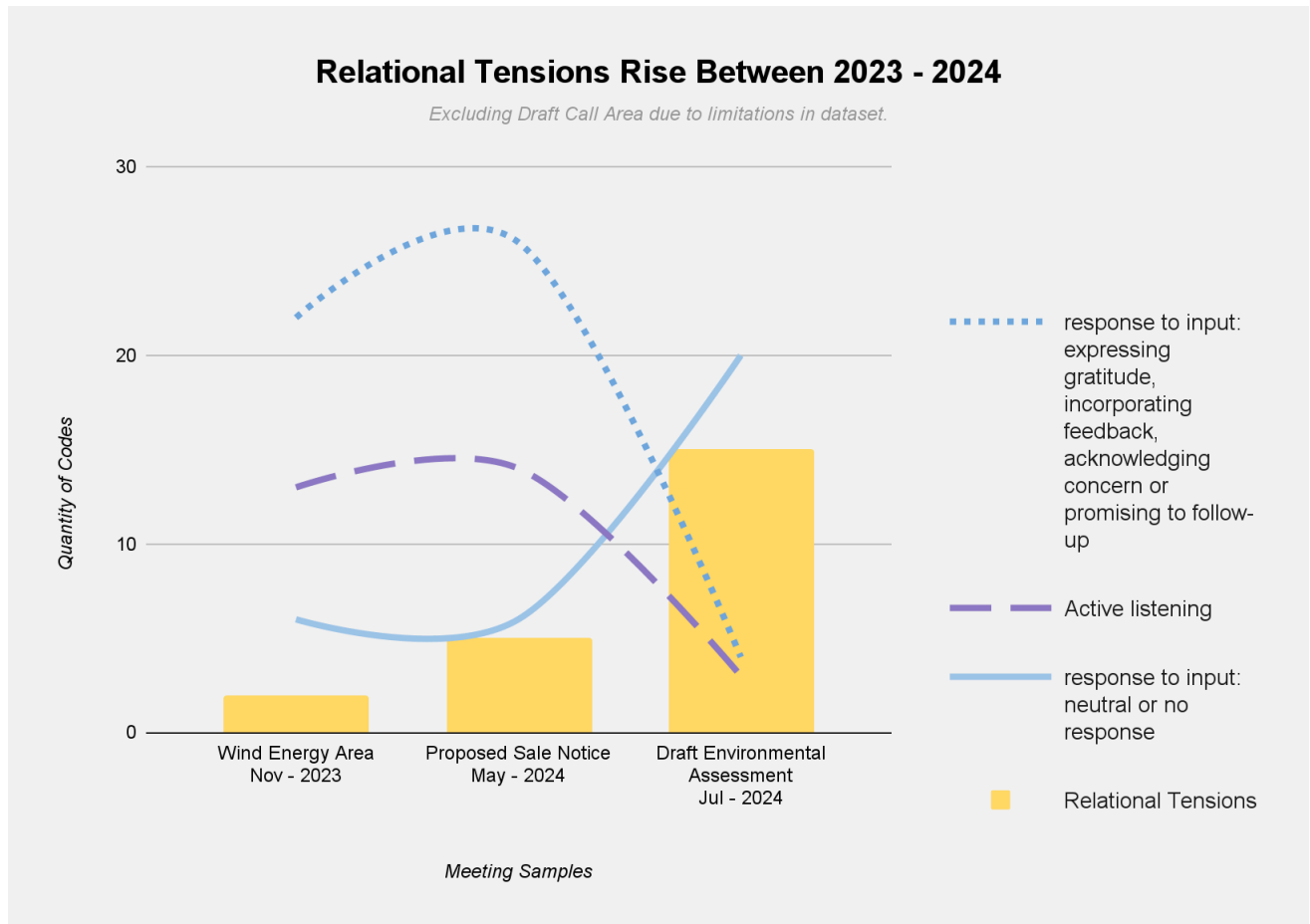
Theme #3: Relational Tensions

Even during the most well-intentioned engagement, relational tensions can arise. Moments of relational tensions include participants expressing concern or dissatisfaction. These are signals that somewhere along the process, the trust or perceived procedural fairness are being compromised. These are moments when the *response to input* and *active listening* are critical to building back trust. Relational tensions were demonstrated through participants *expressing dissatisfaction* and *concern* during the engagements. Participants *expressed concern or dissatisfaction* more in Meeting Sample #4: Draft Environmental Assessment than in the three prior meetings. As shown below in *Figure 6*,

