

# Energy Justice at the Community Level

*Exploring the creation and apprehension of energy justice concepts at the community level*



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## Abstract

This thesis explores how conceptions of energy justice are constructed and contested at the community level. Energy justice pertains to equity and fairness with regard to the role of energy in our society, which is especially important in light of the ongoing energy transition from fossil fuels to renewable energy sources. Over the past years comprehensive studies have emerged addressing the importance of energy justice, theoretical conceptualizations have resulted in extensive energy justice frameworks. This study adopts such a framework of energy justice, taking elements from several authors addressing the subject, and subsequently attempting to uncover its meaning on a community level. Energy justice is ultimately expressed and articulated by communities and individuals that are actively involved in the energy transition, and therefore it is extremely important to consider how these local actors construct and apprehend notions of energy justice. This research attempts to explore and explain some of these relationships through a case study, investigating the way in which energy justice is constructed and apprehended in the context of a collectively owned wind farm in the Netherlands. The research was structured according to the three analytical levels of energy justice, as presented in the work of Van Bommel & Höfken (2021), it distinguishes between energy justice in the internal dynamics of a cooperative, energy justice in the interaction between a cooperative and third parties, and finally energy justice in the interaction of a cooperative with wider societal phenomena. The results of the case study show how notions of fairness are used by members of the cooperative to relate to others, this happens internally, to contest other ideas or beliefs within the cooperative. Fairness is also used to relate to third parties, here a notion of what is fair informs the way in which the cooperative conceives of the relationship between them and a third party, where fairness has a reshaping quality, that contests the nature of a relationship. In a wider societal context a concept of fairness also seems tremendously important for the way in which the cooperative relates to certain processes and phenomena, in this case the cooperative, through adherence to energy justice principles, inspired the local community to rethink their role in the energy transition, a fine example of the transformative power of local justice creation. Ultimately, this study shows that understanding the local construction and apprehension of energy justice is valuable, both for reflection on the energy justice literature as well as in the practical implications it has for the functioning of energy cooperatives.

**Keywords:** Energy justice;Energy transition;Community level;Renewable energy;Case study research

## Preface

Dear reader, you are about to read my master thesis “Energy Justice at the Community Level”, the culmination of a year’s work on the local construction and apprehension of energy justice. Settling on the eventual direction of the research took some time but the first ideas on the chosen subject matter formed quite a while ago: during my bachelor degree I studied political philosophy in England for a semester, during that time I became acquainted with the social justice literature and the philosophical debates on equality, I took great interest in this and when I was looking for a subject for my master thesis I knew I wanted to explore an issue in spatial planning that intersected with political philosophical literature. This is what inspired me to take up the theories of social justice literature and apply them to the energy transition, and as it turned out there was already a bulk of research on this intersection, the energy justice literature. After conducting a thorough literature review of energy justice, I ultimately decided to focus on the interpretation of energy justice at a local level, and this is where the seeds of the research project that lies before you now first sprouted. In this preface I would like to express my gratitude to all the interviewees for their input and participation and also the organizations that allowed me to have a look at their practices, especially the energy cooperative WindPower Nijmegen since their openness and participation has been instrumental to my research. Furthermore, I would like to thank my supervisor dr. Iulian Barba Lata for his support and important feedback throughout the research process, this has been very helpful in shaping the research and it also really helped me to have a critical voice to challenge my own thought processes regarding the research matter and research steps. So here we are, the final product of my research and the last step in completing my masters in spatial planning. I am happy that I can share my research with all of you now and I hope that you, the reader, will enjoy my work.

Emil Ros,

Nijmegen, June 13 2022

## Table of contents

<b>Chapter 1: Introduction</b>	<b>7</b>
Research Problem	7
Research aim	8
Research questions	8
Societal relevance	9
Academic relevance	9
<b>Chapter 2: Theoretical framework</b>	<b>10</b>
Foundations of energy justice	11
<i>Recognition justice</i>	12
<i>Procedural justice</i>	13
Concepts of energy justice	13
Distributive issues of energy justice	14
<i>Recognition issues of energy justice</i>	15
<i>Procedural issues of energy justice</i>	16
A community energy justice framework	18
Three levels of community energy justice	18
<i>Energy justice within community initiatives</i>	19
Energy justice between community initiatives and related actors	19
Energy justice beyond community initiatives	20
Conceptual model	21
<b>Chapter 3: Methodology</b>	<b>22</b>
Research paradigm	22
Critical theory	22
Research strategy	23
Unit(s) of analysis	23
Narratives	24
Holistic research strategy	24
Research methods	24
Data collection	25
The interview guide	26
Selection of respondents	27
List of interviewees	27
<i>Data analysis</i>	28
Validity, Reliability And Trustworthiness	29
<i>Four criteria for trustworthiness</i>	29
Operationalization	31
<b>Chapter 4: The Case Study</b>	<b>33</b>

A short introduction of cooperative organizations	33
The development of the wind farm (and the solar farm)	34
Overview of involved parties	34
Organizational structure of the cooperative WPN	36
The resistance of the local community	37
Ambitions of WPN	37
<b>Chapter 5: Results</b>	<b>38</b>
Foundations of the cooperative	38
Interaction between members and the board	40
Relationship with the developer	41
The cooperative within institutional arrangements	44
Interaction with the local community	45
Interaction with energy vulnerable groups	47
<b>Chapter 6: Discussion</b>	<b>49</b>
Energy justice in the internal dynamics of the cooperative	49
Energy justice in the relationship between third parties and the cooperative	51
Energy justice in the interaction of the cooperative with a wider societal context	53
Recommendations for future research	54
Recommendations for praxis	55
<b>Chapter 7: Conclusion</b>	<b>55</b>
Answering the main question	56
Limitations and reflection	56
<b>References</b>	<b>57</b>
<b>Appendices</b>	<b>63</b>

## List of Figures and Tables

**Figure 1:** The conceptual model

**Table 1:** An energy justice framework for the community level

**Table 2:** An overview of interviewees

**Table 3:** An energy justice framework for the community level

**Table 4:** A framework of indicators

**Table 5:** Overview of involved parties

## Chapter 1: Introduction

All across the world governments, business, organizations and people are increasingly concerned with energy. Due to climate change induced by huge carbon emissions, more and more unsustainable energy practices are being exposed and are subsequently under increasing pressure to be rigorously transformed, the energy system is at the dawn of an unprecedented transformation: the reluctant end of fossil fuel domination and the increasing pervasion of renewable energy alternatives. The energy system has long been perceived as one of the most stable human systems, however things are set to change, contemporary energy systems are in flux along numerous dimensions. New technologies in the form of renewable energy and fracking, dwindling oil resources, increased energy efficiency targets, elevated oil prices, ambiguity towards nuclear energy and geopolitical conflicts are among some of the reasons as to why energy systems are exposed to increasing instability, these are clear indications that an energy transition is underway (Miller, Iles & Jones, 2013). These changes will lead to insecurities across the system, and here it is important to recognize that energy is far from merely a technical issue, energy systems are pervaded with social dimensions: energy services, affordability, accessibility, energy security and energy use are largely determined by societal energy practices, how do we consider our energy consumption? Who gets to participate in decision-making and where do benefits and burdens fall? These are profound social questions that are based on normative reflections of our society. Furthermore new energy technologies are shaped by economic, social and political arrangements, therefore the key choices in the energy transition are not on how to use these technologies but pertain to the wider implications of such technologies on society (Miller, Iles & Jones, 2013). The energy policy field is among one of the most complex, its practices are deeply embedded and path dependent, Goldthau & Sovacool (2012, p.232) even argue that it is more than a sector, policy or field : “it is instead a cross-cutting issue area that envelops a distinct set of governance challenges” or in the words of E.F. Schumacher (1977, p.1-2) energy is: “not just another commodity but the precondition of all commodities, a basic factor equal with air, water and earth”. It is therefore no exaggeration to state that the energy transition is one of the most pervasive, encompassing and bewilderingly complex challenges the world is facing and will be facing in the coming years.

### Research Problem

An important dimension of the energy transition is ensuring an equitable approach to this transition. Social and environmental justice principles are being applied to the energy transition for there are clear signs that developments in the shift from fossil fuels to renewables might exacerbate existing inequalities and might leave certain social groups more vulnerable (Heffron & McCauley, 2014). For example, the increase of energy prices will disproportionately harm those that already pay a large share of their income on energy and do not have extra income to absorb higher bills, this scenario seems to be unfolding in the Netherlands as energy prices are increasing at a tremendous rate (NU.nl, 2021), leaving the prospects of poor and vulnerable groups more and more precarious (Carley & Konisky, 2020). Evidently, justice should be considered as a fundamental part of the energy transition, as Jenkins et al. (2016) state: “Energy should be considered among the things we prize, the

distribution of benefits and burdens of energy systems is a fundamental question for any society that aspires to be fair". Energy justice is the scholarly field that concerns itself with issues of justice in the energy transition, adhering to the principles of environmental and social justice, and applying and specifying those concepts to the context of energy and the energy transition (McCauley et al., 2019). Energy justice does not only mean equal distribution of benefits and burdens but also takes into account matters like: equal opportunities to participation, full recognition of all societal groups, empowerment of minorities and, fair and equitable processes. An important opportunity for enacting energy justice is through community involvement, many renewable energy projects have acute impacts on communities, social acceptance plays a large role in determining and guiding the siting of projects. Furthermore, collective ownership provides promising opportunities for securing energy justice principles as well as increasing social acceptability and urgency (Mundaca, Busch & Schwer, 2018; Bauwens, 2016). Perceptions and values within communities concerning ownership, aesthetics, energy infrastructure or decision-making are requisite considerations for a just transition, being attentive to the notion that energy justice is contested and negotiated at the community level (Forman, 2017). Advancing the role of the community as most complementary to energy justice principles will be elaborated upon in the theoretical framework, however, practically, we can already evidence that the local or community level is widely regarded as instrumental to the advancement of the energy transition. As seen through the decentralized approach in the strategization of the dutch energy transition, the Regional Energy Strategy (RES) holds local concerns in high regard, reserving an important role for citizen participation (Regionale Energiestrategie, n.d.). Additionally, the dutch government aims for a 50% local share in renewable energy projects, acknowledging the inclusive and mobilizing potential of collective ownership (Hier Opgewekt, 2021).

## Research aim

The aim of this research is to investigate the local construction and apprehension of energy justice concepts, specifically with regard to community (collectively owned) energy initiatives. This means, identifying existing perceptions and values that are consciously or unconsciously connected to conceptualizations of energy justice. Therefore, the theoretical framework will elaborately address conceptualizations of energy justice, and the context in which energy justice emerges. The objective of this research is primarily to discover and identify the creation of a notion of "justice" by local actors in the energy transition and the way in which such a notion recurs in their actions, decisions and motivations. The nature of the research is both exploratory and explanatory, in that it is trying to gain insight in the presence and contestation of a fairly recent phenomena, energy justice, while trying to explain local attitudes and manifestations of it. In order to do this, theoretical concepts of energy justice will be translated to the local level, so that they can be used as a means to identify different aspects of the local construction and apprehension of energy justice.



## Research questions

### *Main question:*

How are notions of energy justice apprehended and constructed at the community level?

### *Sub questions:*

How are notions of energy justice apprehended and constructed in the internal dynamics of a community initiative?

How are notions of energy justice apprehended and constructed in the relationship between third parties and a community initiative?

How are notions of energy justice apprehended and constructed in the interaction of a community initiative with a wider societal context?

## Societal relevance

The energy transition is a very hot topic in current public debate. This battle is fought in the political arena, where discussion tends to remain more in the technological sphere (Nu.nl, 2021), but also by groups in society that are increasingly advocating for approaching the energy transition not just as a technological issue but foremost as a societal one, stressing the importance of social inequalities that are interlinked with the energy transition (Janssen, 2019). This research heeds these calls, generally by adopting and developing an energy justice framework and specifically by focussing on the construction and contestation of energy justice on the local level.

Illustrative of the social problem faced is a report from The commission Brenninkmeijer on the role of citizens in the transition towards renewable energy sources, their findings indicated that people feel left out of the process. As a result, the commission stressed that the government should facilitate more citizen involvement to bridge the gap between national policy goals and local incomprehension (adviescommissie Burgerbetrokkenheid bij klimaatbeleid, 2021). In that sense, this study contributes in part not only to a more comprehensive understanding of energy justice on the local level, but it also has the opportunity to open up discussions on the policy level to reconsider the attitude and approach towards citizen involvement, and to respond more sensitively to local perceptions and insecurities. Studies already indicate that fairness and equity can help to increase the level of social acceptance among communities (Mundaca, Busch & Schwer, 2018); energy justice research can play a vital role in connecting local concerns to national policy aspirations.

Furthermore, Sovacool & Dworkin (2015) state that ethical considerations in the energy transition are often overlooked by consumers and producers, a study like this one stimulates people to think about the ethical implications of energy, in a societal context a study on the local manifestation of energy justice can foster a societal awareness of the ethics of energy, the understanding that certain groups of people are more exposed to the vulnerabilities of a transition and how that also relates to the choices and actions of individuals, thus appealing to the responsibility that members of society,

and groups within that society have for a fair transition. A responsibility that includes an equal distribution of benefits and burdens, but also a responsibility that must include people from many different social and ethnic backgrounds, allowing everyone to express what energy means to them, and from that understanding, informed by equal and accessible procedures, the collective view on the energy transition may be reshaped in a more equitable way.

### Academic relevance

The urgency of energy justice studies on the local perceptions and experiences of people with the concept seems increasingly relevant, as Carley & Konisky (2020, p.575) indicate : “The scholarly community has an important role to play in assuring that efforts are evidence based and grounded in the experience of individuals, households and communities that are most affected”. With regard to the relevance of a community level perspective, Rasch & Köhne (2017, p.608) state that: “the local construction of energy justice remains unstudied and under theorized”, they argue that more research into this phenomenon will open up avenues for analyzing “renewable energy practices” within the energy justice framework. Forman (2017) further affirms the previous notions, he argues that, although large scale participation has been studied in decision-making, there is a need for more insight into local and community-based engagements with energy systems, Van Bommel & Höfken (2021) go even further and claim that a broader and more connected understanding of energy justice in the context of community energy initiatives is that which should be seen as central for making the energy transition just, this research tries to respond to that call by exploring the connections between the literature and the local construction and apprehension of energy justice, thus aiming to establish a more comprehensive understanding of energy justice in that context.

Also, emerging from the literature, against a background of dominating technological focus, there are calls for a more human-centered approach to energy transitions, this concurs with the main centers of inquiry here; energy justice and the community level (Sovacool, 2014). In a study published in 1999 Sociologists Loren Lutzenhiser and Elizabeth Shove indicated that energy research had been predominantly occupied with “conventional techno-economic thinking” rather than acknowledging the human dimensions that pervade energy technologies and use, they argued that this conventional paradigm dismissed the crucial and controlling role of human choice in energy use and technological choice, merely recognizing it as a factor within physical-mechanical systems, this conception of energy still prevails in many instances today, or as Sovacool (2014, p.2) states : “In the 25 years since the first energy crises, this perspective has changed remarkably little, despite its weakness”. Contrary, this research finds great salience in a human perspective, an endeavor clearly supported by the academic literature on the issue.

## Chapter 2: Theoretical framework

In the theoretical framework the most important theoretical concepts will be discussed, this means a comprehensive overview of the most relevant energy justice literature as well as relevant concepts from related fields, with more in-depth attention for the relationship between energy justice and the community level.

### Foundations of energy justice

Any introduction to the concept of energy justice requires a description of its origins, for the term might have only emerged recently in scholarly literature, its practical foundation can be traced back to the start of the Environmental Justice Movement in the 70s and similarly its philosophical foundations were laid around the same time, which will be addressed later on in this chapter, but first: the Environmental Justice Movement. The movement initially emerged as a reaction to address the unequal distribution of environmental risks between different communities, especially with regard to poor african-american communities in the United States. It has since been developed to include numerous other injustices pertaining to the environment, expanding the distributive concerns with notions of recognition and participation, elements that are now considered to be essential in establishing justice (Schlosberg, 2013). The justice elements described as distribution, recognition and participation also form the foundation of energy justice, in the literature often referred to as the three tenet energy justice framework (McCauley et al., 2019; Jenkins et al., 2016; Heffron & McCauley, 2014)). The following paragraphs will briefly and concisely address all of the three tenets separately, with special attention for their philosophical underpinnings.

#### *Distributive justice*

Distributive justice pertains to the equal distribution of benefits and ills on all members of society, regardless of race, income etc. Naturally, some resources are unevenly distributed, therefore distributive justice inquires into questions of fair treatment. Conceptualisations of distributive justice vary as a result since the fairness of a situation is a very normative statement (Jenkins, et al., 2016). This section will briefly address some philosophical considerations on distributive justice to illustrate the normative quality and implicit difficulty of establishing a universal notion of justice. Out of the three tenets of energy justice, distributive justice is definitely the most widely debated one, there is a long history of philosophers debating on the form and extent of what justice ought to be, the foundations of social justice, and subsequently energy justice, can be found in the work of John Rawls, his magnum opus *A Theory of Justice* (1971) forms the starting point of an intensive debate on social justice. Rawls illustrates his central argument by means of a thought experiment; he suggests that you imagine yourself in an original position, behind a veil of ignorance. Behind this veil you know nothing of yourself, you are completely oblivious to your abilities or your position in society, and all people there are assumed to be rational, free and morally equal beings. Rawls then argues that from this original position people will wish to maximize the resources of the worst-off

group in society since the veil of ignorance ensures the uncertain possibility that one will belong to this group. This notion is called a *maximin rule*, this means to maximize the minimum, or in other words, to make those choices that have the highest pay-off for the least advantaged position. According to Rawls, from the original position, people will come to the following two principles of justice (Wenar, 2021, Rawls, 1999):

First Principle: Each person has the same inalienable claim to a fully adequate scheme of equal basic liberties, which scheme is compatible with the same scheme of liberties for all;

Second Principle: Social and economic inequalities are to satisfy two conditions:

1. They are to be attached to offices and positions open to all under conditions of *fair equality of opportunity*;
2. They are to be to the greatest benefit of the least-advantaged members of society (the *difference principle*).

However well formulated, Rawls Theory of Justice has not remained unblemished from critique, his most fierce opponent is economist Robert Nozick, who argues that inequalities originating from free exchange between individuals are equally as just as redistributions emerging from the original position. He stated that if you collect all the holdings and possessions of people and distribute them in a completely equal pattern as soon as you turn your back people will start to trade with one another and the proposed equal pattern is already disturbed. The main argument here is that to ensure these kinds of equal distributions an interference of liberty is required that borders on a dictatorship, and so he argues that preserving any pattern of justice is undesirable (Nozick, 1974). Where Robert Nozick strongly opposes Rawls ideas on social justice many others theorists agree, insisting on adjustments to the principles rather than dismissing the theory altogether like Nozick. Some argue that the absolute priority given to the worst-off group in society is undesirable, since it might lead to an enormous amount of resources being spent towards only a small improvement for the worst-off group, resources that could have been spent in more effective ways. Another view argues that the distributional pattern is unimportant as long as every human being has enough to lead a flourishing life, if this is ensured no further redistribution is required (Wolff, 2014). This brief philosophical overview of distributive justice shows that questions regarding 'just distributions' are by no means a simple matter of resources flowing from rich to poor. Debating the intricacies of distributive justice is not the objective of this research, however it is essential to be aware of the theoretical background and underpinnings of distributive justice, in order to have a comprehensive understanding of what energy justice entails.

