Universitetet
i Stavanger

Communication and Stakeholder Management in Renewable Energy Development
Case Study Utsira Nord
Floating Wind Offshore Energy Development

By Latifa Anda
Kandidatnr: 220307

Supervisor
Thomas Sattich

Abstract

This dissertation explored the nature of stakeholder interactions in Utsira Nord floating offshore wind development, factors affecting it, and strategies for engagement and communication to sustain the green energy transition. Accordingly, the researcher chose several theories and conceptual frameworks to answer the research question and fulfil the research objectives. These include energy justice (e.g., Sovacool, 2014), MLP perspective (e.g., Geels, 2002), communication (e.g., Shannon & Weaver, 1949; Communication theory, 2020), discourse theory (e.g., Dryzek, 2013; Hajer, 1995) stakeholder theories (e.g., Weber et al., 2017), capability approach (Sen, 2004: Kato, Ashley & Weaver, 2017) and participatory approaches (Mohan and Stokke 2000, Mohan 2001). The study followed a qualitative approach by interviewing ten actors in the green energy transition. A qualitative discourse analysis was employed, complemented with thematic and textual analysis.

The finding reveals that the nature of stakeholder interactions in the energy transition in the Ustira Nord involves diverse actors across multiple levels at the landscape, regime, and niche. These actors include government, developers, county municipality, municipality, neighbour municipalities, fisheries, maritime, civil society, and inhabitants. Their interactions are characterized by varying degrees of contestation, concerns, consensus, cooperation, and less conflict depending on the power, rules, voice, and interest. Utsira Municipality, with almost 200 inhabitants, played an essential intermediary role in facilitating, mobilizing, and lobbying for the green energy transition in Utsira Nord floating Offshore wind development.

In response to existing concerns and constraints, the Utsira Municipality has proactively and strategically managed to play a winner's role. However, external and internal factors, including political, economic, social, technological, environmental, and legal, and the resources and capability, including lack of substantial power, affect Utsira municipality's stakeholder interactions. Utsira municipality's objective is to add more socio-economic innovation developments and sustainable plans. Through positive storytelling, Utsira municipalities' values are highlighted in three simple words (Utsira Gir Energi), meaning Utsira gives energy, not any energy, but green energy that helps protect the planet and climate and adds more value to the community. Overall, the study's main finding is that community participation and capability building are essential energy justice strategies for sustainable communication and interaction between several actors and stakeholders in the green energy transition.

Acknowledgment

Personal Motivation

The primary motivation of this case study from Utsira is struggling to be heard by the count and national government. Developers may help to understand how communication and stakeholder management could help in the effective energy transition in the decentralized communities in Africa, Asia, and Latin America and how smart communication could narrow the gap in the power struggle in energy development in this area. According to Alao (2007), many developing countries in Africa, Asia, and Latin America share the same struggle in having no control over their resources nor a structural capability to develop legalization over energy security.

My Study of Utsira municipality and communication with stakeholders show community's early participation in the energy transition is essential to the project's sustainability over time. Plus, the advantage community has, when digital communication technologies platforms, democracy, and knowledge capabilities are available, where Utsira Municipality effectively engaged from the niche level to be part of the development and the green transition. With almost 200 inhabitants, they managed to bring their little voice to the developers by actively hiring a business developer who simply advocated their concerns, goals, and interest to the governments and developers through events, conferences, and meetings. With a positive attitude, they welcome developers and the government to visit the island. By creating a simple and clear message that Utsira gives green energy, and actively lobbing to be part of the innovative technologies and the green energy change, to provide positive energy to the planet earth, environments, community, and inhabitant. "Well, this sounds like the Wakanda Island in Scandinavia for me."

What about green energy and offshore wind development in Africa? According to (Elsner, 2019), a wind offshore technical study in Africa shows that the number of African coastal has an excellent wind Offshore Energy resource potential. However, further study is needed regarding the market potential, mainly on policy incentives, regulations and investor responses. My question is how to engage the decentralized community to be part of the energy transition that could change and improve the livelihood of many poor areas through stakeholder digital communication engagement tools. My question again can a positive storyline and active participation from the community in Africa bring their voice to the developers and governments the way Utsira managed today?

Table of Contents

List Of Figure

Table List

Chapter 1 Introductions

1.1Background

We live in an uncertain time, where new political, economic, environmental, and technological paradigm changes challenge humanity. Various drivers across several levels influence energy developments. Geels (2002) and Figenbaum (2017) include the landscape at both global and national levels, the regime and niche levels. At the global level, the attendant climate change challenge and response to it, the Paris agreement and subsequent UN conference of parties (COPs) are critical drivers for the energy transition. At this level, the deal is a need for a sustainable development trajectory for the energy transition Langelle, 2000; 2009). It reconciles physical sustainability, needs satisfaction, and equal opportunities within and between generations. Also, Energy security has become the most challenging question facing world leaders today. Especially after 22. february.2022, their mutual concern is how to secure affordable and available energy without geopolitical influence and domination. Germany stopped its approval to build a gas pipeline with Russia. Belgium has another thought about withdrawing their plan on nuclear power besides Italy, the Netherlands, and the UK to speed up their implementation of wind power. (Tollefson, 2022).

However, these new green energy activities affect local communities every year. Thousands of people globally are forced to leave their local society, homes, farms, values, and way of life by energy developers and governments, causing new collective actions and resistance against the phenomena. The new green shift is pushing decision makers and scholars worldwide to resolve some concerns between the competing goals of addressing climate change by developing green energy and adding more socio-economic growth while decreasing the socio-technical environmental impacts through energy justice. At the national level, the global, the regime and the niche factors are in play. The regime levels include government regulations, energy policies, and the existing structures and norms at the industry at the same level. The niche level new energy players, including firms and grassroots movements. (Kraal, 2022)

 In this context, Norway is a fossil fuel exporter country. However, 98% of the electricity production comes from renewable sources such as hydropower, wind power and thermal power. Norway has an excellent opportunity, and recently wind power has become a fast-

growing investment and production in Norway (Government.no, 2022). Based on its white paper on energy policy titled Power for Change, the Norwegian government aspires for an efficient and sustainable energy supply by 2030 (Ministry of Petroleum and Energy, 2011). The energy policy serves two purposes: first, it responds to the demands for a sustainable energy transition at the global level. Second, it serves as a competitive strategy for the demand destruction for oil and the shift toward the green economy in 23. Feb. 2022 Norway delegation led by the prime minister Jonas Gahr Store had a meeting with the EU commission. The purpose was to acknowledge the need to speed up the implementation plan in cutting carbon gas emissions, improve Europe and Norway's resilience against any other environment threatening situations such as climate change, and improve sustainable energy independence. They discussed how fast they can implement the green transition within 2030 and cooperate in knowledge transfer through frameworks, policy exchange, regulatory activities, and stakeholder networks (Commission, 2022).

Currently, Norway has more than 4GW of onshore wind; Norway has an outstanding extensive coastline with strong Nordic wind, which gave the country a huge opportunity to utilize natural offshore wind energy. The Norwegian government announced this in February 2022. the first offshore wind auction it's in southern Norway Zone 2. The auction will be 1.5GW, which will power up 460.000 households in the mainland in Norway first, and the government decided against the hybrid wind offshore farm to export to other countries (Europe, 2022). According to Europe (2022), another wind floating offshore farm in the Utsira north zone is ready to be auctioned. However, the government announcement on the auctioning time was unclear, leaving the offshore wind experts concerned about implementing the Utsira Nord wind offshore because of the government regulatory process and long bureaucracy.

In March 2022, the Norwegian government confirmed no auction for Ustira and allocated the developers for qualitative criteria to facilitate innovation and technology development. Statnett gets the responsibility to enable the network at sea, where the players have a likelihood to ensure further growth and planning. (ReNews, 2022). Utsira municipality director argues that they have a relatively small formal role in the offshore wind energy- legalization process, as they are a decentralized community. They are concerned about their position and the rules they play in the green energy transition. And how that will affect their beautiful island, values, and future generation.

Utsira Nord has emerged as an important location for wind energy development. Utsira, located on the west coast of Norway along the North Sea in the Rogaland region, is considered Norway's smallest municipality (energy, 2021). It has an area of six square kilometres inhabited by about 193 residents, and its main economic activities include oil drilling, tourism, fishing, and wind energy production until recently. Naturally, the North Sea is one of the areas with the best wind resources, making Utsira an ideal place for offshore wind energy production. Accordingly, the municipality commissioned Utsira North on June 04, 2020. It has an area covering seven square kilometres and has attracted several companies, both local and international. These companies include Equinor, Vargrone, Shell and Norwegian Hydropower, Statecraft and Aker offshore, British oil and gas BP, Aker offshore wind, ocean wind and Statkraft, RWE, NTE, Havfram, Deep wind Offshore, and EDF Renouvelables.

Arguably, municipalities such as Utsira, consistent with Broto and Bulkey (2013), serve as arenas for the new energy transitions, and stakeholders also play intermediary roles (e.g., Howells, 2006; Kivimaa, 2014) between various stakeholders. As arenas of development, municipalities are involved in land use planning and face the demands for sustainable land use (Metternich, 2017). Already, there is a potential conflict between offshore wind energy developers and existing petroleum companies in Ustira Municipality and concerns about the natural environment for residents and tourists (energy, 2021). Anticipating these challenges, the Ministry, responsible for petroleum resources, suggested the need for early contact between different stakeholders to ensure smooth coordination for a successful energy transition (energy, 2021). Therefore, exploring the nature of communication and stakeholder management in new offshore wind energy developments provides an opportunity to explain how stakeholder interactions in energy transitions unfold, explore factors affecting them and understand the strategies for managing the interactions and engagements.

This study explores the nature of communication and stakeholder engagement in energy transition, specifically examining the rules and the relations between several stakeholders in wind energy in a decentralized community. This study's primary motivation is that the energy transition is a broad discourse that depends on several factors, including the context, actors involved, and technologies (Sovacool et al., 2020). Most studies (e.g., Geels, 2002) broadly examine the role of different actors and their relationships. They do not pay specific attention to the nature of communication and stakeholder management in energy transitions nor how some stakeholders play an intermediary role in facilitating between the actors.

The thesis will look at Ustira Municipality and its offshore wind energy developments. While much attention has been paid to stakeholders such as firms, regulators, and users in energy transitions (e.g., Geels, 2002; Sovacool et al., 2020), the users seem to be treated as a black box. Municipalities are essential stakeholders in the energy transition, working with different internal and external stakeholders. Internal stakeholders include employees. External stakeholders include government departments, business associations, interest groups, clusters, regulators, companies, communities and residents or inhabitants, other actors such as research institutes, the European Union and its agencies, climate organizations, and conventions like COP26.

1.2. Problem Statement

Norway is relatively new in developing offshore wind energy. The Norwegian government is open to reconsidering the energy policy for the green energy shift to fight climate change to achieve sustainable development (Government,2022). However, in the Norwegian context, community involvement and the role of municipalities in offshore wind development remain unexplored. At the same time, the literature on energy transitions looks at stakeholders broadly to mean all actors interested and affected by energy transitions. It does not look at how stakeholders such as municipalities play an essential role as intermediaries and arenas for new energy developments and their role in its deliberate acceleration (e.g., Hajer, 1995).

Also, there is a tendency to broadly treat the nature of politics and the relationship between the stakeholders and ignore its dynamics, including how inclosing and shared meanings unfold over time. While part of this literature, specifically, transition management (e.g., Loorbach, 2010; Loorbach & Wijsman, 2013) has tried to look at energy transition from an organizational perspective, it does not explicitly pay attention to stakeholder management and communication. At the same time, the traditional literature on stakeholder theory (e.g., Freeman, 1984, 2004; Noland & Philips, 2010) has examined stakeholders and suggested that stakeholder engagement and communication are integral to an organization's strategy but did not examine their role in energy transitions. Overall, there is a lack of empirical research on stakeholder management and communication in energy transitions looking specifically at municipalities as both arenas of energy transitions and stakeholders, playing an important intermediary role. Therefore, this research aims to gain comprehensive insights into how firms

involved in renewable energy affect and connect with their stakeholders to realize their business goals and facilitate a green shift energy transition.

1.3. Research Questions

The research study aims to explain the nature of stakeholder communication and how it can be managed in energy transitions. The following performs:

1.3.1 Main research question
What is the nature of stakeholder interactions in Utsira Nord floating offshore wind development?

1.3.2 Sub-research questions

1. How does stakeholder engagement (interaction and relations) evolve in Utsira Nord wind offshore development?
2. What factors affect stakeholder engagement and communication in Utsira Nord energy transitions?
3. What strategies can help ensure effective stakeholder involvement, participation, and communication in Utsira wind offshore energy transitions?

1.3.3 Research objectives

1. To understand and explain how stakeholder engagement (interaction and relations) can empower community development in energy transitions
2. To explore the factors affecting community engagement through stakeholder management and communication in energy transitions
3. To identify and describe the strategies that can help ensure effective community participation and communication in energy transitions and how that could help speed up the transition.

1.4 Significance of the study:

This study makes theoretical contributions to understanding the nature of stakeholder communication and interaction in energy transitions, especially new wind energy development in the context of Norway. The study has practical relevance to stakeholders, including developers and municipalities such as Utsira working in new wind energy development, to understand better stakeholder communication and interactions, factors affecting it and

strategies that can be helpful. It gives them evidence-based information to support and inform their stakeholder communication and engagement strategies so that there is support for Utsira Nord among all stakeholders, including the government, developers and inhabitants. It gives the developers and municipality an understanding of how the concept of energy justice can be helpful by implementing capabilities and participatory approaches to empower small communities to participate in developing sustainable energy solutions actively.

1.5 Delimitations

The study is a qualitative case study limited to Utsira Municipality in Norway, a part of Northern Europe. The study looks specifically at floating offshore wind energy development in the Utsira Nord as an arena of contestation between actors and, depending on their interactions, can lead to concerns, consensus and cooperation or conflict. The study is limited to ten participants and does not include fisheries but involves a key informant on this stakeholder group.

1.6 The structure of the thesis:

Chapter 1 is the introduction. It highlighted the background of the study, the research gap, the significance of addressing it, and the delimitation and the structure of the thesis. The subsequent chapters present the literature review in Chapter 2, which provides an overview of the literature on the nature of stakeholder interactions, the factors that affect them, and the strategies to enhance them. In the same order, Chapter 3 presents the theories and key concepts which ground the study. Chapter 4 is the research strategy, articulating the research philosophy, the approach, the research design, the data methods for collection and analysis, ethics and Limitations. Chapter 5 contains the study's findings, followed by Chapter 6, which discusses them. Chapter 7 concludes by emphasizing the main conclusions and, based on them, providing a recommendation, stating the study's limitations, and suggesting future research.

Chapter 2 Literature Review

The literature review will critically examine the state of the art of energy transitions, focusing on stakeholder management and communication and intermediary organizations such as municipalities. In this discussion, the municipality is viewed as both an organization and an arena for renewable energy development. Municipalities offer the physical space and context for energy transition and indigenous energy resources (Broto & Bulkeley, 2013). Also, municipalities play an essential intermediary role where they help solve the problems of negotiation, coordination, and commitment among different stakeholders (Howells, 2006; Kivimaa, 2014). Therefore, focusing on the municipality help close the gap on the neglected role of the state or state-like bodies in energy transition literature (Johnstone and Newell, 2018) and beyond discussing politics of energy transition in general, to focus on the politics surrounding their deliberative acceleration (Roberts et al., 2018).

The discussion first starts with a broader overview of the energy transition. It ends by looking specifically at the nature of stakeholder management and communication within this context and the factors that influence it, and finally, the strategy that could help in bringing decentralized communities such as Utsira Municipality into energy transition decision making through the practice of energy justice, capability, and participatory approach

2.1 Nature of stakeholder management and communication in energy transitions

Energy transitions are an arena of contestation between different actors, who are found at different levels or operate across all three levels, whether it is the landscape, regime, or the niche (Geels, 2002, 2014, 2019; Loorbach & Wijsman, 2013; Schot et al., 2016; Hofer & Madlener, 2020; Sovacool et al., 2020). The literature on energy transitions has recognized the role of firms alongside others as critical in energy transitions. Thus, the multi-level perspective (MLP) highlights various actors' interactions across multiple levels.

The exogenous macro-event and factors shape how actors interact at the regime and niche level (Schot et al., 2016). Therefore, we can argue that actors are also present at this level. At the regime level, mainly incumbent firms and interests direct as part of the dominant technology platform, but innovative firms and green alliances also make efforts to contest the status quo (Moe, 2010; Lockwood, 2015; Roberts et al., 2018), depending on their power, these actions either constrain or facilitate green energy transitions (Geels, 2016; Schot et al., 2016). At the

niche level, new concepts are demonstrated, experimented with, and protected from hostile actors present at the regime level until they have gained momentum.

However, the literature on MLP privileges the role of firms, particularly start-ups, as dominant players at the Niche level. Still, it overlooks the role of other actors or stakeholders, such as municipalities, which are the arenas for new energy developments, transitions, and intermediaries. Another criticism of the MLP is that it tends to fix specific actors at specific levels when it is clear that the actors or stakeholders are present at multiple levels and their interaction is dynamic. For example, while firms create innovations at the niche level, they are also active in coalitions lobbying for the same at the regime level. Events at the landscape level affect them. The same argument applies to the role played by municipalities, both as arenas for new energy developments (Broto & Bulkeley, 2013) and intermediary organizations (Howells, 2006; Kivimaa, 2014). While the MLP suggests a role in politics, it has been criticized as too broad and lacking a nuanced understanding (Kuzemko et al., 2016; Roberts et al., 2018; Langelle et al., 2019). Some criticisms are that the MLP framework takes the levels as given, yet they are socially constructed and, therefore, subject to political struggles (Rosenbloom and Meadowcroft, 2016).

In response to the criticisms of how the MLP framework is perceived to treat politics, the discourse coalition framework by Hajer (1995) provides a complementary perspective that "looks at politics as a struggle for discursive hegemony in which actors try to secure support for their definition of reality (Zeitoun & warner, 2006) It goes beyond the MLP assumption of energy transitions as just contestation. The framework allows us to understand the politics surrounding their deliberative acceleration of energy transition among different stakeholders in municipalities as arenas for energy development (e.g., Broto & Bulkeley, 2013; Roberts et al., 2018) and the role of intermediaries (Howells, 2006; Kivimaa, 2014).

Furthermore, the energy transition literature, particularly the MLP, gives a broad or systems perspective of stakeholders, contrasting the traditional literature on stakeholder theory, such as Freeman (1984), which views stakeholders from an organizational or firm perspective. According to this view, stakeholders of the firm include government, shareholders, suppliers, civil society, employees, customers, and competitors (Hofer & Madlener, 2020). Similarly, other than firms, stakeholders of an organization would have the same but differ in that some specific types of stakeholders would not apply. For instance, a municipality as an organization

would have residents instead of shareholders. According to the stakeholder theory, the relationship between the organization and its stakeholders must be managed. The former minimizes adverse effects and maximizes the positive impact on the latter (Chinyio & Olomolaiye, 2010).

Both the traditional stakeholder and energy transitions literature looks at the normative types of stakeholders, which, according to Philips (2003) and Fassin (2006), refer to stakeholders with a moral obligation to maintain at least an honest relationship. However, the difference between them is that the traditional stakeholder theory (e.g., Freeman, 1984) emphasizes the organizational or firm's central role and distinguishes internal from external stakeholders. In contrast, the energy transition literature considers the firms as stakeholders taking a system view. Also, it has mainly taken stakeholder engagement from a policy perspective (e.g., Ottinger, 2013; Prestwood et al., 2018; Höfer & Madlener, 2020), emphasizing the acceptance and support of users and citizens as essential (Kalkbrenner & Roosen, 2016). Arguably, the discourse theory (e.g., Hajer, 1995) allows us to examine further the nature of stakeholder interaction beyond their assumed contestations. These stakeholder perspectives from the MLP, discourse theory, and stakeholder theory provide helpful input to synthesize a holistic understanding of stakeholders in energy transitions, their roles, and interactions.

To sum up, the stakeholder theory looks at organisations' role and obligation to stakeholders. Still, there is a need to recognize that the same organizations are stakeholders in an energy transition. This brings two dimensions: how organizations interact with other stakeholders and manage stakeholder interaction. Therefore, it is essential to understand the interaction between the municipal organizations and other actors in energy transitions and how such organizations work with stakeholder engagement or interaction to facilitate the energy transition. Arguably, such an understanding is essential given that the municipalities play multiple roles in energy transitions. These roles include being an arena for energy development (Broto & Bulkeley, 2013), and where politics meet space, the municipal organization itself plays an intermediary role in facilitating energy transitions (Howells, 2006; Kivimaa, 2014). There is a need for empirical studies to investigate the nature of stakeholder engagement and communication from the municipality's perspective as both an arena of new energy development and transitions, where things happen, and an intermediary organization playing a critical part. More specifically, there is a need to understand who is involved, how they do it, and the nature of power relations and politics that underline these processes

2.2 Factors that influence stakeholder communication and engagement in energy Transition

The multi-level perspective (MLP) (e.g., Geels, 2016, 2014, 2019) and environmental analysis perspective from strategic management literature (e.g., Johnson et al., 2011; Porter, 1980; 2008; Vega-Jurado et al., 2008) looks at the external and the internal environment of an organization. These factors function as barriers or enablers of stakeholder communication and engagement in energy transitions. They provide a valuable framework for understanding the factors influencing stakeholder communication and engagement in energy transitions.

