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Exploring Wind Power Conflicts and Energy Justice in Sweden: An Analysis of Stakeholder's Perspectives

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I confirm that the work is self-prepared and that references/source references to all sources used in the work are provided, cf. Regulation relating to academic studies and examinations at the Western Norway University of Applied Sciences (HVL), § 12-1.

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Exploring Wind Power Conflicts and Energy Justice in Sweden:

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This thesis is a part of the master's program in Climate Change Management (Planlegging for klimaendringer) at the Department of Environmental Sciences, Faculty of Engineering and Science at the Western Norway University of Applied Sciences. The author(s) is responsible for the methods used, the results that are presented and the conclusions in the thesis.

Foreword & Acknowledgements

Writing this thesis has been a roller coaster ride. As my engagement for the topic has driven me, that same engagement has also been a pressure and a hinder in the pursuit. It has seemed almost too relevant of a theme during this time, and I have been showered by news articles, links, Instagram DMs, and messages about wind power in Sweden, wind power in Norway and just wind power in general. And initially, this thesis was about wind power, but ultimately it ended up as something else. It is about the people, the places and the structures surrounding wind power and their interconnections and perspectives. I am happy to say that I am still engaged in this topic. When writing this foreword, I feel humbled by all the learning I did this spring, both about the academic field of energy justice, the green transition, wind power in Sweden and myself.

As this thesis marks the end of my time in the Climate Change Management program at HVL, I want to say thank you to many people, and firstly, to my classmates, our teachers and the university that has been part of shaping these past two years. Our diversity has shaped our time together, and our different backgrounds have highlighted the complexities around climate change and climate solutions in a unique way.

From the bottom of my heart, I want to say thank you to Bente Johnsen Rygg and Rune Njøs, my two supervisors for this thesis. With our discussions, this thesis has taken shape, and your constructive feedback and friendly support have been fundamental for this piece of research and my mental health.

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And finally, I want to extend a heartfelt and honest thank you to the respondents from the case studies for sharing their perspectives and their time with me. Their insights have been the foundation for this work, and I am so grateful for their contributions.

Clara Edwards

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Abstract

In tackling climate change, it is important to speed up the green energy transition towards low-carbon energy systems to meet future demands. In Sweden, onshore wind power is the primary option available, but it has become a source of conflict and controversy. This thesis employs the theory of energy justice to analyse two cases of wind power development that are in dispute in different regions of Sweden. The theory of energy justice has gained prominence in the last decade, and this thesis contributes to it by offering a localized context of the framework using two distinct case studies. The aim was to understand how the theory could be used to understand conflicts, beyond the distinct conflicts of interests. Energy justice was subsequently used to identify divergent perspectives and highlight potential drivers for conflict. The research design applied qualitative methods, and data was collected through semi-structured interviews, which were later analysed using a thematic approach.

The analysis showed how differences in stakeholders' perspectives could be explained based on varying understandings and departure points regarding temporal and spatial scales. Further it was understood that the scale mismatches could be a driver of conflict. For instance, stakeholders may have different perspectives on justice based on their outset and focus on scale, as residents tended to focus on locally grounded justice, contrasted by developers that tended to view justice on a larger scale.

The findings highlighted how the energy justice theory is a comprehensive framework that interconnects issues of distribution, recognition, and process, and that it both could highlight important empirical findings, and how these findings could help understand energy justice holistically. It concluded that energy justice and wind power conflicts are complex, and the discussion brought forward central aspects around these complexities as they related to the green transition and value conflicts. It also raised the question on responsibility for justice and who should take it. Conclusively, the thesis has found that utilising the theory of energy justice was helpful in understanding wind power conflicts, but that there is much ground to cover with future studies.

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Sammanfattning

I kampen mot klimatförändringarna är det viktigt att påskynda övergången till koldioxidsnåla energisystem för att möta framtida krav. I Sverige är landbaserad vindkraft det primära alternativet, men det har blivit en källa till konflikter. Denna masteruppsats använder teorin om energirättvisa för att analysera två fall av vindkraftsutveckling som är omstridda i olika regioner i Sverige. Teorin om energirättvisa har blivit framträdande under det senaste decenniet, och denna uppsats bidrar till den genom att erbjuda ett geografiskt placerat sammanhang av ramverket med hjälp av två distinkta fallstudier. Syftet var att förstå hur teorin kunde användas för att förstå konflikter, bortom de uppenbara intressekonflikterna. Energirättvisa användes därför för att identifiera skiftande perspektiv och lyfta fram potentiella drivkrafter för konflikt. Forskningsdesignen tillämpade kvalitativa metoder, och data samlades in genom semistrukturerade intervjuer, som senare analyserades tematisk.

Analysen visade hur skillnader i intressenters perspektiv kunde förklaras utifrån olika förståelser och utgångspunkter avseende tidsmässiga och rumsliga skalor. Vidare förstod man att de stora skillnaderna där kunde vara en drivkraft för konflikter. Till exempel kan intressenter ha olika perspektiv på rättvisa baserat på deras början och fokusera på skala, eftersom invånarna tenderade att fokusera på lokalt förankrad rättvisa, i motsats till utvecklare som tenderade att se rättvisa i större skala.

Resultaten belyste hur teorin om energirättvisa är ett omfattande ramverk som sammankopplar frågor om distribution, erkännande och process, och att det både kan lyfta fram viktiga empiriska resultat och hur dessa resultat kan hjälpa till att förstå energirättvisa holistiskt. Uppsatsen drar slutsatsen att energirättvisa och vindkraftskonflikter är komplexa, och diskussionen förde fram centrala aspekter kring dessa komplexiteter när de relaterade till den gröna omställningen och värdekonflikter. I diskussionen togs även frågan upp om ansvaret för rättvisa och vem som bör ta det. Sammanfattningsvis har uppsatsen funnit att användningen av teorin om energirättvisa var till hjälp för att förstå vindkraftkonflikter, men att det finns mycket att täcka med framtida studier.

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List of Abbreviations

EIA – Environmental Impact Assessment

IPCC – Intergovernmental Panel on Climate Change

NIMBY – Not In My Backyard

NSD – Norwegian Centre For Data Research

NGO – Non-Governmental Organization

1 Introduction

The latest synthesis report from IPCC (2023) reminded the world again about the human-driven and caused climate change, its destructive and adverse effects and the disproportional impact on societies across the globe. A key question for climate change mitigation is how to shift away from a fossil fuel-driven society and transition towards renewable energy sources (Shabliy & Kurochkin, 2022, p. 13).

The same IPCC (2023) report highlights multiple opportunities and actions that can be taken to scale up and accelerate climate mitigation. In terms of energy, wind and solar are the two energy sources with the highest potential contribution to net emission reductions. These mitigative technologies exist and are ready to be deployed further in many regions, including Sweden, where this study takes place.

The energy system in Sweden is undergoing a transition, with a growing demand for electrification in the industry and transport sectors as fossil fuels are phased out (Energimyndigheten, 2023c). The Swedish Energy Agency's latest report and Swedish scholars echo the findings of the IPCC, highlighting the importance of wind energy (Energimyndigheten, 2023c; Wretling et al., 2022). Onshore wind power is considered the most promising short-term option in both technical and economic terms (Energimyndigheten, 2023c). Wind power is considered a prominent and primary energy source for continuing the green transition (Anshelm & Haikola, 2016), and Sweden is committed to tripling its land-based wind power by 2040 (Wretling et al., 2022) to align with EU targets and accelerate progress.

During the press conference for the release of the latest IPCC Synthesis Report, IPCC chair Hoesung Lee emphasized the importance of trust, collaboration, and equitable sharing of benefits and burdens for successful transformational changes (World Meteorological Organization, 2023). This statement highlights the need to go beyond technology and economics and focus on fairly implementing climate solutions, including technology and energy infrastructure, in society. This study hopes to contribute to human-centered energy research by examining the connections between energy infrastructures and people in the associated local contexts in two different cases of wind power developments in Sweden.

1.1 Problem Statement

The green energy transition must accelerate to meet the urgent climate change mitigation targets, and geopolitics and other technological developments affect the energy paradigm. With a growing interest in this field, questions arise on how and challenges this transition will pan out, especially regarding justice (Bickerstaff et al., 2013, p. 4). As mentioned, wind power is an important energy source in Sweden and will play a significant role in the green transition. In scenarios of energy systems in the Nordic region, wind plays a vital role in every case and is essential for the transformation of both industry and transport (Wråke et al., 2021). With the need for acceleration in mind, this thesis notes the trend of deceleration in project approvals for wind. Sweden has a trend of decelerating wind power project approvals, and subsequentially, the rate of development will decrease (Energimyndigheten, 2023b). Albeit there is value in the cautionary principle to avoid unnecessary impacts on people, nature, and society, there is an apparent disconnect between the need for an acceleration of fossil-free energy sources and the rate of development of new wind power (Barry et al., 2008; Klintman & Waldo, 2008).

The question that one asks is then, why are wind power projects subject to increased resistance if they are such an essential part of the green transition and essential for climate mitigation? As Söderholm et al. (2007) recognize, there are uncertainties related to the development of wind power, e.g., in terms of public resistance and the stability of legal frameworks for planning. Historically, many large-scale energy developments in Sweden have been met with protests from residents and environmental activists, including wind power development (Anshelm & Haikola, 2016). However, the protests may come from a different source depending on where they occur as they are commonly locally grounded; effectively, there is an inherent climate and environmental conflict between the climate mitigation factor of wind power and the locally grounded impacts from turbines (Anshelm & Haikola, 2016). Additionally, the conflicts of interest between different stakeholders may be an underlying reason. Conflicts of interest could include protected nature, cultural heritages, settlements, infrastructure, and military interests (Energimyndigheten, 2023c). And further, wind energy planning in Sweden covers many levels of government, and the complex landscape both nationally and internationally, contributes to the acceleration, e.g., for reaching EU and national goals (Wretling et al., 2022). Thus, the slow development of wind power in Sweden

is two-fold: partly due to increased public resistance and partly due to complexities in the regulatory frameworks. In particular, the regulatory framework related to wind power is the municipal veto governing wind power projects concession. In 2021, the municipalities in Sweden used this veto to stop 78% of the applications for new wind power developments (Svensk Vindenergi, 2022).

By acknowledging and addressing consequences such as the impact on the environment, on societies and on humans, it is possible to increase acceptance of wind power developments (Bolin et al., 2021). In addition, factors such as justice, participation, and trust can significantly impact the legitimacy and acceptance of wind power projects (Bolin et al., 2021); and Wråke et al. (2021) find that implementing measures focusing on social justice aspects of social acceptance of onshore wind is essential for an energy transition. As it is now, the green transition and wind power developments may contribute to increased inequalities. Elodie (2018) writes how this will happen over space, time, and generations if there are no changes in how the energy system is viewed and governed. A better understanding of the issues and conflicts surrounding wind power projects and how the challenges can be met is needed, but there could be many different outsets or points of view. Based on the increased resistance to wind power and the rejections of wind power projects that are causing a slow deployment rate of new wind power projects, it may be interesting to investigate and explore some of the forces related to the process and forces. A just and green societal transition intersects an energy transitions and energy justice, and equity and justice guide energy system changes (Carley & Konisky, 2020).

Hence, this study takes off from the theory of Energy Justice, an understanding of energy systems where social, economic and environmental issues of equity over time and space are encompassed (Eames & Hunt, 2013, p. 47). Energy justice is a subjective claim, and it will be relative to the values and perspectives of different groups; thus, it is essential to understand contexts with a focus on power and influence on some groups on others, e.g., on how it influences marginalised groups or indigenous communities (Eames & Hunt, 2013, p. 48). To bridge the gap between the rapid shift towards a ‘greener’ future with renewable energy and the slow advancement of wind power in Sweden, it is valuable to consider the viewpoints of all parties involved in wind power development. This includes simultaneously considering energy justice principles, which supply a more complete understanding of the issues and

conflicts surrounding this topic and considering stakeholders related to the conflicted wind power developments.

1.2 Aim and Research Questions

This thesis aims to examine how the theory and framework of energy justice can shed light on two conflicting onshore wind power projects in Sweden, focusing on the stakeholders related to the developments. The case studies in question are Galmsjömyran in Sandviken Municipality and Käymävaara Vindkraftpark in Pajala Municipality, and these will be further explained in Chapter 3.

To guide this study and accommodate the aim, two research questions have been formulated:

1) *How do the stakeholders in the two cases view justice?*
2) *How can the energy justice framework help understand the conflict of these two cases?*

To answer these questions, the study has applied a qualitative method in which the focus is to attain and understand different stakeholders' perspectives. Thus, semi-structured interviews with respondents related to the chosen case studies have been used.

1.3 Disposition of Study

Following this introduction, in Chapter 2, the theoretical framework of Energy Justice is explained, and there is a literature review as well as a note on limitations. Chapter 3 presents wind energy developments in Sweden with a short historical overview and an explanation of the current planning and permitting process system. Chapter 4 presents the methodology and the methods used in the study for data collection and analysis. This section also includes the sampling process for case studies and respondents. Reflections on philosophy and ethics are also discussed, as well as limitations. Chapter 5 presents the results from the analysis of the semi-structured interviews divided into two sections each focusing on one of the research questions. Chapter 6 then follows with a discussion of the developments related to the theoretical framework and a more significant energy transition perspective, as well as a discussion on the responsibility for justice. Lastly, chapter 7 provides a conclusion and recommendations for future research. A reference list for all material used in the study, an

appendix with the interview guide, the coding scheme, a list of respondents and the approval from NSD can be found at the end of the thesis.

2 Theoretical Framework

The introduction has highlighted the problems surrounding wind power developments in Sweden and the international call for a just transition with renewable energy in focus. With this in mind, the study chose to use the theory of energy justice as a point of departure, with the ambition that it can help with understanding the conflicted wind power developments in this thesis. This theory served as a framework for exploring the cases and organizing the analysis, and also guided the discussion of the results. In this chapter, the theoretical framework is presented with a review of its origins, past studies, limitations and lastly, how it has been translated into an analytical framework for this thesis.

2.1 Energy Justice sharing qualities with Environmental and Climate Justice

Energy justice is a framework that shares similarities with environmental and climate justice. Environmental justice looks at the link between ecological problems and social disparities, where the environment can be both a resource and a danger to different groups of people (Walker, 2012, p. 1). It has mainly focused on the effects of environmental contamination, such as waste (Tzoumis & Boyer, 2022, pp. 21-22). Climate justice, which grew from the environmental justice perspective, deals with the negative impacts of climate change on a global level. It highlights the inequalities and threats across societies and social classes (Walker, 2012, p. 1). Energy occupies more and more space within environmental and climate justice movements, and concerns with energy developments are becoming more central (Fuller & McCauley, 2016). Unlike environmental and climate justice, energy justice is not rooted in social and grassroots movements but, is rather a framework stemming from academia that enables thinking about and engaging with the current energy system (Heffron et al., 2015; Shabliy & Kurochkin, 2022, p. 9). It is a relatively new framework and can be attributed to the increasing interest from social scientists in energy studies. Shabliy and Kurochkin (2022, p. 3) highlight the duality of energy justice as an academic term and a pathway for policy and decision-making within the energy system. Energy justice looks to apply similar principles to climate or environmental justice to the energy system and focuses on how energy is produced and consumed. Essentially, energy justice is an extension and result of the successes and failures of climate and environmental justice movements, and it seeks to succeed where the others have yet to and gain more traction among decision-makers

(Jenkins, 2018). McCauley et al. (2019) highlight how energy justice needs to diverge from the environmental justice paradigm and take a broader perspective where research explores both how minorities are affected by infrastructure developments, but also on how institutions govern energy policy, all within the energy system.

2.2 Energy Justice in the Green Transition and Definition

Scholarship within green energy transitions and justice beyond the global scale, where energy transitions are locally grounded and climate change mitigation is addressed locally, fairly and justly, has emerged in the past decade (Bickerstaff et al., 2013, p. 1). Academia has written much on sustainability and developing low-carbon energy systems, focusing on the environmental, economic, and political aspects. However, there is still a need to address the implications of low-carbon energy infrastructure on socioeconomic levels (Bickerstaff et al., 2013, p. 2). Moreover, as Eames and Hunt (2013, p. 47) argue, past energy transitions have been associated with waves of so-called creative destruction, where competition, exploitation and distribution of costs and benefits, and there most likely is a similar story with the 'green transition. Thus, because the green transition is associated with climate mitigation factors and is 'green', it is not necessarily fairer or just. Ottinger (2013) argues that the low-carbon transitions are not too different from historical energy systems such as fossil fuels extraction and power plants. A replacement of the energy source does not remove the injustices ingrained in energy systems; thus, low carbon is not equivalent to being just and fair. A sustainable and green transition covers more than purely transitioning from one energy system to another; it also involves new ways to perform societal functions satisfying human needs in e.g., energy, food, and mobility (Eames & Hunt, 2013, p. 50). Doing this would involve more participation of various stakeholders, including the public and improving the communication and focus on justice in transitions overall (Eames & Hunt, 2013, p. 60). Research on energy transitions and inequalities has highlighted concerns for justice and equity, such as the siting of energy infrastructure, pollution and waste distribution, and economic benefits from energy production (Bickerstaff et al., 2013, p. 5). Eames and Hunt (2013, pp. 47-48) explain that energy justice is connected to various issues, including domestic energy prices, oil extraction impacts, and extensive energy infrastructure such as hydro dams. Implementing energy projects, infrastructure, and energy policy is often a conflicted process, where controversies have surrounded oil and gas extraction, hydropower, nuclear energy, and

wind power (McCauley et al., 2019). Considering history may help make the low-carbon and green energy transition less conflicted, more inclusive, and more efficient in resource use (McCauley et al., 2019).

The theory can be used to identify how, where and who are exposed to injustices in the energy system and also what potential processes exist to limit and reduce these occurrences (Jenkins et al., 2016; Tzoumis & Boyer, 2022, p. 21) and it connects the dots between how our global collective makes decisions about energy and what moral implications those choices might have (Sovacool & Dworkin, 2015). As argued by Sovacool and Dworkin (2015), there is value in having a comprehensive framework to understand decisions within the energy system. They define the concept as "a global energy system that fairly disseminates both the benefits and costs of energy services and one with representative and impartial energy decision-making" (Sovacool & Dworkin, 2015). A just energy system would promote welfare and equity for producers and consumers, while distributing hazards related to energy production and consumption in a non-discriminatory way (Sovacool & Dworkin, 2015). Another definition may be "Energy Justice can be understood as encompassing issues of social, economic and environmental equity, within and between past, present and future generations (Eames & Hunt, 2013, p. 47)". McCauley et al. (2019) explain energy justice as "a conceptual, analytical and decision-making framework for understanding when and where ethical questions on energy appear, who should be involved in their resolution and ultimately which solutions must be pursued to achieve a sustainable energy system underpinned by fairness and equity."

Energy justice is a subjective claim, and it will be relative to the values and perspectives of different groups; thus, it is essential to understand contexts with a focus on power and influence on some groups on others, e.g., on how it influences marginalised groups or indigenous communities (Eames & Hunt, 2013, p. 48). Hence, the perspective of justice, on what is just and how something is, may differ depending on which view one takes, calling for an understanding of these subjective realities to understand what and how they are in a local context.

The transition between technologies is a central aspect of this study. According to Sovacool and Dworkin (2015), addressing this question requires more than engineering or economics. Justice perspectives are necessary to ensure accountability. Energy justice helps us understand how values are embedded in the energy system and how choices impact society

on various scales (Sovacool & Dworkin, 2015). Injustice concerns not only inequality but also the fair treatment of all (Eames & Hunt, 2013, p. 48). It is not just about distributing benefits and harms but also about the processes involved.