### *Recognition justice*

Justice as recognition pertains to the fair representation of individuals, that they remain free from physical threats and are allowed full and equal political rights (Schlosberg, 2007).

This notion of justice emerged as a critique on the veritable scholarly obsession with distributive justice, in the time posterior to Rawls argument in A theory of Justice political philosophy consistently conceived of justice in distributive terms, the work of feminist thinker Iris Marion Young however vehemently opposed such a singular conception of justice, she argued that justice should not be understood primarily in terms of distribution of material goods. Rather, it needs to pay much

more attention to the ways in which social structures empower some and oppress others (Wolff, 2014). Young explains that distributive injustices may contribute to or result from forms of oppression, but none are reducible to distribution and all involve social structures and relations beyond distribution (Young, 1990).

Another influential thinker who helped move the social justice debate beyond distributive concerns was Nancy Fraser, though not as radically eager to cast the distributive argument into the realm of oblivion as Young, she too hinted at the incompleteness of the underlying assumptions made by early social justice theorists. However, she argued for a 'dualist' view where overcoming oppression and achieving distributive justice are equal requisites for a just society (Wolff, 2014).

Recognition also manifests itself in the form of misrecognition, this means that the image or view of certain groups of people are tainted by unfair characterizations that appear to be demeanable or contemptible in nature and are widespread throughout society. It therefore requires acknowledgement of divergent perspectives rooted in social, cultural, ethnic, racial and gender differences. Nancy Fraser (2014) distinguishes three categories of misrecognition: cultural domination, non-recognition and disrespect. These categories show remarkable similarity to what David Schlosberg (2007) later presented as three separate issues of recognition in his attempt to define environmental justice, to wit: 1) practices of cultural domination, 2) patterns of non-recognition and 3) disrespect through stereotyping and disparaging language. It is by no means a bold claim to assert that Schlosberg must have drawn heavy inspiration from Fraser in his definition of environmental justice. The emphasis of both crucial authors on distinguishing between these three categories evidences that cultural domination, non-recognition and disrespect are the rudiments of any comprehensive understanding of recognition issues.

### *Procedural justice*

Procedural justice pertains to decision-making processes, it requires equitable procedures that include all stakeholders in a non-discriminatory way. It can be applied to all sorts of marginalizing issues, such as race, gender or, in this case, energy. It is concerned with fair and inclusive legal procedures as well as more informal phenomena like practices, norms, values and behaviors. This tenet of justice is less philosophically underpinned and follows more or less the same reasoning as recognition justice since the lack of cultural respect and lack of involvement and influence in the decision-making closely interconnect (Schlosberg, 2007; Walker & Day, 2012). Its origins lay in politically excluded civil rights movements, especially across North-America and its underpinnings can be found in access to and pressure from multi-level legal systems and other non-regulatory influences like values, norms, behaviors and practices (Jenkins, et al., 2016). Procedural justice then, as we can find in the work of Young, is concerned with processes, including crucially those through which unequal distributional outcomes are produced or sustained (Young, 1990). So where distributional justice concerns the *what*, and recognition justice concerns the *who*, procedural justice pertains to the matter of *how*, it is in this sense the process of remediating the injustices identified in terms of distribution or recognition.

## Concepts of energy justice

The advances of justice theories have the proclivity to remain in the theoretical realm, however, as is also the case with energy justice, these theories touch upon phenomena that are very much grounded in realities vividly experienced in the practical sphere, communities and individuals constantly grapple with energy issues, and here justice is often not a solid or constant concept. To communities renewable energy technologies are not necessarily innocent alternatives to fossil fuels, this is to illustrate that what is considered as 'just' and 'unjust' takes on an ambiguity specific to context, the meaning of justice is contested rather than distilled from some preconceived ethical consideration clinically applied to the issue (Rasch & Köhne, 2017). Therefore the community perspective is irremissible to a conceptualization of energy justice, it further helps to bridge the gap between practical realities and theoretical abstractions, which seems a prerequisite in fostering the necessary social change pivotal to ensuring a fair and smooth transition from a society based on fossil fuels to one based on renewable energy sources (Kupers et al., 2015). Therefore this chapter will discuss concepts of energy justice issues and include them into a framework that can be used to apply these concepts to community energy initiatives. The framework is a way to operationalize theoretical concepts so that they can be applied to the selected case. The constructed framework in this part of the research will thus offer a tool for consistently and constructively analyzing articulations of energy justice at the community level, the framework is then also a means to structure the investigation of local constructions of energy justice, as to provide encountered local perceptions of energy justice with a theoretical counterpart.

Furthermore, a comment should be made on the nature of the literature selection and synthesis of this part of the research, this chapter will address relevant conceptions of energy justice as they emerge from the literature, this means that the focus will be on conceptions of energy justice that relate to local renewable energy projects. For example, an important subject in energy justice research is energy poverty, this pertains to vulnerable households that have difficulty sustaining their energy demand, in the subsequent discussions on issues of energy justice, energy poverty, however important an issue, will not be discussed thoroughly, that is to say from the perspective of these vulnerable households, since it is not relevant to the aim of this research, to wit, the local perceptions and construction of energy justice in community energy initiatives. Of course, energy poverty might be relevant indirectly as it pertains to the ability or willingness of community initiatives to include or allot special attention to the alleviation of the energy poor, or the implications of energy poverty for participation, but this is only in relation to the construction of energy justice as it emerges from said initiatives. Distinctions as such are important to insist upon since it greatly increases the focus of the research, and will prove helpful later on when attempting to operationalize, most comprehensively, a community energy justice framework.

## *Distributive issues of energy justice*

One of the most prominent issues of distributive justice in the energy transition is the siting of infrastructure, this pertains to polluting forms of energy production as well as to the siting of new renewable energy projects that might have an impact on the environment or the community, the latter is of importance here since the siting of collective renewable energy initiatives is often opposed by members of the same local community, thus creating conflicting views on energy, and subsequently justice (Mccauley et al, 2019). However, distributive issues are not limited to the

physical realm, they are also present in rising energy prices, creating an unfair financial burden to certain groups in society. Furthermore, distributive justice can also span generations, with current energy practices having an unfair negative impact on the circumstances of future generations, this is referred to as intergenerational distributive justice. Also, distributional energy justice concerns the equal access to affordable energy services, in this regard distribution also pertains to the freedom of choice a certain individual has over his or her life (Jenkins et al., 2016). Here it is also important to address the ability of renewable energy initiatives to provide distributive justice, this primarily consists of access to outcomes in the form of benefits and services; an important indicator for this is member diversity, granting access to their services and activities to groups that usually do not benefit. In terms of distribution, diversity of membership thus concerns, implicitly, the possibility to acquire ownership in the first place (Jenkins, 2018). The extent to which renewable energy initiatives address distributive issues is also determined by choice. The way in which the distribution of benefits is debated and contested within the initiative has implications for the performance of distributive justice. For example, initiatives may opt to share their benefits and services only directly with their members, but may also opt to, additionally, share their benefits and services indirectly through external activities targeting energy vulnerable groups (Hanke, Guyet & Feenstra, 2021). The latter is a fine example of how the local construction of energy justice can have a great impact on distributive outcomes. An important remark to make here, as Hanke, Guyet & Feenstra (2021) indicate, is that the reason for certain initiatives to not share their benefits beyond their own membership base might also emerge from an absence of a wider societal awareness of energy justice issues, in light of this it is interesting to ponder whether in some cases energy justice might not even be considered all together.

Another important aspect of distributive justice within renewable energy initiatives is the type of ownership employed, since this indirectly relates to the distribution of benefits (as voting rights and risk distribution). So when it pertains to individuals as shareholders, different schemes for consumer ownership have different implications for both the issue of voting rights and the distribution of risk (Jenkins, 2018).

There is an energy justice tension within public policy that should be addressed here as well; the responsabilization of citizens. This refers to a process where responsibilities are shifted from government institutions to individuals and communities. In terms of energy justice, this pertains to a development where community energy initiatives are seen as an instrument to reach policy goals. Many benefits of community initiatives are also experienced at the national or global level, governments then shift responsibilities to citizens through, for example, relying on volunteers or poorly paid community members to do government work. In that way a distributive energy justice issue takes shape through the unfair shift of burdens from government institutions to community initiatives (Van Bommel & Höfken, 2021). Argüelles et al. (2017) further suggest that community initiatives tend to grow outside general capitalist logics of private accumulation and profit, and therefore are able to reconfigure dominant global trends of societal and economic organization. Yet, and this is the crux of their argument, these community initiatives seem to fit relatively well under a neoliberal governing approach where responsibilities of the state are shifting downwards. Thus an issue emerges that challenges the role of the state, and the potential of community initiatives to operate in a more radical manner, reconfiguring conventional organizational tendencies. So, it is important to acknowledge that a shift of burdens for environmental and societal change from the state to community initiatives constitutes a matter of distributive justice.

Recognition issues of energy justice often manifest themselves in discourses of misrecognition, one of the ways in which this happens is through labeling groups as “energy poor” as a result of a knowledge deficit that marginalizes their motivations, interpretations and stories that support their consumption patterns. Another aspect of such discourse is the usage of NIMBYism as a way of discrediting local knowledge and opinions, local opposers of renewable energy projects can have sincere, legitimate and well-founded concerns for the impact of projects on their local environment or community, disregarding their motivations in this way only leads to increased resistance and mutual misunderstanding (Jenkins, et al., 2016; Jenkins, 2018). Furthermore, recognition issues are often grounded in emotions and values, this pertains to socio-geographic or socio-cultural phenomena like place attachment, aesthetics and cultural identity, the way in which renewable energy projects are placed dialectically within such frames determines for a large part the construction of local views on such projects (Jenkins, et al., 2016). To illustrate this, one can consider different local perceptions on the aesthetic quality of wind farms, as found in different case studies addressing the topic. In a case study on local perceptions in Portugal people commented on the aesthetic quality of wind farms as “spoiling the landscape”, however in a different case study on wind farms in Northern-Ireland people expressed a very different perception on aesthetic quality, seeing wind farms as complementary to the natural environment; “Seascapes are very beautiful, wind farms can be visually attractive”, in that same case people also pointed at the positive aesthetic purpose of wind farms as a representation of the economic and sustainable character of the region (Delicado, Figueiredo & Silva, 2016; Barry & Robinson, 2007). This example illustrates the many different possible views on the aesthetics of wind farms and, in light of justice as recognition, it is important that all these views are heard so that an inclusive local construction of such a value can take place. Issues of recognition can also take place in this context when certain discourses on values like place attachment and aesthetics are marginalized in favor of others, this happened in the Noordoostpolder, Netherlands where local opponents of shale gas extraction expressed strong worries about the impact of such endeavors on the character of the landscape as potentially upsetting its ‘peacefulness and tranquility’, but that sentiment was mostly marginalized by prevailing economic arguments (Jenkins et al, 2016; Forman, 2017).

Within the dynamics of collectively owned renewable energy projects, it is also important, from a recognition perspective, that members are treated equally. Community energy initiatives with collective ownership models can lead to enhancing equity, but this is not a self-evident development. There are examples, as Creamer, et al. (2018) describe, where participation within the initiative is often limited to the members in higher socio-economic groups, there are also similar instances where inequality occurs on the basis of gender (Van Bommel & Höfken, 2021).

Recognition also pertains to the diversity of the barriers to consumer ownership for different groups in society, which could be attributed to one or several factors of economic opportunity, cultural tradition and geographic situation (Jenkins, 2018). More specifically, we can identify a form of misrecognition, since the particular predicament of vulnerable groups can be easily overlooked. The ability of consumer ownership forms of renewable energy ostensibly grants the opportunity to include socially marginalized groups, those who appear to be disinterested but, in reality, lack the capacities to consider such options. To explain this further, often, in instances of poverty, energy



dilemmas may rank as lower among pressing priorities (i.g. food or shelter), thus energy affordability, access and ownership may appear as longer-term priorities in contrast to shorter-term goals. This means that engagement of energy vulnerable groups is an important factor of justice as recognition for consumer ownership initiatives, since these groups often do not have the capacity to pensively reflect on participating in consumer ownership. The way in which vulnerable groups are considered as stakeholders and engaged in processes does not merely pertain to elements of recognition but also to elements of procedural justice (Hanke, Guyet & Feenstra, 2021; Jenkins, 2018).

### *Procedural issues of energy justice*

The process around decision-making is one of the most important aspects of procedural justice in the energy transition, this is not only limited to the full inclusion and participation of local decision-makers, but also pertains to the local knowledge cultivated by researchers and organizations, through collection and analysis of data relevant to particular localities. This means that effective participation is not only enacted through physical involvement in decision-making. A comprehensive overview of what procedural justice should entail in the context of energy justice can be found in the literature, identified by Walker & Day (2012) and later Sovacool & Dworkin (2014) as three key rights:

1. Access to information
2. Access to and meaningful participation in decision-making
3. Access to legal procedures for achieving redress

Access to information pertains to transparency from government institutions concerning the processes around the enactment and functioning of renewable energy projects. Access to and meaningful participation in decision-making means that the interests of community initiatives are properly represented in a variety of relevant decision-making processes, but it can also pertain to the internal functioning of community initiatives, that all participating members have equal access to decision-making. Access to legal procedures is important in providing mechanisms for challenging the decision-making and actions of public bodies and also private companies, that in one way or another might harm activities of community initiatives (Walker & Day, 2012). Another element that is often mentioned in relation to the previous three key rights is a lack of bias on the part of decision-makers, this concerns the fair inclusion of different perspectives on matters and acknowledgement of the decision-makers self-interest, this element of bias can be applied to all sorts of decision-makers that appear in processes regarding community initiatives, whether it be from public bodies or from within community initiatives themselves (Jenkins, 2018).

One of the most important aspects of procedural justice in community initiatives for renewable energy is access to membership, this is a very intricate problem as it pertains to the ability of vulnerable groups to find their way into arrangements of collective renewable energy. The most important dilemma for vulnerable groups, which is illustrative for their predicament within collective energy, is that poverty severely limits their capacity to reflect on their situation, which impacts their energy choices in such a way that the realization that investing in renewable energy will be efficient in the long-run becomes irrelevant, since they lack the time to think about this or the financial capacity (or loan opportunities) to make such an investment (discussed before as a form of misrecognition) (Hanke, Guyet & Feenstra, 2021; Hanke & Lowitzsch, 2020). Within the context of

the construction and contestation of energy justice in renewable energy communities it thus becomes a delicate normative matter of how vulnerable groups ought to be included in such initiatives. This appears to be one of the central issues of energy justice in community initiatives, as the issue of membership, as previously described, also contains elements of distribution and recognition, through respectively member diversity and engagement of vulnerable groups. It thus seems important to mention here that there is often, to a certain extent, overlap between the three tenets, distributive, recognition and procedural issues often converge to create intricate cases of energy justice.

### A community energy justice framework

This section presents the previously discussed notions of energy justice within a community energy justice framework, all relevant concepts have been categorized according to one of the three tenets of distributive, recognition or procedural justice. This is the first operationalization of the research, these different concepts, synthesized from the literature will form the basis for the indicators and the interview guide that will be created later on in the research, and thus provides the main mode of investigation.

Again here it is important to stress that in reality sometimes the three tenets will overlap, the allocation of a particular phenomenon to either one tenet will be determined on account of which tenet resembles it most accurately, however it is not necessarily limited to that one.

<b>Distributive justice</b>	<b>Recognition justice</b>	<b>Procedural justice</b>
Siting of infrastructure	Marginalization of local discourses	Access to decision-making
Responsibilization of community initiatives	Aesthetics and place attachment	Access to information
Energy services targeted at vulnerable groups	Equality of members	Access to legal procedures
Access to outcomes in the form of benefits and services	Level of knowledge about energy vulnerability	Lack of bias on the part of decision-makers
Type of consumer ownership	Engagement of vulnerable groups	Access to membership

*Table 1: An energy justice framework for the community level (based on the literature review)*

### Three levels of community energy justice

This section will address some further elaborations on the mechanisms of community energy justice, since the study of energy justice, as it pertains specifically to community initiatives, has been developed only recently and new insights still emerge on how to approach this phenomena. The unique quality of community energy justice is that it obviously pertains to a certain locality, a group of people that have, through one way or another, gathered into a community with shared interest in collective ownership of renewable energy. This particularity of community has implications for energy justice, Sovacool et al. (2019) already operationalized that the idea of energy justice should include different analytical scales. Van Bommel & Höffken (2021) build on this notion with regard to community initiatives and state that there are three levels of interaction in community energy justice, they claim that (Van Bommel & Höffken, 2021, p.1): “Extending the energy justice lens to address these different levels of community energy justice enables us to explore the encompassing premise energy justice has”. The three analytical levels they distinguish are: energy justice within the initiatives, energy justice between the initiatives and related actors and energy justice beyond the initiatives. The following part will address each of these three levels separately, as they can have quite far-reaching implications for research. These distinctions may inform the methodological and analytical approach to investigating energy justice at the community level, in fact the conceptual model presented at the end of this chapter draws heavy inspiration from these three levels of community energy justice developed by Van Bommel & Höfken (2021).

#### *Energy justice within community initiatives*

The first distinguishable level is perhaps the most obvious one and is most frequently addressed in the literature; it pertains to the internal dynamics of community initiatives, specifically, how energy justice is constructed and enacted within these initiatives. The comprehensiveness of the literature can perhaps be attributed to the intuitive link between energy justice and the community when grasping for an understanding of the local context of community energy initiatives. Nonetheless, there is good cause for such a link since many conceptions of energy justice emerging from the previously established framework manifest themselves within these internal dynamics of community energy initiatives. For example, issues of transparency in the decision-making process form a matter of procedural justice in the form of access to decision-making, access to information and lack of bias on the part of decision makers all *within* community energy initiatives. Also, the way in which financial benefits are distributed among members, especially in shared ownership of renewable energy, can cause intra-community tensions, articulations as such are related to issues of distributional justice in the form of access to outcomes and type of ownership, again *within* community energy initiatives. The previous two issues are just examples of how energy justice is contested and constructed within community energy initiatives, undoubtedly, in reality many more similar considerations can be found on this level, the purpose of these examples is to show the relevance and usefulness of distinguishing between three different analytical levels of community energy justice (Van Bommel & Höffken, 2021).

#### *Energy justice between community initiatives and related actors*

Community energy initiatives do not exist within a vacuum, in their practicality they have to deal with various institutions. From their creation to finding their place in institutional arrangements and

acting in accordance with the rules of the game. The interaction between community energy initiatives and particular institutions, and the way in which both are intertwined with each other, can lead to issues of energy justice. This accounts for external parties, which can include developers, investors but also local authorities, which can have an impact on the perceived energy justice of community initiatives. For example, some cooperatives work with third parties that might have larger investment risks and therefore make more decisions without the involvement of community energy initiative members, leading to issues of procedural justice in the form of access to decision-making *between* community energy initiatives and related actors. Another aspect of such justice concerns is the interaction between external developers (either private or public) and community energy initiatives, a lack of transparency from the developer and consequently mistrust towards him within the community can be detrimental for the potential of community initiatives, for example people skeptical of renewable energy might abstain from investing or associating themselves with the initiative as a result. In this way an issue of procedural justice in the form of access to information emerges *between* community initiatives and related actors (Van Bommel & Höffken, 2021).