Externally, political, economic, social, technological, environmental, and legal factors can be said to operate at the macro (Johnson et al., 2011) or landscape level (Geels, 2002, 2016, 2019; Schot et al., 2016) influence stakeholder communication and engagement in energy transitions. Thus, developments at the macro or landscape level put pressure on actors or stakeholders at the social-technical regime and shape the activities and relations of actors or stakeholders at the niche level. These developments co-evolve with social practices and new meanings, encouraging or discouraging acceptance and supporting a green energy transition (Sovacool & Hess, 2017; Sovacool et al., 2020). According to Loorbach and Wijsman (2013), firms or organizations can use these developments for problem structuring, envisioning, establishing the transition arena, and framing relevant messages or communication to their stakeholders. At the regime level, energy transitions, there is a shared, stable, and aligned set of rules or routines (Schot et al., 2016). At this level, there are incumbent firms. Distribution coalitions in support of the dominant technologies exist, and green alliances, which include innovative firms in support of new technologies, also exist (Geels, 2016, 2014, 2019; Moe, 2010; Lockwood, 2015; Roberts et al., 2018; Schot et al., 2016).

In energy transitions, especially new energy developments such as wind stakeholder will be concerned about the social and environmental impacts (Hindmarsh & Matthews.2008). If their concerns are not addressed, they are likely to contest these developments. Also, new energy development involves technological complexities which creates information asymmetry such that no one has all the information and can affect stakeholder interactions negatively (Blok & Lemmens.2015). Another challenge involved economic factors because new energy development involves risks on the part of the developers (Lesser & Su. 2008) and unless government is willing to invest and underwrite the risks, these stakeholders will be reluctant to

play their part and consequently affecting their interactions with other stakeholders. However, as much as these external factors are highlighted above, internal factors equally matter and are integral to a firm's strategy (Vega-Jurado et al., 2008). Overall, the internal factors refer to the firm's resources and capabilities for its strategy.

2.3 Strategies for stakeholder engagement in the energy transition

Freeman (1984) stakeholder strategy matrix propose that stakeholder interacts with one another through mutual interest where cooperation and other organization have in the projects, they design a strategy to address the stakeholder interest, and that depends on the stakeholder's ability to influence, cooperate or threats to the current projects. Several scholars (e.g., Savage et al, 1991; Polonsky, 1996; Kimery and Rinehart, 1998) agree that stakeholders' strategies differ on how they categorized and define the stakeholders, and their ability to hinder or assist the projects activity. According to the literature review, there is a strategy that help in interacting with stakeholders, to change or influence their rules to the exact direct (Freeman,1984), describes the stakeholder interaction and activities to cooperate or threats the organizations in negative aspects, such as threatening, offensive, defensive and the last to keep the stakeholder in the current position. While Savage et al (1991) and Kimery and Rinehart (1998) describes the stakeholder's group in more positive aspects such as mixed blessing stakeholder, the Supportive potential, Nonsuppurative nature and the marginal stakeholders, but they differ in how they involve and interact with them, and that's because they differ in the way they look at Stakeholders, Freeman (1984) looks at stakeholder as a group that can effects the organization activity, while others like Clarkson (1995) looks at stakeholder as a situation at risk and Mitchell at all (1997) from a stand of power, urgent and legitimacy. (Polonsky & Scott , 2005)
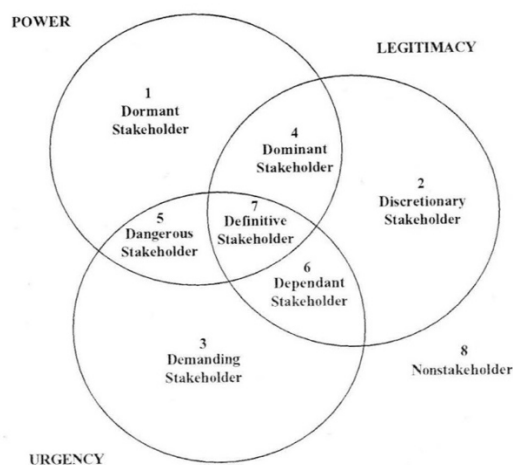
Figure 1 – Typology of stakeholders (Mitchell, Agle and Wood 1997, p. 874)

According to stakeholder literature (e.g., Bunn et al. 2002; Cleland 1999; 1995, Preble 2005), stakeholder management has a wide variety of approaches in a linear relationship process. The literature identifies the stakeholder groups, legitimacy, interest, urgency, resources, and power. It also examines the dynamic relationships between the stakeholders and evaluates their impacts on the projects, then find ways to manage these stakeholders by prioritising their demands, developing organisational responses and finally monitor and control stakeholders' engagement strategically (Austen et al. 2008, p. 8).

According to Loorbach and Wijsman (2013), opportunities exist for organisation exist for "developing coalition strategies, images, and transition agenda" and mobilizing actors. The mobilization and communication are critical at the regime and niche levels but take different forms. At the regime level, the effort is towards building more green coalitions to countercheck and win over vested interests. Routines and knowledge are shared at the niche level to accelerate the green transitions. Thus, at both levels, building from communication theory (e.g., Allan, 2010; Velentzas & Broni, 2014), shared meaning is critical for effective communication. Similarly, Hall et al. (2015) and Schorter et al. (2016) argue that inclusive, honest, and transparent communication and the relevant platforms for communication and exchange are essential for the buy-in for energy projects that facilitate the green energy transition. There are opportunities to leverage social capital, which includes networks and trust in society and the level of public acceptance and support.

According to Velentzas and Broni (2014), firms should have the right competencies and infrastructure to ensure effective communications. We can add stakeholder management. Loorbach et al. (2010) underscore the importance of business strategies for transition management. Although the literature strategy (e.g., Johnson et al., 2011; Porter, 1980; 2008; Vega-Jurado et al., 2008) focuses specifically on the firm, we can extend the same thinking to organizations to consider intermediary organizations such as municipalities in energy transitions. However, the broader energy transition literature has paid little attention to stakeholder management and communication in other organizations such as municipalities which are essential stakeholders and intermediary organizations (e.g., Howells, 2006; Kivimaa, 2014) playing a critical role in energy transitions, we lack the knowledge of how they play this facilitation role, specifically the strategies they use for stakeholder management.

The literature on the sociotechnical transition explains how innovation arises from a multi-level perspective. However, strategic niche management theoretical frameworks that empower actors and stakeholders from the niche level are still under development (Falcone, 2018). Other literature (e.g.,Hoppe et al., 2015) claims that communities from the niche level could enhance positive energy transition change if they are active participants in decision-making. Thus, community participation (e.g., Freire 1970, Cleaver 1999) brings positive aspects to the projects, such as the local knowledge into the decision-making process, empowering the community through the active voice exercise. Community-based participation (Mansuri & R, 2004) delivers better-designed projects with time sufficient, cost-effective, and less corruption. On the other hand, community participation has other negative aspects, mainly because community-based participation can be costly under certain conditions. It could be psychologically and physically challenging since the community is dealing with highly influential and powerful people and believes that community participation will transform the implementation styles of authoritarian bureaucracies. (Mansuri & R, 2004)

Beside (De Koning , Steins , & Van Hoof, 2021) emphasize that the participatory approach is the key to adding inclusion and empowerment to the community to be part of the transition. That may faster the energy transition (Voß, J. P., Smith, A., & Grin, J. 2009) argue that traditional government policymaking is not supporting the transition. They suggest more deliberative governance that will help a regime and paradigm change. There is evidence from a multi-level governance approach on the case of the Scottish and Dutch policy making, between transnational and nation (Scholten. 2016) The results show that deliberative governance is helpful in energy transition cases involving multi/level actors and bringing them together in one agreement. According to De Koning, Steins and Van Hoof (2021) literature review on the impact of participatory governance can improve environmental policies. A review of MLP shows the need for horizontal policy integration and open an inclusive governance style through the participator process. (Geels, F. W. 2019)

Another strategic approach is through energy justice (Jenkins et al., 2017), and toward a normative analysis of social justice is the capability approach (Sen1981, Nussbaum 1998, Sen 1999, Nussbaum 2000). We lack an overall knowledge of strategies for community engagement and participation in the offshore energy transition. The capabilities approach can be a strategy to empower decentralized communities and give them more abilities and voice to be part of the decision-making (Mansuri & R, 2004). It can empower small communities by

adding more resources and competencies to enable them to participate in the energy transition. The capability and participatory approaches in the energy transition increase social accountability and empower the community (Ansari et al., 2012). These can be used to build from the niche level and could enhance a positive green energy transition and public acceptability. And again, the municipality is an essential stakeholder and intermediary actor (Velter et al., 2020) in communicating with several stakeholders through externally and internally strategies.

2.4Summary

In this literature review, three main themes have been identified: the nature of stakeholder interaction in energy transitions, the factors that affect it, and the strategies used. Generally, the literature looks at the roles of the firm from niche levels that bring pressure to the regime and change the landscape over time. Accordingly, the nature of stakeholder interactions in the energy transition is influenced by the firms' rules and power and their obligations to stakeholders from the multi-level perspective of niche, regime, and landscape. This brings a question on how an organization interacts and manages stakeholders in the energy transition.

The factors that affect and influence the stakeholder communications and interactions in energy transition include external and internal factors. Using the MLP framework, external factors are present across all levels, including political, economic, social, technological, environmental, and legal aspects. At the landscape level, international developments provide opportunities and threats that inform energy transition stakeholders' actions. At the regime level, rules and routines emerge, including the regulatory framework, licensing environment, and available technologies. At the niche level, there are new developments, including new technologies. Internal factors refer to the organizations and firms' internal resources, capabilities, and competencies that ensure effective communication with key stakeholders. While organizations can develop these capabilities, they can also seek them from outside through collaborations with partners such as universities, acquisitions, and recruitments.

Stakeholder interaction needs strategies to respond to diverse stakeholder groups, build legitimacy for the organization's activities, promote its interest, attract resources and seek a balance with the power of others. Broadly, the strategy for stakeholder engagement in the energy transition is defined by three essential aspects, stakeholder engagement process,

participatory approach, and capability building. The stakeholder engagement process identifies stakeholder groups, their legitimacy, interest, urgency, resources, and power. It examines the dynamic relationships between them, evaluates their impacts on the projects, and suggests approaches to manage them, including their demands, organizational responses, monitoring, and control.

The participatory approach can be implemented as a strategy through two steps, first through the practice of social movement. This uses collective experience to inform collective action to eliminate an unjust power hierarchy through dialogue and participation in decision-making. The approach has been used in successful energy transitions involving wind developments in Scotland and Denmark (Rudolph, Haggett, & Atiken , 2014, GOV.SCOT, 2022). The second is through institutional perspective, whereby an outsider is hired to change the organization's view by developing strategies and tools to facilitate community involvement. The capability approach focuses on empowering small communities by adding more resources and competencies to enable them to participate in decision-making. First, through the social context, examining the social and environmental factors, such as the lack of government support. The second is through the beneficiary perspective by adding beneficiaries to empower communities and the view on the beneficiary converting resources to actual values. Withstanding the above, the role played by public organizations such as municipalities in energy transitions remains neglected. There is little information regarding the municipality's parts in the energy transition. However, much of the literature on transition and stakeholder management has explicitly looked from the perspective of firms.

Chapter 3 Theories and Key Concept

This section will provide several theoretical and conceptual frameworks. They will help answer the main research question and sub-research question on the complex phenomenon of the energy transition. The concept of energy justice suggests the need to involve all actors in the decision-making process of energy development. The multi-level perspective (MLP) explains the actors' roles and interactions across different levels and how it affects the energy transition. The third is the discourse theory which complements the MLP framework to examine the actual discourse or interaction between the actors. Communication and stakeholder theories follow to understand communication as a two-way process that depends on several factors, including the actors involved and the context and nature of their relationships. It concludes with the concepts of strategy, capabilities and participation approach, which are essential to understanding the complex question of how Ustira municipality can play a critical role in the energy transition. Overall, these theories and concepts allow us to understand the nature of stakeholder interactions in energy transitions, the factors that affect them and the strategies used.

3.1 Energy Justice

The Energy Justice principle stands for all humans having the right to affordable, available, and sufficient energy to meet their daily needs (Newell & Dworkin, 2014) Moreover, energy justice suggests involving all people directly and indirectly impacted by energy development as part of the decision-making process and providing them with all the information on energy development projects. (Sovacool, Burke, baker, Kotikalapudi & Wolkas,2017) In his studies, Sovacool (2014) identifies the need to move toward a human-centered social science understanding of energy development to promote energy justice to benefit the society now, and the future generation plus eliminate all the burdens that come along with the exploration of new energy sources.

The central argument of energy justice is that to tackle injustice, we must identify the three energy justice tents: distributional, recognition, and procedural (Heffron, McCauley, & Sovacool, 2015). The distributional encourages the researchers to investigate where the energy injustice happens in production and conception., affects communities, and how to solve it. The recognition makes researchers realize that communities have been ignored in decision-making, making them reflect on who is ignored and how they should be recognized. Procedural justice motivates researchers to find ways in which the decision-maker could involve communities to participate and engage them in energy projects. It helps to create a sense of ownership and empower the communities' capabilities through sharing information, knowledge exchange, and better institutional representation (Jenkins, McCauley, Heffron, Stephan & Rehner, 2016).

3.2 MLP Framework

According to the Oxford dictionary, a transition is a process or period of changing from one state to another (Dictionaries, 2022). Several scholars (e.g., Geels, 2002; Verbong & Loorbach, 2012) studied transitions as a phenomenon to describe changes in different systems, periods, times, and programs. According to Grin, Rotman, and Schot (2010), a transition is a complex, radical change in the long term that affect the macro-level, plus multiple changes on the socio-technical surface. It involves various groups and stakeholders to change policies, networks, technologies, markets, and individual behaviours regarding the new paradigm. Thus, it is not linear but uncertain and chaotic (Verbong & Loorbach, 2012). Since early civilization, humans struggled to find and sustain one energy source to another, moving from biomass or burning wood to fossil fuels and other forms of energy. These energy sources and related human activities have been acknowledged to cause climate change (Lorenzoni & Pidgeon. 2006). However, due to climate change globally and the increase of CO2, we are forced to find other sources of green energy such as sun, wind, water, nuclear, and biomass (D. Salomon, Krishna, 2009). The need to under the energy transitions to inform sustainability has attracted scholars to provide a better understanding of the phenomena. One such understanding is the multi-level perspective (MLP), a theoretical framework Geels (2002) proposed to explain socio-technical transitions, including energy transitions and together, they developed the MLP framework. The multi-level perspective includes the socio-technical transition from 3 levels: the niches, regime, and landscape (Geels, Verbong, 2007)

The multi-level perspective (MLP) is a theoretical framework Geels (2002) proposed to explain socio-technical transitions, including energy transitions. According to him, socio-technical changes involve three levels of the socio-technical system: the niche, socio-technical regime, and socio-technical landscape. The niches are where the innovative idea starts, in protected space through research and development or innovative laboratories. The start-up gets support through subsidiaries or demonstrates their products to niche market projects. Example of such protected places includes clusters and demonstration projects. The idea behind demonstration projects is that showcasing encourages and lobbies for their uptake at the regime and landscape levels. The socio-technical regime refers to the semi-coherent set of rules that orient and coordinate the activities of the social groups that reproduce the various elements of socio-technical systems. Therefore, it forms the deep structure that accounts for the stability of the existing socio-technical system (Geels, 2011). The Socio-technical landscape is the broader context in which an innovative idea is influenced from niche to regime and finally to the mass in the landscape, including technologies and materials that sustain society and demographical trends, political ideologies, societal values, and other macro-level factors.

3.3 Communication

The word Communications originated from the Latin word communicate, which means sharing and making it common knowledge (Rosengren, 2000). Communication is the process and the methods of sending information and expressing ideas and feelings through different channels. Communication could be verbal and non-verbal, like facial, body, and hand expressions and language. (Dictionaries O. L., 2022) According to Fiske (2010), the basic definition of communication remains taken for granted and vague at the worst. In defining it, some scholars focus on its properties (e.g., Shannon & Weaver, 1949), and others focus on its context and meaning. Shannon and Weaver (1949) developed the first communication concept, as illustrated in Figure 1.
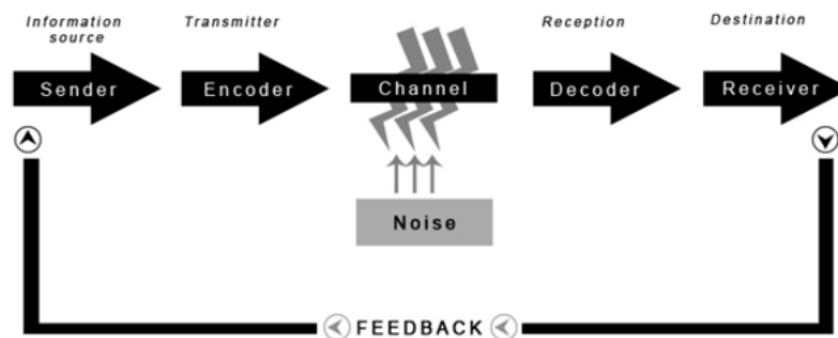
Figure 2 The Shannon-Weaver model of communication (Source: Communication theory, 2020)

According to the Figure, communication starts with a sender and involves a conversion process using an encoder, then transmission through a channel, and decoded at the end for the recipient to get the information. However, one of the criticisms of this model is that it represents communication as a one-way process between the sender and receiver (Littlejohn & Foss, 2010; Communication theory, 2020). Also, other scholars, such as Berlo (1960), have modified it to address some of its assumptions to include shared meaning whose absence will result in noise that distorts the message. However, like the Shannon-Weaver model, Berlo (1960) has been criticized for suggesting a one-way communication process. A more current understanding (e.g., Velentzas & Broni, 2014) is that communication is a two-way process involving verbal and non-verbal feedback between two parties or groups such as organizations based on a shared meaning using different mediums. They also argue that the opposite is the case when barriers prevent effective communication. Overall, communication is an essential function or component of an organization to ensure the control and coordination of its activities,

including engaging stakeholders, but it requires the necessary competencies (Velentzas & Broni, 2014).

There is an agreement that communication science involves every person in society and that process is complex (Burnrns, O'Connor, & Stoclmayer, 2003). They could be scientists in government-industry, mediators such as journalists, educators, opinion makers, decision-makers, the general public, interested public, lay public, the scientific community and practitioners. They communicate their roles, norms, and felling through social interactions. Schirato and yell (2000) define communication as" the practice of producing and negotiating meanings, a practice which always takes place under specific, cultural, and political conditions". They further argue that it includes understanding communication science to incorporate scientific knowledge and content to produce scientific literacy and the individual and society through raising awareness and responding to social factors that affect it (Burnrns, O'Connor, & Stoclmayer, 2003; Liu, Chua, & K. Stahl, 2010). The impact of communication may have positive or negative consequences on the outcome. Besides, any clear and direct answer from the speaker could lead to a negative result or cause miscommunication. An approach to Equivocal communications is preferred through discourse analysis as strategic ambiguity in communication science. (Bavelas , Black , Chovil , & Mullett, 1993).

3.4 Discourse theory

Broadly, "discourse is a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put them together into coherent stories or accounts, discourse constructs meanings or relationships, helping define common sense and legitimate knowledge" (Dryzek, 2013, p9). Broadly, it refers to how an issue is understood, spoken of, and positioned in the public sphere (Jensen, 2007, p248).

It is both a practice and theory, providing ways of doing and knowing (Apthorpe & Gasper, 1996). By constructing meaning and relationships, discourse helps examine energy transitions by allowing us to understand and study change processes and relationships between stakeholders (Rosenbloom, Berton & Meadowcroft, 2016). Specifically, it enables us to explore "politics as a struggle for discursive hegemony in which actors try to secure support for their definition of reality "framing" (Hajer, 1995, p59). Arguably, it goes beyond the assumptions of mere contestations suggested by the MLP (e.g., Geels, 2002). Specifically, the discourse can be analyzed using two central concepts: storylines and discourse-coalition (Rosenbloom, Berton & Meadowcroft, 2016). The first one refers to the narratives. The second relates to the actors, their narratives, and the practices in which they are embedded.

3.5 Stakeholder

The stakeholder meaning changed over time, and according to (OED, 2022), a stakeholder is a person, organization, or a company that shares the same concern of interest, specifically a financial interest. Freeman defines a stakeholder as "any group or individual who can affect or is affected by the achievements of the organization's objectives" (Freeman 1984, p.46). This definition is broad and has been discussed by other researchers and social scientists; for instance (Mitchell et al.1997) to narrow the stakeholder to the effective one who has direct power in affecting the organization. According to (Handelman et al. (2010), we can differentiate between the primary and secondary stakeholder groups who are directly affected by and affect an organisation or its decisions and activities and those who are not directly affected by or affect it.

(Miles, 2017) argued that the stakeholder concept is complex, and through 593 different stakeholder theory definitions, she found that there is no such a universal stakeholder definition or theory. However, she looks at the boundaries of stakeholder identification and the gap. Ultimately, they agree that the broad definition of the stakeholder is likely to be a weakness rather than a strength (Freeman et al., 2010; Kaler, 2002). In this study, Freeman (1984) 's definition is adopted as it includes everyone directly and indirectly affected by the project or organization's mission and objective. Such as Utsira municipalities and communities, directly and indirectly, affect the offshore wind development project in Utsira Nor and all other actors involved.

The literature on stakeholders" frameworks is fragmented and diffused across several disciplines, such as strategic management, marketing, and corporate social responsibility (Weber et al., 2017). Although stakeholder definitions, frameworks, and models are debatable and evolving at other times, according to Clarkson and Max (1995), Freeman (1984, 2004) established the initial understanding of the models, frameworks, and theories.

They further argue that "stakeholders are persons or groups that have, or claim, ownership, rights, or interests in a corporation and its past, present, and future activities. Such claimed rights or interests result from transactions with or actions taken by the corporation and may be legal, moral, individual, or collective. A stake is an interest of a share, and a stakeholder is an individual with a stake (Weiss,2006). Stakeholders with similar interests or claims belong to the same group (Clarkson & Max, 1995). According to Philips (2003), there are three types of stakeholders, the normative, derivative, and the dangerous or dominant. The first puts a moral obligation on the firm to maintain an honest relationship. Freeman (1984) focuses on normative

stakeholders, including several actors or groups, as shown in Figure 1. Gardner et al. (1986) mapped these stakeholders according to their power and interest.