Given that this study focuses on energy production (wind power) and the perspectives of different stakeholders, the energy justice framework offers a valuable perspective through which to view the data; energy justice is useful to address concerns such as protecting the environment and providing clean energy justly (McCauley et al., 2022b). Advocates of transition management approaches should prioritise energy justice, as failure to achieve it can slow down transitions, limit public support, and reduce opportunities for success (Goddard & Farrelly, 2018). Therefore, energy justice must be at the forefront of the low-carbon energy transition. Carley and Konisky (2020) emphasise that efforts and activities focused on justice are important in ensuring an equitable transition towards low-carbon practices. They also suggest many opportunities in the energy transition for scholars, as basic research provides information on local contexts and participation in decision-making and more research can guide policy.

2.3 The Three-Tenet Framework of Energy Justice

Energy justice is usually presented through a three-tenet framework, in which the three tenets are 1) distributional justice, 2) procedural justice and 3) recognition justice (Jenkins et al., 2016; McCauley et al., 2013; Tzoumis & Boyer, 2022, p. 22). These evaluate where the injustice comes from, what parts of society are included or excluded, and how these injustices can be remediated through specific processes (Jenkins et al., 2016). Lacey-Barnacle (2022) highlight how the three tenets and their links strengthen their use; they can facilitate one another, e.g., improving recognition and fair processes can drive distributional justice. Similarly, Jenkins et al. (2016) present the tenets in the same order, as the distributional justice aspect helps identify issues, the recognition justice helps identify who is being affected, and the procedural justice can help identify the strategies to ensure justice or remediation. The thesis has taken a similar approach, and below each tenet is presented in the order explained by Jenkins et al. (2016) and Lacey-Barnacle (2022).

2.3.1 Distributional Justice

Distributional justice is about the 'where', focused on the unequal allocation of benefits and ills both physically and across responsibilities. It calls for the even distribution of benefits and ills across all members or stakeholders, regardless of whom (Jenkins et al., 2016; McCauley et al., 2013). The distribution of wind power for example is inherently unjust, as some will be more affected by others, and thus the siting of infrastructure for example, is an example of how to view or find distributional injustices(Jenkins et al., 2016). Distributional justice, and the allocation of benefits and ills exist both in the physical world through the placement of infrastructure, as mentioned, but it also concerns financial benefits and ills (Jenkins et al., 2016). The economic impacts can be seen through disproportionate financial burdens, but can also be a result of framing distributional justice across societies, either by sharing the burden or by sharing the benefits (Jenkins et al., 2016). The distinct notion of distributional scale in terms of the siting of the energy infrastructure is highlighted by Liljenfeldt (2017) with an understanding that wind power as a climate mitigation method and as an energy source may benefit the entire population of a country, but the burdens are locally grounded.

Distributional justice and energy justice focus on fair treatment and processes related to the developments with these aforementioned aspects in mind. This tenet can help understand

what scale a conflict or opposition is focused on and why, as McCauley et al. (2013) write, there is a historical difference in how wind energy and nuclear energy projects have been objected to due to their localities and other qualities.

For example, according to Tzoumis and Boyer (2022, p. 22), an aspect of energy justice often overlooked is the role of waste from energy production and consumption. There needs to be an understanding of the potential harms or impacts on humans, health, and the environment from low-carbon technologies and renewable energy. As mentioned in the introduction, learning from historical development is important, and it should be recognised that the potential unintended harm from human inventions, e.g., the climate crisis mainly due to the fast industrial revolution and human consumption (Tzoumis & Boyer, 2022, p. 22). Returning to the siting of energy infrastructure, distributional justice also involves an assessment of the key impacts of location related to energy technologies and their outputs on a larger societal or national level. In a US context, much research in energy justice has covered this pollution and waste from energy production being closely located to marginalised communities and areas, e.g., ethnic minorities or people living in poverty (McCauley et al., 2019).

Distributional justice does not just concern distribution in a spatial context or of benefits and ills from impacts of energy developments; it also concerns the distribution over time and generations (McCauley et al., 2019). Moving forward in an energy transition, we must account for the potential impacts the policy and decision-making have on future generations (Tzoumis & Boyer, 2022, p. 40). The question that needs to be discussed includes waste disposal, restoration of land areas, and so on (Tzoumis & Boyer, 2022, p. 40). The nexus between energy justice and intergenerational justice is recently being discussed, but it has been a recent issue within the discussions on climate change and sustainability overall (Motupalli, 2022, pp. 173-174). The energy justice framework highlights damages from energy systems in history and addresses the potentially adverse impacts of future energy systems (Motupalli, 2022, p. 188).

2.3.2 Recognition Justice

Recognition justice focuses on the 'who,' and it is about how groups and individuals must be represented and valued equally about rights and participation. It is more visible in the lack of recognition, where it can occur in various aspects, e.g., disrespect, devaluation, or failure to include. Recognition justice calls upon the processes and developments to acknowledge the differences between people and take that into account when preceding developments (Jenkins et al., 2016). It differs from participation in processes, as it focuses on how people or stakeholders are viewed under cultural paradigms and how they are treated (Jenkins et al., 2016). Recognition justice can also focus on the 'energy' victims, i.e., the people or stakeholders suffering unfairly from energy production(McCauley et al., 2019). It is about recognising groups, especially those where the culture is not dominant in the setting; this tenet is complex as it involves both recognising the group in question by involving them in the majority and distinguishing and recognising differences (Fraser, 1998). Jenkins et al. (2016) distinguish two main aspects of recognition justice: non-recognition and misrecognition. Where non-recognition can occur as devaluating, insulting, and undermining specific groups, misrecognition focuses on the distortion and the misunderstanding of specific groups' views and values. It is important to discover and fully engage in exploring the different perspectives and thus, needs of groups in a context to avoid creating injustices. And, in terms of misrecognition, it is important to recognize the need to listen and understand specific groups, not to reduce their voices to fit a prejudice, e.g., in terms of wind power opponents, it is important not to reduce their concerns to NIMBYism (Devine-Wright, 2005).

2.3.3 Procedural Justice

Procedural justice concerns and relates to the decision-making processes and the processes related to energy production and consumption. It is focused on communication, participation, and regulatory frameworks (Jenkins et al., 2016). Procedural justice is subject to full information disclosure and structures that promote and aid engagement (McCauley et al., 2013). This tenet concerns the right and access to fair and just processes; in essence, it combines the two other tenets: distribution and recognition, as it summarises their focus on demand for institutions that ensure involvement and participation in decision-making (McCauley et al., 2019). This tenet highlights the actions that can be taken after identifying the potential injustices in distribution or recognition; the focus should thus also be on policy

and regulatory frameworks (McCauley et al., 2019). The procedural justice tenet is driven by and stems from regulatory frameworks and policy guiding energy systems and is further underpinned by norms and values(Jenkins et al., 2016; Walker & Day, 2012). Regulatory frameworks are central for legal rights, to ensure participation and to disseminate information to all stakeholders (Walker & Day, 2012) Jenkins et al. (2016) further discuss procedural justice not in terms of exclusion; instead, they bring forward ways of inclusion to demonstrate how the energy justice framework can be used to remediate injustices. These inclusions mean that they focus on mobilisation of local knowledge, showing information and representation in institutions. Utilizing local knowledge usually means Indigenous knowledge but also encompasses other local contexts such as livelihoods or ecosystems. The rationale behind including these knowledge systems is to enhance decision-making and policy formulation. Transparency is important in disclosing information and how it is shared with stakeholders. Transparent and disclosed information promotes inclusion and participation. Lastly, the representation in institutions highlights the importance of diversity in governing bodies of energy development. Variety can guide proactive action towards justice rather than justice discussion being an afterthought (Jenkins et al., 2016; Walker & Day, 2012).

2.4 Studies in the Field of Energy Justice

The field of justice has been explored through various research methods and paradigms. However, quantitative social sciences have traditionally been the primary focus in addressing justice-related issues; nevertheless, it has been acknowledged by McCauley et al. (2019) that qualitative research can play a vital role in energy justice studies. Specifically, this involves delving into how experiences, perceptions, and discourse are intertwined with energy justice in energy systems.

A recent article by Lacey-Barnacle (2022) explores how energy justice principles guide local energy activist organizations in promoting fairness and equity in low-carbon development. Meanwhile, McCauley et al. (2022a) utilized the Energy Justice Framework to comprehensively evaluate energy systems in Malawi through qualitative interviews with stakeholders. Although different contexts were studied, both articles employed qualitative research methods to assess justice dimensions in locally grounded energy systems.

A study by Goddard and Farrelly (2018) investigated the concept of energy justice in transition management in Australia. Through their qualitative study, they researched the significance of effective leadership to ensure just transitions while minimizing harmful effects on workers and the economy in contexts reliant on fossil fuels. The researchers emphasized better stakeholder coordination to avoid confusion and ensure a smooth transition. Castán Broto et al. (2018) noted the need to consider post-colonial perspectives and non-western justice traditions when striving for energy justice. In their article, the authors also pointed out that the implementation of low-carbon transitions can vary depending on the level of development of the energy system and its cultural integration.

Interdisciplinary approaches in energy justice studies are highly recommended to ensure a sustainable and long-lasting transition and a recent research paper by Roddis et al. (2018) delved into deploying renewable energy technologies in the UK, such as onshore wind and solar farms, and how communities receive them. The study utilised statistical analysis to evaluate how public acceptance influences planning outcomes. The role of community acceptance is critical, but the subjectivity of energy justice makes it challenging to quantify. Nevertheless, the authors suggested that improving procedural justice could enhance acceptance as it involves ensuring better processes(Roddis et al., 2018). In terms of energy

justice and wind power, a study on the environmental justice of wind power highlighted that technological development is not equal to sustainable development. As wind power technology is trending towards larger wind turbines in larger clusters, it is consequently trending towards designs and structures that are potentially less in line with democratic and just policy (Ottinger, 2013). Rather than the technology design following the logic of maximization of power that tends to develop more negative impacts, the technologies should utilise a justice perspective early on. Then, the energy development includes the community perspective, which involves co-design, participation and inclusive communication (Ottinger, 2013).

Literature on wind power, conflicts, and social dimensions has traditionally focused on NIMBY-ism and policies to reduce resistance and increase acceptance. However, new research paradigms in wind power developments also draw from work that has shown how different transition models guide the perspectives or split sides in conflicts about wind, i.e., there is a divide between ecological modernization and environmental conservation perspectives. This puts the wind power debate in a larger context, where the developments are also shaped by values and interests from different perspectives (Avila, 2018). Avila (2018) describes the wind energy debate as a composition of the views from different actors in the low-carbon transition relating to modern wind farms, e.g., the values and interests of different stakeholders. They argue that the factions or transition paradigms of ecological modernization versus environmental conservation can help inform said debate. In the paper *Environmental Justice and the expanding geography of wind power conflicts (*Avila, 2018*),* the results highlight how land use and uneven developments are perceived and conflict differently depending on the local socio-geographical context. The study summarized some patterns of socio-geographic context that may guide controversy, e.g., Indigenous territories, community-managed reserves, rural communities, nature conservation areas and affluent suburbs in coastal areas. The paper discusses how the so-called wind energy debate is not necessarily about wind but the portrayal and discussion of wind through differing perspectives.

In another paper, Sovacool et al. (2019) stress the importance of open and democratic participation in the low-carbon transition and the need for shared beliefs to avoid conflict, exclusion, and injustice. They conducted a European study analyzing low-carbon changes from an energy justice perspective, identifying potentially associated inequities. The study aimed

to ensure sustainable and just access to energy, using countries as cases and conducting extensive expert interviews to disclose injustices in each case (Sovacool et al., 2019).

Furthermore, O'Sullivan et al. (2020) highlighted the uneven geographies of energy transitions and how the economic paradigms that characterize the low-carbon transition may lead to continued patterns of marginalization and peripheralization. Their study applied the energy justice framework to discuss how processes of democracy and development combined with energy systems may lead to a negative feedback loop of the vulnerability of peripheral communities (O'Sullivan et al., 2020). Additionally, the concept of energy justice investigates the potential unequal effects of low-carbon technologies on nearby residents, such as noise pollution from wind turbines. Studies have shown that marginalized communities and rural populations often bear negative impacts while urban areas benefit (Carley & Konisky, 2020).

A recent study by Jenkins et al. (2020) highlights the critical moment the energy justice field is experiencing. Despite significant growth in the past decade, it is important to reflect on the diverse range of existing energy justice studies and papers, which vary in their applications, methods, and scales. Though the energy justice framework is beneficial, differing understandings and applications may dilute its effectiveness, inviting criticism. Jenkins et al. (2020) offer four recommendations for energy justice scholars, including aligning terminology, connecting with other communities recognising energy justice audiences, and practicing energy justice principles in their research. A low-carbon transition that is greener and requires a different mindset related to both scale for technology and the production of science about wind power. Relating to procedural justice, studies on decision-making on low-carbon energy infrastructure reveal that communities hosting new infrastructure are rarely involved, particularly clear in wind turbine siting in various other countries. These studies also emphasize the importance of local participation, knowledge sharing, and involvement to increase public acceptance and equity (Carley & Konisky, 2020).

Science should, according to Ottinger (2013) be more collaborative between researchers and communities and developers, it should rather than using only one way of knowing about justice in transitions, apply a range of perspectives to inform siting of wind turbines and also energy policy. This type of knowledge production may help define a change in energy systems that are not just in terms of technological improvements and deploying more wind power.

Still, it would also be a transition in relation to the social aspects of the effects (Ottinger, 2013). Consequently, energy justice as a theory and as an academic research field is broad in its scope of application and method. But, regardless of that, the underlying principles, and the ambition to understand how energy systems can be fair and just is consistent.

2.5 Limitations of energy justice

Knowing that energy justice is emerging and growing in prominence and depth, this study recognises the complexity of its application. Although the energy justice framework and the three tenets cover many aspects of energy systems and energy justice policy, there are still limitations to how much it can cover. There are, of course, other aspects that could be analysed. As discussed by Tzoumis and Boyer (2022, p. 27), several scholars have made suggestions that could add to the sufficiency of energy justice. To increase the flexibility of the tenets, one could also consider gender, race, local communities, and their cultures.

Jenkins et al. (2016) write about how there was previously a dichotomy within energy justice research between studies focused on production and consumption. Thus, there is potential to gain an even deeper understanding of the energy transition if this dichotomy is replaced with a system thinking paradigm. The argument is that a systems approach could address the distribution of benefits ills at one point in the system and be applied systematically from production to consumption with surrounding parameters such as policy and pricing (Jenkins et al., 2016).

Arguably, the theory of Energy Justice is wide and complex, a limitation in itself, as it makes it difficult to delimit. However, this thesis will primarily focus on the production side of energy systems, with the development of new energy infrastructure. But, as will become more apparent in the results and the discussion, it is difficult to close the boundaries of the system, as the production and siting of the infrastructure is inherently connected to other parts of the energy system.

Lastly, as the concept of energy justice is relatively new and is still gaining prominence, and according to Jenkins (2018), there is limited evidence of its significant impact on energy decision-making.

2.6 Analytical Framework

It becomes evident from this chapter that the energy justice theory is broad and complex in nature and in application, unsurprisingly, as the energy system is broad and complex in nature. With that in mind, this section presents an analytical framework that builds on the theory and is later used on the empirical findings in the analysis. In other words, trying to understand how the energy justice theory can be used to understand wind power conflicts and how the empirical findings can further inform the theory of the thesis. This thesis may not cover every single aspect of energy justice, and thus this framework is used to specify how it has been approached in this study.

As found in the theory, the participation of stakeholders is a key part of an energy transition and of energy justice. The definitions by McCauley et al. (2019) and Sovacool and Dworkin (2015) highlight the aspect of involvement and participation in energy decision-making. Moreover, as called for by Eames and Hunt (2013, p. 48), there is a call for understanding different perspectives of justice, as it is a subjective claim and on a spectrum of different understandings of what is just or unjust. Building on the same concept, Avila (2018) described the debate on wind power as not necessarily being about wind but the different stakeholders' differing perspectives, values, and interests. Thus, the analytical framework is characterised by the understanding that energy justice is a continuum and that conflicts are also due to the different points of departure between stakeholders. With that, the stakeholder perspectives are seen as units of analysis. The stakeholder's perception of justice and the three tenets of energy justice are the points of departure for the thematic analysis of the conflicted wind power developments. From those, the analysis looked at indicators related to them. These indicators can be found in the coding scheme in Appendix 3.

This thesis argues that the energy justice framework can be used to understand or explain wind power conflicts, as it helps highlight issues of perceived injustice; as justice is a continuum, the focus is not to argue whether something is just or unjust but to understand the different perceptions and understandings of it. The importance of studying these cases does not lie in their specific nature but in what they can highlight about how wind power developments are happening currently in Sweden and the surrounding complexities (Yin, 2010). In Figure 1 below, this framework is shown as a circular process, where the analysis adheres to the boundary-less nature of this study.

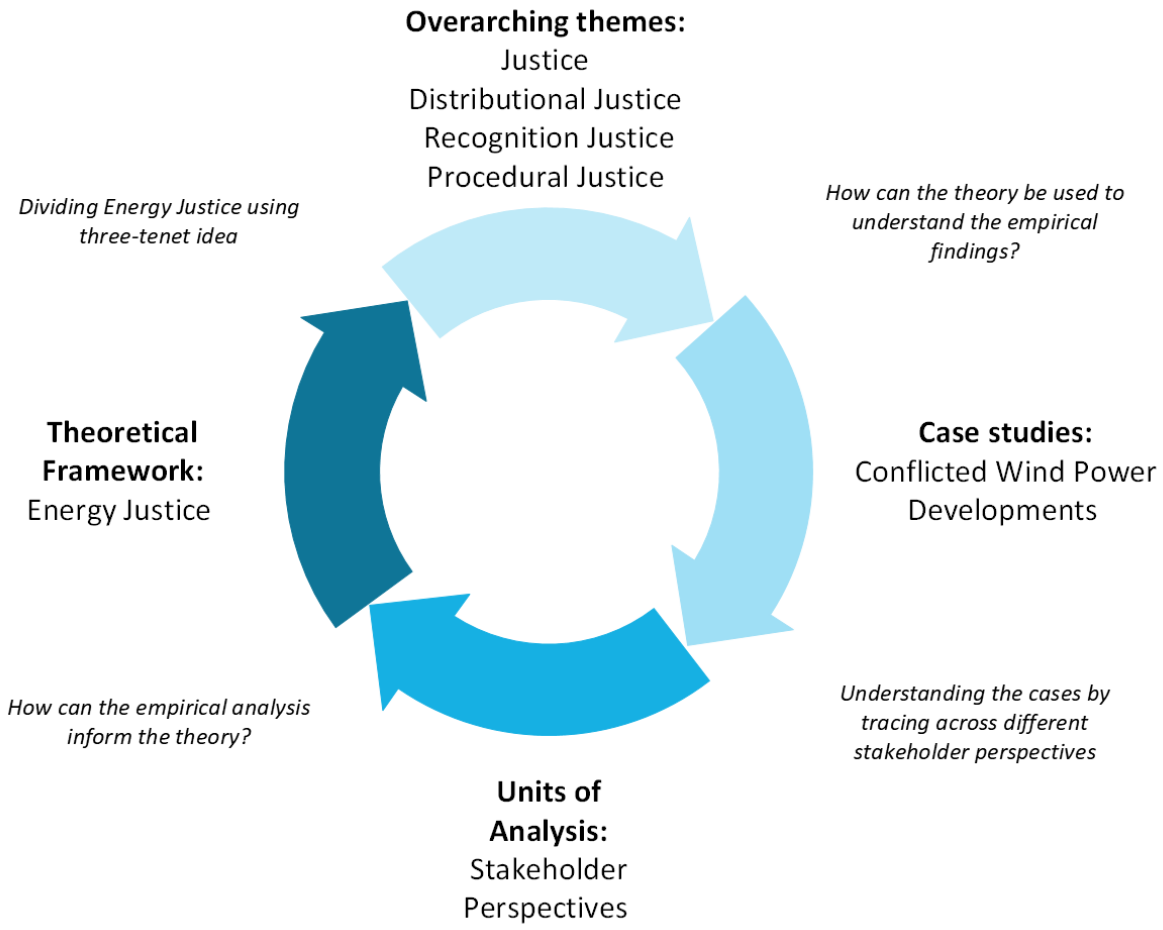

FIGURE 1 ANALYTICAL FRAMEWORK. CREATED BY AUTHOR.