relational tensions steadily increased from Meeting Sample #2: Wind Energy Area in November 2023 to Meeting Sample #4: Draft Environmental Assessment in July 2024. Due to a lack of data around participant relations in Meeting Sample #1: Draft Call Area – Mobile Gear, this sample was excluded from the chart. The increase in relational tensions corresponded with engagement design #2 as illustrated in Figure 5 and a decrease in *active listening* and *responses to input: expressing gratitude, incorporating feedback, acknowledging concern or promising to follow-up*. An increase in responses to input that are either *neutral or no response* corresponded with the rise in relational tensions. A *neutral response to input or no response* also occurred during Meeting Sample #4 alongside participants *expressing concern or dissatisfaction*. These tensions challenge the efforts to build meaningful engagement that affect public perception and support of an offshore wind project. While relational tensions signal a challenge, it also signals an opportunity to course correct and identify a better path to rebuild trust in the partnership.

Figure 6

Relational Tensions Rise Between 2023 - 2024



Note: Chart created by Author.

Theme #4: Structural Challenges

Structural challenges are a reality in offshore wind projects. Whether organizations are supportive or unsupportive of offshore wind, these structural challenges are present throughout the engagement process. Two mechanisms identified through this study include the use of technical language and acknowledgement of power imbalance due to government authority. Technical language was prevalent in the expert presentations and through responses to input. However, efforts by the hosts to explain different technical facets of the phases were noted. The use of technical language will continue to be a challenge when it comes to projects in the intersection of social, environmental and technical planning. Further research should be conducted to identify bidirectional learning to ensure all participants have the information they need to engage effectively.

Power imbalances, predominantly government authority, were noted several times throughout the meetings both by BOEM and by participants. For instance, BOEM staff highlighted at the beginning of Meeting Sample #2: Wind Energy Area – General Public, their own positionality as a federal agency when they said, “[Folks here from BOEM are here to focus on] the methodology, explain the approach, the next steps, and understand what those concerns are and how we can incorporate them into our process. We [...recognize...] that there are a lot of wide-ranging views on this topic. And while we totally respect that there are certain things that are within our control, [other things are not. If we can focus on what items are in our control], I think that’ll lead to a productive meeting”. This quote demonstrated how the structural challenges, such as government authority, can generate potential relational tensions that can be directed towards the representatives of an organization. The use of technical language or rigid timelines as a result of state-level procurement mandates imposed can hinder the ability to foster relationality and reciprocity. While some structural barriers are out of the average person's control such as procurement mandates, technical language can be revised to be inclusive of a general public audience and provide more opportunities to engage with the content being discussed.

Conclusion

The results and analysis section examined how civic design shapes relationality and reciprocity throughout public engagements for offshore wind development in the Gulf of Maine. Through the analysis of public meeting transcripts and meeting documentation, civic design elements and recurring engagement themes emerged. The civic design elements – spaces for dialogue and collaboration, inclusive process and timing, accessibility and language and feedback loops and responsiveness – created both missed opportunities to collaborate and moments of establishing relational accountability. Engagement design contributed to missed opportunities for thoughtful responses to comments. The theme, practice of reciprocity, demonstrated how *expressing gratitude*

and acknowledging the *incorporation of feedback* signal respect and investment in public participation. Relation tensions increased from Meeting Sample #2 - #4 alongside the change in the engagement designs, demonstrating how a shift in design can result in public dissatisfaction. Lastly, structural challenges including technical language and power imbalance as a result of government authority, can hinder the capacity to meaningfully build relational engagements. These findings showcase the potential and limitations of civic design in fostering relationality and reciprocity in public engagements. The following discussion section will interpret these patterns and themes in relation to theory, literature and highlight cross-cutting findings with corresponding recommendations.