Figure 3The original Stakeholder Model - Freeman (1984)

The stakeholder with a high level of interest and high level of power is the key partner in the projects and keep a high level of participation and engagement with them; the stakeholders with a low level of interest and high power must keep satisfied and engaged, and the key stakeholder with a high level of interest and influence and low level of power you keep the engagement and keep informed regarding their activities and finally the stakeholders with low interest, influence, and power no need to engage or participate with them. The firm should cooperate, and he suggests involving them in the project (Polonsky & Scott, 2005).
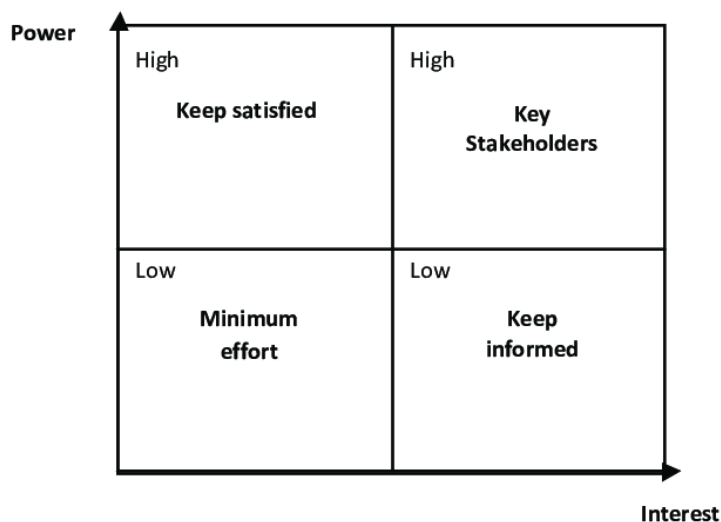
Figure 4 Júnior, Pacagnella & Geciane, Porto & Pacífico, Ornella & Júnior, Salgado. (2015).

3.6 Strategy

The word Strategy comes from the Greek, which is the command of an army; however, lately, the word strategy wildly spread and is used in all forms of life and organizational development. (Roger, 1983). "All can see the tactics whereby I conquer, but none can see the strategy out of which victory is evolved" Sun Tzu in The art of war. Strategy is planning and developing a set of objectives to achieve a particular purpose or goal in the future (Mckeown, 2019). According to (Porter, 1996), the strategy involves differentiating oneself or an organisation from others doing similar activities or in the same context by choosing to do things differently. He also adds that it requires analyzing the external and internal environment, benchmarking with the other organisations, analyzing the current and future capabilities, outsourcing, and diversifying the risk to respond with a set of actions to achieve the desired plan.

3.7 Participatory approach

Community participation is essential to future sustainable development not just to secure an efficient distribution of materiel and recourses but also to gain more capabilities through sharing knowledge and the learning process itself, resulting in the transformation of communities (Connell, 2010). According to Oxford, participatory means to allow everybody to participate in giving their opinion and being part of the decision-making in the current development project. (Dictionaries, 2022). It empowers the communities to build their capability, capacity, and skills required to evaluate other areas and promote forms of participatory development (Jackson & Kassam, 1998, p. 3). Participatory development seeks to engage local stakeholders in the current projects and be part of the regulation and policymaking. (Mohan and Stokke 2000, Mohan 2001).

According to Mohan (2007), at least two participatory development practices, including the social movement perspective, whereby the collective experience causes a collective action. The other is the institutional movement perspective, whereby the government invests an extra human capability to include a group of people or community in the decision-making. In addition, ICT capabilities can enhance communication participation in decision-making (UNESCO, 2022).

3.8 Capability approach

According to (Dictionaries, 2022), capabilities are the ability or qualities necessary to do something. The capability approach is a normative framework with social justice orientations developed by philosopher and economist Amartya Sen (Robeyns, 2005). It helps evaluate assets, individual wellbeing, and social arrangements to design and develop policies about social change in society so that individuals and groups have the freedom to choose and the ability to participate in the development. It also helps monitor and measure inequality and human rights (Sen 1981, Nussbaum 1998, Sen 1999, Nussbaum 2000).

Broadly, capabilities are a set of opportunities that are available to a person or group of people to be able to do things they want, including through democratic and participatory processes to transform their lives and societies in a dignified manner taking recognition of their rights and others (Sen, 2004). Thus, the capabilities approach focuses on people's ability and capacity to do and be and their ability to convert input or the resources to a valued outcome within a social context (Sen 1999, Robeyns 2000, Sen 2006b, Qizilbash 2008). It pays attention to the social value and wellbeing of the society by emphasising the inclusion of the social context through the examination of the environmental, social, and institutional factors and impacts based on the beneficiary perspective, freedom, and advantage (Kato, Ashley, & Weaver, 2017).

Chapter 4 Research Strategy

According to Johannsson and Perjons (2014), a research strategy is an overall plan to address the research questions. It consists of a research design and data collection, and analysis methods. However, the research philosophy or paradigm, as well as the approach, informs it. Accordingly, the discussion starts by articulating the research philosophy, the approach, the research design, and the data methods for collection and analysis.

4.1 Research philosophy

Several research philosophies or paradigms, including social constructivism, positivism, and pragmatism (Creswell, 2014). Social constructivism is the philosophy that reality is socially constructed. It informs a qualitative approach to exploring, understanding, and explaining a phenomenon based on the experiences of individuals or groups and how they make meaning of their environment. The epistemological argument is that reality is not independent of the researched or researcher. Similarly, its ontological position is that reality is subjective. It is inductive, allowing patterns to emerge and contribute to theory building. In contrast, positivism takes an epistemological position that reality is independent of the researcher. The ontology position is that reality is objective and quantifiable, allowing a deductive approach to reduce theory to testable propositions or hypotheses, thereby contributing to theory testing.

These two philosophies or paradigms are usually considered opposites. However, it is also valuable to consider them complementary and usable together. A term referred to as pragmatism is a middle-of-the-road approach contributing to theory building and testing (Creswell, 2014). According to Danemark et al. (2001), another middle-of-the-road approach is critical realism. It combines social constructivism and positivism elements. Its basis is that a world exists independent from human awareness but remains open to accepting changes when a new understanding of reality emerges. The starting point is ontological assumptions about reality followed by its epistemological assumptions. Thus, observed phenomena help us to arrive at an understanding of reality. However, it is essential to understand that the general methodological framework for critical realism is not associated with any specific set of methods and applies flexibly to quantitative and qualitative data methods (Fletcher, 2017). Specifically, this study will take a qualitative and taking an abductive approach.

4.2 Research approach

The study was qualitative and explanatory, taking an abductive approach. It is qualitative because it seeks to explain a phenomenon based on the experiences of individuals or groups and how they make meaning of their environment (Creswell, 2014). This study will address the 'how' question and is abductive in that it offers an understanding of how social actors behave as they do in a social setting (Blaikie & Priest, 2019). Thus, it refers to the process of collecting social scientific data from social actors. Besides technical frameworks and theories interpretation of social life, activities, and behaviors in daily people's life, what is their motive, meaning, and intentions.

4.3 Research design

Creswell (2014) argues that research design is a plan of action for getting data about the subject of interest. The research design of the study will be a single case study. According to Yin (2009, p18), "a case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between the phenomenon and context are not evident." According to him, a single case study only looks at one setting or bounded context to examine a phenomenon. He argues that case studies are essential for addressing the how and why questions. Specifically, the research design is a case study of Utsira offshore Wind Energy Development. The case study participants were selected using purposive sampling based on a criterion. It will be vital or purposeful in that the researcher will use knowledge and decision to choose people based on a measure (Creswell, 2014). The criterion is that they participated in the Utsira offshore wind energy development.

4.4 Data collection

The data collection methods involved primary data collection using semi-structured interviews and secondary data. Firstly, the primary data collection will involve semi-structured interviews of Utsira municipalities leaders, employees, residents, and other external stakeholders. Semi-structured interviews are more focused and have the advantage that the researcher controls the line of questioning (Creswell & Poth, 2018). They also allow the collection of extensive or detailed information on the phenomenon of interest, gathering data in the participant's natural setting, providing immediate follow-up, and combining other data collection strategies such as observations. However, the disadvantages are that, like any interview, the researcher's presence can result in bias and can be time-consuming (Creswell & Poth, 2018). Other limitations

include hesitancy by the participant to be completely truthful or transparent, unfamiliarity with the researcher's jargon, and the researcher or interviewers' competence. Second, secondary sources will include newspapers, articles, websites, and documents related to offshore wind energy developments and broad sustainability discourse.

4.5 Pre-Interviews arrangements

In planning the interviews, written requests with research questions and the purpose of the study were sent to the participants. It highlighted the data collection process and gave assurance that the interviews were voluntary and that participants could withdraw at any time without facing any consequences. Linked in was used to compile the list of participants and send the invitations. Participants were eager to be part of the interview, and we mostly arranged the interviews through digital meeting platforms such as Zoom and Meeting, some face to face and others through phones.

4.6 The interviews

The interviews took almost 60 minutes by participants. Before the interviews started, the researcher guided the participant through the purpose and process to make them feel both comfortable. She assured them that the information they gave was confidential during pre-interviews and interviews. The interview was written using digital MS words to track some forgotten elements and words. Each participant gave approximately 5000 qualitative content and comments. The researcher thanked all participants after the interviews, and most received an extra thanks message on their e-post and on LinkedIn.

4.7 Data reduction and analysis

4.7.1 Familiarization and indexing

Each participant interview gave 5000 words transcript that was converted to code. Most transcripts were sorted in deep reading, highlighting the common pattern and themes following the research questions. Excel worksheets were used to code the data. An excel table was designed following columns and rows. The research questions, stakeholders, demographic, and participants' numbers and codes were presented in the columns. The rows captured the themes following the research questions. The process of familiarization and indexing was simultaneously conducted with data analysis to aid the reduction of data into meaningful codes.

4.7.2 Aanalysis

Discourse analysis was used to look critically at semi-structured interviews from selected participants from Ustira Municipalities and other external stakeholders involved in the new offshore wind energy development and documents. Since we argue that stakeholder interactions are political processes, discourse analysis allows us to examine what definitions or frames are given to problems and which aspects of reality are included or excluded (Hajer,1995). As mentioned earlier, discourse analysis involves storylines and discourse coalitions (Rosenbloom, Berton & Meadowcroft, 2016). Specifically, storylines are narratives of social reality based on symbolic referencing and shared understanding in which actors or stakeholders try to make sense of the world and overcome their problems (Hajer, 1995). On the other hand, discourse coalitions are denser and more detailed, consisting of a set of storylines or content, actors behind them, and practices and context in which both the actors and storylines are embedded. The storylines and discourse coalitions that emerged from the data were presented in narratives, representations, and interpretations of what some words, comments, and discourse mean in the real world. The approach allowed the identification of the discoursed roles, power, and interest based on the participant information. Both thematic and text analysis were employed to aid the discourse analysis to identify the themes informed by the theories and literature reviews and analyze the text by taking notes of the words used, their frequencies, and emphasis, respectively.

4.7.3 Presentation

The process of the presentation involved charting, mapping, and interpretations. Thus, data from the interview was presented using tables, graphs, pie charts, and graphic illustrations. The frequency and intensity of these aspects are mapped or illustrated by counting words or graphs. It involved simulating data from the original transcript to rearrange it in themes following theories and the literature review. In addition, some descriptive analysis was included using some statistics and graphs. The presentation followed the research questions. The interpretation of the data and findings of the study followed themes emerged from repeated patterns, associations of the meaning of the patterns, concepts, and their explanations.

4.8 Ethics

Ethical research involves honesty about the study's purpose, process, and outcomes (Flick, 2015; Silverman, 2013; Creswell & Poth, 2018). Thus, the assigned supervisor approved the research for a master's thesis, and permission was also sought from NSD. The process involved getting informed consent from potential participants based on honest communication to ensure voluntary participation. Accordingly, the researcher adequately explained the research goals to the participants through a letter of invitation and advised them that it was voluntary. They were in their right to refuse or change during the interviews. Also, ethical research must not harm participants during and after the study. The researcher ensured this by maintaining the participant's anonymity by not disclosing their real names or organizations. Also, an effort was made to avoid any names of specific individuals or recognizable events. Confidentiality was ensured by not recording or sharing information that is sensitive or given unconsciously. Another area that is important for ethical research is data management and storage. The researcher kept all information and data secure on their personal computer, and once the thesis is published, the information will be destroyed.

4.9 Limitation

This research had limitations in the form of the participation numbers, quality, and representation from different stakeholders, such as the NGOs, governments representative, and the neighbouring municipality inhabitant who are against the wind offshore developments in Utsira. Actors in the fishing industry did not participate in the study. Instead, the researcher had to rely on a key informant who was an environmental researcher.

The interview participants were very highly knowledgeable in the field. However, some of the participants were giving the answers that could manipulate the outcome of the research findings, using the research as a platform to promote their interest, and others withheld from sharing information that could affect the findings differently. One reason could be that they wanted to protect their information or strategies from competitors. Also, there are limitations on face-to-face interviews due to the distance, time, and cost. On the other hand, phone interviews gave limited data for different interviews.

5.1 Introduction

In chapter five, I highlighted the research methods and techniques used to analyse the data to find the main issues that answer the research question: the nature of stakeholder management and interaction in the energy transition. These factors affect such as wind development case study Utsira Municipality. In this chapter, I will present the findings from the interviews of ten participants who are all stakeholders in energy transitions. Eight are locally based in Norway, five from Utsira, and three from the Rogaland region. Two are international developers from New Zealand and Germany.
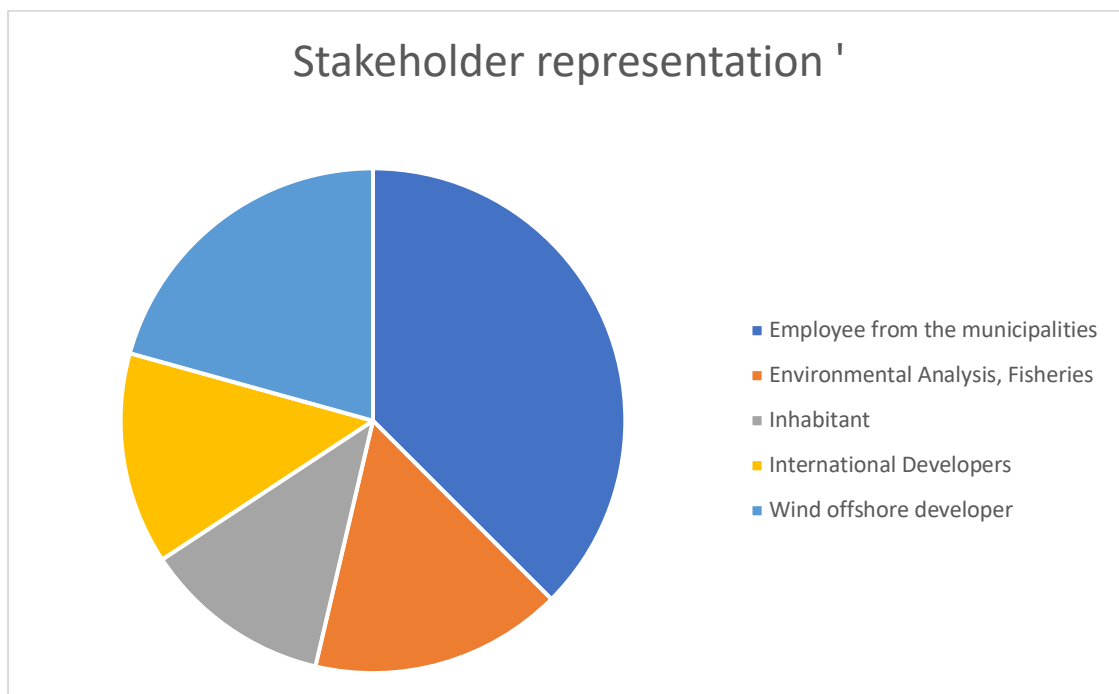
Figure 5 Stakeholder Representation

5.2 Overview of the participants

In this research, I conducted ten interviews, mostly over digital meeting platforms such as meet and zoom, one to one interview, and three phone interviews. Most participants held an academic qualification, had long experience, and were highly positioned, as shown in Table 1.

Stakeholders Code	Qualifications	Sum of Field2
Environmental Analysis	Researcher	72
Municipality Employee 1	Politician	71
Developer 1	CEO and master's in computer science	59
Municipality Employee 2	General manager, master's degree in engineering	53
Municipality Employee 3	Environmental protection and Manager	48
Inhabitant 1	Maritime	46
Developer 2	PhD in science and technology	37
Int Developer 1	CEO, Scientist, and Doctor of Philosophy	34
Int Developer 2	Manager at the Global Energy development	29
Inhabitant 2	Rutebåten the Liner in Utsira	11
Grand Total		**460**

Table 1 Stakeholder Qualification

Eight participants were directly involved with the project as a stakeholder from the region, and the other two have international expertise in renewable energy development in a decentralized community. The eight selected participants represented the main stakeholders within the offshore wind development in Utsira Nord. Five of eight, including the municipality employees, are inhabitants of Utsira Island. Four of five stakeholders were actively involved in Utsira Nord wind offshore transition. Two of them were directly involved as an employee of Utsira municipality. The third was an environmental analyst and wind offshore cluster networker; the last was an active politician in the area. Two participants are wind offshore developers and competitors with very high positions in senior manager levels within the region's energy sectors. They have a higher degree of academic qualification. The first has a PhD in science and technology while the other has a master's in computer science. The last participant holds a master's degree in engineering, and he is an energy supplier and consultant who worked directly with Utsira municipality and other developers. He has excellent knowledge about offshore wind development in the regions. Finally, the last two participants are from the International renewable energy development arena, with highly experts in climate change, environmental impact, and energy transition. They hold high academic qualifications

and an international network within energy transition and capacity building. Both participants work in Europe, Asia, and Africa with renewable energy development programs. They have a tremendous knowledge of policy making and government in centralized and decentralized communities in the energy transition. To sum up, 9 of 10 participants are highly qualified with excellent knowledge and experience of the subject. On average, they delivered 5000 words each that were coded through thematic and text analysis that will be represented in this chapter. Table 2 below represents the stakeholder participation and the number of the thematic code they represent, three employees.

Stakeholder representation	Sum of Code
Employees from the municipalities	174
Wind offshore developer	96
Environmental Analysis, Fisheries	75
The international developer not involved in Utsira	63
Inhabitant	56
Grand Total	464

Table 2 Stakeholder Representation

5.3 Findings

The participants were asked several interview questions relating to the three sub-questions. First, how does stakeholder engagement (interaction and relations) evolve in Utsira Nord wind offshore development? Second, what factors affect stakeholder engagement and communication in Utsira Nord energy transitions? Third, what strategies can help ensure effective stakeholder involvement, participation, and communication in Utsira wind offshore energy transitions? Figure 1 shows the number of codes generated from the data all the participants gave.
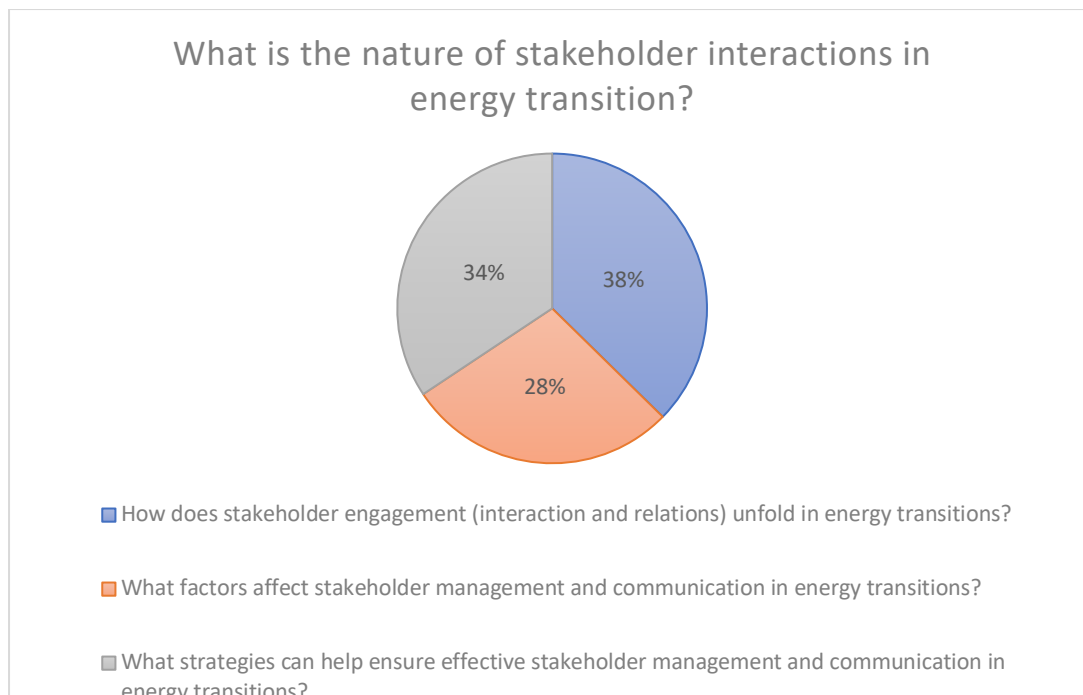
Figure 6 What is the nature of stakeholder interactions in the energy transition?