3 Background

Following the theoretical framework as a framing of this thesis, this chapter introduces relevant background information needed to understand better the context of this thesis and the context in which the two case studies are situated. This chapter provides a background on energy and wind energy in Sweden, the planning and concession process for wind power and an introduction to the different roles of actors and stakeholders. Additionally, this chapter will briefly introduce the two case studies to provide local context.

3.1 Energy and Electricity in Sweden

Energy use globally differs significantly within and between countries, partly due to different preconditions and partly due to economic development (Energimyndigheten, 2023a). In the global context, Sweden is a leader in the decarbonisation process, and national measures have driven emissions reduction to a maximum rate (IEA, 2021). Energy management in Sweden has changed over time, and the energy sector has grown and developed using diverse types of production and at different scales. Today, the industry has developed due to deregulations of the electricity market and the connections abroad (Stattin, 2014, p. 92). In Sweden, electricity production comes from nuclear and hydropower, making it mostly free of fossil fuels. As of 2021, approximately 60% of the country's electricity was generated from renewable sources (SCB, 2022b; Stattin, 2014, p. 16).

The Swedish consumption of electricity developed with the most significant increases occurring in the 70s and 80s due to international oil conflicts and the shift toward electricity in both industries and households (SCB, 2022b). Regarding climate and energy goals, Sweden has a set framework in liaison with the national energy agreement from 2016. However, in many ways, the plans in these sectors are governed by international and regional agreements, e.g., the EU Repower Agenda, the Paris Agreement or the Sustainable Development Goals (Energimyndigheten, 2023a). In 2019, the European Green Deal was introduced to achieve carbon-neutrality, promote well-being, and safeguard the environment throughout Europe. The plan significantly emphasises the renewable energy sector as key in this endeavour (European Commission, 2019). The global energy markets have been disrupted by Russia’s war in Ukraine, prompting the European Commission to accelerate the REPowerEU plan further. This plan aims to reduce dependence on Russian fossil fuels and expedite the transition

towards eco-friendliness (Energimyndigheten, 2023a; European Commission, 2022). The REPowerEU plan focuses on accelerating the development and deployment of renewable energy, as with the 2018/2001 directive to promote renewable energy. This directive calls for a faster transition to renewable energy and greater integration of renewable energy into the energy system. The permit-granting process will also be simplified to ensure that EU objectives are achieved (Energimyndigheten, 2023a).

So, it can be understood that this push towards renewable energy is not only a Swedish policy but also a significant initiative on a European level. Sweden's energy policies aim to secure sustainable access to electricity and energy, facilitating the transition towards a resilient society (Energimyndigheten, 2023a). It is important to appreciate Sweden's position in the global context, as global factors inevitably influence Sweden's policies. On a larger scale, this may lead to a discussion on global justice, such as a country's national responsibility to reduce emissions more rapidly. It is valuable to understand that the push for wind power is a global, regional, and national priority that is by effect then deeply rooted in local energy structures.

3.2 Wind Energy in Sweden – historical developments and current trends

Similarly, to electricity consumption, wind power and renewables gained prominence following the 1973 oil crisis and the 1980s nuclear referendum (Edwards, 2023; Engström, 2015, p. 66; Söderholm et al., 2007; Vattenfall, 2023). Initially, wind energy faced challenges in the Swedish market due to its production size not aligning with production sites, but over time this has changed and there are now many larger wind parks throughout the country; however, with new developments primarily being planned for the northern regions and off-shore (Edwards, 2023; Energimyndigheten, 2022d; Stattin, 2014, p. 93). The wind energy sector has grown along with technology and the support of renewable electricity certificates (Energimyndigheten, 2022a; Engström, 2015, p. 95). Although the sector's growth has slowed down in the past years, Sweden now aims to produce 100% renewable energy by 2040, requiring sustainable wind energy development as a part of the energy mix (Energimyndigheten, 2023a).

The National Strategy (2021) for sustainable wind power development outlines how the energy transition for wind energy can be more sustainable, focusing on exploring regional development needs, mapping areas with low levels of conflict, and suggesting distribution

based on available land, electricity use, and population. Their definition of sustainable wind power development includes meeting the goals for emission reductions, even national distribution, minimising environmental negative impacts, respecting human health and settlements, and being source-effective (Energimyndigheten, 2021).

Public attitudes to wind power in Sweden are essentially twofold. There is a generally positive attitude across society, but there is usually strong resistance locally, sometimes explained by the Not-In-My-Backyard (NIMBY) syndrome (Liljenfeldt, 2017; Söderholm et al., 2007). NIMBY-ism is when people with purely self-serving interests oppose wind power in their locality but are fine with it elsewhere. Arguably, this may explain some resistance, but research has shown that it is not the full picture (Bell et al., 2013). For example, this notion has been criticized over the years since the introduction of the term for not being expansive enough and for simplifying the debate. Wolsink (2000) argue that rather than understanding public resistance as an oversimplified understanding of people being against all wind turbines and developments, there is usually also a suspicion of the developers and the process. Thus, he argues that regulatory frameworks focus on collaborative processes and participation. Further, changes in the landscape on a broader scale, as well as concerns about fairness, are potential aspects that may influence public resistance (Bell et al., 2013).

Recent trends for wind power in Sweden show that new wind energy development is still high in 2023 but will most likely decrease in the southern regions after 2024 (Svensk Vindenergi, 2023). However, there are some clear challenges that industry organisation *Svensk Vindenergi* presents in their latest quarterly report. They state a solid willingness for investors to invest in wind energy but significant challenges in the Swedish context about the permitting and concession process. The municipal veto stops many projects, and the slowness of developments may reduce future investments (Svensk Vindenergi, 2023).

3.3 Planning for and the Process of wind power development and decision-making.

In Sweden, municipalities must develop a municipal overview plan that outlines their land-use plans for sustainable development, considering environmental, social, and economic considerations (Energimyndigheten, 2022c). Municipalities thus share responsibility for wind power planning with developers. The result of wind power infrastructure is governed by two primary legislations: the Planning and Building Act and the Environmental Code, which regulate municipalities and developers (Energimyndigheten, 2022c). Figure 2 below outlines

the main steps involved in wind power development and the actors that are involved in the decision-making.

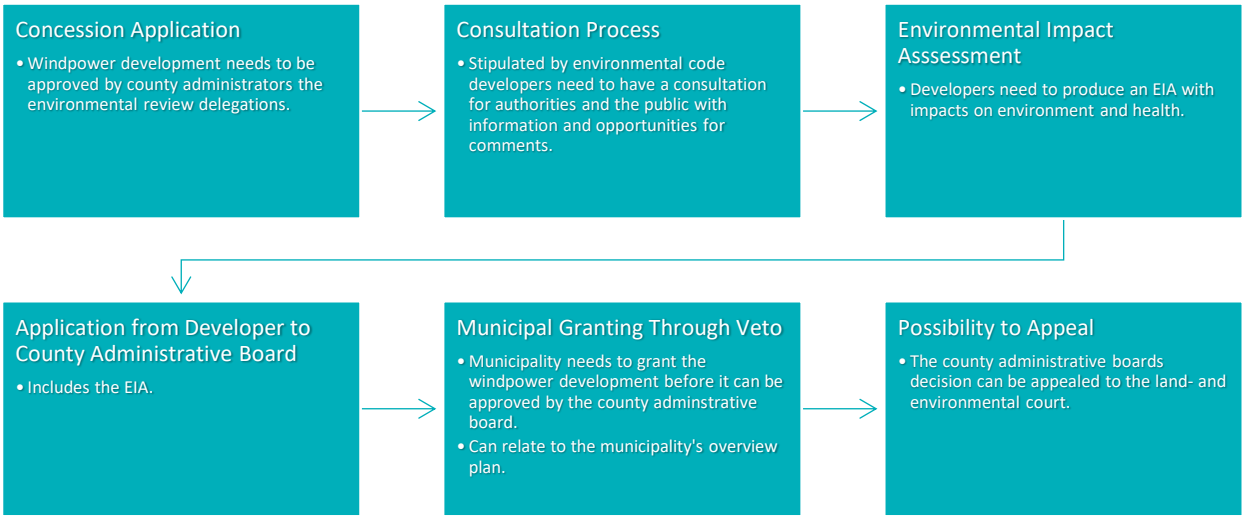

FIGURE 1 DIAGRAM SHOWING THE PROCESS OF DECISION-MAKING IN WIND POWER DEVELOPMENTS FROM APPLICATION TO THE DECISION (ENERGIMYNDIGHETEN, 2022C)

In this process, the municipal veto is as mentioned in the introduction a significant aspect that influences wind power projects and their concessions. The veto stipulates that concession for a wind power development can only be given if the municipality in which it will be situated has endorsed it (Statens energimyndighet, 2015).

As seen in Figure 2, the main actors that drive the process of wind power and are involved in decision-making include the municipality, the environmental review delegations, the land-and environmental court, and the wind power developer. The municipality has two roles, partly as a member in the concession process to ensure environmental interests in the municipality; they also have the power to affect permit applications and planning through their overview plans. Lastly, they are also related to the decision-making with their endorsement, i.e., veto right.

It is essential that municipalities have updated overview plans that include wind power, as well as weighing wind power as an interest with the municipality's other interests; the reason

for this is partly to ease planning but also for basing the decisions on concession (Statens energimyndighet, 2015).

The municipal veto has been under debate in the past years as it is an obstacle to accelerated wind power developments in the light of climate change and increased electrification. In 2022, the government tasked an investigation to suggest what and how incentives could work to increase municipalities saying yes to wind power developments (Regeringen, 2022). The investigation highlighted that the incentives required for municipalities to increase their endorsements are linked to compensation and profit from the wind power projects, a profit that only can come from financing from the government; further, the investigation showed that the local communities and residents should be able to be compensated with the revenue of the wind turbines. Additionally, owners of neighbouring properties should have the right to compulsory purchase, i.e., that the licence holder of the wind farm purchases the property at a price that corresponds to its value before the wind power development (Liljeberg et al., 2023).

3.4 Research on wind energy in Sweden

An extensive national research program called *Vindval* has been central to wind energy research in Sweden since 2005; it has produced around 50 research projects (Naturvårdsverket, 2023). It is a collaborative program between the Swedish Energy Agency and the Swedish Environmental Protection Agency. They have executed studies about our interests, nature on land, marine resetting and within the planning aspects of wind. Two of the reports produced from this provide an overview of the current state of Sweden: Regionalt planeringsstöd för vindkraft/Regional planning support for wind power (Mörtberg et al., 2023) and Uppdaterad syntesrapport – Människors intressen/Updated synthesis report – human interests(Bolin et al., 2021). The first report, prompted by the need to understand the same context that this thesis is situated in, focuses on how wind power can be further implemented and planned on a regional level. It found that wind power is complex in planning, as it has technology, economic aspects, and social and environmental factors surrounding it that provide challenges for municipalities in the planning. It concluded that regional support for planning, knowledge and capacity building, as well as cohesive landscape planning are key for the sustainable development of the Swedish energy system (Mörtberg et

al., 2023). In the second report, the focus is to evaluate how wind power impacts human interests, including health, financial impacts, and also participation in the wind power process. It is a comprehensive document and report of the current research in Sweden, and it synthesises important aspects of wind power being developed and integrated into Swedish society. It especially emphasises the importance of the planning processes in terms of communication, participation, and case-specific content (Bolin et al., 2021).

On the planning process, previous literature on wind power in Sweden also shows that planning processes that are built on dialogue and participation have higher rates of success and are arguably more sustainable (Klintman & Waldo, 2008). Public participation is included in the planning process through the consultation period, but some scholars, such as Klintman & Waldo (2008), have suggested improving this based on their findings. They offer three significant points; firstly, there should be an effort to understand all stakeholders' perspectives and who thinks what and potentially why. Secondly, it is essential to listen to any potential resistance. Public disapproval should not be taken lightly or ignored. It should also be a focus early in the process, as it tends to be harmful when opinions are heard too late; planners and wind power developers should see the local views as changeable –both positive and negative thoughts should be equally taken care of (Klintman & Waldo, 2008).

Researchers should focus on understanding human attitudes to wind power establishment's function, what values exist and how these values can be compensated if lost (Klintman & Waldo, 2008; Naturvårdsverket, 2012). Solman et al. (2021) write that co-production in various forms in wind power projects is essential and will gain more importance as stakeholders and agencies try to increase public participation. However, further in this field is also needed to understand how interactions can be more fruitful when shaping the broader energy transition and understanding that shifting from the predetermined view on public perception to understanding the real concerns and values can create more.

3.5 Case Study Descriptions

Here, the two case studies selected are briefly presented along with the context and events that have occurred in relation to the wind power developments. Additionally, the stakeholder groups associated with each case, who will be taking part as respondents, are introduced. It should be noted that while some stakeholders are linked to the case study as actors or those potentially affected, others may have indirect connections, e.g., industries or environmental organisations. The location of these cases in Sweden is shown in Figure 3 below. These cases may be referred to by different names, as in one of them, the name of the village is similar and perhaps a more convenient way to talk about the case, however, for the intents and purposes of this study, the cases will be referred to as the name of the wind power project. To better understand the selection process for case studies and stakeholders, please refer to the methods chapter.

FIGURE 2 MAP SHOWING THE CASE STUDIES' LOCATION IN SWEDEN
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3.5.1 Galmsjömyran

The Galmsjömyran wind power project is situated in Sandviken Municipality. The municipality described the themselves is an industrious and innovative area with approximately 39,000 residents (Sandvikens Kommun, 2023). The plans for the wind power project in the area of Galmsjömyran in the municipality were initially presented by a private developer in 2020, proposing the installation of 40 turbines with a maximum height of 280 meters near the border of Sandviken and the neighbouring municipality, Falun (Ecogain & Njordr, 2022). In response to the proposed project, a local organisation called "*Nej till Vindkraft på Galmsjömyran/No to wind power on Galmsjömyran*" was formed in 2021 and has since been vocal in expressing their opposition through various means, such as writing debate articles and maintaining an extensive website. They have also submitted a citizen proposal to the municipality, calling for better planning and decision-making within the wind power process (Föreningen Nej Till Vindkraft på Galmsjömyran, 2022). The local environmental nature protection organisation also released a statement, saying that they agree that wind power is essential for climate mitigation; however, since Sandviken municipality already has a significant number of wind parks, they think that the wind park should not be given a permit with the context at the time (Naturskyddsföreningen Sandviken, 2021).
In October 2021, Falun Municipality used their veto, causing the developer to pause their application for revision (Ecogain & Njordr, 2022). The developer worked with an environmental consultancy to conduct the project's consultation process and environmental impact assessment, carried out digitally due to the pandemic. In December 2022, the company submitted a new permit application for 21 wind turbines with a maximum total height of 280 meters (Ecogain & Njordr, 2022; Njordr AB, 2023). The last environmental impact assessment (EIA) reveals that the project will impact 11 objects with high nature value, primarily wetlands and old forests, and 95 different cultural history items (Ecogain & Njordr, 2022). According to the EIA, the closest connected buildings are ca 2 km from the closest wind turbine. The report also shows that there are already possibilities to connect to the electricity grid and that the present road network can be helpful in the establishment process. According to the EIA, no other notable conflicts of interest (Ecogain & AB, 2022; Ecogain & Njordr, 2022). Since the last permit application in December 2022, there has not been any new development during this study's time period. The main identified stakeholders for this thesis have been identified as the municipality, the wind power developer, the local environmental organisation, and the

local residents nearby the case area, Additionally, the landowners and nearby industrial representatives were invited to take part as respondents. These stakeholders were identified to be the main actors and holders of interest in this case. As the scope of this project is limited by time and resources, these were chosen to find some main divergences, but as will be mentioned in the limitation section, there are of course more perspectives to these cases.

3.5.2 Käymävaara Vindkraftpark

The plans for Käymävaara Vindkraftpark is situated in the Pajala municipality of Norrbotten County. With a population of only 5880 individuals, it is a small municipality, and the main economic activities are mining and tourism (SCB, 2022a). Pajala is in the middle of Tornedalen, a valley surrounding the Torne River. It is a culturally rich area, with several minority groups and languages present in the area (Tornedalsrådet, 2023). The Käymävaara wind power project was initiated by a government-owned energy company in 2016, and the first permit application was submitted in 2019. Initially, the application was for 58 wind turbines with a maximum height of 250 meters. However, the consolidated permit application and EIA now state that the project will include a maximum of 30 wind turbines with the same height(Vattenfall, 2022). It is worth noting that a portion of the project area falls under a national interest area for reindeer herding. The Environmental Impact Assessment was carried out by WSP Sverige, a renowned consultancy. The EIA covered aspects such as proximity to reindeer herding, protected nature, and other impact analyses (Vattenfall Vindkraft Sverige AB, 2022). Similarly, to Galmsjömyran, the local environmental organisation was part of the consultation process and made a statement against the project from an environmental conservation standpoint. They were primarily adverse to the developments due to the cumulative effects that the wind power project would have on reindeer herding and other industries, such as the nature tourism industry, as well as on nature directly (Naturskyddsförening i Norrbottens Län, 2021).

The project is located close to the village of Käymäjärvi, a small village with both permanent and seasonal residents. Similarly, to the project in Galmsjömyran, a local organisation has been formed in response to the project. *Tornedalen Framtid* is an organisation that has primarily worked against establishing wind power in Käymävaara (Tornedalen Framtid, 2022).

This thesis's primary stakeholders are the municipality, the wind power developer, the local environmental organisation, and the residents nearby the case area. The landowners and

nearby industries were invited but declined participation in this study. In relation to this case study, there are also directly impacted Sami villages. However, they declined to take part in the study and are thus not part of the interview data, but their perspectives are, of course, important to consider and remember regardless, as they are part of making up the local context. Similarly, to Galmsjömyran, these perspectives are not the only ones present in this case, but due to limitations in time and resources, these are chosen as the main focus for this thesis.

4 Methodology

This study has adopted a qualitative research design to answer the research questions outlined in the introduction, here that is presented along with a reflection on philosophy, methodology, ethics, and limitations.

4.1 Philosophical Considerations

It is relevant to note the following thoughts and assumptions as they have guided the methodological choices. As Creswell (2013, p. 15) explains, most researchers bring beliefs and philosophical assumptions into their research. It is essential to be aware of and understand these to decide whether to incorporate them. In qualitative research, researchers must write about the beliefs and theories that inform their studies, as there is a close bond between philosophical assumptions and the choice of a theoretical framework for analysis (Creswell, 2013, p. 15).

The philosophy of social constructivism has been used to guide methodological choices in this thesis. Social constructivism entails that reality is constructed through human activity, and knowledge is a socially constructed product. As Berger et al. (2000) discuss in the book *The Social Construction of Reality,* our subjective view of reality may sometimes guide actions more than the objective view of it. In social constructivism, the research looks to understand individuals' meanings of their experiences, e.g., from a cultural or a historical perspective, and how these shape their meanings of different things (Creswell, 2013, pp. 24-25). Jung (2019) highlights that social constructivism is an excellent way to understand what we know, not only in the sense that there are norms and ideas but that these also are interrelated with power dynamics and different interests.

This thesis relies on the stakeholder's views, so the study has considered how their subjective realities may shape these. I have also reflected on my research role and understand that my subjective reality may shape the study. The craft of qualitative research is to be human and creative in the research design but structured enough to meet the ethical and structural norms (Repstad, 2007, p. 16). Maintaining this balance has been a constant in this thesis, and as a junior researcher, I see how important it is to be humble in these challenges.