Discussion

Public engagements are the cornerstone of ensuring procedural fairness, trust and equity in offshore wind projects. Civic design sits at the heart of engagements by creating spaces for people to align, disagree, share knowledge, collaborate, create and make decisions as a collective. Civic design that strengthens relationships and generates reciprocal benefits can support public participation and satisfaction. This research focused on the question of how civic design plays a role in fostering relationality and reciprocity during public engagements for offshore wind development in the Gulf of Maine. The results and analysis highlighted civic design elements utilized and underutilized throughout the public engagement samples along with four engagement themes – practice of reciprocity, relational accountability, relational tensions and structural challenges. The civic design elements and themes are interwoven and connect to broader literature on public participation in offshore wind, civic design theory and systems thinking theory. The cross-cutting findings focus on 1) civic design to foster reciprocity 2) relational accountability for building trust and procedural fairness and 3) structural barriers undermining efforts to build relationality.

Finding #1: Civic Design To Foster Reciprocity

The results and analysis demonstrated that civic design elements that facilitate two-way engagement provide opportunities for participants to have back-and-forth responses that can cultivate reciprocity. As outlined in the analysis, *knowledge sharing* and *responses to input that incorporate feedback*, *express gratitude* or *channel active listening* build towards mutual benefit. Incorporating civic design elements that foster reciprocity are important for the health of the relationships that are interconnected to the broader system of offshore wind development.

Relational system thinking (Goodchild, 2022) emphasizes the need to recognize the network of relationships that are interconnected and interdependent in a system. The health of one part of the system depends on the health of the whole system and its interactions. When applying this relational systems thinking lens to offshore wind development in the Gulf of Maine, public engagements are in relationship with other elements of the civic infrastructure such as public comments and the Gulf of Maine Intergovernmental Task Force which are interconnected to other steps and phases of the development process led by BOEM and other organizations such as NOAA-NCCOS and developers. All these moving parts are interconnected. Relational systems thinking reminds us that the health of the systems are dependent on the health of the relationship which are fostered through reciprocal actions to ensure balance. This framework challenges thinking in silos to approaching systems from a holistic perspective. Based on this finding, the recommendation calls on those designing public engagements to focus on designing for two-way knowledge sharing and dialogue. Through this back-and-forth, more opportunities for communication between participants will ideally foster incorporation of feedback, mutual expression of gratitude and active listening. These actions are foundational to building toward an engagement process that fosters reciprocity.

Finding #2: Relational accountability for building trust, transparency and procedural fairness

Relational accountability and relational tensions work in tandem with each other. While relational tensions signal a decline in trust, relational accountability provides the roadmap to rebuild that trust. Relational accountability promotes transparency and procedural fairness that support trust building. As demonstrated through the analysis, engagements designed to provide opportunities for participants to actively listen, share knowledge and collaborate can support the development of relational accountability. In contrast, as illustrated in *Figure 6*, relational tensions increased with the shift in engagement design due to one-way communication, a decrease in active listening and no response to input.

The literature has suggested that an active engagement process and procedural fairness are key components of positive public perception and participation in offshore wind development (Bingaman et al. 2022; Firestone et al., 2020). Relational accountability can be a mechanism for building transparency and trust throughout the lifecycle of offshore wind development. Implementing civic design elements that work to remedy relational tensions and build relational accountability can support efforts to ensure procedural fairness and an active engagement process. The recommendation based on this finding, suggests providing opportunities to support the development of relational accountability throughout the engagement process. Designing engagements to allow for participants

to collaborate, share knowledge and actively listen to one another allows for relationships and mutual respect to cultivate leading to a sense of accountability between all parties involved.

Finding #3: Structural barriers undermine efforts to build relationality

Structural barriers undermine efforts to build relationality through civic design. The findings highlight the structural barriers, particularly as a result of government authority leading to top-down planning and the usage of technical language. Top-down planning poses a structural challenge in offshore wind because energy goals are set through state-level procurement mandates which set the pace of the development process. Pace of development can pose a challenge, requiring a process to move faster than the speed of trust. Trust, as noted in the literature, acts as a key mechanism of public support and participation (Bingaman et al. 2022; Firestone et al., 2020; Tyler et al., 2021; Devine-Wright, 2012). Through top-down planning, community groups are consulted later in the process after the decision-making process has taken place. As seen in the public meeting analysis, participants are primarily consulted for their knowledge to provide insights on existing plans. As a result, there are limitations to the engagement design due to rigid timelines and top-down planning including an inability to design engagements for horizontal and collaborative decision-making. These limitations can stifle opportunities to build relational engagement.