The data analysis shows that 38 % of the codes generated from the data were for the themes of nature of interactions. Followed by 28% on the factors that affect the stakeholder interactions, and 34% of the quote generated were related to strategies that could help ensure effective stakeholder management and communications in Utsira Nord wind development. The finding will be presented according to the participants who represent a diversity of stakeholders' comments and answers to the interview questions. Major themes and patterns are presented in the major sections and subsections with an overview of the answers in tables and diagrams, followed by the participant statements.

5.3.1 Nature of stakeholder interactions in offshore wind development.

This section represents the first research question, what is the nature of stakeholders' interaction in Utsira Nord wind offshore developments. The Participant was asked to share their experience in interacting with several stakeholders. These interactions between stakeholders indicate the level of powers, rules, and relations in energy transition, where time was the main factor in the interactions between the stakeholders, followed by the goals, the impact of knowledge, and participation. The Governments and the developers' roles and communication methods were mentioned in the interviews by most of the Utsira municipality, politicians, and inhabitants. The interview represents their experience and activities with

several key stakeholders in lobbying for green energy shifts from the regime and niche level. Following the thematic and text analysis, the data was gathered by themes. The indication of themes in the diagrams and the tables show stakeholders' total relations and rules in Utsira Nord offshore wind developments. These relations are represented in Figure 7,
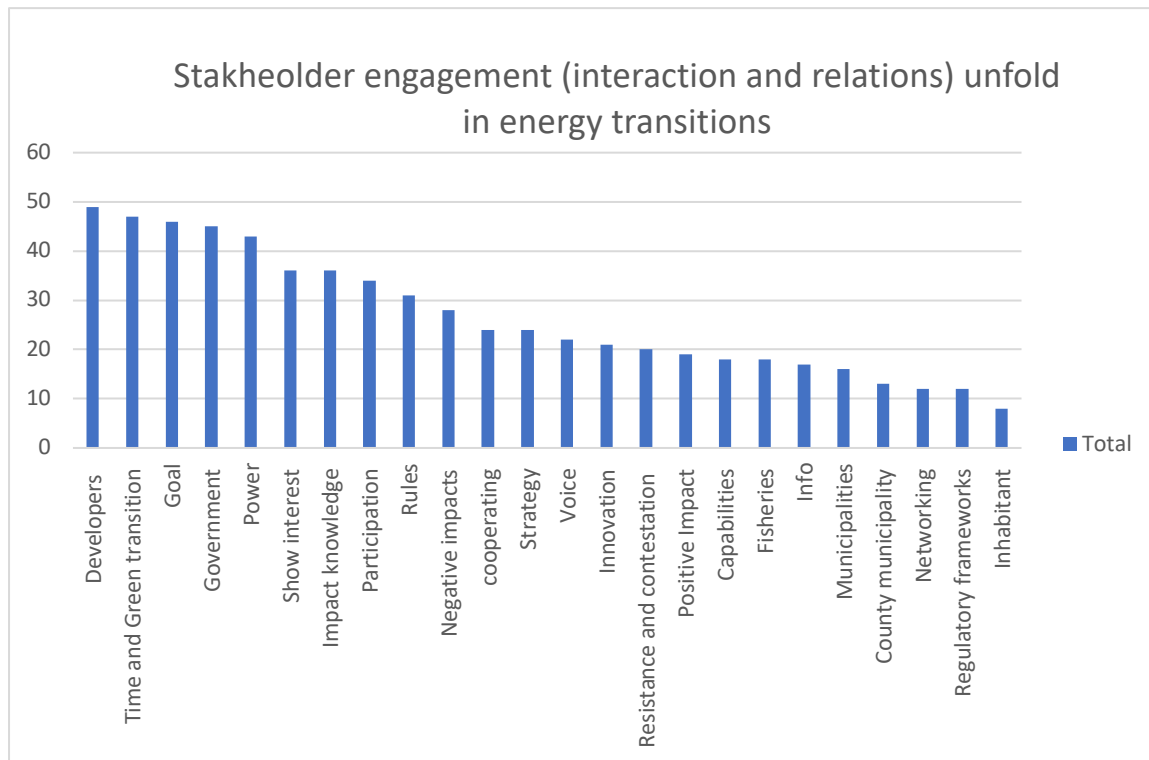
Figure 7 Stakeholder engagement (interaction and relations) unfolds in energy transitions

The Key Stakeholders in Utsira Nord:

These sections present the key stakeholder in Ustira Nord and their interaction with one another in energy transitions. The sum of the code represented in the table below indicates the numbers of each stakeholder being mentioned or represented in the finding. These numbers of representations in comments could be translated to how much power, Legitimacy, and urgency these stakeholders in Utsira Nord floating wind offshore developments have. Further, we will look at the major content that each stakeholder has represented to understand how they engage and communicate with one another.

Stakeholder	Sum of Sum of Them
The government	58
Developers	49
Fishery	18
Municipalities	16
Inhabitant	8
Grand Total	**149**

Table 3 Stakeholder

The numbers from Table 5 and Figure 8 show that count and national governments represented 39% of comments, the developers represented 33 %, and the fisheries represented 12% of the codes as major stakeholders against the developments. The figure below, as I mentioned, could be translated into how much power, legitimacy, and urgency these stakeholders have regarding the Utsira Nord wind developments. Utsira municipalities have 11% of the code, and Utsira Inhabitant with 5 % of the code. The participants' comments regarding each stakeholder are mentioned below:
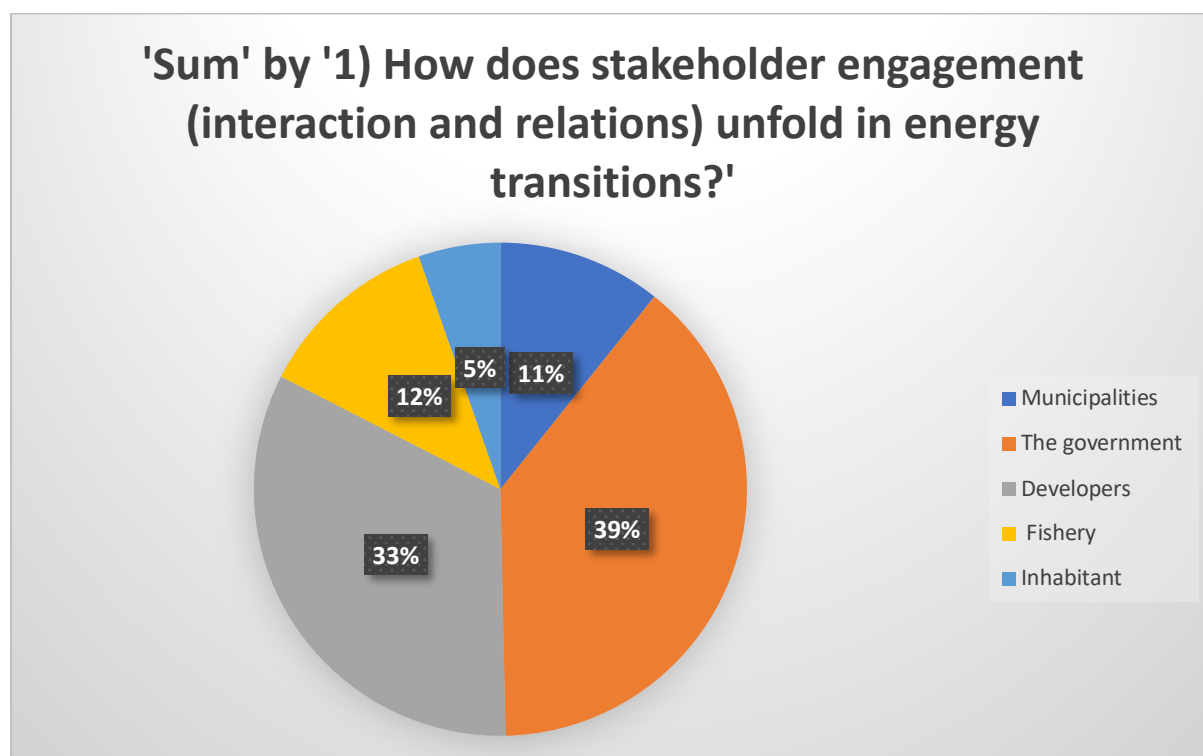
Figure 8 '1) How does stakeholder engagement (interaction and relations) unfold in energy transitions?'

The Governments Relations with other stakeholders:

Government relations with stakeholders were mentioned in 39%, which indicates how much power the governments have in energy transitions. However, some participants were not happy with the government efforts regarding the green energy transitions and communications efforts. In contrast, others are more familiar with the government roles and happy that such new innovative technology platforms are getting the risk, environmental assessments, and study required to develop sustainable projects over time. The participants' comments regarding their interactions with the governments are represented below, whereby two of the municipality employees agree that the role of the government is based on a lengthy bureaucratic process, besides Utsira municipality actively inviting the government to visit Utsira Island with No response. The participants' quotes are highlighted here:

> *Municipalities Employee 1 ´´ We have with the democratic system the hearing system, but I don't feel it's enough, especially as a small municipality, we feel we are left aside.*
>
> *´´I have sent some invitations to politicians and ministries, but they have not responded yet. I feel the meeting with the government it's based on a long bureaucratic process and one-way communication, and we try to get information. Unfortunately, it takes time, and They don't take us seriously or value us."*
>
> *Municipalities Employee 3 There is a formal process that the department of oil and energy drives. They are sending out on the hearing of official hearings they develop you know the pilots of jury juridical framework for the industry of floating with and went on standing on the bottom this on the high level sending it out in a formal way to make new laws and new regulations.*

The environmental analyst highlighted the government is more listening to the most vocal stakeholder, such as the fisheries industry. While the Inhabitants are more confident in the government's roles regarding the offshore wind energy transition. Both the environmental Analyst and the inhabitant highlighted how important

> *Environmental Analyst ´´I know that the government has had continued dialogue with the fishing industry from the planning face, and from what I understand, such a dialogue is continued. I've been to a couple of conferences over the past two years. They have at least some segments where they talked about the coexistent, particularly **with fisheries, because***

they have been the most vocal stakeholders. You may say so, and that's important. ´´

Inhabitant 1, **I think the offshore wind development will take time as the government wants to make sure all stakeholders have been heard,** *and we are lucky if the government comes with their demands sooner, but I think this will take another 5 to six years.*

Developers' interactions with Stakeholders:

From the developer side, Developer 1 reported the meeting with the Norwegian authorities was unique compared with other international countries such as the UK. Regardless of the competition between developers, they meet with the Norwegian governments collectively to discuss the new developments in Utsira Nord. In that regard, Developers 2 highlighted the importance of not sharing valuable information in such meetings with the other stakeholders. The developer's quote is highlighted here

*Developer 1 `` **From the developer side, I would almost call it unique**, how you deal with Norwegian authorities because that is very much a test and the company that is engaging with this often do that even if they are competitors, they meet to the authorities together. So, you can see Company X and other competitors come as a group.*

*Developer 2 `` we all know we have different perspectives and interests related to this competition is **key you got to be very careful on how much you say when you go to conference** on your plans for it because I might be competitive taking notes and stealing then we need to do it better and now we know what developer is doing and another developer might improve it, so because there is a really competition of who's going to win that area and competition is the key.*

The environmental analyst reported that the developer is not happy with the licensing process in the wind offshore, and it is taking a long time. They are waiting to be part of this transition. However, the two developers expressed what other participants highlighted regarding their disappointment with the licensing process. The developer and other participants' statements regarding the developers' relations with the government's efforts in energy transition are stated and highlighted in bold accordingly here:

*Environmental Analysis said `` Not far enough. It's very slow, and **I know the frustration many of the developers have regarding the licensing process.** I feel like just one year ago. They were just before I started working as a researcher. I was working for a Norwegian offshore wind cluster, and I worked for them. There were a lot of meetings with developers, who were very optimistic and talked about how Norway has this great opportunity with floating offshore wind…. Then Recently, I had the first conference in 202,2, and **I just felt the entire mood switch yeah, the mood was low,** and they were like, it's too late. It's almost too late for us. We've wasted such a great opportunity to become the best as we did with petroleum, but the ship has passed and sailed, so it's a bit sad that this process has taken so long.*

*Developer 2 ´'I think this is the strength, or **I should say the strength of democracy in Norway**. Well , at this time, discussing this at conferences, you see people with different perspectives. But **I think it's quite sophisticated, and it's quite honest discussions** we have, and of course, we know we don't necessarily agree. Still, II think it's y, I don't know how to put it, but I think this **is an excellent open discussion, and if we disagree, we tell that too.**``*

*Developers 1 ´' **We are not telling the government how to do their job fasters** and all that because we believe this is coming on its time". Other cases in such a way that the companies are here to help to provide them good faith and advice. A good regulator is transparent and available for such development.*

*Municipalities Employee 2 ´'Several vendors have expressed interest, **but they do not yet have an application deadline, so they don't know when to submit their application. They don't know the criteria for applying.** There are also still negotiations with other stakeholders because, uh yeah, once you have selected the site, there are always some stakeholders that will protest.´' It has not been decided yet.*

The developers include the municipality in their communication strategy to satisfy the community at this level. On the other hand, many participants from the municipality and Ustira inhabitants stated that developers are actively involved in including Ustira in their interactions and are interested in contacting them. They have been visiting the island, and the municipality and other stakeholders are pleased with the interactions and communication

received. At the same time, they hope that will continue after the planning face. Participants' comments are represented here:

> *Developer1* ´´*We have the ambition of maximizing local content,* so for the time being, we are doing is it possible as developers and suppliers. And we are working on a communications strategy to communicate with several stakeholders.*
>
> *Municipalities Employee 2´´ **Most of these stakeholders have visited us. They** just travel out to talk to the people from the municipality and try to gain some trust and be visible. They try to gain some positive vibes if you understand.´´*
>
> *Municipalities Employee 1 ´´The companies are two sides communications. They prepare for the applications and **would like to know everything about the island and the community that lives there.´´***
>
> *Inhabitant 1´´ They have been visiting us in Utsira, and when **I asked them what they can do for the community**, he was a bit **uncertain** regarding the question, and he promised he would come up with a better answer next time.*

Utsira Municipality interactions with Stakeholders:

Many participants reported that the municipality's relation with the stakeholder, regarding Utsira Nord offshore wind development, is based on positive interest, welcoming, and actively lobbying for their position to developers, governments, environmentalists, fisheries, and the inhabitants. The participants' comments are represented below:

> *Municipalities Employee 1 **We send emails to the companies, developers, and governments. We invite them we are active in bringing our voice. The business developer and I travel to seminars and conferences to get our voice to the public** regarding the offshore wind development in Ustira*
>
> *Inhabitant 1 ´´Utsira municipalities are communicating regarding the offshore wind development **through seminars and conferences and welcoming all stakeholders to visit the islan**d.´´*
>
> *Inhabitant 2, **We have got enough information from the municipality** regarding the development, and they are planning and looking if that will cause any problem with the fisheries, the bird life*
>
> *Developer 2 ´´**We have met with the community several times, and they are very nice people there**, but we can't promise X number of jobs, so to say that the industrial development will be on the island or not that's of course far too early to say. I'm answering like a politician now, but that's the fact it's too early to say.´´*

Fisheries interactions with Stakeholders

According to an Environmental analyst and the municipalities employee, the fisheries industry is against the development. But others distinguish that Utsira Nord wind offshore development will have fewer conflicts than other areas, plus many participants highlighted the concern from fisheries with less conflict, according to others.

> *Environmental Analysis 1 They have done lots of research and **are still against it. The** fishermen have always come around to the fact there are a lot of bad deals in the area; however, the data from the Norwegian government and various other sources shows that yes, there might be, but you can see that where Fisher boats have travelled, it's just on the outside of the zone, and it's not like that they're going in the middle and so what they're complaining about is not realistic, and it's something so small, and it's not going to affect them*

> *Municipalities Employee 2 There are different as some stakeholders **don't want the development such as fishing industry and environmentalists who are looking after the birds** and then you have a public group like against windmills yeah and opinion groups, they are against it. So, if the Norwegian government said no, we would never build one floating offshore in Norway, there would be people in Norway cheering up and happy.*

> *Municipalities Employee 3: Like the fisheries, **there are not so many conflicts, but they can come**. That's why they chose this area as a pilot. ´´*

Inhabitant interactions with Stakeholders and VS

Inhabitant has been mentioned in a few comments by the participants, highlighting the lack of capabilities in Utsira municipality. Some expressed the need for community participation and active involvement from the inhabitant regarding the developments in this project. Besides other mentioned inhabitant concerns regarding the developments as they are not satisfied with the onshore wind developments, at the same time, they are relieved that these developments will be offshore with less social impacts, bu. Still, they are concerned regarding the environmental impact. The participant's comments are represented below:

> *Municipalities Employee 1: At this point, we lack capabilities, resources, investment, manpower, and more people to work with our business development as she is doing lots of work to communicate with several stakeholders and she feels left alone in such huge development, **and we need the help from the inhabitant and the politicians to bring our positive storyline to the public**.*

*Environmental Analysis 1: Then we have the inhabitant **they have been hostelling with on land windmills** the people don't want to live close by them due to various environmental effects such as with light and sound and so on, which is understandable, **but the wind offshore that will be developed will be far out** I'm I am like from each other you're going to be able to see them of course, but I don't think you're gonna be able to hear them today: we already have two windmills out in the ocean on the marine energy test centre, and you can see them in the map where the channel will be, and you can see the distance is pretty similar so if we can't hear them, even though it's goanna be a lot more than two when but might not be a sound that can be annoying for the people who live around it*

*Developer 1: Because offshore wind development has never been in Norway, and I also think it is relevant for them to know when they goanna makes decisions that have to do with this new industry to the local municipalities, **I believe it is important that they leave something or weather value for those that are affected by this** not all places in the world you do that. I'm not saying we normally have done that or places in Norway, but I cannot guarantee anything, at least for this. Still, like I want something to be left, whenever you have a connection point to the server in the ocean seems to be something not only to the industry but also to the communities and municipalities.*

Utsira Nord Stakeholders Relations in energy transitions

Utsira Nord Stakeholders Relations	Sum of Field3
Power	43
Interest	36
Roles	31
Cooperating	24
Voice	22
Resistance	20
Information	17
Grand Total	**193**

Table 4 Utsira Nord Stakeholders Relations

The relationship between the stakeholder is represented in the table above. Many stakeholders mentioned the power differences, stakeholders' roles depend on how showing interest to one another and the information that has been shared. Besides, many participants show that their relations with other stakeholders are through either cooperation, networking, resistance, or conflict could be translated to contestation, concerns, consensus, cooperation, and conflict

Participants highlighted 43 comments regarding the power difference in meeting with the stakeholders, whereby the Government and the developers are dominate in this position. 36 of the comments were regarding the interest level of the participants. The role stakeholders play has been mentioned in 31 comments, whereby the developers and municipality justified the government's roles regarding the energy transition time. Besides developers and municipalities, they mentioned their roles in Utsira Nord floating offshore wind developments at the planning stage. Besides, the voice as a measurement of legitimacy, urgency, and power was mentioned 22 times by the participants.