4.2 Research Design

A research design is, as Yin (2014, p. 28) puts it, "a logical plan for getting from here to there", where the here is the research questions, and then there are the results and the discussions. This plan involves collecting, analysing, and interpreting data and is a work plan to avoid pitfalls during the study (Yin, 2014, p. 29). This thesis has used a qualitative design and methodology to help answer the posed research questions. These methods are the most useful for getting in-depth knowledge about an issue or place and bringing the individuals' perspectives. Using qualitative methods for inquiry seeks to discover what people do in their everyday lives and what their actions mean to them; it is focused on the qualities of things, not their quantities of them (Denzin & Lincoln, 2018, p. 87). In qualitative research, the focus is to find and see the meaning from the perspectives of the individual that is studied and how they are and try to understand the processes of them being in a particular way (Järvinen & Mik-Meyer, 2020).

4.2.1 Case Study Design

The thesis has adopted a multiple case-study approaches to inquire in-depth about the specific settings of each case and to be able to answer the research questions. A case study is described by Yin (2014, p. 237) as "a study that investigates a contemporary phenomenon in depth and its real-world context". It is a type of inquiry, as well as the object of the study, and it allows for multiple sources of information (Creswell, 2013, p. 97). The choice of having two case studies instead of one has been made for two main reasons; initially, the main point was to be able to investigate two geographical contexts. However, as the study progressed, it also became apparent that having two case studies would be useful to see contrasts and similarities in other ways as well. As Eisenhardt (1991) explains, having two different cases can pinpoint and draw upon similar parts to link to phenomena, further, it can help with the bigger picture. Further, it helped enlarge the sample of stakeholders to attain more different perspectives. The cases are as explained in the background the two planned wind energy developments selected with their respective stakeholders and subsequentially, the units of analysis are the different stakeholders within each case.

In this thesis, the traditional logic of constant units of analysis needs to be considered on behalf of the logic of tracing across the analysis units instead, as Bartlett and Vavrus (2017) suggested. This entails looking at links and tracing these across places, space and time and

trying to understand how things are influenced by actors and events at distinct locations and different scales. As the units of analysis in this study are stakeholders constantly changing within and around the case study and the context in which they exist is influenced by history, current politics and culture, boundaries to the cases are challenging to set(Bartlett & Vavrus, 2017). Instead, the case studies are seen as windows to broader phenomena, which means gaining insight into the stakeholder's perspectives. By doing it this way, the relations and dynamic aspects of the cases are regarded and also the complexities within and between stakeholder groups (Bartlett & Vavrus, 2017). The aim is for this approach to reveal new and surprising findings even though they may be complex(Bartlett & Vavrus, 2017)

4.2.2 Sampling of Case Studies

The sampling of case studies for the thesis was done purposively. Sampling refers to the selection of units of analysis that relate to the posed research question, and purposive sampling, especially, is designed this way (Bryman, 2016, p. 408). The selection was a rigorous process involving multiple de-limitations to enable a conscious and skilled choice. The sampling process and the criteria will be explained below.

The Swedish national land surveyor mapping service *Vindbrukskollen* was used as the case studies search site. The Swedish County administrative boards and private actors provide the data that includes information on planning, developing, or building wind power sites.

Primarily, the study focused the search on projects that are not yet built, i.e., in the planning and development phase. The reasoning was based on the convenience of finding and interviewing respondents. It was assumed that it is easier and more relevant to address and share perspectives on developments that have yet to be decided upon; this gives room to communicate without having the limiting factor of an already made decision.

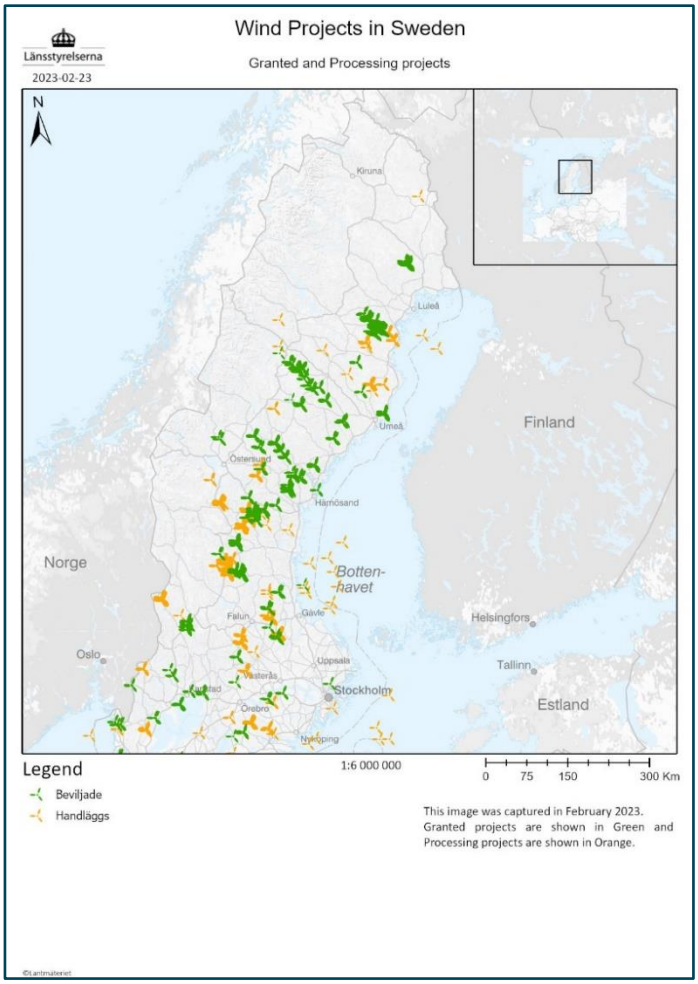

FIGURE 3 MAP SHOWING GRANTED AND PROCESSING WIND DEVELOPMENTS IN SWEDEN, FEBRUARY 2023. COPYRIGHT: LANTMÄTERIET (2023)

Using the mapping service, a list of projects was compiled based on a list of primary criteria:

- The cases should be in the counties related to electricity areas SE1 and SE2 in Sweden. Some cases may be in SE3 but should be in the same counties. This choice assumes that many new projects are being built in the middle and northern regions of the country and that there is value in focusing on these contexts at this point in time. The SE1, SE2, and parts of SE3 electricity area are in the northern regions.
- They should be labelled as either *in processing* or *granted* in Vindbrukskollen.

Following that, through the mapping service, Excel spreadsheets were downloaded for the counties related to SE1 and SE2 and partly SE3. These are:

- SE1 Luleå: Norrbotten County and parts of Västerbotten county.

- SE2 Sundsvall: Västernorrland County, Jämtland County, Västerbotten County, parts of Gävleborg County and parts of Dalarna County.
- SE3: Parts of Gävleborg County and parts of Dalarna County.

Using these first delimitation criteria, a list of seventy-three projects that fit the criteria as outlined above was compiled. In this list, the name, the status, the number of turbines planned, the height of the turbines, which municipality it was planned in, which electricity area, and the last update on the map service was outlined. For these seventy-three projects, the study conducted a basic internet search using Google to get some preliminary details on each project; these details included, for example, what phase the project was in if granted, potential conflicts already raised, amount of readily available information, changes in the applications and so on. Many projects in the given categories were already in the building phase, which then led to exclusion, for the reasons outlined above concerning convenience and relevance for reaching out to respondents. Following this, the list was narrowed down to 32 projects.

With that list of projects, the delimitation proceeded with the following criteria:

- The cases should be considered significant, according to the Swedish Energy Agency; this implies more than seven turbines planned in the same area, all with a height >150 m (Energimyndigheten, 2022b).
- The cases should be in the planning phase past the consultation process. This is because projects without this consultation have limited information and may have fewer informed stakeholders. I.e., residents may be unaware or more challenging to reach. Thus, for convenience reasons, this criterion was made.
- The case should be subjected to conflict, e.g., from environmental or public resistance. In the small scope of this thesis, there is more to attain from a case with conflict than one without; stakeholders may be more invested. However, in a more extensive study, there is, of course, value in looking at both types to understand the differences between them as well.

Finally, the cases were chosen based on geographical differences, i.e., they should be in different counties and electricity areas, to create more variation between them and within the thesis. The choice of cases also depended on fieldwork convenience as the ambition was to

pursue as many interviews as possible physically and in-person. With this process, the choice of case studies landed on the two that was presented in chapter 3: Käymävaara Vindkraftpark in Pajala Municipality in Norrbotten County and Galmsjömyran in Gävleborg County.

4.2.3 Sampling of Respondents

Similarly, to the selection of case studies, the stakeholders were sampled purposively. Respondents were sampled from different stakeholder groups, and the study applied a maximum variation approach to ensure a wide distribution among the perspective and an attempt to avoid biases. Additionally, snowball sampling was made by asking respondents to refer to other relevant stakeholder groups (Suri, 2011). As mentioned in the background, a preliminary list based on the factors related to wind energy was made when identifying stakeholders. Additionally, I used the background of the case studies to identify the remaining groups and find respondents.

As shown in Table 1 below, the thesis identified the following stakeholder groups and developed a matrix with subsets to guide the respondents' sampling.

TABLE 1 STAKEHOLDER GROUPS AND SUBSET WITH SUGGESTED CONTACT SURFACES

Stakeholder category	Potential Subset of stakeholder category/Informants	Contact surface
Municipality	• Municipality Board. • Planning Division.	Municipal website.
Wind power company	• Directors. • Project Managers.	Wind company website.
Local population	• Residents close to the project. • Working in an area close by. • Local Community Organizations.	Newspaper articles, Facebook groups, websites, and local organisations related to wind power.
Nature and biodiversity /Environmental	• Nature experts in the local area	Local environmental organizations' websites

Organisations/NGOs	• Local environmental organisations	
Indigenous community	• Local Representatives. • Members of the community living or working in the area.	Contact information forms and community websites.
Industries/Local Firms	• Larger industries or companies in the municipality.	Municipal website, statistics on more prominent industries.

In the sampling process, groups and individuals were contacted through the contact surfaces, as shown in Table 1. As contact was initiated, the potential respondents were given information about the project, the purpose, and their potential role. They were asked for participation in the form of respondents in semi-structured interviews. Prior to the interview, each respondent that had agreed to participate was given more detailed information about their participation, about the projects' data management and confidentiality procedures. In this part of the process, they were also asked to sign a consent form before the interview was to be conducted.

Not all stakeholders from the list in Table 1 are represented in the study because they either objected to participation or did not respond to contact attempts. This sampling process took place over a period of 3 weeks, and in the next section the data collection from this sampling process is described further.

4.3 Data Collection – Semi-Structured Interviews

As explained, the thesis seeks to explore stakeholders' perspectives. Thus, the data collection was based on semi-structured interviews with individuals from different stakeholder groups. The fieldwork consisted of 18 interviews conducted over three weeks in March 2023. Some were digital, and some were in person; this was decided based on convenience for both researcher and respondents. Most interviews were with only one individual, but in three of the interviews, several respondents were present at the same time. Seventeen interviews were done in Swedish, and one was conducted in English. See a complete list of the interviewees and information length and location in Appendix 2.

Qualitative interviews focus on the participant's point of view and it is a flexible method that encourages the reflexivity of the researcher and the interview guide and format (Bryman, 2016, pp. 466-467). In a semi-structured interview, the themes and topics are guided, usually by a pre-designed guide, but there is room for the interviewee to guide the answers where they want (Bryman, 2016, p. 468). The interview guide is a schedule that helps structure the issues or themes to be covered in the interview; it is a flexible document. For the purpose of this study, the interview guide was designed to be open-ended, and each interview departed from the same themes and questions. Primarily, the focus was on understanding the respondent's relation to the wind power case and hearing their specific perspective. All questions were not answered in all of the interviews, as different stakeholder groups have diverse backgrounds and knowledge frames. But the most frequent questions were asked to all of the respondents, and some more specific were asked only to stakeholders or actors that had a clear role or relation, for example regarding the consultation process, not all respondents took part and thus, those questions were naturally not answered. This was naturally guided by the respondent's answers and helped guide the interview forward and aid me in asking the questions as a researcher. For the interview guide, see Appendix 1.

4.4 Data Analysis

Qualitative data analysis can be made in diverse ways, but eventually, it seeks to capture the social's complexities and explain something within a context (Punch, 2005, pp. 194-195). In this study, the analysis has been conducted with this understanding as a backdrop and the main data analysis method is thematic analysis. As Punch (2005, p. 195) highlights, the methods for the research need to be transparent – i.e., systematic and explained. Thus, the process of analysis is explained in the following sections.

4.4.1 Data Management

After the data collection process was finalised, all the interviews were transcribed word-by-word. Repetitions and studders, as well as noise, disturbances such as individuals outside the interview or dog barks, were removed to make the analysis more manageable and the transcripts more comprehensible. The interviews were transcribed in the language they were held in. Thus 17 transcripts are in Swedish, and one is in English. The transcription was made as accurately as possible using word-by-word. However, some repetitions and 'studders' were removed to ease the analysis. Any quotes from the interviews presented in this thesis are

directly translated by the author from Swedish to English. However, they are only presented in English as the analysis is of the content, not the language. The transcriptions were uploaded to the Qualitative Software NVivo for further analysis. Using qualitative data analysis software aids with the large data set and helps create structure (Bryman, 2016, p. 617). The software helped visualize and structure the coding, hopefully adding to the research's validity.

4.4.2 Thematic Analysis

Thematic analysis was chosen as a method for analysis because it can be applied to large sets of data, and it is an analytical method for a range of disciplines in the social sciences (Nowell et al., 2017). The technique is used to identify, analyse, organise, describe and report on themes that the researcher finds within the data (Braun & Clarke, 2022, p. 34). As highlighted by Braun and Clarke (2022, pp. 7-8), the method can be used to examine and understand the perspectives of research participants to highlight variations and find surprises; this requires reflexivity and immersion into the data. Nowell et al. (2017) developed a framework to ensure the trustworthiness of the stages of thematic analysis as it is a newly growing method of analysis, and there needs to be more literature on its structure of it. Their structure provided a baseline for the analytical pathway in this thesis. The first phase started before the interviews began and continued throughout the collection period. This was a process of familiarising with the data and organising it. The initial coding scheme was developed as a second phase (Nowell et al., 2017). It began to form through a compilation of raw notes and from the first read-throughs of the transcription process. The coding scheme is two-fold, one section related to the first research question in which the thematic analysis was done inductively, and one section related to the energy justice framework, in which the themes were created based on the three tenets: distributional justice, procedural justice, and recognition justice. Then, the thematic analysis was an iterative process of searching for, reviewing, and defining themes. In the first round of analysis, I focused on the first question, 1) "*How do the stakeholders in the two cases view justice?*". The coding scheme primarily focused on the respondents' perspectives on fairness, the allocations of benefits and ills, and their emotional responses. The second round of analysis focused on research question number two, 2) "*How can the energy justice framework help understand the conflict of these two cases?*". In this round, the coding was done after the energy justice framework. See the full coding scheme in Appendix 3.

4.5 Ethical Considerations & Considerations of Research Practise

All social research has ethical issues, as data is collected from and about people (Punch, 2005, p. 276). Edwards and Mauthner (2012, p. 14) write that ethics is about dealing with conflict, not about attempts to eliminate it; further, they emphasise that attention to ethical dilemmas is essential for ethical actions. This thesis involves many individuals and groups, all with relations within and between groups. Thus, they are inherently in conflict with diverse needs and ambitions. As argued then, the ethical action in this study should focus on understanding the conflict rather than resolving it (Edwards & Mauthner, 2012, pp. 14-15). This consideration has been important throughout the study, highlighting the importance of balancing perspectives and communicating them respectfully.

Ethics and methods are closely linked (Leer-Salvesen & Leer-Salvesen, 2022, p. 88). One common mistake is that the researcher overly plans the process; it is a type of confirmation bias. Leer-Salvesen and Leer-Salvesen (2022, p. 88) propose that one should try and keep some mystery in the data and that it should still be able to surprise the researcher; the pre-conceived notions of the researcher should be nuanced, corrected, or falsified rather than just confirmed. I have reflected upon this and understand the potential limitation of my own biases. During my research, I have taken time to contemplate the significance of my work. Why is it important? Apart from addressing climate change, it is a study that links energy research to society. Numerous factors impact wind power development, and there are multiple perspectives to consider. I am grateful for the respondent's trust in me, and I take my role seriously and with humility.

Practically, I have committed to following the *Guidelines for Research Ethics in the Social Sciences, Humanities, Law, and Theology* (NESH;, 2022) and assessing the processing of personal data during the thesis work. Before the study, I ensured that I submitted and got approval for a notification form to the *Norwegian Centre for Research Data;* see Appendix 4 for the notification form. This ensures that the project's data management plan is aligned with data protection legislation in Norway. Following this, I also ensured that all informants were informed about the study and gave their informed consent before conducting the interviews. They were informed about the type of study, how they would be referred to in the research and how they could access their data, e.g., see the transcription during the project's duration. They also had the opportunity to ask questions or retract consent at any time. To ensure safe

data storage, the recordings were uploaded to the university's secure server SILAF at the earliest convenience, and following the completion of this project the recordings and transcriptions will be deleted.

4.6 Limitations

These limitations are presented to understand how the findings should be understood, and they also highlight potential points of departure for future studies, which is elaborated on in the concluding chapter. This study takes a social science approach to understanding energy by focusing on the perceptions and thoughts of different stakeholders, rather than just technical and other factors. While other types of research are also important, the aim of this study is to widen the scope of energy research beyond just technical details. The thesis argues that the conflicts and controversies surrounding wind power developments are not just about specific details or events, but also stem from the differing perspectives of stakeholders. Therefore, instead of seeking objective truth, this study aims to analyze variations in perceptions. Recognising the validity of each stakeholder's perspective is important, as it reflects their viewpoint without speculating about right or wrong. The limitation of this may be that the perspectives chosen or presented are too subjective, and objective details may be left out. A broader study could compensate for this by adding data from other sources such as environmental impact assessments, applications, debate articles, and chronicles.

Case studies are usually criticized for not having enough data or systemization, and that it is difficult to draw generalizations from the results of the case studies. This may be a limitation in this thesis, building on the previous point, that it could have benefitted from a mixed-methods approach to increase rigor. However, to mitigate these critiques, data collection and clearly explained and deliberate choices can be helpful; the focus is not to generalize statistically, but rather add to the theory and to provide in-depth and real-life contextual understanding about the phenomenon of wind power conflicts in Sweden (Idowu, 2016).

With these points in mind, the major limitation of this thesis relates to the stakeholders involved, the sampling process and the composition of these within the cases. Although the study attempted to contact all relevant stakeholders using purposive and snowball sampling it was restrained due to time and budget constraints. In this study, more residents were interviewed than developers because there were multiple residents but only one developer per case. To improve future studies, adding more cases with quantitatively more data could

help mitigate this imbalance. Another example is that the study brought in local environmental organizations to provide nature's perspective, but it could not cover all aspects of nature of course. A more in-depth analysis could involve interviews with a biologist or an expert on nature's perspective. Further, attempts were made to gain insights from municipality employees, but only politicians responded and participated in this case. With these examples in mind and the understanding that perspectives of the case studies are incredibly diverse, it is essential to acknowledge that other stakeholders may have been overlooked, and their perspectives could have been captured as well if the study was pursued over a longer time. This limitation is central to the understanding of the data, as the potentially missing perspectives could have changed the analysis. However, it is understood in the analysis that this is important and as mentioned, it is perhaps not the specific perspectives, but how they differ that is the interesting findings of this study. Another limitation and note regards the timing of this study. This study was conducted before the municipalities made their veto decisions and cannot be applied to other situations or periods. Therefore, it is important to bear in mind that this piece of research is limited to the specificity of the time and these stakeholders.

Lastly, the limitation of me as a junior researcher in these complex cases can be understood partly as described in relation to social constructivism and also here as understanding how my personal background and my outside perspective may have influenced the responses in the interviews. For example, the interviews conducted in-person were no longer in duration than the digital ones, but potentially more naturally flowing. In those interviews I also interacted with the respondents for some time before the interview started, which may have influenced how the respondents answered their questions.