The civic design framework provides another lens to examine structural challenges. Two design principles, systemic change and ecological networks, work to situate engagement processes that embrace the understanding of our interconnectedness to one another and our environment along with examining the underlying structures (i.e. political, social, cultural) that exist beneath the surface of an engagement process. All public engagements are layered with underlying structures which influence how the engagements are designed and how people show up to engage. While limitations are inevitable, acknowledging those limitations, grounds expectations and provides space for discussion. Unlike systematic structures that take time to shift, one component of civic design that can be improved includes the usage of technical language. Offshore wind projects require an intricate combination of social, environmental and technical knowledge. As the results and analysis discussed, there were efforts to explain technical jargon but the technical language was still dominant in presentations.

A recommendation for this finding suggests that engagements should be designed for the margins (We Who Engage, 2021) which in the case of public engagement for offshore wind development, means those with less technical knowledge and different learning styles. Education and awareness building are important foundations to enable participants to have the information they need to engage

effectively. Being mindful of technical language and breaking down scientific jargon are important elements of civic design. While structural barriers, such as technical language, can be actioned on now, structural challenges as a result of top-down planning are more challenging to work around. A first step for this challenge involves recognizing where this top-down planning undermines relationality and imposes a rigid timeline.

Contributions and Implications

This research adds to the literature around civic design, public participation in offshore wind development and community engagement in environmental planning with a focus on the Gulf of Maine. The findings highlight how civic design can play a role in generating relational engagements. Given the discussion around two-way engagement, community benefits and bidirectional deliberative learning, a new layer of complexity should be added that recognizes the network of relationships built through the civic infrastructure during offshore wind development and how to shift toward reciprocal relationships instead of transactional ones. This research can apply to public engagements outside the environmental planning realm by providing civic design mechanisms to address complex social, environmental and technical planning projects.

Surprising Absences and Areas of Future Study

During data collection and throughout the analysis, I was surprised by the absence of partnerships with Tribal Nations. I expected more acknowledgement around how BOEM was partnering with Tribal Nations during the different phases of development. Based on *Figure 3. Gulf of Maine engagement and planning integrated timeline*. Tribal Nations were present in one in-person meeting during the *Draft Call Area* step in the *Planning & Analysis* phase and Tribal government leadership was present during the Gulf of Maine Intergovernmental Task Force Meetings. In comparison to other public meetings for community groups such as the fishing community, minimal attention has been placed on meaningfully partnering with Tribal Nations on the Gulf of Maine. Future research should explore how reciprocity and relationality are being practiced between BOEM and Tribal Nations. Due to limitations of time and capacity, I was unable to explore this question, however resources should be allocated to ensure offshore wind development provides reciprocal benefit for Tribal Nations.

Additionally, I was surprised there were no significant findings related to conversations around relationships to the ocean or place. As the literature discussed, coastal community member's relationships to 'place', particularly the ocean, holds a special significance which influences public perception and participation for offshore wind projects (Kempton et al., 2005; Devine - Wright, 2005;

Bates & Firestone, 2015). Relationships to the ocean or ‘place’ was an area that I expected to witness more throughout the public engagements, given the literature on the role ‘place’ in offshore wind and the significance of ‘place’ to people’s identity, values and culture (Tuck & McKenzie, 2015). Perhaps, the engagement design wasn’t set up for that type of interaction. Further research should look into the role of relationship to ocean and ‘place’ and ways of honoring this relationship during offshore wind development.

Limitations

Limitations to this study include a limited scope of four virtual meetings due to capacity and time constraints. Analyzing virtual meetings has benefits and limitations as well. The benefits include the ease of accessing a recording and transcript as well as the ability to review the meeting material several times to ensure accurate coding and analysis. The limitations include participants interacting differently in virtual meetings than they might during in-person meetings. BOEM has several in-person meetings in conjunction with the virtual meetings during the steps of the *Planning & Analysis* and *Leasing* phase. This study does not analyze the quality of those in-person meetings but the presence of those meetings was captured in *Figure 3. Gulf of Maine engagement and planning integrated timeline*. Observing those in-person interactions as a result of the engagement design would provide more depth to the results and analysis. Lastly, this study would be strengthened by interviewing the participants from the meetings. Through interviews, participant perception around the civic design could be further explored through first-hand accounts. While these are limitations, they are opportunities for improving a future study around civic design and its role in fostering relationality and reciprocity.