In this finding, the Utsira community feels overpowered and not heard, and it's hard to get the right information from the government. The relation could be translated as a concern at this level. On the other hand, Developers are blessed to meet with the government as they partner and can bring their voice. Besides, offshore wind developers have more cooperation and consensus relations with municipalities and governments. On the other hand, the fisheries relations with wind offshore development are based on resistance and against the developments, whereby their voices are heard and valued by the governments, which shows the level of urgency and power the fisheries have. The relationship fisheries have with stakeholders could be translated as resistance and conflict. And finally, the inhabitant is much pleased with the information received from Utsira municipality, and their relations are based on cooperation; however, there are concern regarding offshore wind development. The participants' comments are highlighted in Figure 1.
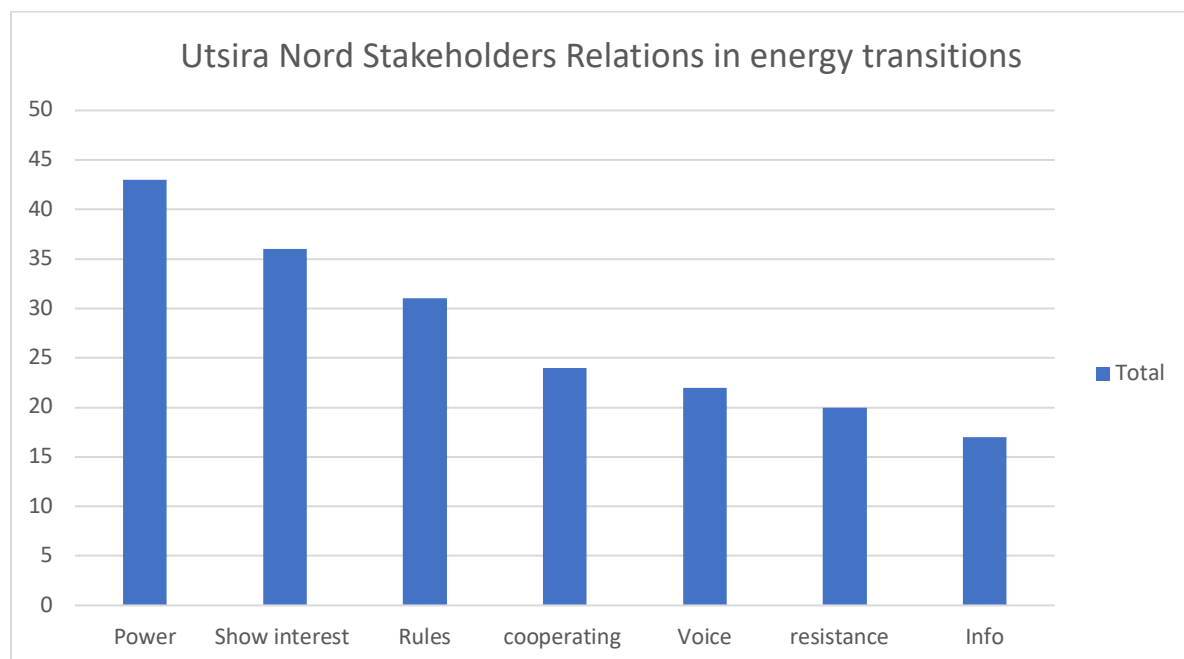
Municipalities Employee 1 **We feel we don't have that much power to have an impact or that our voice has been heard the way it should**. *We feel bigger municipalities overpower us. The county municipality is not supportive of Utsira, but they welcome the offshore wind development without engaging with us.*

Municipalities Employee 3 Most of these stakeholders have visited us. They just travel out to talk to the people from the municipality and try to gain some trust and be visible. They try to gain some positive vibes if you understand. **We have a voice and a strong voice, and we hope it will work our way, but we are not sure about it**, *so we must work very hard.*

Environmental Analysis 1 The government, you know **they, 're being considerate, and they're checking all the boxes,s making sure everything is going well** *know that sort of thing with Norway. We might not always be the fastest, but at least when we get there in the end, the project is yeah stable. There's no insecurity about anything that you shouldn't be insecure about, and it usually ends up with a slow but steady win the race*

Developer 1 we are doing our research in the field, and we have contacts with the politicians, ministries, and municipality workers. **We have Good Cooperation with the communities and governments**

Developer 2 We are trying to identify like you are the most critical stakeholders, who can we look at and **who will be talking to, who will we learn from who will try to influence**

*Inhabitant 1 ´´***The main factors in getting the right information at the right time***. This industry will affect and have an impact on Fisheries.´´*

Figure 11 below illustrated the interactions between stakeholders. The government are represented in the red color, the developers in black, the fisheries in blue, municipalities in green and the inhabitant in purple. Government treats both developers and fisheries as key stakeholders in Utsira Nord Wind Offshore development. However, it gives minimum effort to Utsira municipality as a stakeholder and the inhabitants until they reach a momentum of collective resistance or contestation.
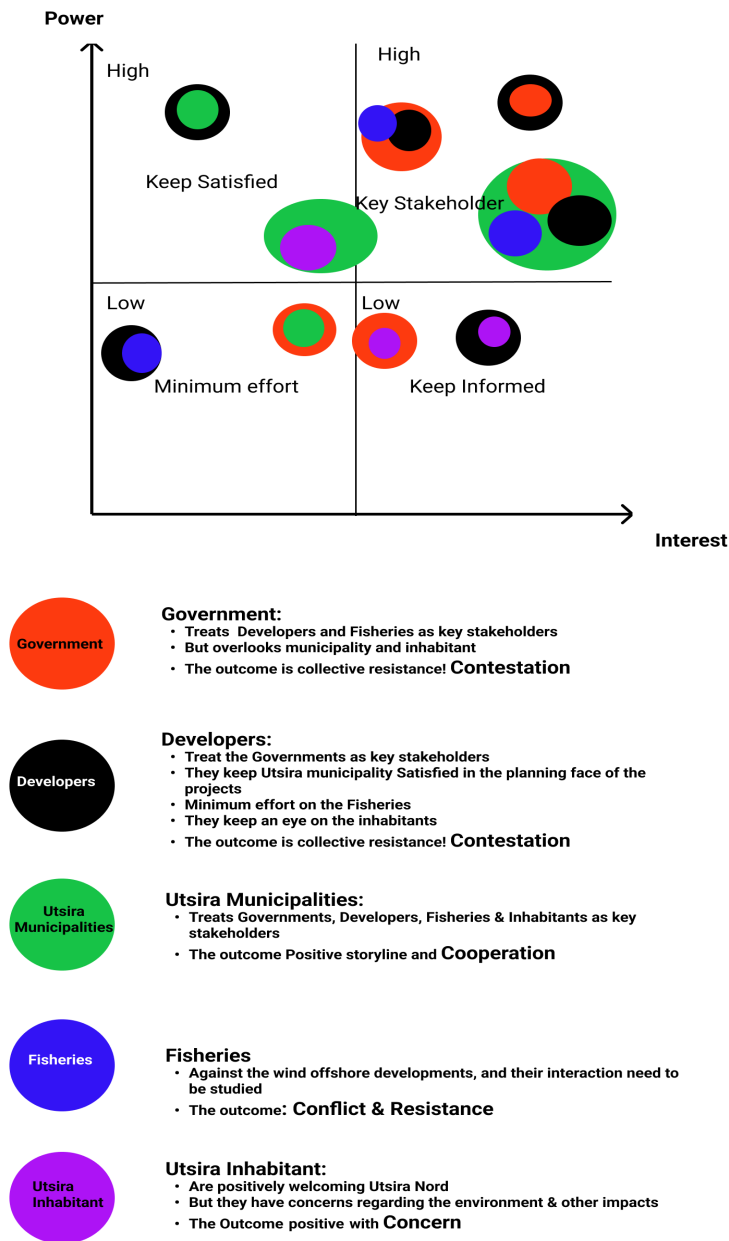
Figure 10 The Nature of interaction in Utsira Nord energy wind offshore development. (Author Work)

The developers treat the governments as key stakeholders in Utsira Nord Wind Offshore development. They keep Utsira municipality satisfied in the planning face of the projects but gives minimum effort to fisheries, and inhabitants and others until they reach a momentum of collective resistance or Contestation. Differently, Utsira municipality treats governments, developers, fisheries, and inhabitant as key stakeholders and they keep them satisfied. The efforts depend of how much power and interest each have. The municipality builds a positive

storyline which helps it to achieve cooperation with other stakeholders. But in the past the Fisheries took a stand against the wind offshore developments, their interaction needs monitoring otherwise if their concerns are no addressed it will lead to collective resistance and conflict. Although the Utsira inhabitant are positively the wind offshore developments, they have concerns regarding the environments and other impacts.

Summary of the nature of stakeholder interactions

This chapter presented the participants answers to interview questions relating to the first research question what the nature of the interaction between the stakeholders. The findings show that there is diverse stakeholder in the energy transition involving the new offshore wind energy developments. These stakeholders include count and national governments, the fisheries, Utsira municipalities, developers, inhabitant. The findings show the government and developers have power, voice, and dominate roles in wind offshore development. The government have more formal roles, based on democratic hearing and bureaucracy to developing energy legislation, frameworks, licensing process and to approve the projects funding. On the other hand, the developers have strategic roles, voice and power in supporting the innovative technological platforms and they have a competitive advantage role to cooperate, negotiate or disregard stakeholders during the planning face of the offshore wind development, conditionally on the identifications of key stakeholders' groups, legitimacy, interest, urgency, resources, and power.

The findings show the relationship between the governments and the developers are based on cooperation's. However, the relationships between the developers and the fisheries are based on resistance and conflict with the municipalities concerned about the government's role. On the other hand, the participants highlighted the developers concerns regarding the licensing process and time. Finally, the inhabitant relation with the municipality is based on mutual interest in improving the livelihood of Utsira, and they are slightly concern regarding the social and environmental impact. The inhabitant was positively interacted with the developers, and they are welcoming the project.

The findings show that municipality such Ustira lack power, they are conveying their voice through a democratic hearing, and they feel meeting with the governments is based on long bureaucratic process, where their voice remains not heard, and they feel the governments and the county municipality don't have much interest in interacting with small municipality with 200 inhabitants. However, the findings show that Ustira municipality and developers have a

better interaction and cooperation in the planning face of the projects. Overall, the interactions between the stakeholders are based on degrees of contestation, concerns, consensus, cooperation, and less conflict.

5.3.2 The factors that affect stakeholder management and communication in energy transitions

Table 5 below represents the factors affecting communication between stakeholders in Utsira Nord energy transitions. The findings identified at least seventeen factors from the participant factors. Each element is listed against the frequency with which it is mentioned.

The factors	Sum of Field2
Political	36
Social	36
Environmental &Visual impact	33
Supply chain and infrastructure	24
Economical	24
Participation	22
Technological Innovation	20
Transition Time	19
Information	17
Capabilities	13
Justice, Benefits	10
Security & Safety	8
Transparency	7
Knowledge	7
Value	5
inclusion	4
Networking	3
Grand Total	**288**

Table 5 The factors that affect stakeholder management and communication in energy transitions

Most of the stakeholders reported their desire to with the projects sooner; however, external and internal factors affected the transition time. Political and social factors dominated the regulatory framework, and political planning was the major factor that affected the interactions between the stakeholder in planning from the regime level. In this section, we will represent two subsections of the external and internal factors that the participants have reported.

5.3.2.1 The external factors that affect stakeholder management and communication in energy transitions

This section represents the participants' comments regarding the external factors. 36 of the participants commented regarding the regulatory and licensing process, equally 36 comments from the participants being reported regarding the social impacts, 33 comments regarding the environmental and visual impacts, then the supply chain and infrastructure had 24 comments, the economic and investments as factor got 24 comments, technological innovation 20 comments, transition time 19 comments and the security and safety with 8 comments. The result from the interview shows developers and municipalities were not pleased with the government's efforts regarding the energy transition. The relationship is based on uncertainty and time-consuming regarding the licensing process, financial support, impact assessments and regulatory frameworks. The finding factors and figures are represented below.
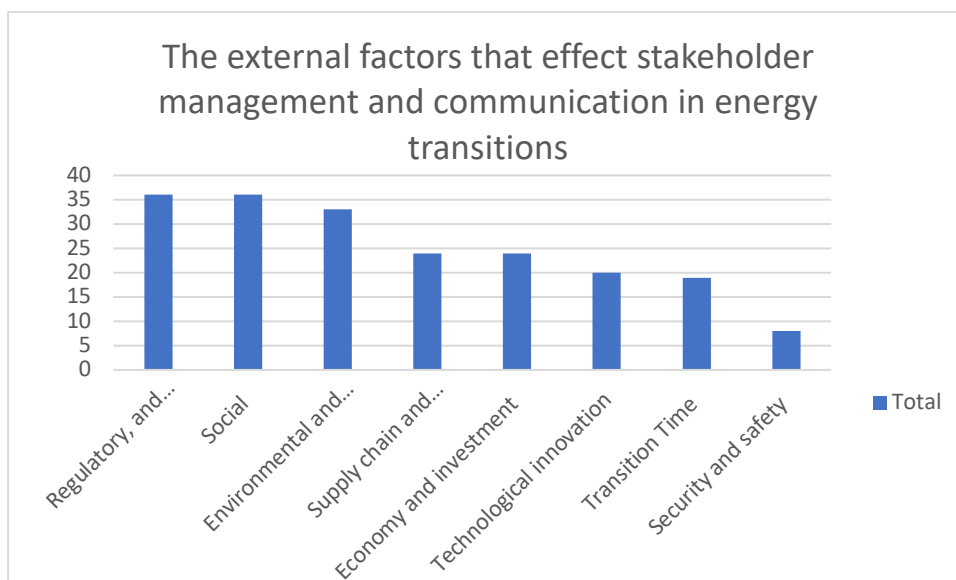
Figure 11 The external factors that affect stakeholder management and communication in energy transitions

Political factors: Many participants reported concerns regarding the licensing process and the application deadline. Others were not concerned at all. Like the municipality, inhabitant and developer mostly agree that the government are taking the time necessary to make all the impact assessments, risk and financial measurement available, plus they make sure all stakeholders' concerns are heard. They feel the licensing, and regulatory frameworks take time at the beginning, which is a healthy step for the government to make all the impact assessments before they finalize and open the applications for all developers.

> ***Municipalities Employee 2:*** *One of the main factors that will take a long time is **because there are so many stakeholders on a project like this**. According to Norwegian law, we may have 50, 60 or 70 stakeholders, and each stakeholder should be heard and listened to. Some of the stakeholders*

fighting for the birds' rights, the fishery industry, oil and gas, The visuality on the horizon, The various political parties, The municipalities, The power companies, The army and the marine, **But if you asked in a region government when is the application deadline, they don't have an answer they're still waiting.**

Inhabitant 1: **The government should be strict in how they will develop the field and how the local community will benefit from this.** *As I told you earlier, we are the ones who will live with this for many years to come*

Environmental Analysts: But you know you got to work with what you have, and in one way you can say **yeah it's bad that it's taking so long, but also it's it shows that the government you know they're being considerate and they're checking all the boxes making sure everything is going well,** *knowing that sort of thing with Norway we might not always be the fastest but at least when we get there, in the end, the project is yeah stable there's no insecurity about anything that you shouldn't be insecure about, and it usually ends up with a slow but steady wins the race*

Developer 1 **You can sense, yeah, there are many of these developers that are not patient well. They are chasing the governments regarding the licensing.** *I think it doesn't help at all. You need to do the opposite. You need to support and provide them with examples, and they can listen if they want to and cannot listen to us, but at least they have the offer. How do these factors affect the stakeholders and their engagement or interaction?*

INT developer 2 Why is that regulatory framework needed in the first place? This **is required because investment certainty and security probably cause the size of the cost upfront. If you build a power plant, you have to disclose that you will make a profit out of it** *and investment; therefore, it needs a certain regulatory framework giving investment certainly security and which usually guarantees that certain price over 20 years, so this is a kind of a technical, economical thing of course*

Social factors: Many participants reported the social aspects that affect communication with stakeholders, both the negative and positive, in developing Utsira floating wind offshore. The environmental analyst reported how many inhabitants positively welcomed the new development. They hope for a positive social and economic improvement in the Utsira community as they want to be part of the green energy transition. The inhabitant and the municipality hope for more strict regulations that will benefit the local community, and the international developer agree that the platform's location will impact the local society. They should have some support and benefits from the projects, while developers need to show that they will improve the local socio-economic. Participants' comments are stated here:

Environmental Analysis **is an issue being so small. Why they should care about the municipality with 200 people living;** *when the plan is just*

*making millions and millions of dollars on the offshore wind? Why I would worry about a population of only 200 people. On the other hand, **I think most people are optimistic about all other positive possibilities that could come up with the development.** With regards to population, and you know,w without options of work, it's tough to move into a place like Utsira. Norway has this decentralization policy where they want to keep people living in decentralized areas, not just in the cities. Getting an industry such as offshore wind out to those areas can be an excellent stepping stone to making that policy come to life.*

*Inhabitant 1 The government should be strict in how they will develop the field and how the local community will benefit from this. **The current development might impact how we will live here in the future** because we are almost 200 inhabitants. I don't know if I would live here if we were 500 people on the island. As I told you earlier, we are the ones who will live with this for many years to come.*

*INT developer 1 **So, exactly where it's located will give you an idea of what sort of impact it will have on the people living on the island.** So what we're looking for is continuously leveraging support so it essentially, you know, we can say there's no way they're going to stop this process. It is going to go ahead. However, there might be ways of leveraging support from the government that helps the community grow or benefit in some way.*

*Municipalities Employee 2 if you compare with how small we are doing well in all the other jobs and if this society is not engaged well on all levels. It's not interesting for these companies either; because **the people will live or get employed here. They have to be a good society with good health care, school, kindergarten, and** everything. So we have to do the rest of the job also very well we cannot use all focus on this. Of course, there is some limitation to what we can participate in because of travelling, time, and people.*

*Developer 2 **The developers might have to prove that they will use local companies to create new jobs** and so there will be no subsidies to the fisheries and others because there is not a lot of compensating*

*Inhabitant 2 More investment in Norway, more workplaces for people who live in Norway and not just from they come from other countries, **more children and kids, Positive development in our population,** Aquaculture, Windmills in the ocean and not the land, more activity in Utsira, And the fisheries get more opportunities in Utsira*

Environmental factors: Many participants reported the ecological impacts. At the planning face, many participants were concerned regarding what type of environmental impacts this project would have. Also, they reported that the government is taking much time to study the environmental assessment to make sure a sustainable project over time, and the municipality employee agreed with the environmental analyst on the comments are highlighted here:

*Municipalities Employee 2 Some of the stakeholders **fighting for the birds' rights, The fishery Industry, The visuality on the horizon,***

*Environmental Analysis: **The government wanted to do some environmental studies, and those studies** well, first of all, because it's out on the ocean, it depends on the season. You can't do that during the winter. It's too rough of weather, so that would have to be done now, and if those projects haven't even started yet, then they're not likely to get going until one year. Yeah, those studies can likely be turned into desktop studies done through literary searches and studies that have already been done in other countries, and then once the building happens, you can do those studies out in the field as you go. That would save that could save, yeah, two years, and dumb it should, but it's up to the government it's up to the government*

Supply chain and infrastructure: Participants reported how the supply chain and infrastructure would impact both environment and community, the inhabitant and the international developer agree. Their comments are highlighted here:

INT Developer 1: you know, wind turbines, it's not only the construction but the ongoing maintenance of those systems that need to be carried out and eventual replacement of those systems. You know, because those wind turbines have only got a used by date and that might be only ten years, or it could be less depending on how much they work. So, what that means is that they have to go through the construction phase, and then they have to go through the deconstruction and reconstruction phase of the systems as well. In five or ten years, all of that will impact the community and the environment. I guess the negative factors associated with the lack of communication and ability for the community to have its voice heard were even gained form of information related to the installations of these systems and the ongoing issues related to that which all might negatively impact the community

Inhabitant 1 The service station will have an infrastructure and environmental impact on the Utsira municipality

Economy and investment: Participants highlighted the importance of funding and investment during the planning phase. However, developers one and two had two different discourses, whereby developer one mentioned that they would like to invest and develop. In contrast, developer two and the international developers agreed on the need for the government's financial support in the planning face. Besides, the municipality highlighted their need to improve the island's capability and infrastructures and the need for early investment in the island. the participants' comments are presented below

*Developer 2: The **problem, of course, is that there is a need for substantial government support to get this up and running, and so far**, we have not seen that money from the government. They will say that this will require some investments at an early stage because this floating offshore wind industry is relatively immature. So you would need to support it in an early phase, but after a while, it will be competitive, so this is an investment for the future. It's not that kind of pure subsidy, as others will claim. However, the government still needs to find the money, and they haven't so far found it, but they said they are looking for it. Still, they are also saying that that kind of government support to the building will only be in a transition phase or starting place. They are saying that this would need to be competitive without subsidies after a while. Besides The government delay as you say, I mentioned a rule of the games*

*Developers 2: Good Cooperation with the communities and governments. **The development can create more jobs, power, and taxes for the governments could be investments and work based on a decision. For instance,** to have a substructure for the grid would mean that you build something that means that you don't have to maintain something and will have to play something, so that would mean workload to some extent. There could be a basis for a small maintenance base for, it means additional manpower local manpower, it means income for the company, it could also mean it should also be place monitoring the activity*

***Municipalities Employee 1: We lack investment to build housing, infrastructure, harbour,** and the discussion shall we make them now, or wait until they start with the development. But we are afraid we will be left alone if we don't do it now.*

*INT Developer 2: Why is that regulatory framework needed in the first place? This is needed because, I mean, you will still need a certain kind of stuff. It **requires investment certainty and security, probably causes of the size of the cost upfront. If you build a power plant, you have to disclose that you will some kind of make a profit out of it** yeah and re investment cost so therefore it needs a certain regulatory framework giving investment certainly security and which usually guarantees that certain price over 20 years so this is a kind of a technical, economical thing of course*

Technological and innovation factors: the developers highlighted the importance of the knowledge transfer regarding the new innovative green energy transition. They are investing in the future innovative idea and platforms and the inhabitant. The municipality reported their wish to be part of the green energy transition and to put Utsira as a hub for technology and innovation.

***Developer 1 We are involved with the technology development**, and we would like to do that in Norway, so we engage in this and testing our floating pilot and structures, so we have the skills and knowledge and what it takes in this a position. Plus, it's important to be engaged with innovative*

technology development in Norway. That's why we invest in future innovative ideas.

Inhabitant 1 I want to be a part of this new technology *and to put Utsira on the map light with the hydrogen windmill project that will bring people from 50 countries coming here from everywhere to develop and research and on this type of new energy. I don't see anything but positive.*

Municipalities Employee 3 We have a slogan that says Utsira gives energy, *which is part of it. We want to be part of the green Energy technological shift and provide power to the world, the region and ourselves, but we hope we will get something in return; it's about employment. We need new places for people to work here, exciting places with a service space, innovative drones, smaller ships, and underwater robots. So, on ...that can be employed by 20 persons because we are so close to the area that it's very natural to have it here that's under my top list.*

Security and safety: Participants, in general, are concerned regarding the safety of the projects. The developers hope to implement and deliver safety projects, and the inhabitant hopes for the people's safety while sailing through the sea. The participants' comments are highlighted here:

Developer 2 *We hope that this will be a safe project. It will be a project that is executed, as we say, according to time and schedule, and this is kind of all things you always heard from a developer and especially big ones. We need to do this on time. We need to do this on the budget. We need to do this with as little environmental impact as possible to create jobs. We need to make sure that this puts the people are doing. Then the municipality of Ustira and also other local communities are happy. We should not ask for more government support for this project that needed meaning, and of course, we need to have a good happy project people working on to have a content project that should work on*

Inhabitant 2: *I am concerned regarding the impact on the safety of people sailing in the sea*

5.3.2.2 The Internal factors that affect stakeholder management and communication in Utsira Nord offshore developments

This section represents the internal factors that affect the communication and stakeholder interaction, whereby most participants highlighted the importance of early participation in decision making. The internal factor's themes and the number of comments are highlighted here. In this section, participation gets 22 comments. Information gets 17 comments, capabilities get 13 comments and knowledge gets 7 comments.