5 Analysis

This thesis aimed to investigate how the concept of energy justice could shed light on conflicted wind power developments, and to do so, it has used two main research questions: 1) *How do the stakeholders in the two cases view justice?* and 2) *How can the energy justice framework help understand the conflict of these two cases?* The study has found that the research design with two cases at hand aided in the distinction of certain key aspects of wind power cases in Sweden within the analysis: especially in terms of the importance of local context and case-by-case understanding when discussing energy justice. The analysis has not aimed to compare the cases, but by putting them side by side, and grouping stakeholders it was found that there are certain findings that can be traced across the cases and also findings that are distinct for each localization. This chapter will first address the first question and outline how stakeholders in each case discussed justice, both generally and about the specific wind power cases. Secondly, it will address the findings of the analysis on how the energy justice framework can help in comprehending the wind power conflicts in Galmsjömyran and Käymävaara.

5.1 Understanding Stakeholders' Perspectives on Justice in the Wind Power Developments

When analysing the stakeholder's view of justice in general and in relation to the wind power projects, it became evident that stakeholders held varying perspectives on justice. Through data collection, management, and analysis using the analytical framework and coding scheme, two main themes emerged: spatial and temporal scale. Regarding spatial scale and justice, stakeholder perspectives varied between their focus, either on a more local level, a regional, a national or a global scale. Regarding temporal scale, the accounts displayed that justice was considered across multiple temporal dimensions, e.g., focus on history or the present, compared to a focus on future generations. The discussion of scale is not mutually exclusive, as time and space are also interconnected themes. Thus, there may be some findings echoed in both 5.1.1 and 5.1.2.

5.1.1 *Spatial Scale – Justice Across Space*

The views of justice across space emphasised the differences in where the stakeholders' perceptions of justice occurred, i.e., from what spatial perspective they departed from when considering justice, especially related to the specific wind power cases. The various perspectives will be categorized by stakeholder group and explained further. However, a summary of the results is provided in Table 2 below.

TABLE 2 SUMMARY OF PERSPECTIVES ON JUSTICE ACROSS SCALES

Stakeholders	Galmsjömyran	Käymävaara
Wind Power Developers	Justice was intricately linked to energy consumption and the location of the demand. Responsibility for green transition should be encompassed by all of society. Recognised historical exploitation of northern regions.	Justice was intricately linked to energy consumption and the location of the demand. Responsibility for green transition should be encompassed by all of society. Recognised historical exploitation of northern regions.
Municipality Politicians	Justice was linked to the municipality's local need for electricity. Justice was primarily viewed on a societal scale. Recognised historical exploitation of northern regions.	Justice in energy production was a topic of discussion, with concerns that the northern regions should not carry the burden alone. The Käymävaara wind project was suggested as a potential source for economic development and job creation, emphasising justice on a societal scale.
Local Environmental Organisations	Justice for nature was not focused on within processes; justice for nature was seen locally. Reflections on the notion of national and regional scales for justice in terms of environmental protection were made in general.	Justice for nature was not seen, as perspective is disregarded or disvalued in planning and decision-making. Local and societal focus on justice, but nature has no borders; justice would be equal to no new developments.
Residents	Justice was primarily viewed from a micro-scale, where the local is central. Rural-peripheral vs urban as spatial justice. Adverse local impacts were seen as unjust. Would consider relocating if compensation were provided for the reduction of property values.	Justice was viewed here as local and grounded in local culture and values. Adverse local impacts were seen as unjust. Rural-peripheral vs urban as spatial justice.
Landowner	Viewed justice as inherently part of legal and regulatory frameworks on a national and societal level.	n/a
Industry	General reflections on justice. Access to fossil-free energy nationally was seen as creating more justice in Sweden and a more global context.	n/a

While the perspectives presented below highlight the central understanding of each stakeholder group, the views presented are not mutually exclusive, and while respondents may emphasise one particular level, it does not imply that they only understand justice on that scale, rather that it is their point of departure.

Developers

The wind power developers were leading actors in the wind power developments as they are instigators and drivers of the process. In both case studies, it was seen that the developers focused their views of justice on a societal or national scale, and their accounts related justice to a more extensive discussion on the supply and demand of electricity generation, and second, the accountability and responsibility that is attached to that, i.e., a discussion of responsibility and who should take that responsibility in society. As the quote below shows, justice was related to a larger societal level.

> *"**So, to begin with, I think that all people have the right to electricity for justice reasons**. That is the fundamental thing, I think, because it is a central part of a civilization, and you, as a citizen, have the opportunity to live, work, and survive. It is a fundamental matter of justice that everyone should have electricity."*
> *– Wind Power Developer, Galmsjömyran.*

According to the developers in Galmsjömyran and Käymävaara, electricity and renewable energy demand were important in their decision-making process. Electric demand is expected to rise, and both developers acknowledged their societal responsibility to contribute to this development. As stated in the following quote, it is an underlying assumption that the electricity demand will increase.

> *"We do not see that the electricity belongs to anyone because the wind farm is there. However, everyone will need more electricity. **All of us shall electrify the whole society with vehicles, with transport and with industry**. So, an incredible amount more electricity will be needed and then, as I said at the beginning, wind power is the fastest to expand." – Wind Power Developer, Käymävaara.*

Justice in wind power developments was seen as energy access, where wind power companies were responsible for developing more clean energy. The developers stated that aside from their efforts, society and local communities were also responsible for promoting and supporting the transition towards sustainable energy production, i.e., by accepting that there may be energy infrastructure close to their properties.

They emphasised wind power's national distribution and location and the historical north-south distributional inequality. Although the case studies are in distinct locations with differing perspectives on north and south, this aspect remained important to both developers. In Galmsjömyran, the developer brought attention to the issue of national distribution and fairness, stating that the burden of production should not solely fall on the northern regions, which have already contributed to the past. On the other hand, developers in Käymävaara recognised the historical discrepancies in distribution and exploitation. However, they did not consider it a valid argument against fairness in their projects, as they are taking a wider perspective on justice.

> *"So, hydropower became our main source of energy. It is clear that many people up here think that we have already contributed here; we have had a lot of our local environment destroyed by exploiting the rivers/…/.* ***We think we have done our part. But we don't see it that way in our business****." – Wind Power Developer, Käymävaara*

In both scenarios, the wind power developers prioritized promoting justice on a broader scale. The emphasis on justice was centered around national renewable energy production, with a focus on aligning energy needs and demands with production and assigning responsibility for justice.

Municipality

Much like the developers, in wind power development, the municipalities played a significant role in processes of concession and for decision-making in these cases. Their views on justice aligned with the developers' continued focus on north-south developments. For instance, a municipal politician from Käymävaara highlighted this:

> *"****I would say that energy production is linked to justice - then I would say that southern Sweden has homework****. I don't know if... I think it's challenging to go*

into exact details – but I think that if you look at wind power, I think that if you want more energy for Sweden, then it is not enough to say that everything should be placed in Norrbotten. They only look at transmission, capacities, and things like that. That's what it means. They must produce more in the southern regions." – Municipal Politician, Käymävaara.

During discussions in Galmsjömyran, the local politicians emphasized the importance of producing energy where the demand is highest. This means that if the demand for energy is increasing in the southern or industrial regions, which is where the energy should be produced. They believed that it is not fair for others to take responsibility for fulfilling the energy demands of Sandviken municipality, as the electricity demand is continuously increasing. Therefore, Sandviken should also consider increasing its energy production within the municipality to work towards a more just energy transition.

The politicians expressed concerns about justice at a national level regarding fair development and distribution. They acknowledged the potential negative impacts on residents near wind power developments and nature. However, they believed that justice should not only be considered on a local scale even though energy production infrastructure is inherently local, and they further agreed that wind power developers and everyone involved in energy production have a responsibility to make sacrifices for the greater good, as part of their perspective on justice, including residents.

Local Environmental Organisations

In both cases, local environmental organizations were invited to share their thoughts on nature as a significant stakeholder. However, their views also centered on the human aspect as they are not experts on e.g., biodiversity, but rather on individuals campaigning for environmental protection and valuation; they emphasized the importance of giving nature more consideration and not overshadowing it with other interests. While they acknowledged the necessity of renewable energy production for climate change mitigation and clean energy, they also stressed the need to understand and address the impact of wind power developments on nature. The organizations emphasized the need for better knowledge and practices to ensure justice for nature as a stakeholder, when discussing justice, the two representatives emphasized the complexity of incorporating nature as a stakeholder due to

its lack of borders and the presence of conflicting intrinsic natural values. Thus, discussing justice in terms of spatial scale can be challenging. At Galmsjömyran, the representative from the local environmental organization expressed concern about achieving justice in energy developments with the challenges posed by factors such as cost, efficiency, and speed of deployment. To tackle these issues and promote environmental equity, they suggested exploring offshore wind as a viable alternative to onshore projects. Both local environmental organisations highlighted how the country has already seen significant exploitation of nature due to energy development, including onshore wind and hydropower. Therefore, achieving justice across scale and space would require less exploitation, which could be potentially achieved through offshore projects as argued by the local environmental organisations in both cases.

> *"It will always be the case that there will be places where it will be, if you only talk about wind power, where it fits better with wind power and where it should be. Well, what to say, rational that it should work well and give enough power from it. And these sea-based power plants I think are great that they get in place as soon as possible. They say it takes a very long time to get them there compared to the ones here that are built up on the mountains" – Local Environmental Organization, Galmsjömyran.*

In both cases, the organizations stressed the importance of understanding nature values and contexts to guide decision-making from an environmental and biodiversity perspective. Justice, in their view, involved considering the impact of projects on the environment and promoting better understanding of nature values. The respondent from Käymävaara emphasized the importance of considering nature as a stakeholder and treating it with the same level of seriousness as other interests. They argued that true justice for the environment would mean protecting it from harmful wind power infrastructure.

> *"Not in the discussions, the natural values. There is the basis. It must be in the EIA. But it falls back into the background. How much does it weigh? /…/ You follow the legislation and see the documentation and opinions. /…/ No matter where you are. But nature is not raised up. It is not in the first line of priority." – Local Environmental Organisation, Käymävaara.*

The local environmental organizations were primarily focused on justice from a broad perspective that transcends micro and macro scales, placing nature at the forefront of their

concerns. Their accounts raised the concern that nature and biodiversity is not a prioritized value in wind power developments in Galmsjömyran and in Käymävaara to the same extent as other factors.

Residents

The largest stakeholder group in the study consisted of residents who had a personal connection to the two case studies. Due to the diverse range of individuals, the findings provided a more inclusive and varied perspective on justice. The residents' viewpoints were primarily focused on a micro-scale, specifically on individuals or smaller groups impacted by the developments. They emphasized justice for themselves, and the local communities directly linked to the wind power developments, and how the physical infrastructure would affect their living environments. While there were some reflections on justice at a national level, particularly regarding climate change mitigation and renewable energy, these were infrequent and not strongly expressed, and did not change the perspective of viewing justice locally as equally important. These perspectives manifest themselves as explained below.

In both case studies, as they are situated in rural areas, residents expressed concerns and feelings of unfairness towards significant infrastructure developments contrasted against more urban areas. These perspectives were inherently grounded in the rural-peripheral contexts, where they reside and do not necessarily benefit from the developments, i.e., regional, or municipal scale benefits may not reach them at the local level, highlighting a scalar injustice. Regarding this matter, with regards to the justice concerning wind power developments in these two cases, a resident involved in the Käymävaara case emphasizes the importance of providing incentives or benefits to those affected by the wind power project as a part of the justice system.

> *"**Justice would be that where the energy is produced, there must also be incentives for the local population**. You also must consider what an investment like this is; if you want to talk about pure wind power or nuclear power, what it will do to the population living in the area, to the entrepreneurs living in the area, to animals and the biological diversity." – Resident 4, Käymävaara.*

It was argued that residents should not be burdened with the responsibility of achieving justice on a local level without adequate compensation to alleviate the distribution of such

burdens. While some residents in both cases shared the same sentiments as resident 4 in Käymävaara, emphasising the significance of comprehending the nationwide spread of wind power advancements but acknowledging the need for compensation, others in both cases expressed opposition to wind power overall. They questioned the necessity for more exploitation and development within the municipality, given that it already contributes to energy production via hydro, wind power, or both. The interviews also delved into the topic of national justice, raising concerns about responsibility and accountability, with discussions touching on individual, municipal, and national responsibility in general for energy and fairness in energy distribution.

Justice viewed by residents was inherently linked to the process, which will be further explored in section 5.2, where findings from the analysis of energy justice related to the conflicts are presented. During the interviews, multiple residents shared their perspectives, and one topic that stood out was the consultation process. Many residents felt that transparency and communication were lacking, leading to feelings of insecurity, distress, and fear. This was a common sentiment shared by respondents. Additionally, justice was seen as being related to the ability to participate in the process, with one resident in Käymävaara highlighting the importance of involving all stakeholders and generations, including children who do not have voting rights or the ability to lobby.

> *"You know, around 30 people here registered, I think 29. Ten of them are children, you know, they cannot vote, they have no impact, they can't lobby anybody.* ***But they will be affected. That's unfair****."*
> *– Resident in interview 2, Käymävaara.*

This sentiment emphasizes how spatial and temporal scales are interconnected, as it considers future generations and their justice not just on a general or global scale, but also on smaller, local scales. Specifically, in Käymävaara, residents have described the region as historically significant and generational housing is common, suggesting that the place has held importance over time.

Landowner

The study did not include the landowners in Käymävaara as they declined to participate. However, the landowner representative in Galmsjömyran showed that there is a prevailing perspective like that of the developers and the municipalities as justice or general reflections on justice was made on a national or societal spatial scale rather than the local. However, the landowner further emphasized and addressed wind energy's physical and legislative limitations, which could potentially impact the development progression and affect fairness in decision-making. This perspective of justice in wind power developments highlighted that many aspects could guide justice in the developments, and that it is both related to geopolitical aspects as well as national planning and legislation.

> *"We have rules that mean you cannot build anywhere. And where to build, then? It is governed by different things, by purely physical facts and our legislation. Then* ***whether it is fair or not****, there is not much you can do about it*." – Landowner Representative, Galmsjömyran

Industry

There was no clear expression of views regarding spatial scales of justice and wind power from an industrial perspective. As one of the stakeholder groups with the least direct link to the wind power project, their concerns and reflections were more general than local, and case grounded. However, they expressed their urgent need for energy as they belonged to an energy-intensive sector and desire to use fossil-free resources. They viewed fossil-free energy as a necessity for both their industry and Sweden as a nation to maintain current levels of welfare in the future. Thus, reflecting on justice on a national and societal scale, where energy is part of the welfare state.

5.1.2 *Temporal Aspect – Justice Across Time*

The views of justice across time focused both on justice historically, in the present, and also for future generations – and was in some cases related to justice as an effect of renewable energy, but in other cases as an effect of environmental protection and no wind power developments. As such, this theme is intrinsically linked to the spatial scales and how justice is viewed there. Similarly, to the section above, the various perspectives will be categorized by stakeholder group and explained further; a summary of the results is provided in Table 3 below.

TABLE 3 SUMMARY OF PERSPECTIVES ON JUSTICE ACROSS

Stakeholders	Galmsjömyran	Käymävaara
Wind Power Developers	Focused on future generations need for electricity and renewable energy based on assumptions of increased need.	Focused on future generations need for electricity and renewable energy based on assumptions of increased need.
Municipality Politicians	Recognised the complexity of justice across time, as the municipality has a responsibility for both current and future generations.	Recognised the complexity of justice across time, as the municipality has a responsibility for both current and future generations. Additionally, reflected on the region's economic opportunities in the future and how wind power might affect it.
Local Environmental Organisations	Justice for nature over time is difficult as nature's timing and process are slower than humans and take place over a prolonged period. Restoration is difficult to know, and it is difficult to restore all of the ecosystem, e.g., mycorrhiza.	Justice for nature over time is difficult as nature's timing and process are slower than humans and take place over a prolonged period. Restoration is difficult to know, considerations of geology and wetlands.
Residents	Focused on the direct impacts and timing of justice is related to the present, i.e., the development process and the direct impacts. Reflections on how future generations will or can live in the area.	Focused on the direct impacts and timing of justice is related to the present, i.e., the development process and the direct impacts. Reflections on how future generations will or can live in the area.
Landowner	No reflection on temporal scales of justice.	n/a
Industry	No reflection on temporal scales of justice.	n/a

Developers

Wind power developers prioritised scalability and future planning, particularly ensuring equitable energy access over time. This forward-thinking approach raised important questions about meeting future energy demands through effective planning, and in the quote from the developer in Galmsjömyran, it is highlighted that it is important for this aspect that the wind

power developments are accelerated and that the process is one of the biggest hinders for that.

> *"…it is important to be always careful because electricity consumption will double within 20 years. And since the processes take so long to get new electricity production, it is incredibly important that the permit processes are made more efficient. Otherwise, we will not make it. As it looks now* ***according to the Swedish TSO Svenska Kraftnät****[1]*, *there will be an electricity deficit as early as 2027. From being a surplus of almost 20 percent in 2022, we will move towards a deficit as early as 2027." – Wind Power Developer, Galmsjömyran.*

In Käymävaara, developers also emphasised the importance of considering time for justice in a longer perspective. They noted that the cumulative impact of multiple developments in the same area must be considered, and understanding the history and timing of events is important to ensuring fair development, including acknowledging other developments in the same region. An example of this is the impact of Käymävaara on the Sami village, as illustrated in the following quote:

> *"But if you look at it broadly. I mean Sami villages affected by a wind power project in the middle of their business.* ***It is difficult for them and these cumulative effects that there may be. It is difficult for them. And these cumulative effects, that there is a mine nearby, there is another wind farm that another developer built a few years ago maybe somewhere****. So, it has these cumulative effects, and then our project becomes just another, what can we say, a burden for them or a problem, a difficulty in their business." – Wind Power Developer, Käymävaara.*

Additionally, both developers emphasized the importance of understanding the historical inequalities between the North and the South in terms of spatial scale which also spills over to the temporal scale, as there is a historically grounded element and that justice concerns have changed and developed over time. Understanding this, the findings show that the developers are aware of this perspective of justice and how time can be a factor. The

[1] **The part of the quote was obtained through personal communication with the respondent after the data collection process and was not directly taken from the interview transcript.*

developers understood and highlighted the historical elements, but they were concentrated on justice for the future, mostly in terms of developing renewable energy production and energy security for future generations.

Municipal Politicians

During the interview, the politicians in Galmsjömyran emphasized the importance of considering justice for future generations. They acknowledged that decisions made today have long-lasting effects and must be approached with a forward-thinking perspective. It was emphasized that choosing not to act can also be seen as a decision with consequences for the future.

> *"Yes, then we must deal with other things going forward. And this is what I mean from the perspective of time.* ***Not doing things today also means that we have decided that something will happen in the future that we might not want****. However, we will see." – Municipal Politician, Galmsjömyran.*
>
> *Thus, we know, think we know, or all research points to climate changes that will occur will have substantial social consequences. Then the question is which social perspective we should put on.* ***Should we put future generations or our social needs here and now?*** *– Municipal Politician, Galmsjömyran.*

These quotes emphasised the complexity of justice as it is a subjective concept that shifts depending on which social perspective or justice perspective one takes. The respondent here does not necessarily take a stance on which generation to focus on. However, the perspective of justice was shown in terms of temporal scale as being encompassing not only the present, but also bringing in generations to come. In Käymävaara, the municipal politician resonated about these aspects, and further raised aspects on how justice is inherently complex. One example brought forward by the Käymävaara politician is the potential competing interests of environment and economic opportunities in the future with wind power in mind, for example in relation to tourism.

> *"The hospitality industry with us sells silence, restlessness, watching the Northern Lights. They have zeroed in on it and have carved out a pretty good niche for themselves. And gets on well with the visitor. It is also growing, the hospitality industry with us.* ***They have been extremely worried, and their***

contractors have also been worried and quite critical of the establishment."
– Municipal Politician, Käymävaara.