### *Energy justice beyond community initiatives*

Up to this point the discussed issues of energy justice, on the previous two levels, all relate to or have an impact on the initiatives' members yet, as evidenced in previous chapters, there are also energy justice issues that do not directly impact the members of initiatives but are nevertheless related to the development of community energy. For example, the unequal opportunities for different groups in society to form a community energy initiative as a result of high levels of deprivation and social exclusion, some initiatives work towards the inclusion of such vulnerable groups and by doing so articulate ideas of justice as recognition in the form of diversity of barriers to consumer ownership, level of knowledge about energy vulnerability and engagement of vulnerable groups, thus taking energy justice constructions *beyond* community initiatives. Another example of this level of energy justice is the role community energy initiatives can play when engaging with energy systems and mobilizing their knowledge as a social institution to advise broader segments of society on energy use and consumption patterns. In this way, distributive justice in the form of energy services targeted at vulnerable groups can be enacted taking energy justice *beyond* community initiatives (Van Bommel & Höffken, 2021).

This chapter has shown how energy justice conceptions emerging from the framework take on specific meaning when applied to three different levels at which community energy initiatives might interact with principles of energy justice. The distinction made between the three different levels is an important aspect of operationalizing energy justice at the community level, it shows the possible different relationships between actors in the local contestation and construction of energy justice. Furthermore, it reveals important steps to be taken in the methodology, especially as it concerns to the methods of data collection, since, in accordance with the three different levels, interviews ought to be conducted with members of the community initiative studied (within), related actors that have been or are involved in the process (between) and relevant actors that have been excluded or are informed of the implications of the initiative for those not involved (beyond), only then can a comprehensive and encompassing understanding of energy justice at the community level be developed.

## Conceptual model

The aim of this research is to investigate the local construction of energy justice, the theoretical concepts that have been translated to a framework that can be applied to the local level is instrumental here. The main relationship under investigation is thus how local perceptions and values on what is just, in other words, the local construction of energy justice, how that articulation relates to the theoretical concepts. Therefore, the conceptual model centers around this local construction of energy justice, the meaning of which may be unveiled through the lens of theoretical concepts. The analytical levels of energy justice, taken from the work of Van Bommel & Höffken (2021), are important for making sense of this local construction; they represent different relationships that local constructions of justice can have with the theoretical concepts. Finally, the theoretical concepts are distributive, recognition or procedural in nature, these distinctions are important for determining the essence of the ideas of justice that are created, and can be identified, on the local level.

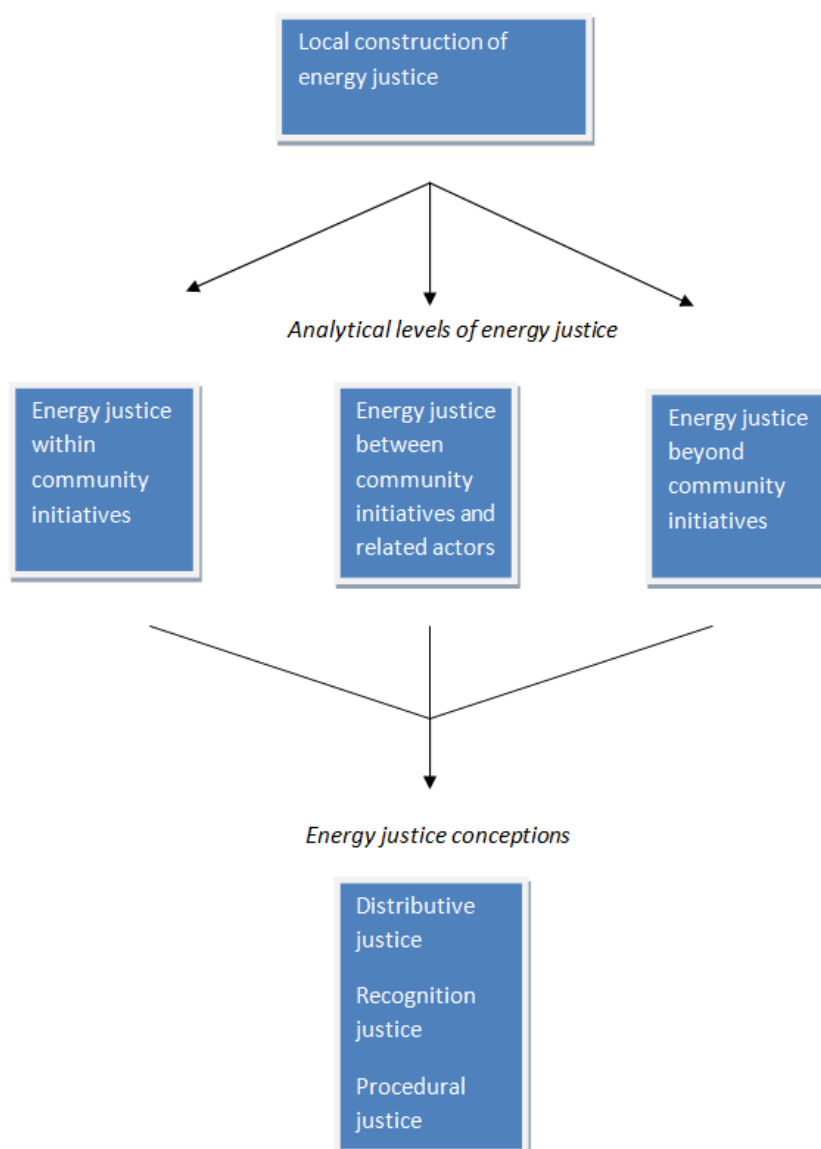


Figure 1: The conceptual model

## Chapter 3: Methodology

The following chapter will address the methodological foundation of the research. The methodology is an important step in the research process, it informs how the ideas of the researcher are translated into the real world and how the knowledge can be apprehended. This pertains to the philosophical positions taken in the research, which is referred to as the research paradigm. After ascertaining the more abstract philosophical foundations of the research, focus will be directed towards the research strategy and the research design, this will provide a more specific structure to the methodological direction of the research. After this step, the operationalization process can advance and the methods of data collection will be ascertained. Then finally, this chapter will address the internal and external validity and the reliability.

### Research paradigm

A paradigm can be described as a particular set of basic beliefs that pertain to the nature of the world, an individual's place in it and the range of possible relationships to that world and parts of it. It is important to emphasize that these paradigms are not founded on absolute truths, they are well-argued, but all rely on faith, which is why these beliefs are referred to as basic. However, it is not the philosophical debate that is of interest here, the positions taken on a research paradigm are relevant to the research since they reveal some of the underlying assumptions that can't be denied when trying to obtain knowledge from a world that is at times confusing and incomprehensible. More specifically, we can delineate the questions that inform research paradigms into three different proponents; ontology, epistemology and methodology. The ontological questions what the nature of reality is, in other words; what can we know about this world? The epistemological questions the nature of the relationship between the knower or would-be knower and what can be known, this also depends on the ontological position one takes, for example, if reality is assumed to be 'real' then the relationship between this 'real' reality and the knower is one of objective truth, this is to say that the knower can observe the world and ascertain information from it that is objectively true. The methodological questions how the would-be knower can go about finding that which he or she believes can be known, and this is informed by the positions that one takes on ontology and epistemology, therefore one could say that a research paradigm consists of a coherent set of ontological, epistemological and methodological beliefs (Guba & Lincoln, 1994).

### *Critical theory*

It appears that the philosophical positioning of this research appeals most to positions that align with a research paradigm known as critical theory. The ontological assumptions of critical theory are described as a form of historical realism, this means that reality is assumed to be apprehendable but only as a form of ancient history. The reality perceived today has been shaped by numerous political, social, ethnic, cultural and economic factors that have formed into structures that are taken as 'real'

and seem to us as natural and immutable. It is important to note that practically these structures are 'real' and when researching objects in the real world they appear as historical realities (Guba & Lincoln, 1994). In terms of epistemology critical theory appeals to a notion of interactive connection between the researcher and the research object, this is important because it means that the values of the researcher will inevitably influence the research. Here the line between ontology and epistemology becomes blurred since what can be known (reality) is inextricably intertwined with the perception of the would-be knower, this means that findings are always value mediated. The methodological understanding that fits with these notions is dialogic and dialectical, the interactive nature of the relationship between researcher and research subject requires a dialogue, where misconceptions and ignorance of the researcher can be transformed into a more informed understanding.

### Research strategy

In the next section the research strategy will be discussed, it pertains to some of the most vital decisions that are to be made when deciding on how to conduct the research. Most of these dilemmas concern the methods of data collection, the processing of obtained data, and how to align them in such a way that relevant data will be obtained, data that will help towards answering the research questions. The case study seems like the most appropriate approach for data collection in this research, Yin (1981) indicates that the need for a case study arises when "an enquiry must examine a contemporary phenomenon in its real-life context", especially when the boundaries between phenomena and context are not clear. In the instance of energy justice, the real-life context is tremendously important, local constructions of energy justice are inseparable from the context in which they emerge. The latter is also stated by Forman (2017) who argues that methodologies for studies examining the enactment of energy justice ought to be sensitive to context. This research is explanatory in nature, Yin (1984) indicates that these types of research benefit most from experiments or case studies, and, as we've already established, the context matters very much here, therefore the case study is more appropriate than an experiment.

### *Unit(s) of analysis*

Some considerations have to be elaborated on with regards to the unit(s) of analysis. This refers to the subject of study (Bickman & Rog, 1998), which in this case, seems to be an organization, the cooperative of local investors. However, such a definition presents a problem, since to gain insight into the real-life context of the case, to get the full picture, it is absolutely necessary to also include those actors that were involved in the process (e.g. municipal representatives) and those people who, for one reason or another, were excluded or refused to participate in the cooperative, a more comprehensive definition then seems to entail not so much an organization or group of people as unit of analysis but a more abstract notion that pertains to a contextual process. The boundaries of the study are informed by the definition of the unit(s) of analysis (Bickman & Rog, 1998), which in this case means that the subject of study is not limited to the cooperative as a single unit but is rather confined by the emergence and character of the cooperative as a social phenomena, this has been theoretically underpinned by the previously described notion of three different levels of community energy justice.

## *Narratives*

Flyvbjerg (2006) addresses the role of narratives in case study research. He argues that good narratives tend to approach the complexities and contradictions of real life, which makes studies that deploy them ably hard to summarize, yet this quality is a merit to the case since it signifies the ability to uncover a particularly rich problematic. The case under investigation here, seems best approached with a similar method, or is at least inclined to contain, to an extent, substantive elements of narrative. As explained in the previous paragraph, the study centers around an understanding of the cooperative as a social phenomena, to avoid missing important contextual factors that are of significance to the articulation of energy justice in this case, and it is in this light that the relevance of a narrative approach should be understood, a narrative approach is particularly sensitive to details and might reveal complex and sometimes conflicting stories with regards to the phenomena under investigation (Flyvbjerg, 2006).

## *Holistic research strategy*

The case study as a research strategy can be suited to help overcome certain reductionist tendencies, some of these seem very applicable and relevant to this research; This includes acknowledging the interdependency of social phenomena and being aware of the functions an object may have for a larger whole of which it is a part (Verschuren, 2003). Verschuren (2003) indicates that the researcher should comprehend the meaning of an object or phenomenon as a particle of a larger whole, before drawing conclusions about its significance. Here, the implications for this research are evident, in that it seems important to gain an understanding of the contextual factors that influence the construction of energy justice, and particularly the ability of renewable energy initiatives to articulate energy justice principles throughout their enactment and in their interactions with larger societal processes. This means that conclusions on the construction of energy justice, as it pertains to members of a renewable energy initiative, should be formed only after placing the information in a wider relevant frame, this can be achieved by considering individual results in relation to each other with simultaneous consistency to the whole unit of analysis. This will eventually lead to a holistic understanding of the investigated phenomena, with individual results, holding up in terms of their relevance on their own accord, but still always relating back to and being part of a comprehensive and encompassing whole. Verschuren (2003) indicates that it is important to consider patterns, structures, mechanisms, types, profiles and configurations, instead of variables. In holistic research the researcher may look at processes, dynamics and developments. These are ways of avoiding too much reductionism in the case study, and so ensuring that considerations of the investigated process are made in accordance with the whole from which they may be apprehended, again this recalls the earlier notion of Yin (1984), that case studies ought to investigate a phenomenon in its real-life context.



## Research methods

Research methods that belong to a case study mostly consist of qualitative methods, like participant observation, quantitative content analysis of written and audio-visual documents and in-depth interviews with key informants, however case studies may also include quantitative data analysis like log linear modeling and logistic regression (Verschuren, 2003). An important distinction for the research methods of a case study are the opposite poles of reductionist and holistic research, Verschuren (2003) argues that case studies should be on the holistic side of the axis, this generally involves using qualitative data analysis. The reason for this is that quantification is based on splitting social reality in units and variables on the one hand and observation units or units of analysis on the other hand, from this it follows that knowledge emerging from the research is built up by aggregation of individual properties of the observation units. For a case study then, no distinctions are made between research units and observation units.

Silverman (2015) argues that qualitative methods are also very useful in spatial planning research (p. 140); “qualitative methods are well-suited to account for social dimensions and egalitarian goals in plan making”. This seems very applicable to the themes of this research, since its aim is to say something about conceptions of justice within the field of spatial planning. This is further strengthened by comments of Silverman on the subject, as he states that qualitative methods are designed to uncover deeper meanings in social processes, which aligns very well with the objective of this investigation into the local construction of energy justice. Qualitative methods of data collection and analysis therefore seem like the appropriate research methods in this case.

## Data collection

The specific methods of data collection for this case study will include documentation and interviews. Documents will provide information on the case, on the one hand to extend the scope of useful data, and on the other hand to complement or contrast the data gathered from interviews. The interviews will be semi-structured, this means that questions will be pre-planned before the interview, however the interviewer will give the interviewee the chance to elaborate and explain particular issues by means of open-ended questions (Alsaawi, 2014). This approach to interviews is favorable in this case because it ensures a certain richness of in-depth data, which is necessary for obtaining knowledge relevant to the construction and contestation of energy justice as they are performed by local individuals, yet still remains structured enough to avoid too much deviation from the topic of energy justice. Semi-structured interviews are furthermore appropriate when interviewees have a low level of awareness of the subject or when participants are not used to talking about the subject (Kallio, et al., 2016). Now, in the case of energy justice, it is not necessarily true that interviewees have little awareness of the issue of fairness within their motivations, but they are probably not comprehensively informed on what the theoretical concept of energy justice entails for their motivations and those of their organization. Therefore a semi-structured interview seems beneficial, since interviewees are bound to have a certain perspective on justice within the boundaries of their own motivations and the general motivations of their organization, it is then the task of the interviewer, and consequently the interview guide, to allow interviewees to express these values.

Flexibility in designing and refining the interview guide is an important advantage of semi-structured interviews, also in this case, it ensures a degree of freedom for the interviewees to express their thoughts and highlight particular areas of interest to them and furthermore grants them the opportunity to express the expertise they feel they have (Horton, Macve & Struyven, 2004). The explorative nature of the research questions also demands a flexible approach to the construction of the interview guide, since the phenomena studied emerges from the interviewees in a way that is to a degree intangible to the researcher as well as even to the interviewee himself, coding and analyses of the interviews will provide more understanding and comprehension of the investigated phenomena. It is therefore essential to ensure that interviewees can exhibit their thoughts and experiences in an organic and unconfined manner, this will most likely prove greatly beneficial for the analysis stage of the research.

Semi-structured interviews also provide flexibility when conducting the interviews, this approach makes it possible to allow dialogue during the interview, but also granting the opportunity to change the order of questions asked and easy movement from question to question. The researcher is responsible for anticipating and recognizing the potential merit of changing the order of questions or engaging in dialogue. However, it is important to state that to achieve the richest data possible, interview questions should be well-formulated beforehand, being clearly worded, not leading, single-faced and open-ended (Kallio, et al., 2016). The semi-structured interview guide consists broadly of two levels of questions: main themes and follow-up questions. Main themes cover the main subjects of the research and here interviewees are encouraged to speak freely about their perceptions and experiences. Follow-up questions are the more in-depth questions that are used to direct conversation to the paramount study subject. Follow-up questions can be pre-designed, but might also emerge spontaneously during the interview if the researcher deems a particular point touched upon by the interviewee worthy to be further expanded upon (Kallio, et al., 2016).

### *The interview guide*

Several semi-structured interview guides have been created for the purpose of this study dependant on the stage of the research at the time of conducting them and the character of the interviewees which sometimes demanded a different set-up of interview questions however all share the same foundation, the steps taken and the motivations for these choices will be elaborated upon below. The complete interview guides can be found in the appendices section at the end of this study.

As follows from the literature, it is useful to distinguish between three analytical levels of energy justice, to wit: within, between and beyond. These three levels were the main lines of inquiry, they form the main themes from which more specific questions and relationships may emerge. Therefore the interview guide consisted of a few main questions that are the central lines of inquiry, from there more in-depth exploration of topics took place through some, rather flexible, follow-up questions. The interview always started off with a more general question on the role of the interviewee within the cooperation (or their respective organization), this in turn provided the interviewer with a general idea on the background and subsequent knowledge and experience of the interviewee which proved to be useful information for steering the interview into a most fruitful direction, and additionally, it also offered a way to build rapport with the interviewee.

The constructed interview guide is broad and at times not very specific, this was a deliberate research choice, since the information that was to be obtained was primarily a construct of the interviewee, a representative presenting the ideas that belong to the organization. It is indeed the researcher's task to reveal the relevant information borne within the interviewee. From the outset this inquiry delved into a construction that was both local and specific, the knowledge that might comprise an answer to the research question is therefore laden with meaning and a collection of crude facts would not prove sufficient to sustain a comprehensive answer. The expression of energy justice then, is mystified to the degree that it cannot be based solely on factual preconceived questions, the facts of the matter undoubtedly form the basis for an interpretation of energy justice at a local level, but its relevant meaning can only be understood through the nuances expressed by the interviewees. The point here is that the interview guide was deliberately designed to be unspecific for this reason, it allowed nuances to seep through and gave room for expression. The interview guide was therefore also subjugated to an iterative process, the guide was further specified and modified on the basis of the background and role of the interviewee within their organization, also the guide changed along the way depending on the progress made in earlier interviews. It is also important to address the possibility that not all questions might be equally accessible to different interviewees, it therefore seemed of great benefit to allow interviewees to elaborate on the subjects that they felt most comfortable talking about, in that way they were enabled to reveal the depths of their knowledge and understanding.

### *Selection of respondents*

Since this research takes the form of a case study, the selection of respondents was at first mainly focused on (board)members of the cooperative WindPowerNijmegen, to understand how the cooperative constructs and carries out ideas on energy justice. Then in a second round of interviews the focus shifted more towards placing these previous findings within the right context, therefore interviews were set up with representatives of the local community and the municipality to corroborate or contrast the information received from the members of the cooperative.

Furthermore, several organizations were contacted that could provide more insight on how a cooperative can construct energy justice, for example on the nature of inclusivity in community initiatives or the way in which community initiatives can contribute to alleviating energy poverty, this is to act as a backdrop against which to place the motivations and considerations of the cooperative under investigation.