Internal Factors	Sum of Internal Factors
Participation	22
Information	17
Resources and Capabilities	13
Transparency	7
Knowledge	7
Value	5
Inclusion	4
Networking	3
Grand Total	**78**

Table 6 The Internal factors that affect stakeholder management and communication in energy transitions

Inhabitants and municipality employees agreed on the lack of government information, and they requested early participation in the decision making. Getting the proper knowledge and information from the developers and the governments is essential for the community's wellbeing. On the other hand, the municipality is informed that they include the inhabitant in the decision making and send them information through the website, post mail and digital platforms. The international developers highlight the importance of the participation process in empowering the community and how the lack of participation causes negative impacts and resistance that drives projects to fail. And developers highlighted their practice of open dialogue with stakeholders. In the end, municipality employees and inhabitants agreed on the need to prepare for the projects and add more infrastructure and internal capabilities. The participant's comments are highlighted below

> *Inhabitant 1* **We must be involved early in the project** *and get the proper knowledge and information from the developer and the government. I have pushed the municipalities and the mayor that* **we need more information,**

> *Municipalities Employee 1 We have issues with the government regarding one way of communication. As a decentralized community,* **we don't receive any information. We** *don't get anything from the development, yet we need to invest in this great development.* **The government need to have an open dialogue with us. They must involve us more.** *And from our part as a municipality, we include our inhabitants and community in all dissections. We* **inform them through the app and webpage and send them some paper news to their post,** *so they know what is happening in the municipality. We* **are open and include everyone.**

> *Environmental Analysis, in general,* **having seen a lot of those administrative workers at each other participating in these various**

conferences, shows that they are interested in expanding their expertise within the area, and they know the life positives of doing that and the need for it is it's you know it's the industry for future Norway

Municipalities Employee 3 **The companies ore like coming by themselves** part as of the competition of getting the license in the planning face. **But we try to be very open, and we also try to invite those that we think should come, like the state office of energy**.

INT Developer 1 Because sometimes **people think sending an email is participation,** *you know you need to work. Yeah, you need to say right. We need to participate. What is involvement well participation according to green is ……* then you have this wise participation in **important because without participation projects fail within or negatively impact communities. Here's the evidence to prove that you know numerous cases etc**. So, you establish the need and the requirement the of these organizations to participate

INT Developer 2 The **most important thing is the action case. Why do you want to get active, and what do you want to achieve?** *There is no stakeholder engagement just for the sake of stakeholder engagement, which always must have an aim.*

Developer 2 **We have spoken in open dialogue with all stakeholders** *during all these stakeholder meetings, and we don't have anything to hide in terms of who we are meeting and what we're trying to achieve. But we don't publish about our meetings because there is such a tough competition.*

Municipalities Employee 1 **We need more time to deal with all the factors and enough resources and capabilities,** *or both developers and the government will leave us behind, and this is what we are afraid off*

Inhabitant 1 The most significant challenge during the implementation **is the boat, and it's to have enough capabilities to have more passengers** *if there is enough space for everyone.*

Summary of factors that affect stakeholder interactions

According to the interview, the external factors that affected the interactions between the stakeholder were the regulatory frameworks, as a dominant factor, followed by social, environmental impact, visual impact, supply chain and infrastructure, economy and investment opportunity, Technology and innovation, and security and safety. According to the results from the participants' interviews, the legal frameworks were dominant factors in the planning stage of the energy transition, where many participants highlighted their concerns regarding the licensing process. In contrast, others were more confident that the Norwegian government are working on the impacts assessments procedure to ensure sustainable, reliable, and profitable projects over time.

The participants highlighted positive and negative social impacts that could affect Ustira island by implementing the floating wind offshore technologies. The community hopes for positive demographic growth, social benefits, more opportunities for the citizen, an increase in the employment rate, enough children to obtain educational level on the island, and improvement in the culture and lifestyle. The negative impacts of the developments if the community is not allowed to be part of the green transition and Utsira municipality will only be a space for developing activities with no benefits. It can also lead to negative demographic growth and overwhelming infrastructure and supply chain activity with no knowledge regarding what's happening on the island. Participants highlighted their concerns regarding the floating wind offshore environmental impact. Developers and the government are doing the required study, and others are fighting and lobbying for the rights of birds and fisheries.

Supply chain and infrastructure were mentioned by the participants where both developers and inhabitants agreed, and many agreed on the need for financial investment and funding regarding the early stage of the developments. The developers want the governments to invest in underwriting the risk, municipalities lack specific capabilities and infrastructures, and the island needs government support and investment. And finally, the participant highlighted both the technical innovation impacts and the risks that follow the developments. Most developers are investing in future innovative ideas and hope to deliver projects with minimum risk and cost that creates more value. On the other hand, the municipality and the inhabitant would like to be part of the future innovation with minimum risk and high safety for the inhabitant. The findings also show internal factors that affect stakeholder interaction that include the lack of community participation in decision making, lack of information, lack of resources and capabilities and lack of knowledge regarding technical innovation were dominant factors that affected the stakeholder communication in transition time.

5.3.3 The strategies to ensure effective stakeholder management and communication in energy transitions.

This section presents the stakeholder communication strategy that has been used in Utsira Nord. According to the table below, the participants gave 35 representations of the clear objective, demands and benefits that indicate how it's essential to have a clear purpose when creating a strategy. The participants presented 34 comments on the socio-economical goals

they would like to achieve, followed by early participation in decision making. 28 comments on dialogue and creativity in problem solving, besides Information communication technologies being mentioned in 27 comments, innovative governance approaches were mentioned in 25 comments, meetings, workshops, and negotiating were represented 14 times, whereby the proactive strategy was mentioned in 13 comments. Clear content, transparency, and a positive storyline had 11 comments each, while networking, events, and conferences, stakeholder overviews were mentioned in 8 comments. Finally, capabilities, knowledge and collective movements are mentioned least. The participation themes regarding the strategies are highlighted in the table below.

Stakeholder communication strategy	Sum of Field2
Apparent Objective / Demand and benefits	35
Socio+ economical Goals	34
Early participation in decision making	28
Dialogue & Creativity in Problem solving	28
ICT	27
Innovative Governance Approach	25
Meetings, Workshops, & Negotiation	14
Proactive	13
Clear content	11
Transparency	11
Positive Storyline	11
Networking	10
Promoting at Events and Conferences	10
Stakeholder, Overview	8
Capabilities	7
Knowledge	7
Collective movement	5
Grand Total	**284**

Table 7 The strategies can help ensure effective stakeholder management and communication in energy transition

The participants were asked to describe how they communicate with other stakeholders, what strategies can help ensure effective stakeholder management and what can be done to address any issues? And does any specific stakeholder communication and engagement approach exist? Most participants highlighted three major dominant outlines of the strategy. Starting Why they communicate represented 36% of the comments, what type of communication they use represented 26% of the comments and how they communicate with each other represented 38% of the comments. The findings show in the diagram and the three subsections below.
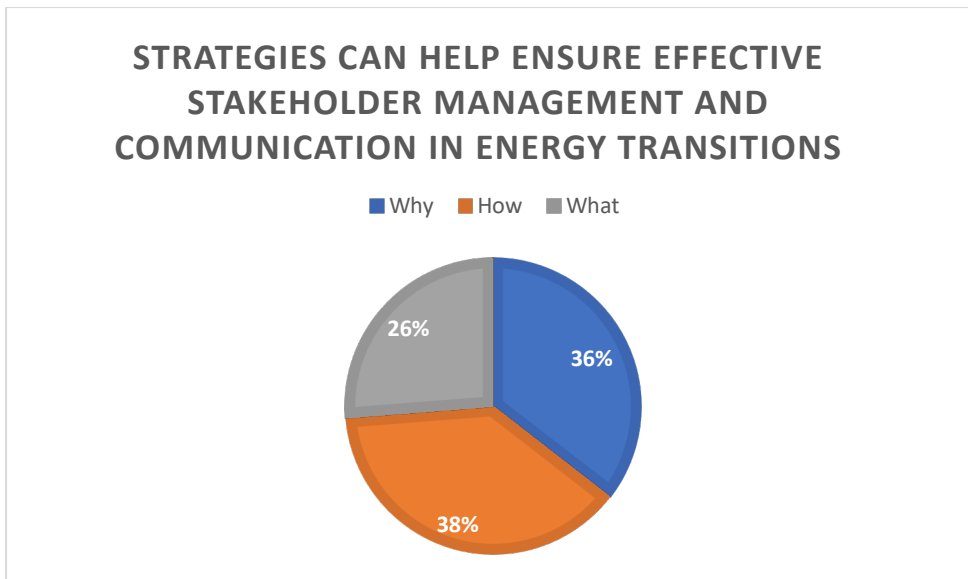
Figure 12 Strategies can help ensure effective stakeholder management and communication in energy transitions

5.3.3.1 Why do Utsira Nord stakeholders communicate

This subsection is an overall understanding of why Utsira Nord floating offshore wind stakeholders want to communicate. The finding from the participant's answers highlighted the importance of having and stakeholder overview, clear objective and demands, Socio economical goals and clear communication strategy, and seeking an innovative governance approach. The results of the why the stakeholder communicates are represented on the diagram below and through the participant comments and quotes.
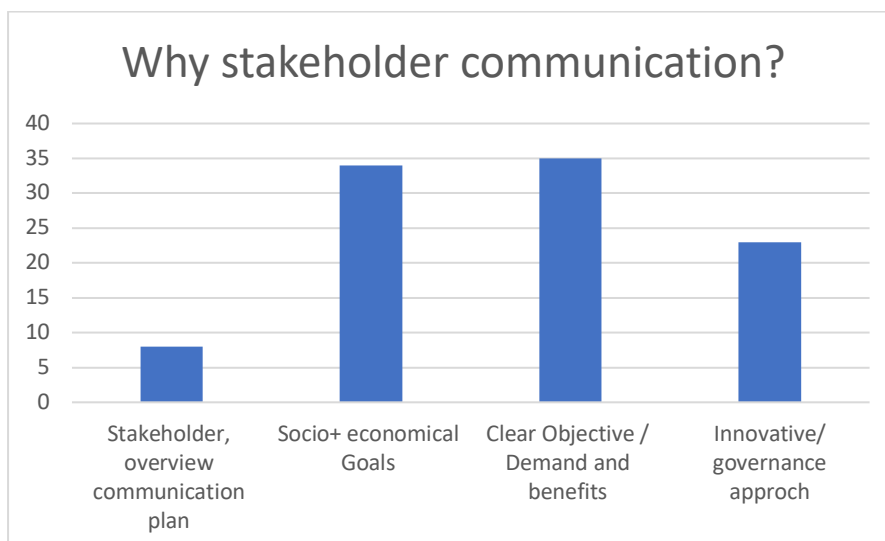
Figure 13 Why stakeholder communication?

International and national developers, plus the municipality employee, agreed that having a clear objective and negotiation plan is an essential strategy that helps in future dialogue with diverse stakeholders. The national developers highlighted the importance of having an

overview of the current stakeholders and their demands. Nevertheless, the municipality employee was highly clear regarding their socio economical goals and needs. Their comments are highlighted below

> *INT Developer 2* **It comes down to your objective and creating a clear case. The case could then be a positive one. Still, you** *also must have your communication strategy, not in terms of social media* **but in terms of negotiations printing on a table with the other party and convincing them.**

> *Developer 1* **To have a clear and good dialogue with all stakeholders and interest groups. To have an open dialogue with the government and support the policy makers….** *We get a key message to discuss with different stakeholders or the company when we have established all sorts of questions to answer all key stakeholders.* **Besides, we have identified all the stakeholders. Then we came into the various category of stakeholders.** *On one side are those who are against no chance to convince, so we don't spend time talking to those. On the other side is that it's very much in favour of development, so the communication needs to go towards them. We have made a strategy for our stakeholders. You know who they are this communication strategies can help us also communicate and write messages to the right people.*

> *Municipalities Employee 3 how will offshore wind development affect the island and the landscape? It depends on what will be built here on the shore, so with a lot of activity it will influence our landscape. With very little activity, it will influence the sunset. This will be the worst scenario.* **We want to make a clearer objective, and you talked about a more written strategy***. Yes, well, it will affect positively, 1) it will generate new jobs 2) it will generate new revenue both for the private sector and a municipality 3)it will generate domino effects, but there will also be new jobs not directly related to wind energy like restaurants and hotels and bars 4) The municipality will also hopefully see an increase in the number of people living in the future with increases of the population to 400 inhabitants 5) I see a thriving community with new children being born and enough to maintain a kindergarten children enough to maintain schooling system and I see a municipality that still exists that is still thanks to the revenue and the income from the offshore wind development. 6) other municipalities like Hugunin and Stavanger have not swallowed a community that is still its municipality. 7) A fully electrified community that is absolutely carbon neutral and could also be carbon negative that captures CO_2 from the air and stores it under the ground.*

The municipality employee requested more innovative regulatory frameworks to include them as an active participant in the green energy transition. On the other hand, the environmental analyst disagrees with the municipality employee regarding the statements and mentioned the

government's regulatory processes are steady and sustainable. Their comments are highlighted here:

> *Municipalities Employee1 We are positive about the future because we want to be part of this excellent energy transition to more green energy. I hope that the people who live here are proud and feel included. Part of it and not left us with nothing, or we didn't become a part of it. But the government invited us through the hearing system, but that was not enough. It's formal interaction.* ***I believe they need to change the hearing process and be more innovative to match the green transition and change.*** *They have done so much wrong in Onshore wind development. Hopefully, they have learned, and they will do better this time. But we are still waiting.*

> *Environmental Analysts* ***The government regulatory framework it's going in the right direction because it's steady.*** *You know it may take time, but it is steady, and we know exactly what we are working with*

5.3.3.2How stakeholders communicate in the energy transition

This section represents How stakeholder interacts and communicate. Most participants prefer dialogue and creativity in problem solving. Many participants from the niche level seek to be included in early participation in the decision-making process, open and transparent communication with a precise massage. Besides, the community practice a welcoming and proactive positive methodology to interact with several stakeholders on the regime level, and they are seeking more capabilities to handle the information, technical knowledge and impacts. And lastly, a few collective movements have been established by the neighbouring municipality. Still, Utsira municipality is open and transparent with their inhabitant regarding the developments, and they provide them with the information and the knowledge required lobbying a positive dialogue and interactions. The comment and quotes are represented in the diagram and the selection below:
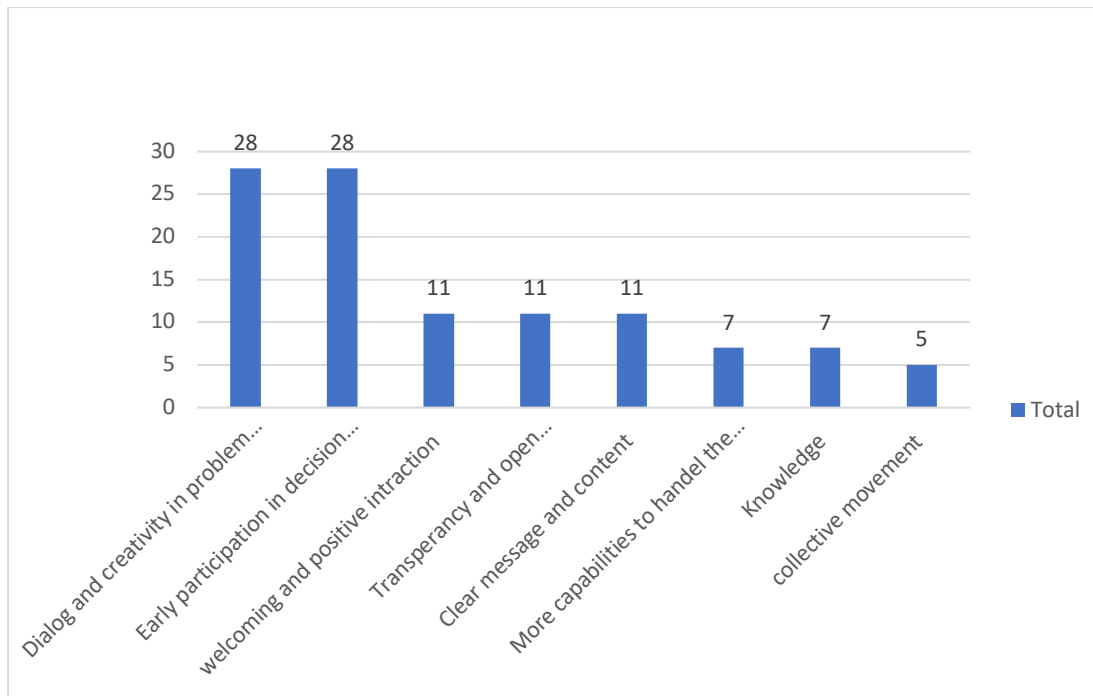
Figure 14 How stakeholders communicate in the energy transition

Developers one and two agreed on the importance of early dialogue and creativity in problem solving. Their comments are highlighted here

> **Developer 1** *We have short term and long-term goals, and we need to communicate well to have a long-term industrial approach with a local foundation. We **collaborate with key stakeholders to build this new industry through dialogue and communication.***

> **Developer 2 Dialogue is everything here.** *I mean, if we have some experiences with fisheries**, we will have problem**s if we do not have a dialogue early enough. So even if you disagree, you have some bad news to tell, or if you know that your stakeholder will not be happy with you, the worst thing you could do is to wait to discuss it because then it will be much worse.*

Here, the international developer and the municipality employee disagreed on the way forward in establishing the momentum of power to voice their concerns. On the one hand, the Int developer emphasises the importance of social movement to bring their storyline, the energy transition impacts and to create a demand to establish a momentum of negotiation between the community and the power stakeholder such as the governments and the developers. On the other hand, Utsira employees decided not to fight the Utsira Nord wind floating offshore developments

> **INT Developer 2** *I mean, creating a movement or somehow gaining power doesn't mean a negative one, but that does not mean that there have to be 2*

*million people on the island. Still, through **social media, even a single individual can exercise a specific power by creating a movement in the campaign or even force them to act. The other would be establishing a relationship and direct contact with the parties involved. It** could be either a government that makes the regulations, the political decision making or, of course, the investor **and trying to convince them that it would be better to involve the local community by saying, OK, you know we've also got something to offer for you. It would be your interest to involve us in trading for win-win solutions.***

Municipalities Employee 2 *First of all, being positive is the municipality's decision in meeting with the green energy transition. I **have decided that they don't want to fight Utsira Nor, and they are welcoming the development with a positive attitud**e. We must treat all developers equally because this is a competition between all these parties. Hence, if we give some developers some opportunity, that will upset the other developers. Our external strategies are to support all the parties equally until we get the winner of the competition's government.*

The municipality employee and the environmental analyst agreed on the importance of receiving transparent information from the developers and the governments. Both decided to give the inhabitant the right information and include them in early participation in decision making. Because of that, the municipality employee highlighted how the inhabitant is positive regarding the development.

> ***Municipalities Employee 1:*** *We are lucky we are positive about the development, and we are not demonstrating against it, **but we need to be included, and we need to get more information regarding the development. I** think it's important for our inhabitants to know as much information as possible. **The government are not providing us with the information to the inhabitant, and we feel we must inform the community about this.** Besides, **we have open communication and dialogue in our community that our inhabitant is positive about the wind development,** and they know this will bring a positive change to the municipality.*

> ***Environmental Analyst: it's just important that the information that is given to the municipality from the developers needs to be delivered to the people that live here as well, of course, like, within the terms of what they're allowed to say and not allowed to say,** but it's just essential always to keep the people the inhabitants involved in terms of that they know what's going on and I know that you know the positives and negatives*

Both the inhabitant and the international developers agreed on the importance of increasing the internal municipality's capabilities to manage the workload of such developments. Nevertheless, the international developer comes with advice regarding how to empower small communities with such capabilities by establishing a relationship with academia, industry, and

the governments. Through inviting a postgraduate student from the university, establishing an information centre by the developers and active participation from the governments through workshops and meetings to solve current issues and needs through knowledge transfer and empowerment. The participants' comments are highlighted here:

> **Inhabitant 1 We have one consultant that works directly with the stakeholders and the governments. We need to have more capabilities and discussion with the developer** *because I can see that there is a workload off all the information and all the meetings and conferences and that she needs to be so many places on only one person that it will be impossible*

> **INT developer 1** *Talking about what the community can do* **to ensure its involvement in the program may be by hiring postgraduate students** *in the law department of your university who are looking for projects associated with these sorts of issues. Somebody at your university may be looking for a project to do with these issues, and even with the ongoing evaluation of the impacts they have, since they don't have that much capability to hire so many students, they don't need to hire them. Every postgraduate student needs a postgraduate project, yeah. There will be several other departments to get an environmental impact, marketing business to support the commercial aspects of the community, social sciences, and political science.*

> **Besides, the company could establish an information centre** *on the island where all that information is available. Also, information about the development you know could almost be a tourist attraction where they take the victors and show them how they build and maintain the wind with the latest information and research in the field.*

> *From the government's perspective on; they could say we would like to establish a wind farm here or wherever and as a result* **we will hold some workshops. But once those workshops are finished, they should then be a public discussion with the community** *so they can ask questions about the information they've been given.* **This process involving community participation should be universal so that regardless of the community and the size and technology level of the community** *then, the process should be carried out.*