Local Environmental Organisations

From the nature perspective, the local environmental organisations highlighted how nature's time and timing are intrinsically disconnected from human developments, e.g., wind power. As the quote below displays, nature's usual time perspective is much longer than humans, recognising the length of time it takes for nature to recover from impacts.

> ***"And so, it is in this time perspective. You have 30 years, a short time. But then you think, it benefits our budget here for a short time, and then we will manage. But in the long term, it is the sustainability that counts. That will be there regardless of what we think and think. But we can destroy it, but it is hard to build it back up."*** *– Local Environmental Organisation, Käymävaara.*

From a nature perspective, the temporal aspect was discussed from a restorative standpoint. The environmental organisations described the restoration of these areas to take a long time, both the forest and the ground, e.g., the mycorrhiza or wetlands. Relating to justice, they highlighted then how difficult it was to discuss justice in nature's terms in these kinds of developments, as they are consequentially not on nature's terms.

Residents

Contrary to the time perspectives mentioned about the developments related to the future generations and future needs, there are perspectives, primarily from residents, about the time related to the actual process of the actual wind power development. The closer the proximity and impacts are for a group, the more concerns related to time are more focused on the direct impacts. For example, as reflected on below, where resident expresses concern over the perceived expedited process:

> *"Maybe that is what we are reacting to, that it should happen in such a short time. You were onto something. Why does it have to go so fast?" – Resident 4, Galmsjömyran.*

On the same note, residents focused on the development of new and updated legislation for wind power developments. For example, here, from a resident on how the current legal

frameworks should be better aligned with the other developments in the wind power sector, to be aligned with the fast technological developments:

> *"I think this legislation is also important. It does not keep up with technological developments." – Resident 4, Käymävaara.*

On the same theme, of justice across time, there were reflections from the residents on justice and the effects of things taking longer time. The processes of wind power developments in both these cases have taken a long time, although not unusual, and residents have raised concerns about how this affects their own justice, as prolonged processes means being a stakeholder for a prolonged time.

Landowner

From the landowner perspective on justice and time, the main reflection and view was about the process and not the effects. In Galmsjömyran, they raised the issue of how prolonged processes may impact the justice of developments and building on the reflections on justice and spatial scale, this was also reflected upon with a focus on regulatory frameworks role.

> *"The permitting process is still ongoing– –so we do not know what this… What it lands in. And… I know there are committed opponents to this– –that even if the project is scaled back, they are not going to think this is a good idea. Because it changes the landscape, and that is probably where much of the resistance lies. There will be a change." – Landowner Representative, Galmsjömyran.*

Industry

The industrial representative did not directly express their thoughts on justice over time, but they did mention the importance of meeting future energy needs and how it could affect Sweden's position in the global community. They suggested that investing in renewable energy now could make Sweden a leader in the future, while a lack of investment could lead to electricity deficiencies and fewer job opportunities, impacting society.

5.2 Understanding The Wind Power Conflicts through the Energy Justice Lens

Progressing to the second research question regarding the role of energy justice theory in comprehending the empirical results of the study, which revolves around the phenomena of conflicts between stakeholders in wind power developments in Galmsjömyran and Käymävaara, it became evident that the thesis does not concentrate on either resistance or acceptance. Rather, the findings emphasized the need to understand, with an impartial and objective view, the differences between stakeholder groups to understand the origins and drivers of the conflict. In these case studies, it was challenging to accurately analyze the causes of conflicts, their dynamics, and workable solutions that address all parties' needs and opinions and the analysis revealed that identifying the conflicting actors or stakeholders and the issues they disagree on is not simple. In essence, this was a complex undertaking.

As mentioned, the analysis adopted the three tenets as overarching themes to understand the various stakeholder perspectives. Thus, the theory has been instrumental in bringing forward similarities, differences, and noteworthy aspects between the groups. As exemplified in section 5.1, the theory's application showed that the fundamental differences in how respondents viewed justice could be traced to the different points of departure in terms of spatial and temporal scale. Building on that understanding, and further using the three-tenet framework to structure the findings, the analysis showed that there are further disparities in how stakeholders perceive each other and how they understand their distinct roles in the cases. It appears that there is some confusion regarding the role of different actors, their affiliations, and the responsibilities assigned to them – from all perspectives in this study.

As highlighted in Chapter 2, Kirsten Jenkins et al. (2016) and Lacey-Barnacle (2022) showed the significance of discussing the three tenets of energy justice in order of distribution, recognition, and procedural justice as they are interrelated; this order was applied in the analysis as well, and the following sections are structured the same.

5.2.1 Distributional Justice: economic impacts, pollution, and geography.

Three main sub-themes occurred in terms of distributional justice – or in other words – sub-themes relating to the distribution of benefits and ills. These were the economic impacts, geographical distribution, and the pollutive impacts and from these main themes, the findings highlighted how the conflicts could be related partly or how these aspects were viewed differently. The discrepancies contributed to a feedback loop, in which one aspect of injustice may contribute to other aspects of injustice or vice versa. As Liljenfeldt (2017), brought forward, wind power and distributional justice has a clear relation to scale, adding to the exploration in 5.1, and highlighted how regardless of wind power being a climate change mitigation method nationally, it is characterized by its local impact. Something that was also emphasized by a respondent in this study from the municipality related to Galmsjömyran:

> *"Well, I can say that if we look at the nation of Sweden, no matter if you are going to build nuclear power or **if you are going to build wind power** or if you are going to build hydropower or if you are going to set up solar parks, **it will happen locally**. It will not happen on a national level, but there will always be someone who will be affected. **Somewhere in the geography, it has to land**."*
> *– Municipal Politician, Galmsjömyran*

In both cases, the distribution of either economic costs or economic benefits seemed to be of central relevance both to the residents, the municipality, and the developers but in diverse ways. In Käymävaara municipality, the respondent highlighted how important it was that any financial incentive is directed towards the municipality, contrasted by the residents in both Käymävaara and Galmsjömyran voicing the need for financial incentives and compensation being directed at the directly impacted, i.e., the residents or nature. Compensation or financial incentives were discussed by different groups. From the perspective of developers, there is a legal obligation to compensate landowners for the use of wind turbines, as well as provide settlement money to local organizations for community compensation, and both developers highlighted this fact. However, residents argue that the existing compensation for remediation is inadequate. There is a discrepancy between what developers and residents consider to be fair compensation, aligned with the impacted group's perspectives on what is fair and just. The residents in both Galmsjömyran and Käymävaara raised the question of being 'bought out', as one more viable type of compensation, meaning that the developer would purchase their property at the market value before wind power developments so that there is no

economic loss for the residents, as they argue that they have themselves not chosen to be in that situation. In this discussion, one of the main differences between the different cases occurred, as in Galmsjömyran, there was a stronger will to move if proper compensation was in place. However, in Käymävaara, there is not the same rhetoric in place. Galmsjömyran residents value their quality of life, but there is a consensus that they could move if there were proper economic compensation. In Käymävaara, the accounts from the residents are mostly followed the same logic, but their values related to their homes are not only linked to monetary values; and historical ties, local culture and personal values were aspects that made the residents not express a potential will to move away from the area. A resident in Galmsjömyran summarized this well:

> *"**It is so different too, what you want. Someone might rather stay, but they get financial compensation for getting– –remove the noise and so on. But you start from what you want.** Someone thinks that then I don't want to be here. Then I get the opportunity to get the corresponding property elsewhere and so on. So that you have such a controlled process, like I can't see anything else being fair. – Local Resident 8, Galmsjömyran.*

The theme of distributional justice also shed light on how the distribution of benefits from land ownership contributed to the complexity of economic impacts and compensation. In the two cases, the land on which wind turbines are to be installed is owned by different types of constellations. In Käymävaara, the land is owned by a common forest organization, which could not participate in the study. As a result, their perspective was not included. However, residents in the case of Käymävaara highlighted an additional conflict within the wind power conflict as members of society that are part of the commons will benefit from the profits from the wind turbines, while those who live in the same area but do not own forests will not. This internal division is seen as a sorrow or issue by respondents in Käymävaara as it divided the community and families.

> *"Those who have a small or larger patch of forest around can get perhaps a wind turbine on their forest and land and then they get and then they also get a penny. **And that has divided the village into those who own and those who do not own a forest**. And many residents have their own small house and farm. And they just get hit." – Resident 5, Käymävaara.*

In contrast, the landowner in Galmsjömyran is a state-owned company, which presented a different scenario and did not necessarily contribute to a divide locally. However, questions were raised about the responsibility of that organisation to participate and take responsibility in the cases of wind power. One resident in Galmsjömyran expressed their concern with the landowner as this:

> *"I have written [to the landowner] and said it is fine…I wrote... I was shocked at the beginning…Then I wrote and asked why we should use the forest to set up wind turbines. It is completely wrong because the forest is a carbon sink. I wrote that. I feel that down to my toes. And they answered, and they have been here too. We have had them here and they have looked around a bit. And they have behaved so badly. They have made huge clearings up on Galmsjömyran. And we think that it is perhaps preparation for the fact that they have planned to set up wind turbines. We do not know, but you get suspicious." – Local Resident 2, Galmsjömyran.*

Continuing, and as highlighted in section 5.1, the aspect of scale has guided several perspectives on justice in general related to wind power developments and connecting that to geographical distribution, it was seen in the interviews that the distributional justice is understood by all stakeholders on a national level, but it is used as an argument from some and as a counter-argument for some when discussing whether there should be wind power in the specific case. The discrepancy mentioned is partly linked to the contrast between rural and urban areas. Respondents from both settings expressed feelings of being undervalued, perceived as more complacent, or misunderstood merely because they have chosen to live in a less urban area. This rural-urban aspect is a significant finding in the analysis, with several respondents, including residents, municipal politicians, the local environmental organization, and landowners in Galmsjömyran, emphasizing the need to acknowledge the rural perspective. They also point out the disproportionate impact of wind power infrastructure on rural inhabitants compared to their urban counterparts within the municipalities. A resident in Käymävaara brought forward this about incentives:

> *"Yes, so, yes, so then, yes, there are people who are saying, yes, you know, it brings economic development, or it brings technological development, but yes, that was already there before but then taken out, and so, it feels like we are only being offered what is standard for everyone else, or even below standard*

for everyone else, even though we pay the same taxes. I think taxes are often higher than in the city. " – Local Resident 2, Käymävaara.

"It feels like we have very, very little say in the ranks and understand that it is the state that decides. We have nothing more to do. But read the impact assessment, the environmental impacts. It says in one place there that this industrial investment will have very little impact on the area because there are so few people living there. ***But what? Are these people worth less because we have chosen to live in a village instead of us having chosen to live in a big city? I mean, I think that is terrible. It happens in our democracy****. After all, this is not a democracy. When you even hear then that the state wants to speed this up even more and then be able to come in and remove our vote and say that this is what we think you need to have. This is what we will do. completely scuttle people and destroy their lives. And then they say this is a green transition." – Local Resident 4, Käymävaara.*

As it was suggested by McCauley et al. (2019) the location of energy production has often been close to marginalised societies or groups, and that waste and pollution has been impactful disproportionally on certain groups or populations. From the residential perspective in both Galmsjömyran and in Käymävaara, it was expressed that this disproportional impact was an uncomfortable feeling and an experience that shaped society, currently, and potentially in the future.

Further, as it was argued by Tzoumis and Boyer (2022, p. 22), the aspect of pollution as part of energy production can be overlooked, and that impacts on human health and environment from renewable energy sources needed more focus. Pollution related to wind power cases can be discussed both in terms of wind power construction and related to the operation of the turbines. It is mentioned in these two cases as: noise and disruptive traffic during construction, impacts on the environment due to concrete fundaments, visual impacts from turbines, disturbances from blinking lights, low-frequency noise pollution from the wind turbines and potentially polluting water and soil, impacting the local environment. This is expressed below first by a resident, and then by a municipal politician:

“So, then we understood, how is this going to be? And south facing. So, we saw, we thought that the wind power would be visible when the sun goes down. Then there will be shadows and there is sound, and it is... I have learned a lot about why I do not want it now, that there are microplastics and what do you do with all the concrete foundations? You must build a lot of roads, there

will be a lot of traffic here. The concrete foundations will remain when the wind turbines have done their work. I do not normally use the park; I say industrial land." – Local Resident 2, Galmsjömyran

"In the consultations that have taken place, it has emerged that some residents of Käymäjärvi think it is great. They get better roads to the village. Käymäjärvi is quite deserted. And we can also arrange, with the construction of the wind park, we can arrange broadband and a little bit improved accessibility to Käymäjärvi. Because we will need to build solid roads to get the wind turbines there. And some in the village think that is very good. And look at it positively. It is the other faction that thinks that the Wind Power Park will disturb the view. They are afraid that it will sound away from the wind turbine and all the fears that you may have in connection with a wind power project." – Municipal Politician, Käymävaara.

As seen, the way that these pollutive impacts are discussed vary. And, surrounding this, the perspectives from the respondents in this study showed that there are misunderstandings, misconceptions, and broad differences in what is considered as pollutive and disruptive, and what is not; further, it is found that there is additional divergence in what should be prioritized when resolving conflicts or proposing solutions. An example of this involves that the respondents are described by other stakeholders as being primarily concerned about the visual impact, however, as respondents discussed impacts, the main concern has focused on the low-frequency sound, although visual impact was an issue, it was not what they were worried about the most or the most engaged about. Several respondents highlighted proximity as what could be the essential and central issue. E.g., seen here from a resident close to Galmsjömyran:

*"**I think the core issue is proximity to wind power. That is why there is so much resistance**." – Local Resident 2, Galmsjömyran.*

Moreover, increasing distance from residents could reduce the most negative impact and by effect increase distributional justice. The discussion on wind turbines' visual and pollutive aspects also involved their placement and number. With technological advancements, taller and more efficient turbines, the number of turbines may decrease, but the output of electricity may remain the same. In both cases, it is noteworthy how the original plans involved more turbines than what was ultimately decided. The decrease in turbine numbers was due to consultation and the environmental impact assessment, but perhaps also partly possible

due to modernization and technological developments. The developers in both cases viewed this as a positive effect of the consultation process, and the argument was that a reduced number is a mitigating factor and a positive result from the consultation process. However, affected residents continued to view the disturbance the same, as a reduction in the number and taller turbines without consideration of for example proximity, would not reduce the impact significantly. Residents in both cases noted this is not something that they have as an opinion because they had read it or learnt it from other sources, but rather residents conducted their research by visiting other wind parks to learn about potential impacts.

5.2.2 Recognition Justice: local culture & history and respecting residents' views without reducing it to NIMBY-ism.

Recognition justice focuses on how groups are represented, or how they are valued regarding rights and participation. It was a challenging tenet to address, regarding its relativity and how it is a complex concept in nature. The findings here are intended to serve as points of departure or discussion for recognition, but they are more reflections than decisive perspectives. It is important to note that these two cases should not be considered a complete explanation of how certain individuals or groups are either misidentified or not recognized during the process. However, the observations made under this theme highlighted the significant impact of group dynamics, norms, values, and histories that play a crucial role in such situations. In the theory chapter, as argued by Jenkins et al. (2016), recognition involves how the processes and developments acknowledge different groups and their differences in the processes or how they fail to do so. In this study, this was found for example when comparing perspectives from the residents and from the wind power developers, where the way that they described processes and aspects of the wind power processes in relation to recognising different perspectives were divergent. An example of these variations included the narratives and how the distinct groups described the process; the developers and the municipalities use the term consultation when referring to the consultation process, whereas several respondents from the residents rather refereed to the same consultations as information meetings.

In Käymävaara, the wind power developer highlighted how there were consultations with minority groups and other interest groups to recognize their needs in a specific forum. And similarly, in Galmsjömyran, there were several consultations with different stakeholders to attempt to recognize several perspectives. However, the findings from this study point to there being a potential gap regardless of these special consultation processes, as there are individuals and groups that express concerns about being misrecognized. Specifically, this is about the recognition of local culture and context, as well as the organization of people in a local area.

The study revealed the presence of Indigenous minorities around the wind power development in Käymävaara, and although the developers have held special consultations with the Indigenous community, there are clear indications of other types of local cultural history in the region, particularly as the case study is in the Tornedalen valley. The residents' group in Käymävaara shared their family history, relationships, and descriptions of the local identity of *Tornedalingar*, highlighting the existence of a distinct cultural heritage in the area. While the developers in Käymävaara have had special consultations with the Indigenous groups in the region and area, there is no mention of any consultation or recognition of the local cultural history, other than the perspectives shared by the local residents of this not being central in the wind power developments planning. The findings of this study cannot argue or validate the importance of doing so, however, the perspectives of the respondents highlighted and indicated that it is a significant local context with history and culture deeply rooted. Following the logic as noted by Fraser (1998), that the tenet of recognition justice is complex both as it involves the recognition of cultures that are not dominant, and also for the fact that justice would be to involve these in the majority, i.e., promoting participation, but also promoting that the perspectives that are in minority are participating on an equal level.

A second aspect of the recognition justice tenet found in this study relates not to the historical contexts of the case studies, but rather the current contexts, where both cases presented newly formed civil society organisations that were linked to the wind power cases, these were: *Nej till vindkraft på Galmsjömyran* and *Tornedalens Framtid*. As the analysis found these, they were similar in several ways and their main motives were the same. The analysis considered this a noteworthy discovery due to differing stakeholder perspectives of these groups; while

some stakeholders label them as activists focused only on NIMBY-ism (Not in My Backyard-ism), the groups themselves view their purposes as more diverse, and their discussions as more value-laden than just land-use interests. The analysis understood this as an aspect of potential misrecognition, which is connected partly to what was described in the previous section on distribution, that distribution of benefits and ills, also relates to what is perceived as a benefit or as an ill.

5.2.3 *Procedural Justice: transparency, communication, and the question of responsibility*

In the theory chapter, it was highlighted that procedural justice is essential for ensuring fair processes, access, and rights through participation, communication, and support from institutional and regulatory frameworks. This tenet has effectively summarized distributional and recognition justice in the surrounding decision-making processes in these cases and wind power in Sweden; and in this, the focus was primarily on transparency, and on communication. According to McCauley et al. (2013), the procedural justice principle involves disclosing relevant information and promoting engagement through institutional structures in place around wind power projects. Consequently, the mobilization of local knowledge and representative institutions are important for procedural justice.

Transparency plays a critical role in achieving procedural justice, and how knowledge is communicated, to whom, and the accessibility of information are all essential components. However, in Galmsjömyran and Käymävaara, stakeholders from several groups, but primarily residents, reported issues with miscommunication and lack of transparency. Residents expressed insecurity and fear due to their lack of understanding about the process and limited responses from government agencies, municipalities, and developers. The landowners in Galmsjömyran emphasized the importance of transparency for ensuring justice, but the processes in these two case studies were not transparent for all stakeholder groups.

> *"Perhaps the important thing is that wind power planning is not carried out in secret in any way, or that we contribute to it without it having been clear to the local population and, where appropriate, reindeer herding involved. Instead, they have been able to express their views and provide input and information at an early stage."– Landowner Representative, Galmsjömyran.*

It was particularly noted that the residents as a group raised concerns about information not reaching them and/or being withheld. There were also some of the residents that were concerned with the transparency of the process over time, and the timing of communication from the instigating actors.