### *List of interviewees*

An overview of the conducted interviews is provided below, in total 11 interviews have been conducted. The interviewees all represent their respective organizations, most are members of cooperative WindPowerNijmegen, but there are also officials of the municipality, a representative of the local neighborhood association, the director of an umbrella organization for energy cooperatives, and finally, a representative of an organization working on inclusivity in the energy transition. For the sake of anonymity the real names of all the interviewees will be excluded from this document, since it serves little purpose to disclose these names when really the only interest is in what they have to say as representatives of their respective organizations, therefore in the results section when information is used obtained from a particular interviewee they will be referenced based on their initials.

<b>Interviewees</b>	<b>Role and organization(s)</b>
Interviewee 1	Current board member of the cooperative and former project manager at the municipality
Interviewee 2	Former board member of the cooperative
Interviewee 3	Former board member of the cooperative and employee at developer Wiek-II
Interviewee 4	Former board member of the cooperative
Interviewee 5	Project manager at Power2Nijmegen
Interviewee 6	Civil servant at the municipality
Interviewee 7	Board member of Leefbaar Reeth
Interviewee 8	Employee at Kleurrijk Groen
Interviewee 9	Current board member of the cooperative
Interviewee 10	Director at Energie Samen
Interviewee 11	Civil servant at the municipality

*Table 2: An overview of interviewees*

### *Data analysis*

After conducting the interviews and producing the transcripts, the gathered data was put under analysis through a systemized coding procedure, this is an essential method for the analysis of qualitative data; in this case semi-structured interviews. The programme used to structure, register and analyze the data was Atlas.ti.

An important part of qualitative research is thus the process of coding, this means sorting data into categories for further analysis. Primarily, there are two types of coding used in qualitative analysis. The first type consists of sifting through the interview excerpts line-by-line and assigning codes to relevant parts of the data, this is called open coding. The second type involves comparing the results from open coding, synthesizing information, and constructing broader, more overarching categories for data (Silverman, 2015). Following this procedure, several rounds of open coding were done on the interview transcripts, after these initial rounds of open coding, code groups were created and some overlapping codes were merged. Eventually after repeating this process for some time main themes started to emerge, and more overarching categories for the data could be identified. It also seems important to mention that after coding and analyzing the first interviews (with cooperative

members) already a few main themes could be established, where energy justice concepts seemed to emerge most strongly in the cooperative, and to fully understand the nature of these main themes it seemed important to interview other parties that would be able to shed some more light on these aspects of energy justice, in order to clarify the research problem and provide a richer analysis of the construction of energy justice at the community level. This is the point in the research where the decision was made to work towards a more diverse data collection, this shows the importance of the iterative process for this research as well, going back a few steps in the research process to adapt to a new understanding of what is required from the methodology. Thus, when all the interviews were conducted and the coding procedure moved into a more saturated stage, the main themes started to crystallize and eventually provided the structure for answering the research questions in the results chapter.

### **Validity, Reliability And Trustworthiness**

There are two types of validity that need to be discussed here, external validity, pertaining to the generalizability of the research to other contexts, and internal validity, indicating that the research accurately investigates the presumed claim on cause and effect between variables. The case study is often characterized as having limited external validity or generalizability, because of a small number of research units. Yin (1984) however indicates that the results of a case study are in principle generalizable to theoretical propositions, not to populations or universes. The case study can be said to be internally valid when holistic knowledge is acquired meaning knowledge that takes into account temporal, spatial and functional interconnectedness of a phenomenon (Verschuren, 2003). Furthermore, the reliability of the research needs to be addressed, this pertains to the degree to which the research methods produce stable and consistent results. For a case study, reliability can sometimes pose difficulties, since data on real-life events, gathered by different researchers may not always converge into one consistent picture. That being said, possible differences can also provide meaningful additional sources of information about cases under investigation (Riege, 2003).

#### *Four criteria for trustworthiness*

Due to the interpretative nature of the research it is also important to consider different approaches to assessing trustworthiness since positivist researchers argue that validity and reliability might often be insufficient in qualitative methods, Guba & Lincoln (1985) offer such an approach by theorizing trustworthiness not in terms of validity and reliability but rather they propose four criteria that should be considered by qualitative researchers when attempting to establish trustworthiness, these are: credibility; confidence in the “truth” of the findings, transferability; showing that the findings have applicability in other contexts, dependability; showing that the findings are consistent and could be repeated and confirmability; a degree of neutrality with regard to researcher bias, motivation or interest. Characterizing the research in these terms as well as the conventional terms of validity and reliability will enhance the trustworthiness of the research, this twofold approach ensures that objections to a lack of trustworthiness in case study research within the usual paradigm of validity and reliability can be averted.

To ensure or improve external validity in case study research, it is important to define the scope and boundaries of reasonable analytical generalization for the research, where findings are generalized to a certain broader theory, and to compare the evidence found with the previously identified core concepts of the literature. The qualitative techniques to be used here are a thick description of the case data, predetermined questions and specific procedures for coding and analysis, which were set out in the data analysis. A strategy for improving the internal validity is attempting to establish a high degree of internal coherence within findings, this can be achieved by cross-checking results during the data-analysis phase of the research (Riege, 2003).

Reliability of the case study can be improved by several means. One way is through ensuring a certain congruence or compatibility between the research issues established in the theory and the research design. Yin (1984) further indicates that using a structured or semi-structured interview protocol will also benefit the reliability of the research. An obvious, yet nonetheless very important, way to ensure reliability is through the careful and attentive recording of data, completeness in the transcripts and making use of audio-recordings is a requisite (Riege, 2003).

A way to increase credibility and confirmability is the use of triangulation techniques, using multiple sources of evidence during the data collection and data analysis phases of the research. By orienting the research on theoretical grounds, the researcher's worldview and assumptions are intended to remain limited, this would greatly benefit the credibility of the research. Part of the previous point made is the self-awareness of the researcher during the data collection and data analysis phase, being aware of and anticipating potential biases and assumptions during the inquiry that may hamper the credibility, this is also very important for establishing dependability and confirmability. Dependability is also concerned with cataloging the operational details of data gathering and reflective evaluation of the process of carrying out the research. The transferability of the research may be established through a thick description of all the facets of the case study, and by doing so make the case accessible to readers for assessing the potential transferability. Furthermore the researcher can make use of specific procedures for coding and analysis such as symbols, signs and others during the data analysis phase, this will aid in establishing transferability (Riege, 2003; Shenton, 2004).

Kallio et al. (2016) indicate that the construction of a semi-structured interview guide can also enhance the trustworthiness of qualitative research. They argue that the successful selection of the data collection methodology in earlier phases of the research is an essential basis for the credibility of the study results. The development of a semi-structured interview guide can also benefit the confirmability, through systematic use of theoretical knowledge distilled from the literature. In addition, confirmability is expressed by presenting the interview guide in a complete and comprehensible manner that will make the research process transparent for readers. Again, the presentation of a complete interview guide, in addition to the process around its development, will also help to ensure dependability since it will make the data collection tool available to other researchers.

## Operationalization

Operationalization is the process by which researchers set indicators to measure concepts. The following synthesized theoretical framework, as presented earlier, is a first operationalization of what energy justice entails on the community level, and especially with regard to renewable energy projects characterized by a form of collective ownership. These concepts are now to be operationalized into further specified indicators that can be used to inform the questions that will be included in the interview guide.

<b>Distributive justice</b>	<b>Recognition justice</b>	<b>Procedural justice</b>
Siting of infrastructure	Marginalization of local discourses	Access to decision-making
Responsibilization of community initiatives	Aesthetics and place attachment	Access to information
Energy services targeted at vulnerable groups	Equality of members	Access to legal procedures
Access to outcomes in the form of benefits and services	Level of knowledge about energy vulnerability	Lack of bias on the part of decision-makers
Type of consumer ownership	Engagement of vulnerable groups	Access to membership

*Table 3: An energy justice framework for the community level (based on the literature review)*

It is important to address here as well that these indicators are not set to measure how well the initiative is performing on some scale or degree of energy justice, the aim of the investigation is to grasp how energy justice is considered and constructed by local actors involved in collective ownership initiatives for renewable energy. It is in this light that indicators and subsequently interview questions will be framed to regard notions of justice with a degree of normative neutrality, for example, an indicator of energy justice might be an initiatives awareness of the exclusion of certain social groups, the main focus of interest here points to how the initiative comes to regard their own initiative as exclusionary to some, and how, if they are indeed aware of this, they address this perceived exclusion. It is not the job of the researcher here to lecture an initiative on how social groups are excluded and how they should address this, of course after the data analysis it might be possible to form conclusions on what initiatives are missing within a wider societal frame, and attempt to conceive possible explanations for such a finding. For now however, it is important to allow a freedom of expression to the interviewees representing the initiative in order to learn how they conceive of and construct energy justice from the perspective of their organization.

The following indicators are formulated on the basis of several studies that have endeavored in specifying energy justice as a measurable concept, also with attention for the distinct character of the local level. Most of these studies have already been used to create a large part of the theoretical framework, the works are: Hanke, Guyet & Feenstra, 2021; Van Bommel & Höfken, 2021; Argüelles, Anguelovski & Dinnie, 2017 and Jenkins, 2018. The following framework shows the indicators as they

belong to their respective concept and level of justice. For example, an indicator placed in the distributive/within section means that it is a distributive justice indicator that is of relevance to energy justice within community initiatives.

	Distributive	Recognition	Procedural
Within	<ol style="list-style-type: none"> <li>1. Membership diversity</li> <li>2. The possibility to acquire ownership</li> <li>3. Functioning of voting rights</li> <li>4. Distribution of risk</li> </ol>	<ol style="list-style-type: none"> <li>1. Equal opportunities for participation</li> <li>2. Marginalization of internal discourses</li> </ol>	<ol style="list-style-type: none"> <li>1. Decision-making processes within community initiatives</li> <li>2. Information distribution to members</li> <li>3. Organizational culture</li> </ol>
Between	<ol style="list-style-type: none"> <li>1. Experienced limitations by governments</li> <li>2. Experienced shift of burdens by public bodies</li> </ol>	<ol style="list-style-type: none"> <li>1. Marginalization of community initiatives within institutional arrangements</li> <li>2. Marginalization by third parties</li> </ol>	<ol style="list-style-type: none"> <li>1. Inclusion of community initiatives in decision-making processes</li> <li>2. Transparency of government institutions</li> <li>3. Transparency of third parties</li> <li>4. Legal capacity for challenging third parties and public bodies</li> <li>5. Experienced biases of public bodies</li> </ol>
Beyond	<ol style="list-style-type: none"> <li>1. Impact on the local community</li> <li>2. Allocation process of the site</li> <li>3. Reservation of funds for societal projects</li> <li>4. External activities targeted at vulnerable groups</li> </ol>	<ol style="list-style-type: none"> <li>1. Local discourse on siting</li> <li>2. (Mis)usage of NIMBYism</li> <li>3. Recognition of different circumstances</li> <li>4. Awareness of the exclusion of certain social groups</li> <li>5. Consideration of vulnerable groups as stakeholders</li> </ol>	<ol style="list-style-type: none"> <li>1. Knowledge provided to vulnerable groups</li> <li>2. Fabric of local social network</li> <li>3. Reduced membership fees</li> <li>4. Lower share prices for vulnerable groups</li> </ol>

Table 4: A framework of indicators



## Chapter 4: The Case Study

This chapter provides an overview of the selected case for this research, the case under investigation is the cooperative WindPowerNijmegen, an energy cooperative that was founded to develop a wind farm within the municipality of Nijmegen, the Netherlands, in the subsequent years after the completion of the wind farm the cooperative also started with the development of a solar farm.

### A short introduction of cooperative organizations

Perhaps it is useful to first quickly outline what a cooperative exactly is, how it functions and what its goals are. Cooperatives are not a recent phenomenon, the first successful energy cooperatives emerged around 200 years ago after another hundred years of failure, most cooperatives since have been built on what is known as the seven cooperative principles. The principles include voluntary and open membership, democratic member control, economic participation of members, autonomy and independence of the cooperative, the cooperative provides education, training and information to members as well as the public, there should be cooperation among cooperatives and finally cooperatives should have concern for community (Penlight, 2022). These seven cooperative principles are of course locally interpreted by cooperatives, and applied in accordance with their own understanding of them, but one could say that generally all cooperatives are built on these same basic principles.

So a cooperative is a legal body made up of members, these members can leave without jeopardizing its continued existence, they come together in what is called the 'general meeting of members' (GMM), this is where control of the cooperative rests. The general meeting of members appoints a board to manage the affairs of the cooperative, this board then enters into agreements with and for its members and within this process all members have voting rights (S.Z., personal communication, April 8 2022).

Because of the nature of a cooperative, every member has an equal say in matters, it should always function through dialogue, this means that the structure of the organization invites or even compels the board to enter into dialogue with its members. In larger cooperatives with hundreds of members this might often prove difficult, therefore many organizations set up working groups, community events or member councils where this dialogue can take place, the ideas formed here are presented to the general meeting of members who eventually decide whether to pursue the proposed direction, and usually the members are updated on the progress of a certain project or intervention several times a year (S.Z., personal communication, April 8 2022). Thus the organizational form of a cooperative is characterized by a strong adherence to democratic principles, these are held in high regard and serve as the backbone of its internal structure.

## The development of the wind farm (and the solar farm)

The site where the wind farms were eventually built had been designated as such in 2013. Around that time a large energy firm, Eneco, had lost a case at the Council of State (Raad van State) which had put the plans for the wind farm on hold, however the municipality decided to give it another go since the error on which the case was lost would be reparable and the policy goals of the municipality still aimed at realizing renewable energy projects. At this time Eneco opted out due to the costs that had been involved in that first attempt, this gave room for the idea of a cooperative project to blossom. The municipality saw potential in a citizen initiative, and so the cooperative was given a chance, they then also had to fight a case at the Council of State, and won (S.B., personal communication, January 25 2022).

The cooperative at the early stages of the development consisted of about thirty to forty members, all occupied with realizing the wind farm, this was a period in which many fundamental decisions were made, like the type of windmills to be picked or who was to be the operator for the permits. During that period working groups were established in which all the members could express their opinions and feelings on various matters concerning the development of the wind farm. Members of the cooperative at the time described it as a small family. After this period of preparation, participations were finally issued and the cooperative grew from its initial member count to over a thousand members (S.B., personal communication, January 25 2022). People were able to participate in the project by acquisition of a wind share at a price of 250 euros per share. Every member was offered the possibility of buying one or several wind shares with an individual maximum of 80 shares (Windpark Nijmegen-Betuwe, 2015).

The wind farm has been operational since the end of 2016 and the energy generated by the wind farm is sold to an energy company, this company then supplies the energy to municipalities in the region of Arnhem/Nijmegen. After the development of the wind farm the cooperative decided to start with a new project, the development of a sun farm, on the same site as the wind farm. The aim of the cooperative is to turn this place into an energy landscape, called 'Energielandschap de Grift', the wind farm and the sun farm together signal the start of this energy landscape, in which the future aim is to optimally use the available area to produce renewable energy from wind, sun and warmth sources (Zonneparkdegrift, 2022). For the sun farm, participations were issued in 2021, this time the cooperative decided to lower the price of participations to 50 euros per unit and after a year of building the sun farm is supposed to be ready for operation in the spring of 2022 (S.B. personal communication, January 25 2022).

## Overview of involved parties

It seems useful to provide an overview of all the parties that were involved in the process of creating the wind farm, this to provide some context to the position of the cooperative but more importantly also to illustrate the many different third parties that are involved and are to be handled by the cooperative. Here follows the list of actors/third parties involved and their respective roles in the enactment of the wind farm (Windpark Nijmegen-Betuwe, 2015):

Actor	Description and role in the enactment of the windpark
Ontwikkelstichting Wiek-II	This development foundation was responsible for the preparation of the project. The board of the foundation consists of representatives from various organizations, the director of the Gelderse Natuur en Milieufederatie (GNMF), the director of Izzy projects and the chairman of the cooperative WindPowerNijmegen. Izzy projects and the GNMF brought knowledge and experience on the development and realization of wind projects.
Hekkelman	Law firm that provides judicial and notary advice to the project.
BgH	Accountant of Windpark Nijmegen-Betuwe
Gemeente Nijmegen	At the starting phase of the project the municipality intensively supported it. This happened mainly through lending money, assistance with procedures regarding the zoning plan and the advance payment of certain expenses in the first year of the project. Furthermore, the municipality had two distinctive roles in the project. Firstly, it owns the land on which the wind turbines were built. Secondly, the municipality holds authority and supervision over the license for exploitation of the project.
Innovatie en Energiefonds Gelderland	This fund focuses on the financing of smaller innovative companies that are involved in sustainable energy supply. They participate in this project with a small funding sum.
Energy Trading Company BV	This company is the buyer of the energy generated by the wind farm.
Lagerwey Wind Systems BV	This company produced, transported and installed the wind turbines. They are furthermore responsible for maintenance over the course of fifteen years.
Green Trust Consultancy	This party assisted Windpark Nijmegen-Betuwe in the realization of the project by monitoring and safeguarding the agreements with Lagerwey and other involved contractors.
Pondera	Consulting agency that helped in obtaining the necessary licenses and environmental conditions.
Rebel	This is a financial advisor to Wiek-II, who assisted with financing the project and drafting the financial model to be used.
Ecofys	This company provided a forecast of yields for the electricity production of the project.

(Windpark Nijmegen, 2015)

Table 5: Overview of involved parties

## Organizational structure of the cooperative WPN

The way in which a cooperative is set up legally can differ, this has consequences for how a cooperative may function, therefore this section provides an overview of the organizational structure of the cooperative WPN. This is an important aspect to take into account since it might have implications for the way in which an understanding of energy justice is formed and created by the cooperative.

The project organization of the wind farm can aptly illustrate how the cooperative functions. The cooperative, Windpower Nijmegen, consists of members and a board, members have invested in Windpower Nijmegen, and they can expect a return on their investment, furthermore they contribute with their ideas to the cooperative and through the general meeting of members can participate in decision-making, the board is responsible for the daily operations but are at all times accountable to their members. Wiek-II, a foundation acting as project developer, is responsible for the daily project management and works in close cooperation with the board. The exploitation of the wind farm is accommodated by the company Windpark Nijmegen-Betuwe BV, this company was founded by the cooperative and always answers to the board (Windpark Nijmegen-Betuwe, 2015). The functioning of decision-making within the cooperative is in accordance with one of the seven cooperative principles, the notion that every member has equal voting power regardless of the amount of shares they may own, in that way the cooperative safeguards against a takeover of the project by a few rich shareholders (S.B., personal communication, January 25 2022).

An important aspect of the foundations of the cooperative pertains to the type of financial model used. Two common ways of shaping the financial vehicle is either through bonds or shares, in the case of WPN shares were issued but in an intermediate form where the shares are held to a certain maximum so that a part of the money flows back to a fund that can be used by the cooperative to undertake other activities, but essentially this intermediate form functions similarly to regular shares (C.G., personal communication, January 28 2022).

During the establishment of the cooperative one vital moment for the structure of the cooperative occurred. In the early stages of determining the structure of the cooperative negotiations were held with the municipality, the initiators of the cooperative wanted an organization with a broad scope, with the wind farm not as its sole purpose but as a first project within a vision of creating a vast array of renewable energy projects. But at that time the municipality stipulated that the primary purpose of the cooperative should be the wind farm, and this was later established in the articles of association, this structural aspect of the cooperative has had, and still has, far reaching implications for the functioning of the cooperative. An example to illustrate one of these implications, when too much energy is being generated by the wind farm and sun farm, so that not all of the energy can be put on the grid, the wind farm will always go first, this happens because the wind shareholders were first and this is the primary purpose of the cooperative, so wind shareholders will have more returns on their shares than sun shareholders (A.M., personal communication, February 15 2022).