Conclusion

Public engagements need to be designed to build and maintain reciprocal relationships to ensure trust, procedural fairness and equity in offshore wind development. Civic design sits at the heart of engagements by creating spaces for people to align, disagree, share knowledge, collaborate, create and make decisions as a collective. By examining how reciprocity and relationality are fostered through the design of public engagements we can work towards an active and reciprocal engagement process. This research highlighted civic design and its capacity to foster reciprocal engagements that strengthen relationships, accountability and trust. To design with and for community, time, care and resources need to be allocated toward building better civic design practices. Additionally, this research suggested that the design of engagements must facilitate feedback loops and opportunities for discussion that generate active listening, expressions of gratitude and knowledge sharing. The design

of engagements should provide opportunities for two-way engagement, collaborative decision-making and relationship building. Offshore wind development needs to be mindful of extractive practices of engagement to ensure meaningful public participation that builds procedural fairness and trust.

With an estimated offshore wind project life cycle of fifty years, a reciprocal engagement process will be necessary to ensure equitable outcomes. For existing efforts around public participation in offshore wind projects, focusing on reciprocal engagement processes to strengthen relationships with community groups will yield a better return on investment. Civic design that strengthens relationships and generates reciprocal benefits can support public participation and satisfaction. While designing engagement processes for reciprocity and relationality acts as one step towards generating reciprocity throughout the development process, this step will hopefully shift mindsets toward considering public engagement as a component of the larger system of civic infrastructure that supports the health of the offshore wind development process. The health of this development process depends on the health of the public engagements which can be nurtured through reciprocal relationships, accountability and trust.

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Appendix I: Codebook

Codebook			
Group	Parent Code	Subcode (if applicable)	Description
Participants	Hosts	boem	Bureau of Ocean Energy Management (BOEM)
		noaa-nccos	NOAA-National Center for Coastal Ocean Science
		facilitator	Consensus Building Institute
	Attendees	general public	Member of the general public. Unaffiliated participants are assumed to be a part of the general public.
		fishing	Member of the fishing community
		local and state government	Local and state government representatives
		research and academia	Participants from research organization or academic institution
		Nonprofit, advocacy, ngo	Nonprofit organization, advocacy group or non-government organization
Reciprocity	Knowledge sharing	sharing an idea	Participant sharing an idea
		ways of knowing	Expressing a way of understanding or knowledge
	Response to input	Promise to follow-up	Plans to follow-up on input
		No response to input	No response
		acknowledgment of concern	Address when participants expresses concern
		incorporating feedback	BOEM mentioning how they have incorporated feedback
		soliciting feedback	BOEM asking for feedback from attendees
	Relationality	Active listening	Asking clarifying question
Reflective response			Exhibiting care in response given to comment or question
Expressing concern		Participant expressing concern about a topic	

	Relational breakdown	expressing dissatisfaction	Participant expressing dissatisfaction about a process
	asking for clarification		Participants asking for clarification on a topic
Challenges and Barriers	Power imbalance		Highlighting systematic challenges in the development process, engagement process or other processes
	Structural barriers	Technical language	Use of technical language during meeting
		Rigid process/timeline	Relating to pace of development or time constraints.
Topic	place		Expressing connection to place and/or ocean
	engagement		Mentions engagement - public comment
	data & science		Quality of assessment, modeling
	ocean health		Relating to health of ocean and all of their inhabitants such as plants and animals
	community benefit		Relating to community
	developer		Mentions developers and their role in the process
	leasing		Relating to leasing phase
	physical infrastructure		Related to the physical offshore wind turbines and other types of relevant infrastructure
	wind energy area		Relating to wind energy area planning
	monitoring		Relating to monitoring the process and its success
	long-term future		Mentions the future and looking at the long-term impacts
Civic design features	analog + digital		Engaging in analog or digital
	multiple forms of expression		Expression through different outlets such as written, verbal, drawn, etc.
	Prioritizing conversation		Weighing the values of options to identify an action or path forward