5.3.3.3 What type of communication the stakeholder focuses on?

In this section, the participant on the type of communication channels and tools required for effective stakeholder interaction. The majority of the participant highlighted the importance of information communication technologies (ICT) in the form of social media, webpage, email, and Team and zoom meetings that helped the interaction with a decentralized community such as Utsira. The participants highlighted the use of Information communication technological channels in 27 comments as a main resource and media that helped bring their voice further to developers and governments. After that meeting, workshops were highlighted in 14 comments

by the participants, sending invitations was mentioned in 13 comments and promoting Utsira Nord by the municipality in events and conferences was mentioned in 10 comments. And networking and cooperating with other regions have been mentioned 10 times by the participants. Participants' answers and the number of comments are presented in Figure 17 and supported with comments.
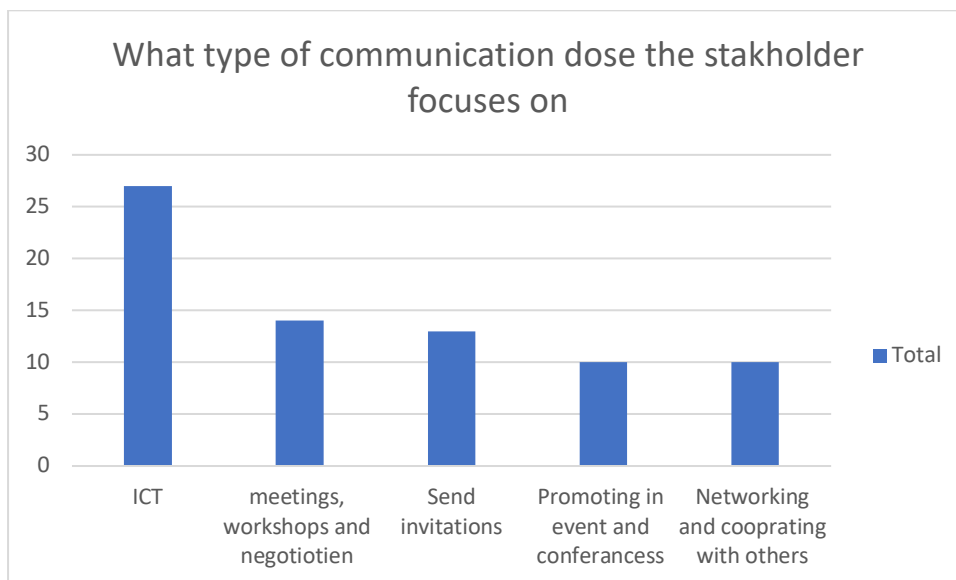
Figure 15 What type of communication does the stakeholder focuses on

Municipality employees, inhabitants and the environmental analyst highlighted how Utsira municipality actively interacts with the inhabitant through different channels and methods such as the ICT, meetings, workshops, and negotiations to include them in the decision making and bring their voice further to the governments. Sometimes, the municipality reported the need for more information from the governments regarding the development. Their comments are highlighted here:

> ***Municipalities Employee 1*** *We are treating everyone with open arms. We send information to our inhabitants through Ustira App and webpage, and we send them paper information. We have open communication and dialogue in our community that our inhabitant is positive about the wind development. They know that this will bring a positive change to the municipality. We are trying our best in what we have, and we need to improve the communication with the government. We lack information regarding the project. It doesn,t takes that much time. The government could use our app or webpage to add more information and keep us updated, adding more value.*
>
> *Environmental Analysis* ***We have something called SiraLab like the tiny newspaper that the municipality sends once a month or whenever***

> ***something significant happens****, they put like the latest updates on what's going on with everything on each other, and that could be a source of spreading you know the information make sure that at least everyone gets it*
>
> *Inhabitant2 Everyone knows what is going on in the community, and the municipality makes sure we get all information regards the development, and we get the Sira Lap with the information*

The national and international developers disagree regarding ICT use, whereby the national developers highlight the need for a clear message to communicate with stakeholders. On the other hand, the international developers emphasise the need for networks and technological infrastructure that helps to empower the decentralized community to be part of the green energy transition. He also highlights that Norway is a developed country and, regardless of how small the Utsira community is, will not have such problems bringing their voice to the world. Besides, the employee highlighted that Utsira municipality has all the digital platforms required to communicate with the world. The participants' comments are highlighted here.

> ***Developer 1 You don't get a breakthrough in this development by having a better technology such as ICT. You*** *need to do it with the best messages, and so they need to work on the messages and how can you bring the best message*
>
> ***INT Developer 1*** *It depends on the country.* ***I guess regarding Norway, there are technological advances and advantages to living in Norway, where communications are a lot easier, so it's different if you know you're working in a remote community on an island that's that doesn't have access to the Internet etc.,*** *but we're looking at the Norwegian case so in Norway there's plenty of opportunities*
>
> ***Municipalities Employee 2*** *Nothing needs to be improved in communication channels. They* ***have a Microsoft, excel, PowerPoint, and outlook email, they have 'teams' they have Facebook have LinkedIn, it's good enough, and they have public meetings*** *where they gather all the inhabitants in a room, and you just inform them about what's happening that's easy enough since it's a small community everyone knows everyone*

Municipality employees highlighted how actively they promote and cooperate with other regions to be part of conferences and seminars to bring Utsira's community voice to the movements and developers. The comment is quoted here:

> *Municipalities Employee 1* ***We try to be part of the conferences and seminars to bring our storyline and the future of Ustira****, where I talk about Utsira Nor and the community, and every time I get a chance to promote the development through seminars and conferences, regarding our expectations and how to add more values to the decentralized community in*

the green energy change and We are working together with Hoagland, and
we travel to the government to bring our stories

5.3.3.4 Summary of stakeholder strategies

The previous section discussed the strategy that enhances an effective stakeholder interaction in Utsira Nord. The results from the interview have identified who the stakeholders' groups are, whereby the government and the developers played an essential role and had more power and legitimacy plus interest and resources in their dynamic relations and factors and impacts that affect the relationships between the stakeholders. Utsira municipality, according to the participant, played an essential intermediary role in relations with stakeholders in energy transitions. In these sections, most participants highlighted why, how, and what type of communication. Why the stakeholder communicates? The findings show they share 1) to have a stakeholder's overview, 2) to establish a communication strategy plan, 3) to represent the stakeholder socio-economical goals, 4) to have a clear objective, demands and benefits and 5) to seek an innovative governance approach was the main motivation to interact and establish relationships with different actors in energy transitions. Utsira municipality actively seeks information and actively presents and lobbies for the development in conferences and seminars. Utsira, like a mini municipality, managed with their little roles to bring their concerns and demands to the developers by cooperating and positively pitching the green transition to the inhabitant and actively practising dialogue and creative problem solving in interacting with Utsira Nord stakeholders.

The findings show that Utsira municipality interacts and communicates with other stakeholders through positive collective actions, storyline, dialogue and creativity in problem solving. It seeks to participate in the energy transition activities and get more transparent and open communication with all stakeholders through clear messages and content. It enhances organisational capabilities to handle the new technical knowledge. The interview result shows that Utsira municipality plays an essential intermediary role in bringing inhabitants, developers and other stakeholders through positive interaction and a welcoming atmosphere. Regarding the type of communications practised, the participants highlighted the importance of the Information communication technologies capabilities as an essential tool to gab between the stakeholders and decentralized community. Utsira municipality and the business developers helped develop the Utsira Nord webpage as an excellent platform for information regarding the developments in Ustira Nord floating offshore wind developments. Plus, they communicate

their activities through social media and have a meeting through digital platforms such as Meeting. And that confirms the literature review shows that the capabilities approach focuses on empowering small communities by adding more resources and competencies to enable them to participate in the energy transition. Many participants focused on meeting with the locals, and many developers had visited the island seeking the local people's knowledge regarding the projects and their demands. From the Niche level, Utsira municipality is actively using all communication channels to interact with the key stakeholders, invite developers and ministries and promote the island's interest and concern to the regime level through networking, conferences, and event. Besides, Utsira municipality actively involves the local community through meetings, workshops, active community participation, information, and knowledge transfer regarding the developments. And most of the inhabitants are positive and happy about the current projects and feel they have been included in the process by the municipality. They are aware of the latest information regarding the developments. They have their concerns at the same time. They hope for socio-economic growth and development in Utsira.

5.4 Summary of the three themes

This section provides an overall summary of the analysis chapter. Most participants have reported that the nature of interaction in the green energy transition is based on the power difference. The government and companies have dominant rules, voices and positions controlling the energy transition time, participation, interest level and information shared with other stakeholders from the regime level. The interaction between the stakeholders is also explained in detail in the illustration appendix. The government and the municipalities pay much attention to fisheries as an essential regional stakeholder.

However, the relationships between the fisheries and the wind offshore developer are based on resistance and conflict where some developers seek active dialogue with the fish industry. Other developers reported that fisheries resistance is part of the game that they used to. On the other hand, the Utsira municipality and the community have no such power, and the government does not hear their voice in the planning face. They also lack current development information and socio-technical capabilities to be part of the discussion and interactions with such stakeholders, who enhance tremendous knowledge and capabilities from the field. However, Utsira Municipality plays an essential role in lobbying its position through active participation in the networking arena as an intermediary in the green energy transition and

socio-technical innovation from the niche level. Utsira municipality is actively seeking knowledge about the impact; all inhabitants feel included and are well informed. It welcomes developers and governments to visit the island and share their future goals to be part of the green and smart transition.

Several factors that affect stakeholder interaction and communication were identified. The participant informed about the key factors influencing their communication with Utsira Nord stakeholders. The majority of the participants reported that the external factors were dominated in meeting with the stakeholder from the regime level regarding regulatory frameworks, social, environmental &visual impacts, supply chain, and infrastructure. Besides, the economic and lack of investment factors affected how many stakeholders interacted with one another, which consumed a lot of time and resources. On the niche level, the lack of community participation in decision making, lack of information, lack of resources and capabilities and lack of knowledge regarding technical innovation were dominant factors that affected the stakeholder communication and transition time.

Accordingly, the participants identified several strategies that Utsira municipality uses to support stakeholder interactions and respond to the factors that affect them. The participant highlighted the current communication strategies practised from the regime and niche level in this section. Most participants were motivated by a clear objective, demands and benefits that follow the socio-economic impacts and goals, and these motivations represented why they communicate with one another. They constantly reported the need for early community participation in the decision-making process in offshore wind energy developments and the need for creativity in problem solving. The communication methods generally focused on communicating with the decentralized community after creating a clear message and content, mainly through ICT, workshops, meetings, and energy conferences. This empowered small communities to have a voice regardless of the lack of engagement from the government level to include them in decision making. As a result, Utsira municipality has earned international recognition where several international companies have already visited the island and more to come.

The finding reveals that the nature of stakeholder interactions in the energy transition in the Ustira Nord involves diverse actors across multiple levels at the landscape, regime, and niche. These actors include government, developers, county municipality, municipality, neighbor

municipalities, fisheries, maritime, civil society, and inhabitants. Their interactions are characterized by varying degrees of contestation, concerns, consensus, cooperation, and less conflict depending on the power, rules, voice, and interest. For instance, developers felt there was resistance from the fisheries. However, the municipality managed to address their concerns and find them cooperating with the new wind energy development. In agreement, the literature (e.g., Geels, 2002) argues that contestation is expected. There is consensus and cooperation when concerns are addressed, but failure leads to the opposite results.

While the stakeholder interaction in Utsira shows consensus and cooperation, several factors constrain the municipality's ability to manage them effectively. The study shows that the roles of politics, consistent with Geels (2014) and Norman (2015), and governments in energy transition are highly important. On the other hand, the municipality's role as the third government institution and as a proactive actor in the green energy transition is being taken for granted and subjected to a political power struggle, path dependency, and long bureaucratic process. The political power struggle seems to be due to a lack of effective vertical coordination between the county and municipal tiers of government which affects the offshore wind energy developments. There are concerns about the impact on the environment, social type of life, environmental impact and the complexity of the technological developments, and the information asymmetry that arises. While economic factors matter, the difference is that the municipality lacks funds for the required infrastructure to support the development, and developers perceive the government as reluctant to invest or underwrite the risk involved. The proposed solution was that a new innovative approach is well needed at the regime and landscape level to enable a faster energy transition.

In response to the complexities that arise and affect stakeholder interaction, the findings show that the Utsira municipality managed to implement several strategies based on participatory approaches and the capability approach by identifying why and how they need to interact and engage stakeholders as what is required. At the macro landscape and regime level, national and county governments and developers overpowered the municipality's humble energy transition position. In response, they strategically acquired extra human capabilities to improve and secure a negotiation position with several actors from the micro to macro levels. They also took a proactive intermediary role by communicating with civil society and inhabitants and addressing their concerns regarding external factors such as the socio-economic, environmental, technological, supply chain, and infrastructure impacts of the floating offshore

wind development on the island. The same approach of engaging social movements such as civil society has been used in successful energy transitions involving wind developments in Scotland and Denmark (Rudolph, Haggett, & Atiken , 2014) (GOV.SCOT, 2022). Furthermore, they made demands and messages to both government and developers to improve the current level of municipality and community participation, include them in decision making, and improve the livelihood of the community.

At the micro and niche level, Utsira municipality strengthened its organization's resources and capabilities. It managed to interact equally with inhabitants through different activities, meetings, and workshops. For instance, Siralap (local newsletter) and ICT bring enough information to the inhabitant and other stakeholders such as fisheries and civil society. It has helped with positive engagement leading to less resistance and acceptance of the new offshore wind development in Utsira Nord compared to the neighboring community. Besides that, the municipality became a welcoming arena for the resistant inhabitant to discuss their concerns regarding the impacts through active community participation, creativity in problem-solving, and dialogue. Ustira municipality also sought more knowledge, information, resources, and capabilities to handle the new activities by actively inviting interested groups, academia, and industry actors to visit and interact with the island and its community.

These findings suggest how following an energy justice approach recognizing the role of social movements (e.g., Sovacool, 2014), municipalities, county municipalities, and governments could play an essential and intermediary role in the sustainable energy transition. However, they need to develop innovative regulatory frameworks and innovative policy processes to include active participation and capability building based on the social context and the beneficiary perspective. Overall, the main finding of the study is that community participation and capability building are essential strategies toward sustainable communication and interaction between several actors and stakeholders in the green energy transition and can be used by a municipality such as Utsira.

Chapter 7 Conclusion

This dissertation explored the nature of communication and stakeholder management in energy transition, looking at Utsira municipality's roles as an intermediary between and communicating with different actors as well as being a key stakeholder in the wind offshore developments in the Ustira Nord. Specifically, the study had three objectives; first, it explored the nature of the stakeholder interactions. Secondly, it looked at the factors that affect these interactions. Thirdly, it explored the strategies used by Utsira Municipality to manage stakeholder communication. The study used a qualitative approach involving semi-structured interviews with participants.

7.1 Findings

Accordingly, the study's findings can be summarized into three aspects: the nature of stakeholder interaction, factors affecting them, and the strategies used. These three aspects are illustrated in Figure 19 and further explained.
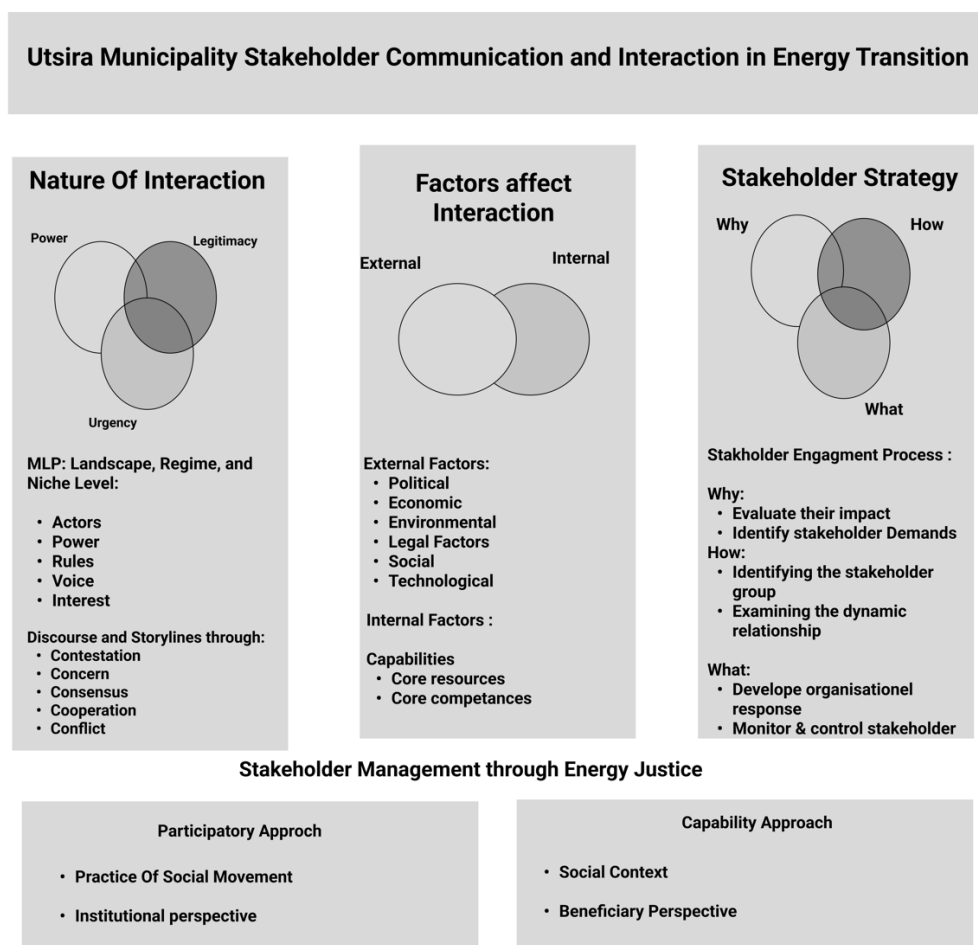
Figure 16 Utsira Stakeholder communication and Interaction Strategy (Author Work)

The finding reveals that the nature of stakeholder interactions in the energy transition in the Ustira Nord involves diverse actors across multiple levels at the landscape, regime, and niche. These actors include government, developers, county municipality, municipality, neighbor municipalities, fisheries, maritime, civil society, and inhabitants. Their interactions are characterized by varying degrees of contestation, concerns, consensus, cooperation, and less conflict depending on the power, rules, voice, and interest. For instance, developers felt there was resistance from the fisheries. However, the municipality managed to address their concerns and find them cooperating with the new wind energy development. In agreement, the literature (e.g., Geels, 2002) argues that contestation is expected. There is consensus and cooperation when concerns are addressed, but failure leads to the opposite results.

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secure a negotiation position with several actors from the micro to macro levels. They also took a proactive intermediary role by communicating with civil society and inhabitants and addressing their concerns regarding external factors such as the socio-economic, environmental, technological, supply chain, and infrastructure impacts of the floating offshore wind development on the island. The same approach of engaging social movements such as civil society has been used in successful energy transitions involving wind developments in Scotland and Denmark (Rudolph, Haggett, & Atiken , 2014) (GOV.SCOT, 2022). Furthermore, they made demands and messages to both government and developers to improve the current level of municipality and community participation, include them in decision making, and improve the livelihood of the community.

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7.2 Recommendations

Utsira municipality wishes to be a proactive participant in interaction with stakeholders in the green energy transition. Several stakeholder engagement and communication strategies could be considered to gain more voice and position in the energy transition. The municipality should build on the philosophy and practice of energy justice in the form of a participatory and capability approach. These approaches empower a decentralized community such as Ustira so that residents are informed, which mitigates their concerns. Municipalities and developers become co-creators of the floating wind offshore energy developments. Co-creation between stakeholders creates a power balance and shared interest which facilitates a collective voice necessary for collective action to get the county government on board, especially support for funds for the required floating offshore wind energy development infrastructure. Moreso, the municipality must continue to build its capabilities because a new development such as Ustira Nord has inherent complexities and is characterized by a lack of information which can undermine the municipality's ability to communicate with stakeholders effectively. Digitalization or the use of ICTs can be helpful.

Similarly, developers must leverage the efforts of the Ustira municipalities, especially the positive storyline of 'Ustira Gir Energi', meaning Ustira gives green energy to address any resistance that might emerge and build consensus and cooperation. Building on the participatory and capability approaches will help them get the municipality and inhabitants on board which gives the developers the power of collective action to get the government to invest and underwrite the risk of the project, which will make the project sustainable. These responsibilities for the municipality and developers also suggest that the county and national government play their part through effective vertical coordination.

7.3 Limitation of the study

This study is limited to Utsira municipality employees, inhabitants, developers, and a researcher. However, other stakeholders' voices, such as NGOs, county and national government representatives, fisheries, bird watcher/tourist organizations, and neighbouring municipality inhabitants, are against the wind offshore developments in Utsira. Also, the study is limited only to the planning face of Utsira Nord offshore wind developments. It did not look at other development stages since the project is still new. While the study is exploratory and

qualitative, relying on a small sample or number of participants, its findings are not generalizable to other contexts.

7.4 Further research

Fisheries are an important stakeholder in offshore wind energy development since it directly affects them. Therefore, future research must rely on their direct participation instead of key informants. The same applies to NGOs, county and national government representatives, fisheries, bird watcher/tourist organizations, and neighbouring municipality inhabitants. Since, by their nature, new energy development is complex and changes over time, there is a need for further investigation to find out what happens during other latter stages of the project and after. Furthermore, a larger-scale study will be recommended to make the findings generalizable.

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Interview Guide

Purpose of the project

The purpose of this Master study is to explore the nature of communication and stakeholder management in energy transition, specifically examining the rules and the relations between several stakeholders in wind energy. Specifically, it undertakes a case study of Ustira municipality and its stakeholders to analyze offshore wind energy developments.

This research aims to gain comprehensive insights into how firms involved in renewable energy engage and communicate with their stakeholders to realize their business goals and facilitate a green shift energy transition.

Main research question

What is the nature of stakeholder interactions in energy transitions such as offshore wind energy developments?

Sub-Research questions 1: How does stakeholder engagement (interaction and relations) unfold in energy transitions?

- Tell what is your understanding of the development happening in Utsira? (Follow up Q if they do not mention- wind offshore - what about wind offshore developments in Utsira?

- Who is directly involved- in the Utsira Nord offshore wind Energy?

- Are they any international actors involved in this project?

- How do these stakeholders interact and communicate?

- Where are we today in offshore wind development in Utsira?

- What is wind offshore goals do you hope to achieve in Utsira?

Sub-Research questions 2: What factors affect stakeholder management and communication in energy transitions?

- What do you see as factors affecting stakeholders in the Utsira energy transition and wind energy?