Apart from the returns for the shareholders and the money set aside for the activities and new projects of the cooperative, a share of the yearly profits is reserved for a fund called 'omgevingsfonds', which functions as a way to redistribute some of the profits of the project to the people living in the surrounding area. This expenditure of the fund is determined in deliberation with the inhabitants of the local area. Practically this means that local initiatives can apply for funding

from the 'omgevingsfonds' and every now and then one of those initiatives will be chosen as recipient of the sum (Windpark Nijmegen-Betuwe, 2015).

### The resistance of the local community

There is one narrative that played an important role in the process of the development of the wind farm, the resistance of the local community. As mentioned before, the cooperative had to win a case at the Council of State before they could even start developing, this was due to the resistance of the local community against the plans of the municipality to build a wind farm in their vicinity. The wind farm is build at a highway opposite of which is a small township called Reeth, this community consists of about forty properties and the inhabitants of this township have been fighting against developments in their area since the construction of a railway line (de Betuwelijn) that runs parallel to the highway and has been built in close proximity to the properties in Reeth.

The history of this area, with not only its many developments but also its geographical and political history, is important for understanding the strong resistance of the township against the wind farm. A quarter-century ago the municipality Nijmegen acquired the area to the north of the river Waal, previously that area had consisted of different municipalities. Especially the original inhabitants of that area have the feeling that the 'city is coming over them', they don't feel like they are being taken seriously. It is in this light that one should see the resistance of the township Reeth, these sentiments have a deeply rooted history in urban expansion and center-periphery power struggles (A.M., personal communication, February 15 2022).

After the community of Reeth lost the case at the Council of State they moved on to a different approach, since now the wind farm couldn't be stopped they would have a right for compensation. This is called "planning blight" which means that a citizen is disproportionately affected by zoning, and can therefore demand monetary compensation from the developing party, in this case WindpowerNijmegen. This arrangement has to be granted by the municipality, they will review the proposal and have a taxation set up by a real estate agent, once this procedure is completed the payment of the agreed upon sum can be handled by both parties. In this case however, the township felt so let down by municipal bureaucracy, resulting in an accumulation of lawyer fees, that they refused the compensation through the planning blight arrangement and instead the township and the cooperative worked out an arrangement among themselves (R.S., personal communication, March 11, 2022).

### Ambitions of WPN

The cooperative wants to contribute to the local energy transition, putting an emphasis on the notion that energy issues are to be tackled by an inclusive community in a sustainable way. The means through which they articulate this ambition is by broadening their activities to have a larger impact on the local and regional level. This includes the ambition to set up more sustainable energy projects on the city- and regional level. However, the cooperative also wants to contribute to community projects within neighborhoods, to support people in their local energy initiatives. There is also emphasis on the improvement of the educational activities of the cooperative, one way of

enhancing this is through the setting up of working groups, where members can come together to develop and give shape to a strategy for the future (Windpark Nijmegen-Betuwe, 2015).

## Chapter 5: Results

In this section the results of the case study will be presented. After conducting the interviews and coding the collected data, several themes emerged, these themes center around issues that seem to come most sharply to the surface when looking at the creation and contestation of energy justice within the cooperative WPN. Note that these themes consist of various aspects, also in relation to different kinds of justice, the themes are not independent of each other, sometimes they overlap and interact, some issues of energy justice are intensified by other kinds of issues. One could say that when something happens or changes within one of the themes this will have consequences for other themes, this should be taken into account when reading through the results, some themes will have a very strong dependence or relationship with each other, when this is the case, it will of course be addressed. For the sake of a consistent and reader-friendly structure the results will be presented in six main themes, though sometimes references will be made to other themes, or certain established relationships between two or more themes will be outlined, this is important because some of the most interesting findings appear in this relationship between different emergent themes.

### Foundations of the cooperative

The first theme pertains to several aspects of the foundation of the cooperative, this means that these issues emerge from the way in which the cooperative has been built, the ramifications of certain decisions made in the process of structuring the cooperative do not remain uncontested and certain elements of energy justice could be identified here. This first theme mostly encompasses issues that land on the distributive side of energy justice, one of these pertains to membership diversity. Several members of the cooperative characterized the membership base as being quite homogenous, in that the cooperative mostly attracts the usual suspects, which means in this case, politically left-leaning well educated white men that care about sustainability and the environment (I.J., personal communication, January 31 2022; C.G., personal communication, 28 January 2022). The interesting aspect of this is to see what this character profile means to the cooperative, if they conceive of this as a problem, in how far this demands attention, since this shows the extent to which they constitute this as an issue of energy justice. This can be done by looking at the ways in which the cooperative envisions the accessibility of their organization, this pertains to a distributive aspect of energy justice as well: the possibility to acquire ownership. Now despite the rather homogenous membership base that has been described as the current situation, the cooperative has thought about accessibility of their organization. This is most obvious in the share prices that have been agreed upon, the 250 euros per share for the wind farm project had already been considered as low, with many people buying just one share which was also one the motivations behind having a low share price, so people that didn't have thousands of euros to invest could also participate (I.J., personal communication, January 31 2022). With the sun farm share prices were even lower at 50 per unit, one of the motivations behind this was also to broaden the scope of the initiative and make

it accessible to more people. One other attempt by the cooperative to broaden the reach of the organization is the possibility to acquire membership of the cooperative without participating with shares in any of its projects, this is called a general participation and it has been created for people that do not want, or can afford, to buy a share, in that way these people can still participate and express their ideas within an energy cooperative (S.B., personal communication, January 25 2022). However, accessibility is still an issue since lower share prices will not ensure the participation of certain social groups like youths, immigrants or lower educated people, this was recognized by the cooperative but they struggle with identifying ways to reach these groups (C.G., personal communication, 28 January). This struggle is not at all surprising as many developments in the energy transition seem to be far removed from the worlds of some these groups, as a representative of Kleurrijk Groen indicates, an organization working on inclusivity in the energy transition, when asked about the biggest obstacles to participation in the energy transition for immigrants and less well-off people (j.B., personal communication, April 4 2022):

“Firstly, they have to cross that threshold of really being engaged with it, of recognizing their own interest in matters, often it is just a ‘far-from-my-bed’ show, and secondly even if they would want to cross that threshold, for many people it is very hard and complicated to find where to start. Because where do you start? How do you get the right information? Especially when you don’t speak the language fluently or when you’re suspicious of government organizations, then they might really want to, but there has to be an entrance somewhere and there are many organizations that mean well and are open to this, but then you must know how to find them”.

This also shows how an organization, like WPN, might try to make their organization more accessible to these groups and still struggle to reach them. To return to the issue of the homogenous membership base, it is then an issue where the creation of energy justice intertwines with larger societal themes, the cooperative, at their foundation, conceptually, might aim to provide access to their outcomes in the forms of benefits and services to all groups but practically that becomes difficult due to factors that are to a certain degree outside of their control.

The following aspect of this theme had not been considered in the earlier stages of this research, that is to say in the creation of the theoretical framework and the subsequent indicators, the reason for this is that the literature did not mention it. However, during the data collection it became pretty obvious that this foundational aspect of the cooperative was tremendously important generally, but also in relation to energy justice. This aspect pertains to the initial structure of the cooperative, also mentioned in the case study chapter, it seems that a lot of energy justice issues that emerge in the cooperative stem from or are at least somewhat related to the structural organization. Therefore it seems important to explain exactly how this has happened.

The explanation mainly consists of two different, but converging, aspects, the issuing of shares instead of bonds and the statutory establishment of the wind farm as primary purpose. First, the difference between shares and bonds is important because shareholders will always expect a financial return on their investment, whereas with bonds the return percentage is fixed. Second, the statutory establishment of the wind farm as primary purpose makes it so that the board has an obligation towards its shareholders to always put their interest first, this is after all what has been legally established and this thus hampers the ability of the cooperative to engage in new projects. A

former board member explained the peculiarities of the organizational structure of the cooperative as follows (A.M., personal communication, February 15 2022):

“That’s ingrained in the structure because the wind farm has shareholders and those shareholders, no matter how sustainable they are, want to see that the agreements that have been made in the early stages or the repayment through return, that those are guaranteed, so the wind farm is just the prime project of the cooperative.”

He then explains how a different structure might have helped the cooperative to be better suited for developing new projects.

“I will give you an example, cooperative Zeewind has a different structure, for a specific project a separate entity is established with crowdfunding, but the decision-making in the objectives is in the cooperative, so cooperative Zeewind actually has as driving force the development of new projects.”

What this means is that when one specific wind farm of Zeewind makes a certain revenue, then the bondholders will get a fixed percentage on that, and if more revenue is made perhaps that percentage could be increased, but the decision-making lies within the cooperative Zeewind and not with the wind farm, this is the essential distinction with cooperative WPN. As will become clear later on in the results section, a lot of the tension in the cooperative is related to this choice regarding structure, mostly because many members share an ambition to create new projects which is thus limited at a deep structural level of the cooperative.

### Interaction between members and the board

This theme addresses the nature of the interaction between members of the cooperative and the board. Here matters mostly revolve around aspects of recognition or procedural justice, within WPN there are some tensions that involve the construction or apprehension of such energy justice concepts. These tensions have their origin in a time element, this pertains to the inevitable growth of the cooperative and the changing internal dynamics that are the result of that growth. In the early stages of the development of the wind farm, when the project is set up, a relatively small group of people works intensively with one another to accomplish the construction of the wind farm. However, when this is completed and the shares are issued, all of a sudden the cooperative consists of hundreds of members, and many changes occur. One aspect of this is that it demands more from the democratic character of the organization. The process of bottom-up decision-making, where members offer a real contribution to the creation of strategies that will shape the organization, is an important aspiration for the cooperative. However, with the increase of members the pure form of democratic decision-making is impossible to maintain and alternative ways of approaching this issue are hard to find, as one of the current board members indicates (S.B., personal communication, January 25 2022):

“When you set up such a project it obviously starts with: “we are going to make green power, we are going to save the world”, that is the first. But eventually, somewhere along the line, it becomes about reinventing democracy, in other words, we are going to speak with each other in a different way, that is very hard and we are not succeeding. It means that we often come back to the same things, we



have 1800 members but we can't talk with 1800 members, so there is a general meeting of members, like in any cooperative, and in that general meeting of members about a hundred come and even then it is very hard to hear everyone out, so we are seriously thinking about how to do that, how can we involve members more as a cooperative."

The way in which the cooperative usually involves their members instead is through working groups, the themes of which range and all members are allowed to participate in them. In this way members can be involved in strategy forming, but they can also contribute with their knowledge, for example by reviewing agreements or discussions between the cooperative and third parties, in that way the cooperative is not fully reliant on external parties for their knowledge and may bring some of its own expertise to the negotiating table (A.M., personal communication February 15 2022; S.B., personal communication January 25 2022).

The changing member dynamic of the cooperative has more implications, the founding group, the forty or so members that set up the project, those people started working from something akin to an ideology, where the most important aspect was the creation of this sustainable project as a contribution to the energy transition, but with the increase of its members and the project growing in size and financial risk, the financial responsibilities begin to take on more urgency. This has created tension between members and the board, members express that they believe that the current board puts too much emphasis on the financial aspect and as a result neglects the outward ambitions and the possibilities for developing new projects. Furthermore they critique the board for only having an eye for internal fairness, looking at the needs of their own members and not at other groups that might find it hard to engage with the energy transition (C.G., personal communication, January 28 2022). Despite the tension between some of the, so to speak, 'early' members and the board, the root cause for this development seems to originate primarily in the internal structure of the cooperative. As outlined before, the wind farm is the primary purpose of the cooperative, this means that the board has, or certainly feels an obligation towards the wind shareholders. The sentiment that the board has become 'too entrepreneurial' should also be viewed in this light, the entrepreneurial approach, that disappoints some members, is at least to a certain degree a consequence of the internal structure of the cooperative (A.M., personal communication, February 15 2022).

### Relationship with the developer

The developer responsible for the development of the wind farm, Wiek-II, is an organization that has played a significant role in the history of the cooperative. It is therefore useful to elaborate on their connection with WPN, since it also displays how energy justice concepts, especially recognition and procedural ones, are apprehended and constructed by the cooperative to constitute this relationship. First it is important to mention that Wiek-II has quite a few members of the cooperative working for them as employees, this happened because the organization Wiek-II and the cooperative WPN organically grew from that initial outburst of energy when the founding people came together to form their ideas about the creation of a wind farm. This means that there are close ties between WPN and Wiek-II not only professionally but also as social organizations, the biggest difference of course being that Wiek-II is a professional organization and WPN a voluntary, consequently this leads

to a strange dynamic where some of the voluntary members are at the same time representatives of the professionally operating developer. Here it is also interesting to note that many of the founding people that started with this earlier described ideological motivation of wanting to contribute to the energy transition have professionalized over time and have been incorporated into Wiek-II, something that should not be regarded as independent from their current perspective on the course set by the board. Second, there is an element here that pertains again to the internal structure or functioning of the cooperative, Wiek-II is an independent organization that hierarchically operates on the same level with the cooperative, this means that the cooperative has little control over the developer, as a former board member expressed in the following quote (A.M., personal communication, 15 February 2022; S.B., personal communication January 25 2022):

“A Wiek-II, if you look at other energy cooperatives, there Wiek-II would have been an implementing body of the cooperative but with us Wiek-II is simply independent, is not a part of the cooperative, what’s more, if the cooperative wants to get anything done they are dependant on Wiek-II, so that problem is more or less ingrained in the current structure.”

The former quote captures an important aspect in the dynamic between the developer and the cooperative, the balance of professionalization. There is a connection between the need for professionalization of a cooperative and the internal workings of the cooperative, on the one hand professionals are needed to carry out certain difficult tasks that require expertise, on the other hand this can be a root of tension for energy justice principles since a third party is involved that distinguishes itself from the voluntary character of the cooperative and therefore demands a certain acceleration in activities that is likely to result in corrosion of the democratic principles that are held in high regard by members of the cooperative. For example, members of the cooperative lose a sense of control over complicated issues that are now handed over to professionals. This is an important element that is present in many cooperatives that work with professionals, ultimately the professional parties want to move more quickly, to develop faster, and this will almost always clash with the need of members to comprehend what is going on in their organization (A.M., personal communication, 15 February 2022; I.J., personal communication, January 31 2022). It is therefore no surprise that the independence of Wiek-II has caused tension between them and the cooperative, one of these issues, also related to the speed at which Wiek-II as a professional organization can operate, is the information gap the board experiences, which in turn means that they have difficulties relaying the input of a project to their members (S.B., personal communication January 25 2022). This information gap presupposes a dependence of the cooperative on Wiek-II, this is one of the fundamental reasons for the tension between the two parties, however mediating a solution is hard. The dependence might be a strain to the functioning of the cooperative but as a former board member indicates it is not necessarily a bad thing to entrust some aspects of the development to a professional developer (A.M., personal communication, 15 February 2022):

“I think that at the start there has been too little attention for what the essential matters are for a board to understand and what matters you should leave with the developer and watch on a broad outline, and maybe sometimes you could hire an external expert to perform some monitoring on this broad outline. Well there were some things there that weren’t entirely right, I don’t have a solution for that either, since at the same time it is understandable that a board really wants to grasp what is going on.”

Thus it seems that the tension that emerges links back to the structural aspect discussed earlier in this section, it is not per se the dependence of the cooperative on a professional organization that is the root of the tension, it is the independence of Wiek-II as an equal that makes it hard for the two parties to reconcile with each other's wants and needs.

The growth of Wiek-II as a developer for the cooperative has been organic, but it seems as if it has grown into a tangled relationship. The cooperative is therefore working on the untangling of this relationship, which proves hard because of its complicated nature. An obvious step seems to detach the idea development and the selection of a project developer, what this means is that the development of an idea, a project or a development will be approached more carefully and will be separated from the selection of a developer or advisor. One of the current board members explains the direction the cooperative wants to take towards project development in the following quote (J.D., personal communication, April 5 2022):

“To more often make a cut between the development phase of an idea to a more specific idea and the moment when you're actually going to bring in an advisor or project developer, to be more aware of those steps and at the same time try, and that will be challenging, also in the context of good governance, to make sure that someone who has been involved in the idea development will not thereafter be attached to that project as advisor or project developer, or only after you've consciously made the consideration whether that is what you desire.”

This untangling of the project development is perhaps not the most complicated issue that originates from the organic growth of the two organizations, this pertains to a human factor. The members that are a part of Wiek-II, most of whom also happen to be part of the founding group of people, occupy a strange position and feel alienated by current developments in the cooperative. This is related to a theme discussed earlier, it again concerns the internal structure of the cooperative, since the board feels an obligation towards its members, the shareholders that have invested their money, to untangle this organically grown relationship because it implies risk (J.D., personal communication, April 5 2022). The disillusionment experienced by the members that work for Wiek-II can perhaps be traced back to that initial motivation, that more ideological belief that inspired the establishment of the cooperative. This belief is the driving force of many of these people and from their perspective as employees at Wiek-II, an organization that works on many renewable energy projects, the focus of the board might seem puzzling. The following quote from a current board member shows how difficult it is to integrate these two historical aspects of the cooperative (J.D., personal communication, April 5 2022):

“It just hurts when you notice that employees at Wiek-II feel unseen and say things like they are being excluded or something like that, that is not personal, it is not about the person, it is about the institute Wiek-II who is a project developer for us and the people that work for Wiek-II, their energy and ideas, their personal contribution to the development of the energy cooperative, it would be absolutely fantastic if we would be able to hold on to that.”

The organic development of Wiek-II and the cooperative, and the double structure that emerges from it leads to tensions, the organizations have mingled to such an extent, especially in their human resources, that it becomes hard to disentangle Wiek-II without aggrieving some of the members that are closely affiliated with them.

## The cooperative within institutional arrangements

This theme addresses the cooperative as they find themselves within institutional arrangements, what this means is that it describes how the cooperative interacts with different institutions and what their particular place is within this, so to speak, network of institutions. What is meant with this network of institutions is rather an interconnectedness or certain relationship between organizations, these can range from all sorts of government institutions, whether national, provincial or municipal, or even supranational institutions like the European Union or multinational corporations to banks, law firms, planning agencies, energy companies, etc.. The point is that the cooperative comes into contact with various parties that have a certain place in this network and therefore develop an attitude towards the cooperative as an institutional body, to navigate this network certain concepts of energy justice might be apprehended and constructed by the cooperative. The findings here revolve mostly around recognition and procedural aspects of energy justice, where the cooperative finds itself marginalized in certain institutional settings.

The nature of a cooperative makes it a very distinct actor in the energy transition, it demands a new playing field in the sense that it is not a market actor and also not a governmental actor, this means that for cooperatives to flourish it is important that this new playing field will be acknowledged, so that citizens' initiatives are granted a serious role within the energy transition. This is also something that the cooperative WPN struggles with, since they feel that the municipalities have too little faith in energy cooperatives and are deprived of the opportunity to develop themselves into a successful organization. When talking about the Cooperative Society, an organization that champions a serious role for energy cooperatives within the playing field that has traditionally been dominated by market and government, one former board member puts it as follows (I.J., personal communication, January 31 2022):

“This is an interesting perspective, where citizens' initiatives are regarded as serious parties that can achieve all sorts of things and also occupy a role, to not entirely take over the work of the government, but certainly a part of it and with that can also achieve different things as opposed to market parties, or market parties and the government combined.”