> ***"I have experienced that the municipality has had more information than they have actually shared with us."*** *– Local Resident 1, Galmsjömyran.*

*"Yes, that there has been minimal communication with the owners. What runs like a red thread throughout... ... **The whole process up until now, it is really that... I feel that they... They are not really honest, quite simply."** – Local Resident 6, Galmsjömyran.*

*"They had a dialogue with the city council actually six months before, before starting over, this delimitation consultation started. **They had started inventories, without informing us who live here**." – Local Resident 6, Galmsjömyran.*

*" **We did not really know what was going on, what exactly the plans were, what exactly the impact would be, and what the timeline was…**And then we have heard, of course, when you look up information from Vattenfall, or other wind power sources, and they will tell you that everything is fine, everything is safe, there are no effects, but then seeing what other people in the village would be saying about what they have read or what they have heard from other villages or other communities that have gone through the same thing before. It is quite a different story. **So, there is this kind of disconnect between what we hear from the official sources, Vattenfall or the government or some of the big media outlets, SVT, et cetera., is very different from what we hear from people either living here or people who often come here**." – Local Resident 2, Käymävaara.*

*"You feel small, because in this project that I have come into contact with, there are seven different people who come to me in my time that I have to sacrifice. They sit there with lawyers, with lobbying companies or people. And those who work for waterfalls. Everyone has decent salaries; I can tell you when they go around here. And can work full time with this. I feel like a little David who will run and fight with Goliath. /.../**There is so much power behind this, and I do not think I even know a fraction of all the games that go on behind the scenes.**" – Local Resident 4, Käymävaara.*

"He also did not know anything about this in detail. Then I thought, how can it be that this gets this far? And no one knows. No one knows what will happen. That's how it starts. Then we begin to get bogged down in the processes surrounding this. Why was it even a question and how far had it come?" – Local Resident 5, Käymävaara.

From these statements, the thesis understood not only how important transparency was for residents, but also how important the timing of that transparency was. As was emphasized by residents, there was a sense of mistrust when developments began to take form a long time

before the consultation with the residents. Although, as mentioned by the developers, the consultation process should be in the initial stages, these early stages may be viewed differently depending on what perspective one takes in the case. Meaning that the fact that some actions and planning was taken before the consultation, in some aspect made the residents feel that they were being purposefully withheld information or kept in the dark. It was noted by the representatives from the local environmental organisations that they had limited contact with the cases, and thus, their perspectives on transparency were not direct. However, they both emphasized that they are unsure whether the environmental assessments made covered all aspects relevant to nature and environmental protection if nature was a stakeholder equally important.

"Unfortunately, it may take 10-20 years before we know where there is enough in the Environmental Code? ***Had we thought enough about what we are actually doing with nature?*** *Just as it has become with hydropower.» - Local Environmental Organisation, Galmsjömyran.*

*«****I am the mouthpiece for those who cannot speak. And then I have to speak. When you put these winds on the heights, plus all the road connections and everything you have to do, power lines for that matter as well, it affects nature.*** *These heights are preserved with forest and so on, thanks to the fact that forestry has not been done at those heights because they are inaccessible and do not grow very well either. Often fire refuges. After all, in the past, we regularly had large fires every hundred years. But now we are putting out all the fires. This affects some species of animals. Plus it is cultural monuments, conservation for insects and all the different species that depend on these particular areas.» - Local Environmental Organisation, Käymävaara.*

Related to this aspect of transparency, it was also found that communication both as a key part of the theory, but also as a central finding played a key role in distinguishing stakeholder groups perspectives, on the wind power projects, and on each other. As this was manifested in the respondents' interviews, it did so primarily by how the different groups valued and understood how communication between groups have been conducted and made throughout the cases duration. These variations in descriptions of the communication were for example seen in whether the communication was seen as good or bad. For example, in both cases, the developers shared their perspective of communication being well-executed throughout the process. In contrast, the residents in both cases have expressed concerns about it, e.g., that

communication was done in inaccessible or incomprehensible ways. This communication breakdown can perhaps be attributed to the communication's medium and content. The procedural justice tenet stresses the importance of clear and accessible communication, yet many residents struggled to understand the information provided to them during the consultation process which is where there is the most interaction. Additionally, the medium of communication (e.g., digital channels) was found to be a barrier in both Galmsjömyran and Käymävaara. It is not always possible to expect stakeholders to possess digital literacy, and in these cases, some residents did not have access to Wi-Fi, and thus, it was found that it is important to adapt information and consultation communication to fit the local context. In both Galmsjömyran and Käymävaara, there were residents that expressed that the consultations were not sufficient, and that they rather understood them as information events rather than a consultation. This narrative difference highlighted a difference on perspective that is important to understand, as the stakeholder groups understood the process differently, the findings not only showed that there are differences in opinion, but also it found that the differences lie in what they know of wind power processes, what they knew about their own role and what they knew about other roles. The reflection of roles in the project was further mentioned by the municipal politicians, as they expressed frustration and a need for clarification on this topic.

"I have had a perception I have that local residents and those who are not politically active, or parts of the construction company may not really be able to navigate who the municipality is and where. " – Municipal Politician, Käymävaara.

"Because you do not really understand when the municipality will come in and from what I understand, it is the case that the municipality can come in any number of times. I mean, we have seen it in Söderhamn, they have had a referendum and they have said yes, they have said no, they have said yes... And I think that that. Late, late, that is the way it is. And that is it. And it follows all such parts. The developer is responsible. So, it must submit the application as responsible. People do not understand this either, but they think that the municipality is responsible." – Municipal Politician, Galmsjömyran.

In both case studies, the municipal politicians mentioned that they believed there to be a confusion on the different roles of different actors related to wind power processes and

decision-making, which contributed to the confusion and frustrations within the Galmsjömyran and to the Käymävaara project. This confusion, which was difficult from this study to define, but which in effect led to confusion on where the frustrations and comments were to be made in the cases. What it did, nevertheless, is that this highlighted that frustrations about communication and roles come from a municipal level as well as a residential. This confusion linked back to the aspect of communication, as it was assumed that the residents and the non-driving stakeholders had knowledge about how wind power processes operate and how they were supposed to be carried out. The analysis found that the municipal veto as an example of this, is contested from several stakeholder groups as it was seen from different perspectives in a negative way. The underlying assumptions on what should have directed a veto decision from the municipality differ, and this reflection pointed the analysis and findings to the role of clarity and communication in regulatory frameworks related to the processes around wind power developments. As is understood by the background of wind power developments in Sweden, and how the processes work, there are several aspects already in place, for example the environmental impact assessment and the consultation process, as actions that should have been satisfying the needs of each stakeholder group in these case studies. However, it was found that that was not the case. Frustration about the processes, and about communication was expressed from all groups, however, with different outsets.

From several stakeholder's perspectives, the need for better regulatory frameworks was expressed; regardless of what they argued would be a bettering of these frameworks, it was agreed across groups that there was a need to diminish or lessen the potential for misunderstanding or interpretation. This finding did not give any clear indications as to what the changes in these frameworks would be other than the already mentioned ones regarding communication and transparency, however, the findings highlight how it is important that there is less room for interpretation and more clearly set rules around the processes, e.g., on how the consultation process should be carried out.

> *"In May, we decided that we would form an association. I did this together with two other residents. Because we thought we had to have protection. We discovered that there is no protection. /.../ But it has existed for almost two years, and we did it because we should have. We should be able to complain.*

We shall have standing in court. That is the big thing. " – Local Resident 2, Galmsjömyran.

"And then how the permit process goes from submitting the permit. But in between there was nothing… But it has taken two years. And in between, from the consultation starting and being carried out on January 31, it ended until the permit is submitted, it has been almost two years. And that is where negotiations take place under the table in courtyards, out on stumps in the forest. So, there is a lot going on there, but no one has insight during that time. And it feels like no one understands that this is where a lot happens. And all residents will be... Should I sell? Should I not sell? Can I even sell? And it feels like it is not understood by the government or the state or the municipalities. And you are just seen as a whiner." – Local Resident 8, Galmsjömyran.

Building on these quotes, the findings showed that the procedural justice tenet also highlighted the understanding of conflicts and the understanding of who is responsible for resolving these conflicts, and by extension, ensuring that justice and fairness is made. As the respondents from the different stakeholder groups shared their perspectives, and as these perspectives guided the analysis and the understanding of energy justice, these perspectives also highlighted a principal element to consider responsibility. Responsibility for justice was understood and discussed by respondents both directly and indirectly, as some raised it as a direct concern and questioned other stakeholders, and whereas some respondents raised it by expressing worry or concern about not being sure about who was responsible for ensuring justice, for example, one resident highlighted that there was an insecurity in their role, as there was no advocate for their justice other than themselves.

And the municipalities say that it is not their responsibility. We wait until the permit application comes in. There is just a vacuum in between. I would probably say that. What is a blind spot is that it cannot be seen. But there are a lot of people who are affected." – Local Resident 8, Galmsjömyran.

The stakeholders did not agree on who should take responsibility for the situation. The study revealed that distinct groups had varying opinions on the matter. Depending on the specific conflict, such as in Galmsjömyran, the residents believed that the municipality should shoulder more responsibility, while in Käymävaara, they focused on both the municipality and the

developer's role. This does not mean that the residents did not think responsibility should be shared, but rather highlights the specific accounts where responsibility was seen differently.

5.3 Summary

Justice is a crucial aspect that concerns everyone, as uncovered by various cases and stakeholder groups. However, interpretations of justice can vary based on spatial and temporal scales. This chapter has aimed to utilize the empirical findings to enhance the theory of energy justice and vice versa, as indicated in the analytical framework. Given the diverse and vast perspectives from the stakeholders, this circular process aided in the complex analysis.

Relating to the first research question, section 5.1., presented how the stakeholders' perspectives on justice could be understood through the aspects of spatial and temporal scales, and how the variations in these can be used to understand the differences in the views of justice. It was found that different stakeholder groups had different points of departure when they discussed or reflected upon justice and fairness, e.g., the residents related primarily to the micro scale or the local level, whereas the developers and municipalities approached justice from a societal or national scale. Similarly, the residents focused on justice historically and currently, whereas there were other arguments from developers and municipalities where justice for future generations in terms of climate mitigation was central. Evidently, the two cases shared many similarities, and the stakeholders' perspectives resonated across cases. The main differences between groups have been highlighted, and between cases, it primarily relates to the second part of the analysis.

In terms of the second research question, on how energy justice as a theory can be used to understand the conflicts in the two cases, section 5.2 has emphasized how the theory has pinpointed important themes, and how the findings can be connected to the theory. With an understanding of the theory of energy justice, the analysis has highlighted the weight of all the three tenets. In terms of distributional justice, the findings focused on the aspects of disproportionate economic impacts, geographical distribution of wind power nationally and placement of turbines locally, and how that placement may influence by different kinds of pollution. Here, the issue of scale reiterated itself, and the perspective of what is considered

a benefit and what is considered an ill showed the main differences. In terms of recognition of justice, the analysis highlighted two main aspects: the importance of recognising local culture and context, as well as the recognition of the newly formed culture of local organisation for the community and against wind power. These were seen as points of departure for discussion, but regardless, they highlight complexities in recognition, and the need to focus further on it. Lastly, the tenet of procedural justice tied together the perspectives from the other two tenets into an understanding of what aspects are drivers of the other two tenets justice or injustice, and in this aspect the focus and the themes surrounded transparency, communication, and the importance of regulatory frameworks. It was found that there is a consensus among the different stakeholder groups that there is a need for improvement in the regulatory frameworks, and essentially also in communication from different directions.

The analysis has used the energy justice theory as an instrument in understanding the conflicts, and the findings showed that the accounts from the 18 different interviews in several ways resonated with different themes that the energy justice framework revolves around; the findings further informed the theory by adding localized contextualization and by highlighting the need for the application of the theory to be locally grounded.

6 Discussion

This section will attempt to bring together the findings from chapter 5 and discuss them with the help of previous literature. Primarily, the discussion will continue to explore how energy justice can help understand the two case studies' conflicts. Before continuing, it is important to discuss an essential aspect of energy justice that emerged during our study: the practical value of these findings and how they can inform future conflict resolution. This raises the question of whether energy justice should be pursued as an end goal or used as a method to foster greater acceptance of energy systems. Clarifying this distinction may prove challenging, but it is important for understanding and applying the concept effectively. However, this thesis does not aim to provide a definitive answer. Instead, it emphasises the significance of comprehending local contexts, roles and responsibilities in contentious wind power projects and stakeholders' attitudes, perceptions, and worldviews. The concept of energy justice may serve as a framework for achieving a fair transition and improving public acceptance both, depending on the local context. Applying this theory to analyse two conflicts in Galmsjömyran and Käymävaara makes it apparent that the complexities extend across temporal and spatial scales, adding to the understanding of justice in section 5.1.

6.1 Energy Justice – three tenets, but one theory.

The first thing that the discussion will revolve around is the theory of energy justice yet again, and how it has been understood through three different themes, but in the findings have been shown to be one comprehensive theory that is interlinked. The interconnectedness of the three-tenet framework is an insight that the findings support. The analysis suggest, as discussed by both Jenkins et al. (2016) and Lacey-Barnacle (2022), that the tenets build on each other. It may be that injustice found related to one tenet may exacerbate the conflict even further as a positive feedback loop. The way the stakeholders and actors relate to the tenets, how they understand and reflect upon them and how they view justice in the wind power developments is essential for understanding the conflicts and levels of justice in the cases. Similar to the findings and discussions of Jenkins et al. (2016) and Lacey-Barnacle (2022), a lack of communication or coherence in how the different groups view wind power developments may contribute to the challenges facing renewable energy deployment and green transition. The aspects of distributional justice or injustice that occur are the baseline

for these two conflicts, where the distributional aspect of both the locationality of the physical infrastructure and the economic aspects create the conflict. In a Dutch study written by Kluskens et al. (2019), the results show that Local community profits are key to the acceptance of the distribution of wind power in Limburg. Combining distributional justice and transparency is preferred, as individuals do not always act solely in self-interest. Financial investment alone may not be accessible to everyone, and the distribution of profit should go to the local community; this aspect aligns with concerns about distributive justice (Kluskens et al., 2019). However, the findings suggest that this alone is not the main driver of the conflict in these two case studies; instead, it is the composite sequence where recognition justice and procedural justice are added to the argument that can help explain the conflict. As brought forward by Liljenfeldt (2017), recognition of justice could be an aspect that impedes some groups' possibility to participate in wind power planning processes. An example is how opposing groups present each other antagonistically to affect other groups' positions in the debate, as Barry et al. (2008) bring forward in the study on rhetoric between wind power opponents and supporters in the UK. McCauley et al. (2019) defined energy justice as a framework where ethical questions on energy exist and a way to understand how and who are part of the solutions. This thesis has opened the window to explore this, but the intricate details and relationships within the cases are not present in this study to the extent that allows for concrete suggestions to improve justice. Although, the findings could highlight and bring forward some main aspects to consider. For example, the importance of transparent processes as the findings suggest that that aspect reduces predictability and is related to emotional responses of fear and insecurity. Another example relates to the differences in impact and effect on different stakeholder groups. It is essential to distinguish between various stakeholder groups, particularly regarding how wind power developments will impact their lives and livelihoods, especially residents and the environment. To achieve equity, it is relevant to understand the relationships between stakeholders and their specific roles. For residents, the develop wind power development is imposed upon them without their consent or participation in decision-making. The consequences of these overarching discrepancies between stakeholders result in wind power conflicts primarily, and secondly, it reveals another significant issue: some individuals in society will be subjected to energy infrastructure developments without proper support or the ability to respond as it is now. Furthermore, it is important to examine the fairness of local engagement, where citizens must organize

themselves and invest their time and resources in participating in wind processes. The lack of structures framing wind power developments puts non-state actors, such as nature and residents, in a challenging position that must be addressed. As Lacey-Barnacle (2022) discuss in the study on civil society organisations, there is value in organisation as some in the community do not need money, skills, or social capital to participate in the consultation process when low-carbon developments occur nearby. The energy justice framework here has highlighted similar aspects as previous literature, e.g., rural-peripheral-urban complexities where there are potentially uneven geographies of wind power developments and where procedural justice issues have shown that marginalized communities and rural populations often bear negative impacts and at the same time, urban areas benefit (Carley & Konisky, 2020). O'Sullivan et al. (2020) explored how low-carbon transitions impact peripheral communities, and they find that rural communities are excluded from the decision-making process and in processes and distribution. The peripheral communities in the study's two case studies are different, but what they have in common is that they are regarded as being rural enough for wind power infrastructure not to be a disturbance or that it will be less of a disturbance. Indeed, the question is whether rural communities are disturbed less, or more? Adding the historical perspective, rural areas, especially in the North of Sweden, have from exploitation before e.g., through forestry and hydropower (Lundmark 1971; Sörlin 1988; Månsson 2015; Öhman 2017 as cited in Olofsson, 2020). With this in mind, the perspectives of the north-south aspect of justice are further added to. As highlighted by some respondents, the discussion of wind power must consider this perspective, but it must also consider future perspectives. But, if the theory is so interconnected, it raises the question on whether the tenet framework is actually useful and why? The distinct dimensions help explore, as highlighted by (Jenkins et al., 2016), the evaluative and the normative aspects of how to actually address the injustices related to energy systems. Even though this thesis has not attempted to provide normative aspects, it has evaluated across several important dimensions. It is argued in that same article, that justice concerns should be applied to the whole energy system, and this thesis agrees with that as it has found that it is difficult to set boundaries for energy justice.

6.2 Conflicts of interests or value, scale mismatches and low-carbon transitions.

Regarding wind power developments in Galmsjömyran and Käymävaara, it would be a mistake to oversimplify the situation's complexities as a mere clash between several opposing sides. As this thesis has found, there may be more than conflicts of interest in these wind power cases; there are perhaps also conflicting values that may further contribute but also help explain the disagreements. As Eames and Hunt (2013, p. 48) noted, the energy justice framework is subjective and relative to different groups' values and perspectives. They noted that it is important to understand this, as it may be related to power and influence between groups. This is an integral part of it, but it is also important to understand the subjective realities of different stakeholders as they are, as they can help explain or create an understanding of where a stakeholder comes from, e.g., why a stakeholder has a particular interest. Sovacool and Dworkin (2015) also highlight how the framework can help us understand embedded values in energy systems and how these impact society and energy developments. To understand the conflicts through energy justice as a framework turns out to be to understand the conflicts partly through what the various stakeholders do and what they have done during the projects in relation to their own interests, but it also turns out to be partly to understand what it is for underlying values and essential thinking related to the green transition that governs. How these aspects have both similarities, as well as differences, are those that can explain why there is conflict in both Galmsjömyran and in Käymävaara. There may also be differences in the different actors' and stakeholders' understanding of how energy justice should be created, i.e., how it should be proposed to be fairer. Resolving burdens and distributing benefits is relative to the understanding of how that should be done, whether, it is about reducing the burdens and harms or whether it is about balancing and compensating with benefits (Liljenfeldt, 2017). These differences in values can be seen as the study found that justice was perceived differently on both temporal and spatial scales, implying that the stakeholders come into to case with different understandings of what is important in society for the green transition, who is responsible for that, and how it should be done. In another study on wind power, Gross (2007) found that interviewees' attitudes towards a wind project influenced their perception of the fairness of the process and the legitimacy of the outcome. Those who supported the project saw it as fair and legitimate, while opponents and neutrals felt the opposite. The fairness of the process was evaluated based on secrecy, lack of community discussion, and unequal benefits. Those who deemed

the process unfair also found the outcome illegitimate. With this study as a comparison, the findings from this thesis also confer similar thoughts that individual or stakeholder groups' perception of fairness and the project guides the legitimacy and opinions of the projects. Understanding that different perspectives are also related to what is a burden or benefit in wind power developments increases complexity and the understanding of wind power conflicts (Liljenfeldt, 2017).