- How do these factors affect the stakeholders and their engagement or interaction?

- Are there any issues between stakeholders- where they resolve and how, and if not, why is this so?

Sub-Research questions 3: What strategies can help ensure effective stakeholder management and communication in energy transitions?

- What can be done in general to address any issues?

- What can be done internally and externally to address any Issues?

- Do you feel Utsira is well positioned to address these issues, and why?

- Does any specific stakeholder communication and engagement approach exist? (What are its strength and weakness?

- If yes, what do we need to improve that?

- What else do you think needs to be addressed, and how can it be addressed?

- What is our plan for the broader community and government engagement to develop the project sooner?

Other Interview Questions?

- To what extent does offshore wind development in Utsira benefit the communities? Why do you say so?

- How will offshore wind development affect the island?

The nature of stakeholder interaction, factors affecting them, and the strategies used are illustrated here.

Utsira Municipality Stakeholder Communication and Interaction in Energy Transition

Nature Of Interaction

Power — Legitimacy — Urgency
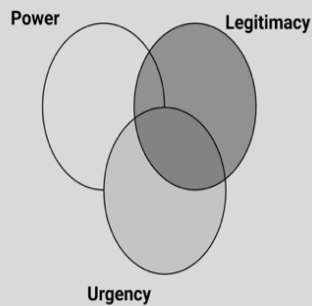
MLP: Landscape, Regime, and Niche Level:

- Actors
- Power
- Rules
- Voice
- Interest

Discourse and Storylines through:
- Contestation
- Concern
- Consensus
- Cooperation
- Conflict

Factors affect Interaction
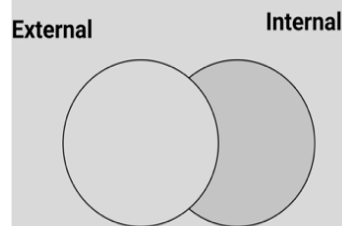
External — Internal

External Factors:
- Political
- Economic
- Environmental
- Legal Factors
- Social
- Technological

Internal Factors :

Capabilities
- Core resources
- Core competances

Stakeholder Strategy

Why — How — What
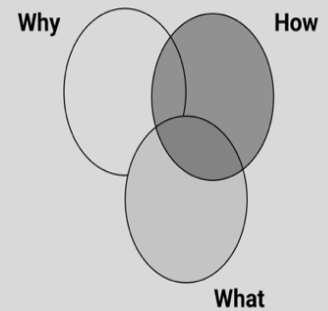
Stakeholder Engagment Process :

Why:
- Evaluate their impact
- Identify stakeholder Demands
How:
- Identifying the stakeholder group
- Examining the dynamic relationship

What:
- Develope organisationel response
- Monitor & control stakeholder

Stakeholder Management through Energy Justice

Participatory Approch
- Practice Of Social Movement
- Institutional perspective

Capability Approach
- Social Context
- Beneficiary Perspective

Figure below illustrates the stakeholder's power, and the level of interactions.

Power

High

High

Keep Satisfied

Key Stakeholder

Low

Low

Minimum effort

Keep Informed

Interest
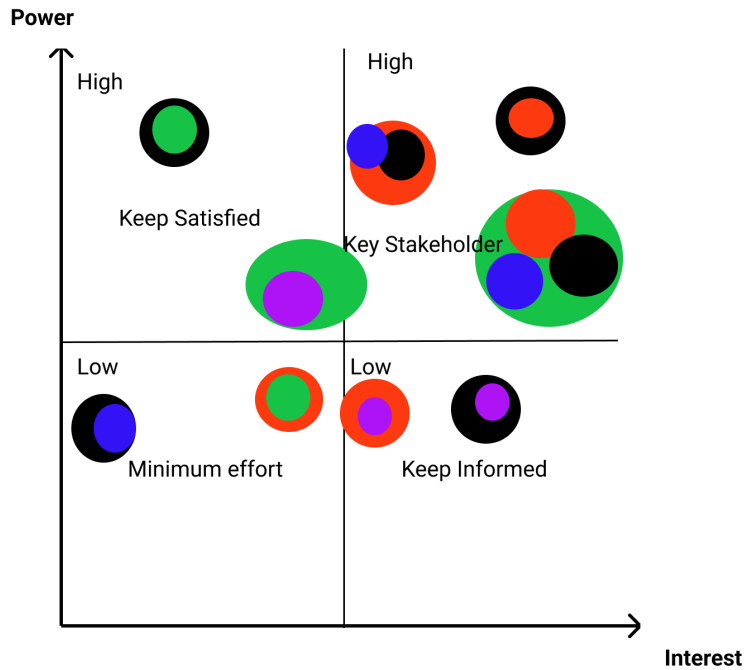
Government:
- Treats Developers and Fisheries as key stakeholders
- But overlooks municipality and inhabitant
- The outcome is collective resistance! **Contestation**

Developers:
- Treat the Governments as key stakeholders
- They keep Utsira municipality Satisfied in the planning face of the projects
- Minimum effort on the Fisheries
- They keep an eye on the inhabitants
- The outcome is collective resistance! **Contestation**

Utsira Municipalities:
- Treats Governments, Developers, Fisheries & Inhabitants as key stakeholders
- The outcome Positive storyline and **Cooperation**

Fisheries
- Against the wind offshore developments, and their interaction need to be studied
- The outcome: **Conflict & Resistance**

Utsira Inhabitant:
- Are positively welcoming Utsira Nord
- But they have concerns regarding the environment & other impacts
- The Outcome positive with **Concern**

The participant's Quote regarding the Nature of interaction between the stakeholder is being illustrated down here, please download the PDF for a better visualization opportunity. https://drive.google.com/file/d/1iUw8plEnbyDOFYO-gQ4zBgcvWAmnlREk/view?usp=sharing

The Nature of Stakeholder Interaction in Utsira Nord

Interaction with the government	Interaction with the Developer	Interaction with the municipality	Interaction with Fisheries	Interaction with Inhabitant

Interaction with the government

The literature on energy transitions has recognized the role of firms alongside others as critical in energy transitions. Thus, the multi-level perspective (MLP) highlights various actors' interactions across multiple levels.

Majority of participant have reported that the nature of interaction in green energy transition is based on the power difference, where the government have a dominant rules, voice and position controlling energy transition time, participation, interest level and information shared with other stakeholders from the Landscape and regime level.

The government relations with stakeholders been mentioned in 30% after the developers that indicate how much power both the cooperates and the governments have in energy transitions, however Some participants where not blessed by the government efforts regarding the green energy transitions and communications efforts.

Besides, participant reported how the government are more listening to the most vocal stakeholder such as the fisheries.

Participant comments highlighted below:

Power:

''The companies are here to help to provide them good faith so advice to make them a good a regulator they are clear and available for such development''

''We are not telling the government how to do their job faster and all that because we believe this is coming on its time''

Rules:

''From The government the nature of communication with the municipalities is based on formalities''

''It's the oil directorate and the government are working closely to put this project in life and to develop the future, and what the developer will provide the island with, besides the government will decide how this development will look like''

''We have democratic system the called hearing system, but I don't feel it's enough, especially as a small municipality we feel we are left a side''

''I think the offshore wind development will take times as the government want to make sure all stakeholders been heard, and we are lucky if the government comes with their demands sooner, but I think this will take another 5 to six years.''

''The impact assessments takes too long the main reason is the concession process; the government wanted to look into doing some environmental studies and those studies it's out on the ocean it depends on the season you can't do that during the winter it's too rough of weather so that would have to be done now in the summer and if those projects haven't even started yet then they're not likely to get going until one year ... Yeah those studies can likely be turned into desktop studies done through literary searches and studies of that have already been done in other countries and then once the building actually happens you can do those studies out in the field as you go that could save one or two years but it's up to the government''

''The government you know they're being considerate and they're checking all the boxes making sure everything is going well know that sort of thing with Norway we might not always be the fastest but at least when we get there in the end the project is yeah stable there's no insecurity about anything. We start up with a slow process but steady wins the race''

''The problem with of course that there is a need for substantial government support in order to get this project up and running and so far we have not seen those moneys from the government those in favor of government support they will say that yes this will require some investments at an early stage because this floating offshore wind industry is quite immature so you would need to support it in an early phase but then after a while it will be competitive so this is an investment for future it's not that kind of a pure subsidy as others will claim, but still the government needs to find the money and they haven't so far found the money but they said that they are looking for it but they are also saying that those kind the government support to building will only be in a transition phase or in starting place they are saying that this would need to be competitive without subsidies after a while''

''The government delaying as you say I mentioned a rule of the games so how would they can find out who should get the right to develop offshore winds and that is the rules criteria if you want will hopefully be ready by the end of this year and then there will be a competition sometime next year then hopefully those the winners will be awarded in the area to work on some sometime later next year and then of course you need to do all this studies on impact on birds and fisheries.''

Pain Point

''We have with the democratic system the hearing system, but I don't feel it's enough, especially as a small municipality we feel we are left a side''

''I have sent some invitations to politicians and ministries, but they have not responded yet. I feel the meeting with government it's based on a long bureaucratic process and one-way communication and we try to get information's unfortunately it takes time and They don't take us serious or value us. Many of the company that visit us they are looking for a bigger harbor and bigger boat capacity than what we have today and the County municipality (Fylkeskommune) don't want to invest on this as they think it's too early to think and plan about such things.''

''The governments interactions with stakeholders is one-sided communication, I feel it could be better, they need to innovate and to include us in the process''

''Very long process designated to be dedicated to offshore wind and energy''

''When it comes to the regulatory frameworks we are not where we should be. I think the regulatory frameworks take more time, because there are different messages from all the political parties.

''The stakeholder expressed an interest in developing Utsira Nor, but they can't apply for the licensing procedure and criteria is not announced from the government yest. now everybody all the vendors and all the stakeholders are waiting for Positive''

Positive:

''A stable political environment I mentioned to you we also we have also engaged with the local communities and the governments so that they understand that we're going to be a safe and collectively can enable this industry to be profitable so we create new jobs you had to drive in the Norwegian economy and income that can be taxed''

Interaction with the Developer

Participant have reported that the developers and cooperation's have a dominant rules, voice and position controlling energy transition time, interest level and information shared with other stakeholders from the regime level.

However, the developers include the municipality in their communication strategy to keep the community satisfied in this level. On the other hand, many participants from the municipality and Utsira inhabitant stated that developers being actively involved in including Utsira in their interactions and they are interested in contacting them and they have been visiting the island, the municipalities participant in majority are pleased with the interactions and communication received at the same time they hope that will continue after the planning face.

Participant reported the relations between the developers and fisheries is based on conflicts and resistance

Participant comments highlighted below:

Developers interactions and roles:

''We are doing our research in the field, we have contacts with the politicians, ministries, and the municipality workers''

''We are engaging and making sure that we can have a proper environment social impact program and we are putting money on any projects that must do to Research on bird migration and to prevent birds from colliding with the platforms''

''We meet with community several times and they are very nice people there, but we can't promise X number of jobs so to say that the industrial development will be at island or not that's of course far too early to say I'm answering like politician now but that's the fact it's too early to say''

'' we are doing our research in the field, we have contacts with the politicians, ministries, and the municipality workers''

''We have spoken in open dialog with all stakeholders''

''I think you have we at least 10 invitation with oh 20 maybe but many of them have come together in joint venture''

''We are engaging with all sorts of associations from Innovation Norway to other cluster and chambers of commerce''

Developers Show interest to Utsira community:

''The companies are two sides communications; they are preparing for the applications, and they would like to know everything's about the island and the community that lives on the island. Some developers asks to meet with the politicians and the states, they are actively approaching us''

''Most of these stakeholders have visited us, they just travel out to talk to the people from the municipality and try to gain some trust and be visible and they try to gain some positive vibes if you understand.''

''The development wants to create more jobs, and more power, and more taxing for the governments. We have the ambition of maximizing local content so for the time being we are doing is it possible as developers and suppliers and we are hosting the supply chain seminars, we meet up with the potentially we believe could provide us with assistance in doing this. We are working on the applications, and we are investigating the possibilities, mapping out all stakeholders involved and find out their demands''

''We are investing on companies that innovative future solutions regarding the projects''

''We are preparing for storage and supply chain and find all the information and knowledge about the impact assessment program and all that to make sure that we have a good program''

Positive interactions with the community

''Many of the companies have a great communication skill and they try to be engaged with the island, but we haven't heard from only few''

''Interaction wise I think it is important to have a continued dialogue it might be the most central aspect to a successful between those industries''

''Most of these stakeholders have visited us, they just travel out to talk to the people from the municipality and try to gain some trust and be visible and they try to gain some positive vibes if you understand''

''There are many international actors who are more interested to get the local knowledge and just a few weeks ago we had a Shelly and only investors and they had the 10 nationalities with them''

Pain Point

''Meeting with the government; I think the money is a bigger issue than the conflict with the fisheries the subsidies will go to the developers UM but then the developers might have to prove that they will use local companies in order to create new jobs and so there will be no subsidies to the fisheries and others because there is not a lot to compensate''

''There have been several vendors that have expressed an interest, but they do not yet have an application deadline, so they don't know when to submit their application they have not know the criteria for applying, and that not been decided yet''

''That will be at least 3 companies in the future who will develop at Utsira Nor with separate windmills position. Then all these three companies will have a conflict regarding the substation, because it serves in a very small island so could it not be a solution that the three parties who should develop that they work together on one substation to reducing the impact on the island''

Resistance from Fisheries:

''The relationship between the developers and fisheries is based on resistance and conflict where some developers seek active dialog with the fish industry and other developers reported the fishery's resistance is part of the game that they use to it''

Active engagement, participation and dialogue:

''I think it's quite sophisticated and its quite honest discussions we have and of course we know don't necessarily agree but I think it's a good with open discussion''

''Good Cooperation with the communities and governments''

Interaction with the municipality

Utsira municipality, and the community have no such power, and their voice is not heard by the government in the planning face, plus they lack current development information's and sociotechnical capabilities to be part of the discussion and interactions with such stakeholders, who enhance tremendous knowledge and capabilities from the field.

However, Utsira Municipality play a very essential roles in lobbing their position through an active participation in networking arena as a positive intermediary in the green energy transition, and sociotechnical innovation from the niche level, welcoming developers, and governments to visit the island, and sharing their future goals to be part of the green and smart transition. Utsira municipality actively involved in seeking knowledge about the impact, plus all inhabitants feel included and are well-informed.

Many participants reported that the municipalities relation with the stakeholder, regarding Utsira Nord offshore wind development are based on positive interest, welcoming and actively lobbing for their position to developers, governments, environmentalist, fisheries, and the inhabitant

Participant comments highlighted below:

Power

''From The government the nature of communication with the municipalities is based on formalities and we feel we don't have that much power to have an impact or that our voice been heard the way it should''

''We have democratic system that called hearing, where everyone are included in decision-making, but I don't feel it's enough, especially as a small municipality we feel we are left a side''

''The county municipality are not supportive they are welcoming the offshore wind development without engaging with Utsira municipality, we feel we are overpowered by bigger municipalities''

Rules

''We are a very small municipality, and this is the pilot in Norway, but we try to give some advice and our voice to national and government before they take their decision''

'' We are welcoming the development and would like to cooperate''

'' Many developers and companies they have been contacting and visiting us, they are interested in deciding this project and they show interest on the island, because it's so close to the field, they both listen and ask us what we want and how do we see the development and what we need. There are many international actors who are more interested to get the local knowledge''

''We invite Several stakeholders to discuss the total impacts and the local community demands. Besides, we get a lot of informal contact from the companies that have the goal to get the license, so they ask about our local knowledge and to guide them with the process. But we answer all developers in transparent and give equal information's''

''I and the business developer we travel to seminars and conferences to bring our voice to the public regarding the offshore wind development in Utsira ''

Voice:

''We have democratic system the hearing system, but I don't feel it's enough, especially as a small municipality we feel we are left a side''

''The island need investment to handle such activities and development, but we are not heard.

We have a voice we have a strong voice, and we hope that it will work our way, but we are not sure about it, so we have to work very hard and try to secure our position in this transition before it's too late''

''We send emails to the companies, developers, and the governments, we invite them we are active in bringing our voice''

Goals:

''I hope that we are a proud energy community because we are the host of it, and the people who live here are proud and feel are included and part of it and not left with nothing or not part of it. As we want to be a part of it''

''We want to be a green island, so we want to have a Research Center, because it's the first in Norway to see how it affects the birds and the animals living in the sea''

''I see a great positive development to our little society that will help in, more jobs, increasing our population, butter energy continuity during the year and much better opportunity to be part of the development''

''We want the cable electric cable have a stopping point in Utsira before it goes further onto the mainland because that would create jobs and that would create tax money''

''So what I understand the perspective external immigration to Utsira island can be an opportunity to get workers who both working on the construction phase but also during the maintenance phase to move in because it's so close to the activities and even if they don't move in they can stay here temporarily using you the hotel and cabins where they could sleep and rest since it's going to be closer than to take the boat from anywhere else out to Utsira''

Pain Point

''At this point we lack capabilities, resources, investment, manpower and more people to work with our business development as she is doing lots of work to communicate with several stakeholders and she feels left alone in such huge development, and we need the help from the inhabitant and the politicians to bring our positive storyline to the public''

''The regional municipality (Fylkeskomme) are not interested in listening to us and even to our demands to strengthen our capabilities to handle such projects, they are not giving us the right information for us to develop and regarding the way forward if we need to build our harbor and to have more boat capabilities between Haugsund and Utsira, but we didn't receive any answer regarding the matters.

''The island need investment to handle such activities and development, but we are not heard''

''I think one of the main factors that it will take a long time it's not actually to build which I know that could be done in two years' time. And the issues are regarding our impacts as many stakeholders, on project like this we may have 50, 60 or 70 stakeholders and each stakeholder in according to the Norwegian processes should be heard and listen to, some stakeholder fighting for the birds right, The fishery Industry, oil and gas, The visuality on the horizon, The various political parties, The municipalities, The power companies, The army and the marine''

Interaction with Fisheries

According to many stakeholders is that the fisheries industry is against the development. But others distinguish Utsira Nord offshore development will have a less conflict like other areas.

The fisheries as stakeholder in the region are well heard by the government, and the municipalities however the relationships between the fisheries and the wind offshore developer are based on resistance.

Participant comments highlighted below:

Power

''Fisheries have been the most vocal stakeholders so far''

''The fishing industry is one of the most important industries in Norway, so you have to listen to it yeah and in regard to that it's important to have that continued dialogue from the planning throughout the construction and the operational phases of the offshore wind farms''

''I know that the government has had a continued dialogue with the fishing industry from the planning face and from what I understand such dialogue is continued''

Voice:

I think it's important that the fisheries and all the other stakeholders are being listened and they're being recognized and that their opinions are validated

I think it's important that we show the fisheries that the concerns are being raised they're being heard, and they're being checked out to see if is they're actually a problem and if this is of course it can be difficult because the fishing industry is vast and it's not always easy to have meetings with them just you know they're seasonal workers they're out like they can be out months

Resistance:

''We can look at those who are affected by the development like the fisheries for instance you can see that they are obviously not super excited about this process and that is despite the fact that these two offshore wind zones were decided upon based on a lot of research to make sure that it's not super important for Norwegian fisheries''

''They have done lots of research about the impacts on Fisheries but still they are against it, the fishermen have all always come around with the fact there's a lot of bad deals in the area, however the data from the Norwegian government and various other sources shows that yes there might be but you can see that where Fisher boats have actually traveled it's just on the outside of the zone and it's not like that they're going in the middle and so what they're complaining about is not really realistic and it's something so small and it's not going to affect them''

''They just choose to be hostile when you see the areas that have actually been selected they're not areas where fishermen actually have activities, and it's not the main areas where the fisherman sail, so sometimes it just feels like they want to be difficult''

''They wanted to stop this development, they just want a full control over the seas the fisheries in Norway have had almost like full rights to the ocean they've been able to fish what they want they've gotten very comfortable doing that''

Interaction with Inhabitant

Inhabitant

Participant highlighted the power difference in meeting with the stakeholders, especially Utsira community, where they feel they are not heard and it's hard to get the right information's from both developers and the governments, however all inhabitants feel included and are well-informed by Utsira municipalities and they are positive about the green development with the offshore wind development!

Participant comments highlighted below:

Power

Community Current Voice

''As a member of the community, we are the one who will hopefully benefiting on such type of investments but we are also the people that need to live with it and see it every day so there must be something in the bottom line that actually benefits the municipality''

''We have to be part of the green transition and to add more value to the community Many are interested to be part of the development''

''We have got enough information from the municipality regarding the development, and they are planning and look if that will cause any problem with the fisheries, the bird life''

Community Demands:

''The main factors are getting the right information at right time. This industry will affect and have an impact on Fisheries, birds and the environment''

''The goals we hope for Utsira to become electricity and energy self-sufficient through the wind offshore and to have enough power during the year, to have enough battery plant that they will go in and adjust this and store electricity so that we will have continuously if there would be no wind so, Server machine, Technologies studies that will benefit everybody, To create more jobs that will increase the populations''

''More investment in Norway, More workplaces for people who live in Norway and not just from other country, More children, Positive development in our population, Aqua culture, Windmills in the ocean and not the least , More activity in Utsira , And the fisheries get more opportunities in Utsira ''

Positive

''Utsira municipalities are communicating regarding the offshore wind development to all inhabitant and others through, Siralog, meetings , Seminars and conferences, and welcoming all stakeholders to visit the island ''The community would like to see the positive development for the community''

Pain Point and concerns

''The wind offshore development will impact on our values and the nature, the silence our freedom and the island spirit''

''There will be big Industry buildings unite and lots of people and a lot of traffic and noise pollutions that will not a positive impact on the island''

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"Utsira Gir Energi"
Utsira Gives you Energy

Photo: May Britt Jensen
Cover Design by the author