Cooperatives are thus fighting somewhat of an uphill battle in the sense that they have to find their way into an institutional setting that has traditionally favored other modes of governance. This is also apparent in the difficulties the cooperative experiences in their relations with other companies or governments, as a current board member explains (S.B., personal communication, January 25 2022):

“Well it is the word cooperative in itself, if you say that you are a company doors will open faster, a cooperative is not taken as seriously....we notice that too, the director of our wind company had an easier time entering some settings than the cooperative, so the cooperative owns the wind company but the cooperative has a harder time in the network than the director.”

The different attitudes towards, on the one hand the cooperative and on the other the director of the wind company shows that cooperatives can really experience biases within institutional settings based on their form of organization. Something that relates to the previous is the way in which the

cooperative felt limited by the government in a particular instance when efforts were made to redistribute some of its benefits to less-well off groups in society. The plan consisted of providing a small portion of the returns to households with financial difficulties, however due to the income policy of the government, the money they would gain on the returns would be lost again on their welfare payment (S.B., personal communication, January 25 2022). The nature and extent of this government policy is of course beyond the scope of a mere cooperative, but it does show how at times the institutional landscape is ill-adapted to the possibilities that citizens' initiatives have to offer.

Another aspect that pertains to the cooperative within institutional settings has to do with the internal structure, as mentioned in the description of the case study, the municipality stipulated the wind farm as the primary purpose of the cooperative. This has had far reaching consequences for how the cooperative functions, for one it makes it harder for them to have a broader scope, the wind farm will always be their main focus which hampers their ability to create new projects. The municipality did not want such a broad purpose for the cooperative because it had no track record and the agreement between them had been about the wind farm. So to the municipality, the wind farm, its shareholders, that was the first project of the cooperative and that should be their primary purpose, not the creation of other projects. The cooperative felt grateful at the time because the municipality could just as easily have given the opportunity for the development of a wind farm to a market party, a feeling that one former board member, who was involved in the negotiations at the time, beliefs might have clouded the necessity for a stronger negotiation strategy (A.M., personal communication, February 15 2022):

“So when you’re talking about who is responsible, you should look at it in context, so there was not one villain, but in hindsight, in that discussion with the municipality we should have committed much more firmly to a different model, we actually let the municipality push us around a little bit.”

The relationship with the municipality is an important factor that has implications for the possibilities and scope of a cooperative, the previous example, the stipulation of the municipality, shows that the perspective of the municipality on cooperatives matters a great deal in the precise establishment of a cooperative. It is therefore also an issue of recognition, where the way in which municipalities envision the role of cooperatives within their area determines the degree to which they are able to fully engage with all their possibilities.

### Interaction with the local community

This theme looks at the way in which the cooperative interacted with the local community. As mentioned before, in the case study chapter, the local community offered fierce resistance to the development of a wind farm in their township, the attitude of the cooperative towards this resistance reveals how they create and apprehend notions of what is just, in this instance mostly pertaining to issues of recognition.

The local community, in this case the township Reeth, went through many legal procedures, recalling the efforts made at the Council of State, to stop the development of the wind farm and all the way

up until the point of the eventual inevitability of its development they had stood diametrically opposed to the cooperative. This situation did change after the case at the Council of State had been wrapped up, as was also apparent in the mutual agreement regarding the planning blight compensation. The most interesting approach here lies not in the precise occurrence of the events that took place between the cooperative and the township but rather in how the nature of their relationship changed, and their attitudes towards each other.

Despite the fact that the cooperative and the township were in heavy disagreement with each other there was always room for dialogue, this made it possible to keep talking about concerns and issues even when the things got pretty heated, as a former board member explains (A.M, personal communication, February 15 2022):

“So, the conversation with the inhabitants of Reeth, who have resisted quite fiercely, at times also very emotionally, we’ve always kept that going.”

Later on in the interview he expresses the internal motivations and convictions that made the cooperative so determined to keep this dialogue going and to not aggrieve the local inhabitants (A.M., personal communication, February 15 2022):

“In such a cooperative it is very important to not only cherish your own sufficiency and your own right but also to build up a good relationship with the immediate residents and the old inhabitants of the area...and the attitude of not seeing people as enemies but as local residents that are standing up for their own interests, that is very important if you want to build up a good relationship with these people, and from the start, in several ways, we’ve invested a lot of time in that.”

An important aspect here is the need for the local community to feel like they’re being taken seriously, the way in which the cooperative has always maintained the conversation and the attitude expressed in the previous quote are examples of a willingness of the cooperative to listen to the issues that occupy the minds of the local inhabitants and even though they might still heavily disagree with each other this does not marginalize the views and concerns of the local inhabitants in a way that makes them feel silenced or unheard. This is also expressed by a representative of the neighborhood association Leefbaar Reeth, an organization that was established a few decades ago to unite the people of Reeth under a single voice that would be better able to provide resistance against the developments in the area (R.S., personal communication, March 11 2022):

“That relationship has actually always been good in the sense that we always kept talking to each other, we’ve never argued in a sense of: I will not shake your hand anymore and you will not have to come here anymore. But we still stood directly opposite of each other, so we disagreed on content but we never harbored personal resentment.”

Of course it is also important to take into account that the good relationship between the cooperative and the local community did not only stem from the way in which they talked to each other but also from the compensation that the local inhabitants received. The fact that the cooperative kept their promises and indeed provided the inhabitants with the agreed upon sum of compensation contributed to the trust they had in the cooperative as a fair organization. The

representative of the neighborhood association believes that these two aspects, the feeling of being taken seriously and that bit of trust that comes with the arrangement of the compensation, are two crucial factors that resulted in a good relationship between the cooperative and the local residents (R.S., personal communication, March 11 2022). This compensation did not only come through the mutual agreement on the planning blight costs but also from a fund called 'omgevingsfonds'. A bit of revenue from the wind farm is put into this fund and that money can then be used by the local inhabitants to finance certain projects in their township, a former board member, who was involved with the determination of the exact sum explains why the 'omgevingsfonds' was an important objective for the cooperative (A.M., personal communication, February 15 2022):

"We basically concluded that it is possible to put 1 euro per megawatt-hour in the omgevingsfonds, that is twice as much as the wind sector advises, but we believed that good neighborliness is very important. And also eventually projects are financed with that fund, useful social or sustainable projects, so we thought let us especially put more money into that as a compensation to the immediate surroundings."

As again becomes apparent through this quote the cooperative did spend a lot of time and effort into the fostering of a good relationship with the local inhabitants of Reeth. This has not been without merit, a remarkable thing took place after the compensation had been paid to the local inhabitants: they decided to use that money to develop their own sun farm. It is remarkable in the sense that a group of people that went to the Council of State to fight the development of a renewable energy project in their vicinity are now starting to develop their own renewable energy project. This unlikely turn of events is not in the least bit independent of the good relationship that the cooperative has invested so much of their time and energy into, as a representative of Leefbaar Reeth expresses in the following quote (R.S., personal communication, March 11 2022):

"I think that we as a neighborhood have changed in the way that we look at the energy transition, it shows in the sun farm that we are now developing with the neighborhood, and there we are being supported by the cooperative to undertake this, those are the beautiful sides of it."

As stated in the quote the cooperative is also assisting the township with the development of their sun farm, they use the expertise and know-how that is present in their organization to help the neighborhood association that has no experience in the development of renewable energy projects, in this way, the two parties who stood diametrically opposed at the beginning of the wind farm developments in Reeth are now working together to establish a renewable energy project, or as a member of Leefbaar Reeth put it: "we went from enemies to good neighbors" (R.S., personal communication March 11 2022; I.J., personal communication, January 31 2022).

### Interaction with energy vulnerable groups

The last theme pertains to the way in which the cooperative interacts with energy vulnerable groups, the creation or apprehension of energy justice concepts in this theme relates to how the cooperative conceives of their power or responsibility to engage with wider social phenomena in the energy transition. The task of cooperatives is of course not to eliminate energy poverty but their attitude

towards these broader social themes does show how they construct their own perspective on justice and what their place should be in the broader context of the energy transition.

The cooperative is certainly aware of the exclusion of certain social groups in the ongoing energy transition, they have also made active attempts to find out more about this development and also about their own possibilities to engage with this problem. The most noteworthy attempt was a research into energy poverty and the possible role that a cooperative could play in supporting these people, the idea even originated with one of the members who approached the board to consider delving into it (C.G., personal communication, January 28 2022):

“In 2018 even I think, one of our more active members, contentwise, who knows a lot about energy poverty, came to us and proposed to do something for this group of people who are in energy poverty, or in any case the group that soon will fall through the cracks in the energy transition. So, we set up a whole research for that.”

Eventually the research showed that things were rather complicated and the municipality decided not to follow through and support the cooperative on this, and so the initiative did not gather any tangible results. Regardless of its failure, the attempt does show that the cooperative is aware of the predicament of vulnerable groups in the energy transition and also shows a willingness to investigate their possibilities to contribute to the alleviation of this problem. A former board member explains how, as a cooperative, their ideas on solidarity are an important reason for thinking about their relationship with energy vulnerable groups (I.J., personal communication, January 31 2022):

“And if you look at it from a cooperative perspective, somewhere from a concept of solidarity, you would want to give this a place in your cooperative, so for example a part of the profit that we make could be used to alleviate problems regarding energy poverty, only what would be the best way to do that, that I find a hard question, I’m sort of stuck there.”

This quote also reveals a sentiment that seems to pervade the cooperative, they are certainly aware of the predicament of energy vulnerable groups but they find it hard to position themselves in relation to it. The cooperative experiences difficulties trying to involve energy vulnerable groups in their organization or projects, this is also partly explained by the fact that the cooperative does large scale projects away from the city, whereas cooperatives that operate in neighborhoods have an easier time connecting with people that seem like they run the chance of being left behind in the energy transition (C.G., personal communication, January 28 2022). As a consequence it seems that there is awareness in the cooperative of the situation of energy vulnerable groups but no real policy or a distinct vision has been developed that will guide the actions of the cooperative as they interact with this problem, if they interact at all. This is also expressed by one of the former board members, who also indicates that it might relate to the priorities of the cooperative over the past few years (I.J., personal communication, January 31 2022):

“I think that the energy cooperative WPN has been very busy with the wind farm and after that very busy with the sun farm and I feel as though no real vision or policy on energy poverty has been developed yet.”



The absence of a clear vision is perhaps not out of an unwillingness to interact with energy vulnerable groups, but as several interviewees indicated, might be a result of other prevailing priorities (C.G., personal communication, January 28 2022; J.D., personal communication, April 5 2022). The members of the cooperative however do not regard this issue with a cold neutrality, people are certainly aware of the dire circumstances energy vulnerable groups find themselves in and it seems that in the past a lack of time and other priorities have kept it more or less off the agenda. Perhaps with the completion of the sun farm this issue might come to the fore, it again depends on the sense of priority within the cooperative. A current board member explains that the focus of the cooperative for the future is yet to be determined, in this sense the cooperative, and especially its members are at a crossroads (J.D., personal communication, April 5 2022):

“There are all kinds of ideas but those are too many to carry out, and you also have to take into account the strength of the cooperative and the commitment of members to it and we are looking into that, in the working group ‘future’, so there are no concrete, well there are all kinds of thoughts, some thoughts are more sharply defined than others, but as of yet there is no annual plan or multi-annual plan for what are going to work on in the near future.”

This leaves an open end to the interaction of the cooperative WPN with energy vulnerable groups, however if they do choose to focus their activities more on the predicament of these groups it seems that they will meet a great challenge in reaching them. The cooperative lacks a strong foothold in the neighborhoods and a strong entrance or presence within the social networks of energy vulnerable groups is extremely important for engaging with them (J.B., personal communication, April 4 2022). The absence of vision or policy on energy poverty may therefore also be intertwined with a more general disconnect of the cooperative to energy vulnerable groups.

## Chapter 6: Discussion

This chapter will reflect on the results of the case study to provide an answer to the research questions posed in the first chapter. The creation of energy justice in the internal dynamics of the cooperative will be discussed, as well as the creation of energy justice in the interaction between third parties and the cooperative and also the way in which the cooperative conceives of energy justice within a wider societal context. And finally some avenues and recommendations for further research and praxis will be highlighted.

### Energy justice in the internal dynamics of the cooperative

The question answered in this section pertains to the analytical level of energy justice within a cooperative, it investigates the apprehension and creation of energy justice concepts in the internal dynamics of such a citizen initiative. Within the confines of the cooperative there are many ways in which energy justice concepts are used. Fairness was an important value in the establishment of the

cooperative, evidenced by the emphasis on the design of the democratic character of the organization and the role of dialogue in decision-making and participation. Furthermore, energy justice concepts are used to reflect on the accessibility of the cooperative, practical actions like lower share prices are an expression of a more fundamental conceptualization of justice and responsibility, this is contested internally, through a discussion and synthesis of different ideas on what is fair, a notion of justice is created that reflects the extent to which the cooperative finds itself responsible for the access of all social groups to their organization. This process links nicely to the work of Hanke, Guyet and Feenstra (2021) where they describe how the construction of justice can have great impact on distributive outcomes. This case shows that the creation of a notion of justice is indeed indicative for the actions that the cooperative believes they ought to take or in other words, their perceived responsibility for redistributing outcomes. Even more so, it seems that the awareness of the exclusion of certain social groups, something also alluded to by Hanke, Guyet and Feenstra, plays a large part in the cooperative constituting it as an issue of energy justice. The cooperative takes redistributive actions to the extent that they constitute certain aspects of their organization as an issue of energy justice, therefore the creation of justice is important to address distributive issues but it does not broaden the scope of the cooperative.

In the interaction between members and the board energy justice concepts are used to contest decision-making, or to contest power, also showing that within the cooperative different ideas on fairness coexist, as is most clear in the tension between the older, more ideologically centered members and the current board, where the concept of justice has a different meaning for both groups. This is also related to changing member dynamics, with the growth of a cooperative the notions of justice change, different views are developed on what is just. The obligation the board feels towards the shareholders is anchored on a perceived responsibility, with the increase in members and also the increasing scale of the projects, the board feels that it is just to prioritize the shareholders interests since they have put their money on the line. This is a changing perspective, since that reasoning only develops after the cooperative has grown in size and so it appears that there is a changing idea on what justice means for the cooperative, but also a contestation of this changing idea, as mentioned before some members do not agree with a focus on internal justice, and so, within the cooperative, different views on what is just come into conflict with one another. One of the fundamental points, that should be addressed here but is no less true for other acts of justice construction throughout the case study, is that these views on what is just make demands only implicitly on concepts like a lack of bias from decision-makers and equal access to decision-making, developed in the literature by the likes of Walker & Day (2012), Sovacool & Dworkin (2014) and Jenkins (2018). In practice, the construction of these concepts of justice takes place through a more direct challenge, a clash between different understandings of what is just, in which energy justice concepts are apprehended in a more rudimentary form.

The structure of the cooperative also has consequences for energy justice, here different ideas on what a cooperative should be, i.e. the internal structure, are connected to ideas of fairness, again this distinction between, so to speak, internal and external justice, plays a role, some members believe that focusing on new projects and helping other groups in society is just whereas with others justice has a more internal meaning, with more concern for the interests of the shareholders. The reason for the focus of the board on their obligation to the shareholders stems from the internal structure of the cooperative as well: the statutory establishment of the wind farm as primary purpose. So

alternative views of justice are created as a response to, or are projected on, the internal structure, in that sense ideas of fairness are not only used to contest opposing ideas of fairness but also the very structure on which the cooperative has been built. This is interesting with regards to the literature as well, since it shows that the type of consumer ownership is not merely relevant as a distributive factor of justice, but it can also have implications for recognition and procedural justice, one could even argue that the type of consumer ownership transcends the triad of energy justice concepts in that it plays a more fundamental role in shaping the context in which energy justice is created or apprehended.

Concluding, it seems that within the cooperative ideas of justice are used by members in different ways, ideas of fairness are used to reflect on the inclusivity and nature of their own organization but also to contest decision-making. Furthermore, different views on what is just exist within the cooperative and therefore justice does not remain an uncontested fixed factor, it changes overtime and different ideas on fairness clash with each other which can result in tension between members. Lastly, it seems that, in this case, alternative views of justice also target the internal structure of the cooperative, in that sense justice also plays a role in challenging the nature of the foundations on which the cooperative has been built.

### Energy justice in the relationship between third parties and the cooperative

The question answered in this section pertains to the analytical level of energy justice between the cooperative and third parties, it investigates the apprehension and creation of energy justice in the relationship between third parties and the cooperative. In the case of energy cooperative WPN the most significant third party for the functioning of the cooperative is the developer Wiek-II, the organic growth of both organizations together has resulted in a strange and complicated dynamic that certainly has implications for energy justice besides the more common justice considerations between a developer and a cooperative. This is also important in relation to the literature, since it shows how energy justice on the local level can take an unexpected shape, concepts of justice are constructed not necessarily to fend off perceived injustices from the developer but they work rather to re-establish the relationship with the developer in ways that align with their notion of what is fair. So it is within this relationship that the cooperative apprehends concepts of justice to deal with the developer. The independence of Wiek-II constitutes a power struggle where the cooperative has little control over Wiek-II, here concepts of fairness inform the reshaping of this relationship, the cooperative wants to detach Wiek-II from some parts of their project development to regain control and to not be subjected to the speed and functioning of a professional organization. This distinction between a professional organization in Wiek-II and a voluntary organization in the cooperative marks another aspect where fairness plays a role, on the one hand a project needs professionals that can carry out difficult aspects of the development process, on the other hand the board and the members wish to comprehend what is happening, this results in tension that revolves around the notion of a fair balance. The cooperative can use ideas of fairness to determine what portion of the implementation process could be handed over to professionals, in this case that proved hard because of the special nature of the relationship between Wiek-II and the cooperative. The special nature of this relationship is in itself a source for justice issues, the organic growth of the two organizations and their independence in relation to each other causes the developer to not be a neutral third party

but more or less a part of the cooperative, a part that holds a different view on matters and consequently contests the views of the board. This gives rise to energy justice issues, especially since it is not just an institutional matter, members are attached to both sides, and this results in members apprehending ideas of fairness to constitute their own right, notice also that this relates to the internal dynamics discussed in the previous section. Additionally, what is important to mention here in relation to the developer not being a neutral party is that it is not the case that the cooperative throws up a barrier of justice that separates them from the developer, as expressed before, justice is used to reshape certain aspects of this relationship that are reckoned undesirable by the cooperative. This is also important for the energy justice literature since it shows that the function of justice is reshaping rather than rejecting, this is what the literature perhaps misses, the idea that energy justice is not per se a way of setting boundaries between what is just and that which aggrieves this sense of justice but rather a way of reconfiguring a relationship that is regarded as containing elements of unfairness.