As Avila (2018) suggested, different transition models may guide or direct how people view wind power and conflicts of wind power. They discussed a potential divide between ecological modernization and environmental conservation and argue that by using those backdrops, wind power developments can be seen as a composition of different stakeholder perspectives, but one that puts the wind power debate in a larger context. Barry et al. (2008) highlight in a study on wind power development and rhetoric that ecological modernisation can be seen in some framings of wind power developments, where climate change mitigation addresses a larger threat and an economic opportunity. Contrasting the past dichotomy of environmental conservation versus economic growth and bringing the two together. The findings of this thesis do not necessarily mention ecological modernization and environmental conservation in literal terms, however, the underlying values explored when presenting the findings in section 5.1, where scales of time and space were presented, show that there are different paradigms or understandings of the green transition that may be guiding the stakeholders. Thus, partly explaining why there are conflict exist describes how scale is affected by both the empirical reality, as well as the subjectivity that is based on one's observation; discussing scale leads to discuss how phenomena (in this case justice) can vary in dimensions within a specific context. Understanding the varying perspectives of stakeholders and their positions in conflicted wind power developments requires consideration of the dimensions of scale, and the dimensions of time. These factors play a role in explaining differences observed, and further they may guide this discussion further as to why there are different views on time and scale. The findings in section 5.1 reveal that stakeholders have differing views on justice in relation to scale. This prompts us to ask some important questions: where do these discrepancies come from, particularly with regards to scale, time, and justice? It is also important to consider the roles and obligations of each stakeholder. Time perspectives also played a significant role in understanding and reflecting on the rewards of different types of

wind power investments. One could argue that the scales and temporal dimensions are social constructs established by those in power and dominant paradigms. Nevertheless, implementing the principles of energy justice to steer development endeavours can aid in bridging these scales and eventually result in a transition that is more environmentally friendly, sustainable developments, and fewer conflicts.

These scale mismatches resonate with the definition proposed by Cumming et al. (2006), where scale mismatches create occurrences where the system, e.g., the energy system and wind power developments, is disrupted, and components are lost or inefficient. They focus their research on socio-ecological scales, but the discussion of scales continues in other systems. The thesis have shown that the scale on which developers and municipalities view justice does not align with the residents' or nature's scales. This can be seen both spatially and temporally.

The question then arises, how can these perspectives be better coordinated, and the discrepancies reduced? Cumming et al. (2006) argue that scale mismatches can both be an unintended effect, but also a result of poor policy and management. Following that line of thought, a return to the energy justice framework to understand conflicts and guide policy and developments from the beginning is useful. Sovacool and Dworkin (2015) propose using the framework as a checklist for decision-makers to follow and safeguard as many interests as possible where a green transition focuses on minimizing emissions and increasing renewable energy in the energy mix, but not at the expense of other social important aspects and sustainable development.

Continuing, as O'Sullivan et al. (2020) emphasise, the approaches and understandings of just transitions may differ, but there is an underlying premise that energy justice needs to be integrated into the energy transition, otherwise; it may be subdued by replication of past injustices, uneven distributions of power and opportunity. Goddard and Farrelly (2018) show in their study on just transition management in Australia that energy transitions have risks as energy is more expensive or insecure. However, they also highlight that national planning and policy could help guide transitions and increase success. Conflicts may arise due to varying perspectives on the low-carbon energy transition and the model to achieve it. Some prioritize sustainable development and technology, while others advocate for degrowth and reduced affluence. While stakeholders from the developer group prioritize a growing green economy,

local environmental organizations and respondents prioritize the quality of life, including access to nature and healthcare, over financial gain. This prompts us to ask once again: where do these different perspectives come from? Returning to ecological modernization and environmental conservation pathways, these may be an underlying answer for understanding the conflicts. The differences in views of the low-carbon energy transition and the pathways to achieve it may be an external driver to the conflict that is not necessarily directly outspoken.

For example, it was seen in the findings that some stakeholders prioritize sustainable development and technological solutions, while others advocate for degrowth or reduced affluence. Many stakeholders prioritize a growing green economy, but respondents and local environmental organizations emphasise the importance of quality of life, including access to nature and healthcare, over financial gain. The topic at hand pertains to reducing emissions and achieving overall sustainable development. Arguably, this is not a matter that should be discussed on a local level or in specific cases. Instead, it highlights the necessity for national or regional planning that guides developments rather than basing it on conflicting transition paradigms in specific instances. Framework improvements can promote energy justice, e.g., by including marginalised groups in decision-making, concentrating benefits on those bearing costs, and ensuring affordability and reliability of energy supply. To achieve this, collaboration between stakeholders and scholars is important (Goddard & Farrelly, 2018). However, as Barry et al. (2008) noted, understanding various perspectives on wind is not an understanding of two sides but rather a spectrum and variety of discourses. Thus, presenting an opportunity to understand and find overlaps and common grounds between different perspectives, es; potentially useful for resolving or coming closer to resolving local conflicts.

6.3 Responsibility for justice

Throughout the entire research process, the study has asked, noted, and reflected upon the issue of responsibility when thinking about energy justice – who is in the end, actually, responsible for energy justice? As several notes in Chapter 5 have highlighted, responsibility for justice is questioned around whom, why, what the burden of responsibility is, how it relates to the issue of scale, etc. The processes around wind power especially highlight responsibility, as it pinpoints confusion about who should take it. The reflections here can also be found in other contexts, e.g., in a study by McCauley (2018) where the issue of responsibility is related to the proximity of energy infrastructure to the consumers, and further, how that changes the position of ordinary people within the energy system. This line of thought resonates with the previous note on the organisation of residents in two cases. It is agreed that proximity to wind energy sources brings new responsibilities and distributional inequalities, especially for rural communities, as they become providers of low-carbon electricity and are impacted in their living environments (McCauley, 2018). When thinking about responsibility for justice, the discussion could be on an individual or societal level. Young et al. (2011, p. 34) reflected on the responsibility for justice and the individual versus the society's responsibility in the matter. She argues that injustice is concerned with the frameworks and institutions that guide our societies, and thus justice would be more than rectifying these injustices by restoration. However, justice would imply that the frameworks and institutions in place prevent injustice in the first place. As is shown in the findings, this relates to the procedural justice aspects, e.g., in regulatory frameworks and planning, but also improved communication and transparency. Structural injustices are beyond somebody's control, and individual choices and actions do not always contribute directly to making the situation more unjust(Young et al., 2011, p. 45). It exists where social processes put groups of people under threat or impact. This happens when individuals, institutions and other actors work towards their interests (Young et al., 2011, p. 52). Young et al. (2011, p. 95) discuss the responsibility of justice around the aspect of a claim, attempting to find an answer to who is responsible. Proving to be more complex in structural injustices, as these are reproduced by society, and causal responsibility is complex and difficult to assign.

Ultimately, this thesis cannot lay the responsibility in the hands of any stakeholder, nor does it aim to argue for or against the justness of any case in this study, nor to resolve the issues or

provide solutions. The consistent aim has been to investigate further why these conflicts arise and identify potential intervention points, such as clear discrepancies between stakeholders' perspectives. But, the thesis does show that responsibility needs to be somewhere, and that justice is central – across the stakeholder spectra.

7 Conclusion

7.1 Revisiting Aim and Research Questions

The thesis aimed to examine how the energy justice theory and framework can be used to understand conflicted wind power developments in Sweden. This was done using two research questions, where the first one focused on the stakeholder's perception of justice, and the second explored how the energy justice framework could be applied to the case studies. The findings align in many ways with previous literature and studies, where different aspects of energy justice are highlighted, although, the study has a specific scope, specific context and that the perspectives are only true to this particular study, the analysis showed similar findings in terms of themes and factors relating to energy justice as other studies have.

In conclusion, the stakeholder perspectives in these two cases could highlight several important views and aspects related to energy justice, e.g., the differences in understanding what a benefit and an ill is, how transparent and communicative the processes where, and what aspects of a case was important to recognize. Essentially, what the findings showed was that local context matters, and that the value of stakeholder perspectives should not be undermined. With this study, these two cases have been framed using the theory of energy justice and what that did was to situate the conflicts of interests in a broader frame, where underlying values and assumptions on what should guide a green transition may also be relevant. The discussion also brought up a value-based conflict, hinting that there may be more than pure conflicts of interest and different views on transition pathways and general sustainable development. Thus, understanding stakeholders' perspectives and agendas is important as it can significantly influence their outlook on justice and energy development. Merging these perspectives may be challenging, but as the energy justice framework emphasizes and as has been found in this thesis, there may be remediating measures to increase justice in the wind power context, e.g., through ensuring procedural justice dimensions such as communication and transparency to help reduce stakeholder gaps and promote justice for all.

This thesis began as an exploration of wind power conflicts of interest, but throughout the research process, the exploration showed that the interests are just one part of the conflict

and that an understanding of values, as well as an understanding of where different stakeholders have their points of departure are equally valuable. The thesis understands that conflicts can be constructive, and where these differing perspectives may be useful to guide and better developments, but it also understands how they can be detrimental, and destructive if they take over developments, and drive injustices. But they can also be destructive, where the conflicts take over the wind power developments and there are controversies and injustices perceived. Potentially, the energy justice framework as used here, can be seen as a suggestion to guide developments towards more constructive conflicts, as raising the divergent perspectives also raises the intersections, i.e., how, and where stakeholders view things differently. E.g., the findings highlighted transparency and communication as two key examples of this. Lastly, the discussion concluded with the aspect of responsibility and justice. Without saying who should be responsible, the take-away is that responsibility needs to be taken, and that it should be done so according to the principles of energy justice. In a green energy transition, this thesis concludes that energy justice as a theory and framework is essential to make the transition actually green.

7.2 Recommendations for Future Studies

This study sheds light on energy justice in Sweden by examining the perspectives of stakeholders involved in two specific case studies. However, to gain a more detailed and nuanced understanding of local contexts, future studies could expand their scope to include public health, economics, and the impact on vulnerable groups over time and space. It is worth noting that this study only focuses on wind power conflicts in Galmsjömyran and Käymävaara, and future studies should consider a wider range of cases to achieve a more comprehensive understanding of energy justice. This could potentially also reach out to applying this type of research design to off-shore projects, as they are becoming more prominent, and also more controversial. The findings of this thesis hopefully contribute to the theoretical and analytical framework of energy justice and emphasizes the importance of incorporating this framework into decision-making processes for new wind power projects in Sweden. For example, this could include looking into how frameworks for consultation processes can be developed with more clarity, to ensure transparency and functional communication for all stakeholders. Focusing for example on municipalities, this could include understanding the municipal planning and how that involves different interests and values. As Cairstairs (2022) highlighted in their thesis on wind power, socioeconomic consequences as part of the permitting process

could be one way of exploring towards less conflicts in wind power developments, and this study agrees with that argument.

As mentioned in the limitations, future studies could expand their scope by using a similar research design, including different stakeholder perspectives, and incorporating more types of data and information, such as through a mixed methods approach. Additionally, this study's findings suggest that discourse surrounding wind power developments may significantly impact how different perspectives are shaped and constructed. Therefore, it may be worthwhile to investigate further how wind power conflicts in media and other forms of discourse are portrayed and how they influence different groups. Future studies could explore energy justice in more diverse cases, of different sizes and geopolitical contexts. This applies to Sweden, where it could be seen that building a more thorough understanding nationally could potentially give guidance to what aspects are missing in regulatory frameworks, and thus provide more in-depth understanding on the phenomena of conflicted wind power in Sweden. In a more general level, comparing this type of study across nation-borders could also provide insights into perspectives, and perhaps link further to conflicts of values, and justice on international scales. Lastly, as Jenkins et al. (2016) suggested, research could look into energy justice activism, this study suggest that this could be operationalized by looking at the formation of civil society organisations and groups in relation to wind power projects, for example, to investigate their narratives, their structures and how common they are.

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Appendix 1 Interview Guide

Theme	Questions	Justification
Energy	• How do you view the environmental, climate and energy agenda in Sweden today? What are important focus areas according to you? • In your opinion, what are essential perspectives and aspects to consider when developing wind energy?	*To begin the interview and discussion with a question about energy, in general, to set the stage and see what perspectives the interviewee naturally brings forward.* *Understand the interviewee's perspective on policy conflicts or synergies.* *Understand the interviewee's thoughts about general planning and development of wind power.*
Relationship to the case study and case-specific issues	• Can you describe the wind power development plan in this case from your perspective? • When and how have you been involved? • What is your role?	*To know which perspective or stakeholder the interviewee comes from. I want to ensure that their role is stated by them and not assigned by me as a researcher.*
Justice/Energy Justice	• How do you think justice is related to the energy sector? • How do you think justice is related to wind power?	*We are limiting the focus to equity perspectives on energy, especially wind power.*
Redistributive justice	• How do you view the spatial distribution of wind power in Sweden in general and here in this case?	*Start thinking about the location aspect of wind power and see what different perspectives stakeholders can have.*
Procedural justice	• How do you view the processes and routines	*To understand how the procedural aspects are made in the case and*

	surrounding this wind power development?	*how they are seen from different perspectives and further understand how the other actors view participation (Jenkins et al., 2016)*
Recognition fairness	• How are different groups and stakeholders represented and consulted in this case? • Is there any aspect or dimension of this wind energy development that you would consider a group as misunderstood or misrecognized, or are there groups that are not recognized at all?	*To understand and explore how different stakeholders perceive different groups in the case and their representation, further, to focus on recognition fairness and how it is in the case.*
Coexistence dilemma/Green transition/Climate change	• How do you see the wind power development process to be for it to be as fair and equitable as possible? • Can the wind power process be fair through compensation? If so, what kind of compensation, to whom and when do you think?	*This section aims to highlight the coexistence dilemma in the green transition between climate change mitigation and accelerating renewable energy development with the potentially conflicting interests of land use related to wind energy and with a specific note to the present case.*
Concluding question	• Finally, after this discussion and interview, are there any things you think are important to add?	*It allows the participant to add important aspects or perspectives to this research.*

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Appendix 2 List of Respondents

Number	Stakeholder Group	Case	Physical/Digital	Length	Recording	Notes
1	Resident	Galmsjömyran	Physical	28 min 16 sec	Dictaphone	n/a
2	Resident	Galmsjömyran	Physical	49 min 10 sec	Dictaphone	n/a
3	Local Environmental Organisation	Galmsjömyran	Physical	35 min 36 sec	Dictaphone	n/a
4	Residents	Galmsjömyran	Physical	48 min 20 sec	Dictaphone	Group interview with three residents.
5	Local Industry Representative	Galmsjömyran	Digital	36 min 20 sec	Teams	n/a
6	Resident	Galmsjömyran	Digital	25 min 24 sec	Teams	Some disturbances in the sound file.
7	Wind Power Developer	Galmsjömyran	Digital	25 min 30 sec	Teams	n/a
8	Resident	Galmsjömyran	Digital	38 min 48 sec	Teams	n/a
9	Landowner representative	Galmsjömyran	Digital	30 min 16 sec	Teams	n/a
10	Municipal Politician	Galmsjömyran	Digital	48 min 30 sec	Teams	n/a
11	Residents	Käymävaara	Physical	36 min 27 sec	Dictaphone	Group interview with three residents.

Number	Stakeholder Group	Case	Physical/Digital	Length	Recording	Notes
12	Residents	Käymävaara	Physical	51 min 17 sec	Dictaphone	English interview. Group interview with two residents.
13	Local Environmental Organisation	Käymävaara	Physical	57 min 20 sec	Dictaphone	n/a
14	Resident	Käymävaara	Telephone	1 h 6 min	Dictaphone	n/a
15	Resident	Käymävaara	Digital	20 min 47 sec	Teams	Some disturbances in the sound file.
16	Wind Power Developer	Käymävaara	Digital	44 min 35 sec	Teams	n/a
17	Municipal Politician	Käymävaara	Digital	31 min 30 sec	Teams	n/a
18	Resident	Käymävaara	Digital	50 min 13 sec	Teams	n/a

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Appendix 3 Analysis and Coding Scheme

	Tenets	Dimensions/Themes	Codes	Sample quotes (examples)
Stakeholders' Perspectives on Justice	Justice about wind power developments in Käymävaara and Galmsjömyran	Fairness	• Perceptions of fairness	"It is so different too, what you want. Someone might rather stay, but they get financial compensation for getting– – remove the noise and so on. But you start from what you want. Someone thinks that then I don't want to be here. Then I get the opportunity to get the corresponding property elsewhere, and so on. So that you have such a controlled process, like I can't see anything else. And then I think about society, the state or if it is a region or a municipality that then goes out and announces or makes a procurement. "– Local Resident 8, Galmsjömyran.
		Allocation of benefits and ills	• Perceptions of allocations of benefits • Perceptions of allocations of ills	
		Emotional responses	• Anger • Fear • Sadness • Fairness • Stress • Insecurity • Determination • Joy	
Energy Justice	Distributional Justice	Geography	• Placement of wind power development nationally • Placement of wind power development locally • Placement of wind turbines	"I think that is an important question to ask. Who benefits from this? Who is it that comes out winning this? Because we must believe that this is about energy for state-owned companies that will generate more money for the state at our expense." – Local Resident 4, Käymävaara "How are your values affected on your house, for example? No, exactly. Odds are that if you have a house in Käymävaara and you get 30 spins around that house, the house will not increase in value. And it probably wasn't that loud, to begin with, so that in the end you get to give it away, and you might not even be able to give it away. "- Municipal Politician, Käymävaara.
		Pollution and Waste	• Impacts from turbines • Impacts from construction	
		Economic Benefits and Costs	• Allocation of economic benefits • Allocation of economic costs • Financial impacts	
	Procedural Justice	Decision Making	• Transparency • Accountability • Participation	«In this case, there is no such regulatory framework that comes into play. And we've had politicians who have been on a tour who have said—yes, you're going to be triggered—that they take for granted that the kind of
		Communication	• Access to information • Means and quality of communication	
		Regulatory Frameworks	• Planning • Municipal Veto	

		• Market structure • Legal protection • Compensation	regulations that apply—when the state does things, that it is applied here» - Local Resident 8, Galmsjömyran.
Recognition Justice	Identity	• Cultural Identity • Local Context	«So that's one aspect of it, and again talking about, I guess, more local politics, there is a very strong feeling, I think, around this area that the energy policy is very much looked at from the perspective of people living in big cities and not taking into account the actual situation of people living in the countryside» - Local Resident 2, Käymävaara.
	Power Dimensions	• Interests and values of distinct groups • Perceptions of power and influence	
	Recognition	• History	

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Appendix 4 Assessment of Notification Form from NSD

Sikt

Notification form / Masteroppgave "Energy Justice in Northern Sweden – a compara... / Assessment

Assessment of processing of personal data

Reference number	Assessment type	Date
104719	Standard	27.02.2023

Project title
Masteroppgave "Energy Justice in Northern Sweden – a comparative case study analysis of stakeholders' perspectives in potential future wind power developments"

Data controller (institution responsible for the project)
Høgskulen på Vestlandet / Fakultet for ingeniør- og naturvitskap / Institutt for miljø- og naturvitskap

Project leader
Bente Johnsen Rygg

Student
Clara Edwards

Project period
09.01.2023 - 30.06.2023

Categories of personal data
General
Special

Legal basis
Consent (General Data Protection Regulation art. 6 nr. 1 a)
Explicit consent (General Data Protection Regulation art. 9 nr. 2 a)

The processing of personal data is lawful, so long as it is carried out as stated in the notification form. The legal basis is valid until 30.06.2023.

Notification Form

Comment
ABOUT OUR ASSESSMENT
Data Protection Services has an agreement with the institution where you are a student or a researcher. As part of this agreement, we provide guidance so that the processing of personal data in your project is lawful and complies with data protection legislation.

TYPE OF DATA
The project will process general categories of personal data and special categories of personal data about ethic origin.

FOLLOW YOUR INSTITUTION'S GUIDELINES
We have assessed that you have legal grounds to process the personal data, but remember that you must store, send and secure the collected data in accordance with your institution's guidelines. This means that you must use data processors (and the like) that your institution has an agreement with (i.e. cloud storage, online survey, and video conferencing providers).

Our assessment presupposes that the project will meet the requirements of accuracy (art. 5.1 d), integrity and confidentiality (art. 5.1 f) and security (art. 32) when processing personal data.

NOTIFY CHANGES
If you intend to make changes to the processing of personal data in this project, it may be necessary to notify us. This is done by updating the information registered in the Notification Form. On our website we explain which changes must be notified. Wait until you receive an answer from us before you carry out the changes: https://sikt.no/en/notify-changes-notification-form

FOLLOW-UP OF THE PROJECT
We will follow up the progress of the project at the planned end date in order to determine whether the processing of personal data has

been concluded.

Good luck with the project!