The role of the developer is not the only aspect where energy justice concepts are being apprehended in an institutional sphere by the cooperative, they are also of importance in the relationship between the cooperative and governmental bodies or actor networks. The cooperative does not feel taken seriously as an actor constituting a new playing field: the cooperative feels marginalized as a form of organization in institutional settings, governments seem to have too little faith in the capabilities of the cooperative and the municipality has had great influence on the establishment of the internal structure. The cooperative constitutes these factors as energy justice issues, since the way in which they are treated from an institutional perspective seems unfair to them, it severely limits their possibilities to act. Concepts of justice are used here to define the cooperative within institutional arrangements, to address the biases that other actors have towards them. Here, as with the developer, energy justice is used to reshape the relationship with other actors, however in this institutional setting it becomes harder to do this for the cooperative since they lack the ability to reconfigure this relationship, the municipality but also other actor networks hold sway over the cooperative, in that way the cooperative is not able, through their own expression of justice, to address the biases held by these parties. It seems that the institutional setting is ill-adapted for the new playing field that cooperatives are able to create as a new form of organization. From a perspective of justice creation, a transformation of our core institutions seems necessary for community initiatives to fully engage with the possibilities that the energy transition offers. The necessity of a deeper change in the rules of the game is also expressed in the literature, Elinor Ostrom (2007) argues that community initiatives, in a broader socio-political context will not be able to achieve much unless these deeper changes take place, the implications from the energy justice perspective explored in this study seem to echo that notion emphatically.

To summarize, It seems that the cooperative, when it comes to their relationship with other actors, uses energy justice concepts to reflect on their own position in the relationship. This is true for their interactions with Wiek-II, where the apprehension of energy justice concepts takes place to reshape the nature of their relationship, as well as their interactions within other institutional settings where they apprehend notions of justice to challenge the actions and views of other actors, albeit with limited success.

## Energy justice in the interaction of the cooperative with a wider societal context

The question answered in this section pertains to the analytical level of energy justice beyond the cooperative, it investigates the apprehension and creation of energy justice in the interaction of the cooperative with a wider societal context. Notions of fairness definitely inform the way the cooperative interacts with developments that occur in a wider societal context. One of the most striking examples of this is the way the cooperative fostered their relationship with the local community. In this interaction with the local community many concepts of energy justice were apprehended by the cooperative, the local discourse was respected and not belittled, this in turn made the local community feel as if they were taken seriously. It is also apparent that a notion of justice played role in the cooperative treating the local community the way that they did, the cooperative had many opportunities to brush aside any criticisms from the local community without any real repercussions for the development of their projects, instead they worked with the local community and accepted the difference of opinions because they saw it as the right way to engage with the local community. In this regard, that notion of fairness also contributed to their ambition to be a propagator of the energy transition, since the good relationship with the local community played a big role in the establishment of a sun farm by that community. This shows that apprehension of concepts of energy justice can actually inspire other groups in society to reconsider their own role in the energy transition. This is also important for the literature, something that remains underdeveloped in the literature is the transformative quality so to speak of energy justice, the construction of energy justice by local actors, in this case a community initiative, can inspire other actors to take up activities in the energy transition. This also alludes to the social dimensions of the energy transition mentioned in the problem statement, by observing the energy transition through a pure systemic and technological lens one misses out on the social and normative aspects of this transition, the construction of energy justice in this case shows how important these social and normative aspects can be for a successful energy transition, this study therefore also stresses that it is important to take into account the implications of energy justice when trying to realize more systemic changes in our energy landscape. Relating this back to the case it seems that strong ideas on fairness have thus made a huge difference for the nature and the extent of the relationship between the cooperative and the local community, and that this has consequently resulted in the development of an inclusive energy landscape within that community.

Another aspect of this interaction of the cooperative with a wider societal context is the way in which they apprehend energy justice concepts to interact with energy vulnerable groups. With this subject the commitment, out of a justice consideration, does not seem that strong, it appears that other matters take priority. The cooperative certainly cares about the predicament of energy vulnerable groups and they do recognize it as an issue of fairness, however the absence of a vision indicates that they are not sure how to deal with this, and also how to envision their own role or responsibility in helping these groups. It is also interesting to consider whether this lack of vision on energy vulnerable groups is a result of the structure and nature of the cooperative, the cooperative has the wind farm as primary purpose and is located in an industrial area away from the city, this also means that they are quite disconnected from the everyday reality of energy vulnerable groups, it is therefore perhaps not surprising that they are able to apprehend a notion of justice when it comes to the predicament of energy vulnerable groups but feel inadequate or inert to take this notion of justice a step further and engage with it in practical reality. This is perhaps also a critical note for the

literature, authors like Hanke, Guyet & Feenstra (2021), Lowitzsch (2020) and Jenkins (2018) stress the responsibility of energy cooperatives to engage with energy vulnerable groups, which is certainly necessary, but it is interesting to discuss whether this is realistic. Considering the structure of a cooperative like WPN it seems that its reach and scope is ultimately limited and to burden them with resolving the predicament of energy vulnerable groups seems unfair. This issue definitely seems like something that above all requires coordination from higher institutional spheres, in that sense one should not judge too harshly the local actors who struggle to engage these groups.

Concluding, it seems that notions of justice are created and apprehended by the cooperative in wider societal contexts but with different results. On the one hand the cooperative used their ideas on fairness to foster a good relationship with the local community and by doing so succeeded in having a broader societal impact in the energy transition, on the other hand they have had a hard time carrying out similar principles of justice when it comes to engaging with energy vulnerable groups. These differences seem to emerge from the character or structure of the cooperative, engaging with the local community in the vicinity of the wind farm proved fine, but for really engaging with energy vulnerable groups the internal focus of the cooperative seems too limiting.

### Recommendations for future research

This section will contain some recommendations for further research, some avenues that future research might explore when it comes to the manifestation of energy justice on the local level. First, this research mapped out what energy justice means to local actors in the energy transition and how these local actors use concepts of justice to navigate the energy landscape, future research could investigate the potential of taking into account notions of energy justice at the start of a project to anticipate tensions that revolve around different ideas of justice, such a study would be more intervention oriented. Second, since this study delved deep into one specific case, trying to really unveil what energy justice means to local actors, future research might look at comparative studies to investigate whether there are significant differences in the meaning of energy justice between cooperatives, and to investigate what might be the explanation for different interpretations of justice. Finally, in the earlier phases of this research it was intended to include a theoretical section on contextual factors, these are factors that are not indicators of energy justice per se but do shape the context in which the apprehension and creation of energy justice can take place. Unfortunately these contextual factors could not be included in this study because it would hamper the focus of the research. However, further research into these factors would take a more broad look at these phenomena and investigate how they might influence energy justice, some of the identified factors were: the implications of a socio-technical transition, the role of knowledge in the creation of justice, the role of politics and power and the significance of spatial dimensions. A brief look at the role of spatial dimensions can work to illustrate how these contextual factors might relate to energy justice. In the case of this study there are already some interesting aspects of spatial dimensions, for example the notion that the cooperative operates locally which is deemed good or fair, however when looked at more closely this becomes more ambiguous. Many members live in the city and do not experience any of the downsides of having a wind farm in the municipality, the burdens are experienced by the local community and as one member of Leefbaar Reeth expressed quite sarcastically: “they can say I own a wind farm, and they are all the way over there” (R.S., personal

communication, March 11 2022). Spatial dimensions again recur with the focus of the cooperative, they have made the choice so far to focus on the development of the energy landscape surrounding their wind farm, at an industrial site away from the city, the consequence of which is that they lack any real connection with people in the neighborhoods. These are just two examples of how spatial dimensions matter for the creation and apprehension of energy justice, the contextual factors thus seem like a very interesting avenue for further research since there is a lot to explore and delving into them might help researchers to better understand how local justice creation works in the energy transition.

### Recommendations for praxis

The results of this study are useful for praxis, they show that energy justice can have great impact on energy cooperatives, therefore taking justice creation into account when developing an energy cooperative seems very beneficial. Internally, energy cooperatives might develop more consciously their collective ideas on energy justice, this can help to take away tensions, since, as this study has shown, many of the tensions emerge from or are in some way rooted in clashing ideas on what is fair. Taking this into account will of course not eliminate all converging opinions and tensions but it will contribute to a more transparent, open organization, and more importantly it will smoothen the functioning of a cooperative since it opens up a space where different ideas on fairness can be challenged without culminating to tensions fueled by misunderstanding or bias. Furthermore, a strong sense of what justice means to a cooperative helps in dealing with third parties, to have a better understanding of how to relate to other actors in the energy transition. Finally, it can also be instructive for developing a vision that reflects the outward ambitions of that cooperative, something which WPN also struggled with: how to relate as a cooperative with wider societal developments.

The scope of this study, as informative to praxis, is not only limited to energy cooperatives, there are also recommendations to be made for municipalities and other government institutions. This study sheds light on some of the processes that take place on the local level, therefore the results of this study might be helpful for government institutions, to learn something about the functioning of citizen initiatives, especially when one considers citizen initiatives as creating a new playing field, insight into the experienced realities at the community level can be very valuable for government institutions that want to seriously support the development of this new playing field. The ideas of fairness that are manifest on the local level can be important indicators for municipalities when trying to make sense of the sentiments that are demonstrated within their municipality.

## Chapter 7: Conclusion

This chapter will conclude the research with an answer to the main research question. Furthermore, the limitations of the study will be addressed and a critical reflection on the research process will be provided.

### Answering the main question

The main question posed in the beginning of this research read: “How are notions of energy justice apprehended and constructed at the community level?”. This question was aimed at investigating the meaning of energy justice on the local level, through a case study on a citizens’ initiative that owns and develops renewable energy projects: energy cooperative WindPowerNijmegen. The findings presented in the previous chapters show the way in which energy justice is apprehended and constructed in the cooperative. It shows how this takes place on different analytical levels: in the internal dynamics, between third parties and the cooperative, and in a wider societal context. The findings furthermore show how notions of justice are used to contest different ideas within the cooperative, or to contest the nature of the relationship with the developer. Ideas on fairness are also important for the cooperative when constituting certain aspects of the energy transition as a problem, like the diversity of the membership base or the predicament of energy vulnerable groups. Justice also played a role in how the cooperative decided to interact with the local community, where notions of justice were used to foster a good relationship with the township that stood, content wise, diametrically opposed to the cooperative. This is perhaps one of the most promising findings, it shows that the local construction of energy justice principles can contribute to a more successful energy transition. The cooperative inspired the local community to change their views and even start a renewable energy project of their own, this alludes to the social shift that is necessary for the energy transition, the construction of energy justice principles can cause communities and groups of people to change their outlook on what the energy transition means to them and what their role in it might be. Concluding, it seems that notions of justice pervade the cooperative, many motivations are based on a consideration of what is just, the local meaning of justice then can take on an empowering quality but it can also be a root for tension. Not all notions of justice are the same, sometimes they clash, on a local level, justice means something to every individual involved in the energy transition and this makes it a contested and at times quite confusing concept. This research has tried to shed some light on the creation of justice on the local level by relating and contrasting this process with the theoretical concepts of energy justice, in this way the research has shown how local actors apprehend and construct notions of justice as they navigate the tumultuous landscape of the energy transition.



## Limitations and reflection

This section presents some reflections on the research and also highlights some limitations that are bound up with the nature of the research. The first point concerns the selection of the respondents, this proved quite difficult at first, reaching a diverse set of respondents from the cooperative was hard, eventually through approaching different people within the organization a diverse set of respondents was established. It is important to emphasize this diversity since on many fundamental aspects of the cooperative, like causes and explanations for certain phenomena, opinions differed quite a lot, so it was a real challenge to gather a nuanced view on matters. Eventually this was managed fairly well by interviewing a lot of different people within the cooperative while at the same attempting to reach deep within the convictions of the interviewees to uncover the fundamental reasoning behind their opinions. Furthermore, as the research progressed it seemed useful to include organizations other than the cooperative WPN, this to ensure a broader perspective on matters which safeguards against a too narrow interpretation of the gathered research material.

A limitation of the research pertains to the researcher's subjectivity. The inevitable weakness of an interpretative research design like this case study is that the researcher carries his own personal experiences and biases with him during the interview sessions and is therefore never completely objective. As mentioned in the research methods there are strategies to curb the researcher's subjectivity during the data collection. In this study techniques were used to limit the research's subjectivity while interpreting the collected data, a systemized coding procedure helped to achieve this and also the keeping up of a coding log in which reflections on the research material were written down and lines of thinking were written down in rudimentary form to provide a structured basis for the interpretation of the research material. The keeping up of such a coding log also helped in reflecting on the choices made during the research process, thus resulting in an iterative process where previous interpretations could be adjusted later on based on a more thorough understanding of the material.

Another limitation of the research concerns the generalizability, since this study took the form of an in-depth study on one case, the results ultimately suffer in their generalizability, the outcomes of this study might not apply to other contexts, i.e. other energy cooperatives. However, the objective of this study was not to find a universal method or mechanism of justice creation, it was rather to explore and investigate what justice creation looks like at a local scale and how this relates to the literature on energy justice. The study shows the importance of the construction and apprehension of energy justice concepts at the local level and how it shapes the organization, and in that sense it can be instructive for every energy cooperative that is trying to grapple with the implications of their own understanding of fairness.

Not all of the interviews were conducted in person, this is also a limitation since non-verbal communication can be important for understanding what the interviewee is trying to say. Similarly with online interviews it is harder for the researcher to read the interviewee which makes it harder to estimate what direction would yield the most fruitful results. Unfortunately this was largely outside of the researcher's influence since many of the interviewees did not have the time for an in person interview or simply preferred to conduct the interview online.

## References

- Argüelles, L., Anguelovski, I., Dinne, E. (2017). Power and privilege in alternative civic practices: Examining imaginaries of change and embedded rationalities in community economies. *Geoforum*, Vol 86, P. 30-41. Retrieved from <https://reader.elsevier.com/reader/sd/pii/S0016718517302452?token=B1330FB17AEBE2E515C1A02B249A0B7A1606920F0063BD6BE2921780F7E411AB3EAFECB35007CABA963F8904063EC6B4&originRegion=eu-west-1&originCreation=20211223111832>
- Alsaawi, A. (2014). A critical review of qualitative interviews. *European Journal of Business and Social Sciences*, Vol 3, No 4, 149-156. Retrieved from [https://www.academia.edu/7852235/A\\_CRITICAL\\_REVIEW\\_OF\\_QUALITATIVE\\_INTERVIEWS?from=cover\\_page](https://www.academia.edu/7852235/A_CRITICAL_REVIEW_OF_QUALITATIVE_INTERVIEWS?from=cover_page)
- Barry, J. Robinson, C. (2007). Many ways to say 'no' and different ways to say 'yes': Applying Q-Methodology to understand public acceptance of wind farm proposals. *Journal of Environmental Planning and Management*, Volume 50, 517-551. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/09640560701402075?scroll=top&needAccess=true>
- Bauwens, T. (2016). Explaining the diversity of motivations behind community renewable energy. *Energy Policy*, Volume 93, 278-290. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0301421516301203>
- Bickman, L., Rog, D.J. (1998). Handbook of Applied Social Research Methods. Sage Publications, Inc.
- Bouzarovski, S., Simcock, N. (2017). Spatializing energy justice. *Energy Policy*, Volume 107, 640-648. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0301421517302185>
- Carley, S., Konisky, D.M. (2020). The justice and equity implications of the clean energy transition. *Nature Energy*, 569-577. Retrieved from <https://www.nature.com/articles/s41560-020-0641-6>
- Catney, P., Macgregor, S., Dobson, A., Hall, S.M., Royston, S., Robinson, Z., Ormerod, M., Ross, S. (2013). Big society, little justice? Community renewable energy and the politics of localism. *The International Journal of Justice and Sustainability*, Vol. 19, 715-730. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/13549839.2013.792044>
- Commissie Brenninkmeijer. (2021). Eindrapportage adviescommissie Burgerbetrokkenheid bij klimaatbeleid. Retrieved from <https://www.rijksoverheid.nl/documenten/publicaties/2021/03/21/adviesrapport-betrokken-bij-klimaat>
- Creamer, E., Eadson, W., Van Veelen, B., Pinker, A., Tingey, M., Brauholtz-Speight, T., Markantoni, M., Foden, M., Lacey-Barnacle, M. (2018). Community energy: Entanglements of community, state, and private sector. Retrieved from <https://onlinelibrary.wiley.com/doi/10.1111/gec3.12378>

- Delicado, A. Figueiredo, E., Silva, L. (2016). Community perceptions of renewable energies in Portugal: Impacts on environment, landscape and local development. *Energy Research & Social Science, Volume 13* 84-93. Retrieved from <https://reader.elsevier.com/reader/sd/pii/S221462961530089X?token=4BFD227C2EF2B034FCDEE978C79BC212DE0AAEABCAAB7489D232F107DDB98F918C6F8D2FD6DD62967C7089436612C635&originRegion=eu-west-1&originCreation=20211116113023>
- Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry, Volume 12*, 219-245. Retrieved from <https://journals.sagepub.com/doi/abs/10.1177/1077800405284363>
- Forman, A. (2017). Energy justice at the end of the wire: Enacting community energy and equity in Wales. *Energy Policy, Volume 107*, 649-657. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0301421517302902>
- Goldthau, A., Sovacool, B. (2012). The uniqueness of the energy security , justice and governance problem. *Energy Policy, Volume 41*, 232-240. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0301421511008263>
- Guba, E.G, Lincoln, Y.S. (1985). *Naturalistic Inquiry*. Newbury Park, CA: Sage Publications
- Guba, E.G., Lincoln, Y.S. (1994). Competing Paradigms in Qualitative Research. *Handbook of Qualitative Research*, 105-117. Retrieved from <https://eclass.uoa.gr/modules/document/file.php/PPP356/Guba%20%26%20Lincoln%201994.pdf>
- Hanke, F., Lowitzsch, J. (2020). Empowering Vulnerable Consumers to Join Renewable Energy Communities, Towards an Inclusive Design of the Clean Energy Package. *Energies, Volume 13*. Retrieved from <https://www.mdpi.com/1996-1073/13/7/1615#cite>
- Hanke, F., Guyet, R., Feenstra, M. (2021). Do renewable energy communities deliver energy justice? Exploring insights from 71 European cases. *Energy Research & Social Science, Volume 80*. Retrieved from [https://www.sciencedirect.com/science/article/pii/S2214629621003376?casa\\_token=zxPDupKCKTIAAAAA:zjOTdRmPYCY5cQ5gHGWHqrc3uDuU059Wz9jM7jeTWKIZAnD3uYp-i9IXsTx91LntdkKhIFF](https://www.sciencedirect.com/science/article/pii/S2214629621003376?casa_token=zxPDupKCKTIAAAAA:zjOTdRmPYCY5cQ5gHGWHqrc3uDuU059Wz9jM7jeTWKIZAnD3uYp-i9IXsTx91LntdkKhIFF)
- Heffron, R.J., McCauley, D. (2014). Achieving sustainable supply chains through energy justice. *Applied Energy, Volume 123*, 435-437. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0306261913010337>
- Hier Opgewekt. (2021). *Lokale Energie Monitor*. Retrieved from [https://www.hieropgewekt.nl/uploads/inline/Lokale%20Energie%20Monitor%202020\\_DEF\\_Ir\\_16-02.pdf](https://www.hieropgewekt.nl/uploads/inline/Lokale%20Energie%20Monitor%202020_DEF_Ir_16-02.pdf)
- Horton, J., Macve, R., Struyven, G. (2004). Qualitative Research: Experiences in Using Semi-Structured Interviews. *The Real Life Guide To Accounting Research, Chapter 20*, 340-350.

Retrieved from

[http://digilib.umpalopo.ac.id:8080/xmlui/bitstream/handle/123456789/72/%5BChristopher\\_Humphrey%2C\\_Bill\\_H.K.\\_Lee%5D\\_Science%2C.The%28BookFi.org%29.pdf?sequence=1&isAllowed=y#page=370](http://digilib.umpalopo.ac.id:8080/xmlui/bitstream/handle/123456789/72/%5BChristopher_Humphrey%2C_Bill_H.K._Lee%5D_Science%2C.The%28BookFi.org%29.pdf?sequence=1&isAllowed=y#page=370)

Janssen, R. (2019). Energietransitie is op eerste plaats een sociaal vraagstuk. *De Sociale Alliantie*.

Retrieved from

<https://www.socialealliantie.nl/index.php/achtergronden/energietransitie-is-op-eerste-plaats-een-sociaal-vraagstuk>

Jenkins, K., McCauley, D., Heffron, R.J., Stephan, H., Rehner, R. (2016). *Energy Research & Social Science*, Volume 11, 174-182. Retrieved from

<https://www.sciencedirect.com/science/article/pii/S2214629615300669>

Kallio, H., Pietilä, A.M., Johnson, M., Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, Vol 72, 2954-2965. Retrieved from

<https://onlinelibrary.wiley.com/doi/pdf/10.1111/jan.13031>

Kupers, R., Faber, A. Idenburg, A. (2015). Who is the wolf? A systems view of energy transition in The Netherlands. Retrieved from

[https://www.rolandkupers.com/wp-content/uploads/2019/09/Wie-is-de-Wolf\\_final.pdf](https://www.rolandkupers.com/wp-content/uploads/2019/09/Wie-is-de-Wolf_final.pdf)

Lutzenhiser, L. & Shove, E. (1999). Contracting knowledge: The organizational limits to interdisciplinary energy efficiency research and development in the US and the UK. *Energy Policy*, Volume 27, Issue 4, 217-227. Retrieved from

<https://www.sciencedirect.com/science/article/abs/pii/S0301421599000129>

McCauley, D., Ramasar, V., R.J., Heffron, Sovacool, B.K., Mebratu, D., Mundaca, L. (2019). Energy justice in the transition to low carbon energy systems: Exploring key themes in interdisciplinary research. *Applied Energy*, Volume 233-234, 916-921. Retrieved from

<https://www.sciencedirect.com/science/article/pii/S0306261918315587>

McHarg, A. (2015). Community Benefit Through Community Ownership of Renewable Generation in Scotland: Power to the People? *Lucas et al, Sharing the costs and benefits of energy and resource activity: legal change and impact on communities*, Oxford University Press. Retrieved from:

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2668264](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2668264)

Milcharm C., Künneke, R., Doorn, N., Kaa, G. van de. Hillerbrand, R. (2018). Designing for justice in electricity systems: A comparison of smart grid experiments in The Netherlands. *Energy Policy*, Volume 147. Retrieved from <https://www.sciencedirect.com/science/article/pii/S030142152030447X>

Miller, C.A., Iles, A., Jones, C.F. (2013). The Social Dimensions of Energy Transitions. *Science as Culture*, Volume 22, 135-148. Retrieved from

<https://www.tandfonline.com/doi/full/10.1080/09505431.2013.786989>

Mundaca, L., Busch, H., Schwer, S. (2018). 'Successful' low-carbon energy transitions at the community level? An energy justice perspective. *Applied Energy*, Volume 218, 292-303. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0306261918302848>

Nozick, R. (1974). *Anarchy, State & Utopia*. New York: Basic Books

Nu.nl. (February 10th, 2021). *Mauritshuisdebat Energietransitie*. Retrieved from <https://www.nu.nl/285783/video/mauritshuisdebat-energietransitie.html?redirect=1>

Nu.nl (October, 12th, 2021). *Energie bij sommige leveranciers meer dan zes keer duurder geworden*. Retrieved from [https://www.nu.nl/economie/6161825/energie-bij-sommige-leveranciers-meer-dan-zes-keer-duurder-geworden.html#coral\\_talk\\_wrapper](https://www.nu.nl/economie/6161825/energie-bij-sommige-leveranciers-meer-dan-zes-keer-duurder-geworden.html#coral_talk_wrapper)

Ostrom, E. (2007). A diagnostic approach for going beyond panaceas. *PNAS*, Vol. 104, 15181-15187. <https://www.pnas.org/content/104/39/15181>

Penlight. (2022). *About The Seven Cooperative Principles*. Retrieved from <https://www.penlight.org/about/the-seven-cooperative-principles/>

Rasch, E.D., Köhne, M. (2017). Practices and imaginations of energy justice in transition. A case study of the Noordoostpolder, the Netherlands. *Energy Policy*, Volume 107, 607-614. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0301421517301817>

Rawls, J. (1999). *A Theory of Justice*. Revised edition. Harvard University Press, Cambridge.

Regionale Energiestrategie. (n.d.). *Nationaal Programma Regionale Energiestrategie*. Retrieved from <https://regionale-energiestrategie.nl/default.aspx>

Riege, A.M. (2003). Validity and reliability tests in case study research: a literature review with "hands-on" applications for each phase. *Qualitative Market Research: An International Journal*, Volume 6, 75-86. Retrieved from <https://www.emerald.com/insight/content/doi/10.1108/13522750310470055/full/pdf?title=validity-and-reliability-tests-in-case-study-research-a-literature-review-with-handson-applications-for-each-research-phase>

Schlosberg, D. (2007). *Defining environmental justice. Theories, movements and nature*. New York: Oxford University Press

Schlosberg, D. (2007). Reconceiving Environmental Justice: Global Movements And Political Theories. *Environmental Politics*, Volume 13, 517-540. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/0964401042000229025>

Schlosberg, D. (2013). Theorising environmental justice: the expanding sphere of a discourse. *Environmental Politics*, 22:1, 37-55. Retrieved from <https://www.tandfonline.com/doi/pdf/10.1080/09644016.2013.755387?needAccess=true>

Schumacher, E.F., Kirk, G. (1977). Schumacher on Energy: Speeches and Writings of E.F. Schumacher, Cape, London.

Shenton, A.K. (2004). Strategies for ensuring trustworthiness in qualitative research. *Education for Information*, Vol 22, 63-75. Retrieved from [https://www.pm.lth.se/fileadmin/\\_migrated/content\\_uploads/Shenton\\_Trustworthiness.pdf](https://www.pm.lth.se/fileadmin/_migrated/content_uploads/Shenton_Trustworthiness.pdf)

Silverman, R.M. (2015). Analysing Qualitative Data. *The Routledge Handbook of Planning Research Methods*. New York: Routledge.

Sovacool, B.K., Dworkin M.H. (2014). Global Energy Justice, Problems, Principles and Practices. Cambridge: Cambridge University Press.

Sovacool, B.K. (2014). What are we doing here? Analyzing fifteen years of energy scholarship and proposing a social science research agenda. *Energy Research & Social Science*, Volume 1, 1-29. Retrieved from [https://www.sciencedirect.com/science/article/pii/S2214629614000073?casa\\_token=9K1yHVbMTmUAAAAA:UqVXkFEm0M1XhaFb52xOalbeT99NpZPaSEdmkqjIDJaQW-quHYLVOLm2958dDh1R\\_0h4qCCwkg](https://www.sciencedirect.com/science/article/pii/S2214629614000073?casa_token=9K1yHVbMTmUAAAAA:UqVXkFEm0M1XhaFb52xOalbeT99NpZPaSEdmkqjIDJaQW-quHYLVOLm2958dDh1R_0h4qCCwkg)

Sovacool, B.K., Dworkin M.H. (2015). Energy justice: Conceptual insights and practical applications. *Applied Energy*, volume 142, 435-444. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0306261915000082>

Sovacool, B.K., Hook, A., Martiskainen, M., Baker, L. (2019). The whole systems energy injustice of four European low-carbon transitions. *Global Environmental Change*, Volume 58. Retrieved from <https://reader.elsevier.com/reader/sd/pii/S0959378018313281?token=66248C497C25A4BE058D6BED4944BA6A45BA55DC5C553EEBDBE77BDF7E32E73EEAFE8CDB19E4AA7569464987060F6376&originRegion=eu-west-1&originCreation=20211123105128>

Van Bommel, N., Höffken, J. I. (2021). Energy justice within, between and beyond European community energy initiatives: A review. *Energy Research & Social Science*, Volume 79. Retrieved from <https://reader.elsevier.com/reader/sd/pii/S2214629621002504?token=417EA73DB6109DF616E7D73FFB269CEE2249B42365287E72EB99DA2D346A118FB19F2473B46063B088B27ACD96661534&originRegion=eu-west-1&originCreation=20211123103348>

Verschuren, P. (2003). Case study as a research strategy: Some ambiguities and opportunities. *International Journal of Social Research Methodology*, 6:2, 121-139. Retrieved from <https://www.tandfonline.com/doi/pdf/10.1080/13645570110106154>

Walker G. & Day, R. (2012). Fuel poverty as injustice: Integrating distribution, recognition and procedure in the struggle for affordable warmth. *Energy Policy*, Volume 49, 69-75. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/0964401042000229025>

Wenar, L. (2021). "John Rawls". *The Stanford Encyclopedia of Philosophy* (Summer 2021 Edition). Retrieved from <https://plato.stanford.edu/entries/rawls/#TwoPriJusFai>

Windpark Nijmegen-Betuwe. (2015). *Investeer nu in Windpark Nijmegen-Betuwe*. Retrieved from <http://www.windparknijmegenbetuwe.nl/wp-content/uploads/Investeer-nu-in-Windpark-Nijmegen-1juli-2015.pdf>

Wolff, J. (2014). Equality & Social Justice. *Issues in Political Theory, Chapter 6*. OUP Oxford.

Yin, R.K. (1981). The Case Study as a Serious Research Strategy. *Knowledge: Creation, Diffusion, Utilization, Volume 3*, 97-114. Retrieved from <https://journals.sagepub.com/doi/pdf/10.1177/107554708100300106>

Yin, R.K. (1984) *Case Study Research: Design and Methods*. Sage Publications, Beverly Hills, California.

Young, I.M. (1990). *Justice and the Politics of Difference*. Princeton University Press.

Zonneparkdegrift. (2022). *Zonnepark*. Retrieved from <https://www.zonneparkdegrift.nl/zonnepark/>

## Appendices

### Appendix A: Original interview guide (in English)

#### *Grand-tour questions:*

EJ within (Community dynamics):

How would you characterize the internal decision-making processes?

How inclusive do you think the initiative has been as a community?

EJ between (Interaction with external parties):

How has the interaction between third parties and the cooperative been experienced?

How would you characterize the role of the local municipality within the initiative?

EJ beyond (Community development within an energy system):

What were the most important processes regarding the enactment of the initiative?

What stance does the cooperative take to the predicament of energy vulnerable groups?

*Probe questions:*

*Questions on energy justice within community initiatives:*

How would you describe the diversity of your membership base?

Do you reckon it is difficult to acquire ownership?

How do members usually participate within the organization?

How do members usually interact with information on the project?

How would you describe the organizational culture?

*Questions on energy justice between community initiatives and related actors:*

What are the expectations of the municipality from the initiative?

How is the initiative involved in decision-making processes?

How would you characterize the information transparency between the initiative and the municipality or private third parties?

What are the legal procedures for challenging public bodies or private companies?

Do you think that the initiative, as a distinct actor within the energy transition, is treated appropriately by government decision-makers?

*Questions on energy justice beyond community initiatives:*

Could you explain to me, briefly, the process around the allocation of the site?

Are there funds made available for societal projects?

Do you reckon there are certain groups in society that find it hard to be a part of your organization?

Do you, from the perspective of your organization, consider vulnerable groups to be distinct stakeholders?

How does the organization mobilize its knowledge?



Does the organization employ lower membership fees or lower share prices for vulnerable groups?

## **Appendix B:** Used interview guide for members (dutch)

Persoonlijke (inleidende) vragen:

Zou u mij kort wat willen vertellen over uw huidige rol binnen de coöperatie?

Waarom heeft u, destijds, besloten lid te worden?

Hoofdvragen (binnen):

Hoe zou u de interne besluitvorming van de coöperatie karakteriseren

Zijn besluitvormingsmechanismen open voor iedereen?

Hoe participeren leden over het algemeen in de coöperatie, worden er gelijke mogelijkheden gegeven aan iedereen?

Hoe belangrijk is participatie en gelijkheid in de organisatie?

Hoe inclusief denkt u dat het initiatief is/is geweest als gemeenschap?

Wordt er aandacht besteed aan de diversiteit van het leden bestand?

Denkt u dat het moeilijk is geweest om eigenaarschap te krijgen (voor bepaalde groepen)?

Hoofdvragen (tussen):

Hoe is/gaat de coöperatie om met de interesses van derde partijen?

Wordt de samenwerking met derde partijen als prettig ervaren?

Denkt u dat de coöperatie genoeg slagkracht heeft om zich staande te houden ten opzichte van grote marktpartijen?

Zijn er voldoende juridische procedures?

Hoe zou u de rol van de gemeente karakteriseren in het initiatief (windpark)?

Wat zijn de verwachtingen bij de gemeente van het initiatief?

Hoe is de transparantie tussen de gemeente en het initiatief?

Wordt het initiatief voldoende betrokken in relevante besluitvormingsprocessen?

Denkt u dat de coöperatie, als specifieke actor in de energietransitie, naar waarde wordt behandeld door beleidsmakers?

Hoofdvragen (voorbeeld):

Wat waren de belangrijkste processen rond de uitvoering van het initiatief?

Wat speelde er omtrent de toewijzing van het terrein?

Hoe kijkt de coöperatie aan tegen energie armoede (de situatie van kwetsbare groepen)?

Worden er fondsen beschikbaar gesteld voor dergelijke projecten?

Denkt u dat het moeilijk is voor bepaalde groepen om deel uit te maken van uw organisatie?

Zien jullie 'energie kwetsbare groepen' als stakeholders in de energietransitie?

Hoe mobiliseert de organisatie haar kennis (rol in het lokale sociale netwerk, het bereiken van 'energie kwetsbare groepen')?

Hanteert de organisatie lagere aandeel prijzen voor 'energie kwetsbare groepen'?

Afsluitende vragen:

De coöperatie wil bijdragen aan de lokale energietransitie, hoe belangrijk denkt u dat rechtvaardigheid (eerlijkheid) is in deze bijdrage?

Zijn er bepaalde maatschappelijke zaken waarop de coöperatie in de toekomst graag zou willen reageren?

## **Appendix C: used interview guide for the municipality (Gemeente Nijmegen)**

Persoonlijke/inleidende vragen:

Kunt u mij wat meer vertellen over power2nijmegen en haar functie binnen de gemeente?

Hoofdvragen:

Hoe gaat de gemeente doorgaans om met coöperaties? Hoe worden deze entiteiten gezien, wat is de potentie van zulke initiatieven in de ogen van de gemeente? Krijgen ze vaak de kans en zo ja of nee, waar wordt dit op gebaseerd?

Wat is de relatie tussen power2nijmegen en energie coöperaties?

Hoe is/was de relatie met WindPowerNijmegen in het bijzonder? Was er sprake van wederzijdse belangen? Waardoor is, vanuit het perspectief van de gemeente, deze relatie verwatert?

Hoe belangrijk vinden jullie energie coöperaties in een succesvolle energietransitie en welke taken reserveren jullie voor hen, zien jullie de opkomst van coöperaties als een veranderend speelveld?

Denk je dat coöperaties een eerlijke kans krijgen van de gemeente?

Wat weet power2nijmegen over energiearmoede?

Hoe kijkt men aan tegen de rol van coöperaties in het bestrijden van energiearmoede?

#### **Appendix D:** used interview guide for Leefbaar Reeth

Inleidende vraag:

Zou je mij kort wat kunnen vertellen over de organisatie Leefbaar Reeth?

Hoofdvragen:

Kun je mij wat meer vertellen over het proces rondom de realisatie van het windpark, en hoe dit ervaren is door het buurtschap?

Hoe zou je de relatie met WPN omschrijven?

Voelden jullie je serieus genomen door de mensen van WPN?

Wat was er zo belangrijk in de totstandkoming van de (eventuele) goede verstandhouding?

In hoeverre heeft de goede verstandhouding met WPN bijgedragen aan acceptatie van de windmolens?

In hoeverre heeft de compensatie die jullie hebben gekregen voor de bouw van de windmolens bijgedragen aan de acceptatie ervan?

Hoe kijkt men hier nu naar de windmolens, is dit met een andere blik dan toen de plannen ervoor gevormd werden?

Jullie bouwen nu aan een zonnepark hier, zou je deze keuze kunnen toelichten, wat waren jullie afwegingen in deze beslissing?

Zou je kunnen zeggen dat het windpark jullie, tot op zekere hoogte, geïnspireerd heeft om met het zonnepark te beginnen?

Denk je dat het zonnepark er was gekomen zonder het windpark?

## **Appendix E: used interview guide Kleurrijk Groen**

Inleidende vraag:

Kunt u mij kort wat vertellen over de organisatie Kleurrijk Groen en hun rol in de energietransitie?

Hoofdvragen:

Kunt u mij wat vertellen over inclusiviteit in de energietransitie? wat zijn de problemen waar men tegenaan loopt?

Als we het hebben over inclusiviteit in de energietransitie, welke groepen in de maatschappij zijn dan het lastigst te bereiken? Zijn dit ook de meest kwetsbare groepen, met betrekking tot energiearmoede bijvoorbeeld?

Wat zijn de grootste obstakels/uitdagingen voor een inclusieve energietransitie?

Hoe belangrijk is eigenaarschap voor kwetsbare groepen in de energietransitie?

Hoe gaan coöperaties om met de uitdagingen van inclusiviteit? op welke manier kunnen zij bijdragen aan een inclusieve energietransitie?

Wat zijn de kansen die coöperatief eigendom biedt voor groepen die het nu lastig vinden om mee te doen in de energietransitie?

De coöperatie geeft aan het lastig te vinden om bepaalde groepen, bijvoorbeeld met een migratieachtergrond, te bereiken, wat zouden ze kunnen doen om beter bereikbaar te worden voor deze groepen?

## **Appendix F: used interview guide for Energie Samen**

Inleidende vraag:

Kunt u mij wat meer vertellen over Energie Samen en welke rol zij heeft in de energietransitie?

Hoofdvragen:

Hoe verhouden coöperaties zich tegenover overheden en marktpartijen, waar bevinden zij zich in het institutioneel speelveld?

Wat zijn de grootste obstakels voor coöperaties in dit speelveld? Zijn overheden/gemeentes over het algemeen faciliterend of belemmerend?

Welke rol ziet u voor coöperaties in de strijd tegen energiearmoede?

Wat zijn manieren waarop

coöperaties kunnen bijdragen aan het bestrijden van energiearmoede?

Hoe zouden coöperaties ervoor kunnen zorgen dat ze bereikbaarder worden voor bepaalde sociale groepen

die nu gemist worden?

Als we het hebben over lokaal eigendom, hoe kun je ervoor zorgen dat dit zo breed mogelijk wordt, in andere woorden, dat alle sociale groepen een kans zien om mee te doen?

Welke rol ziet u voor de coöperatie als actor in de energietransitie?