Beyond the public

Shifting research perspectives in renewable energy controversies

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DOI
10.4233/uuid:22f13b5d-6b0f-45db-81f3-23492592834a

Publication date
2024

Document Version
Final published version

Citation (APA)
van de Grift, E. M. H. R. (2024). *Beyond the public: Shifting research perspectives in renewable energy controversies*. [Dissertation (TU Delft), Delft University of Technology].
https://doi.org/10.4233/uuid:22f13b5d-6b0f-45db-81f3-23492592834a

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Beyond the public:

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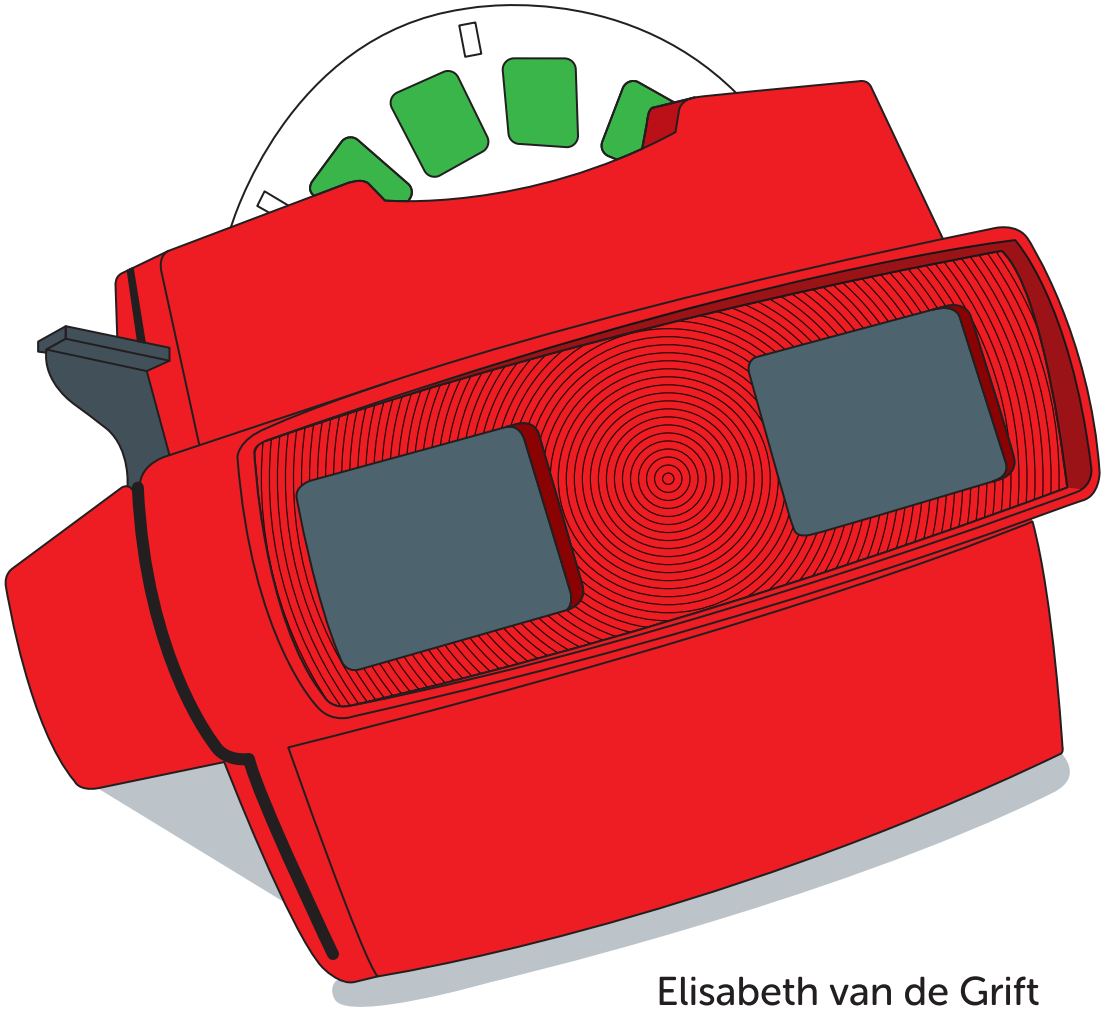

Elisabeth van de Grift

Beyond the public

Shifting research perspectives
in renewable energy controversies

Elisabeth van de Grift

ISBN 978-94-6384-671-4

Ontwerp omslag: Michiel van de Grift
Ontwerp binnenwerk: Loes Kema
Geprint door: Proefschriften.nl

Beyond the public

Shifting research perspectives
in renewable energy controversies

Proefschrift

ter verkrijging van de graad van doctor aan de Technische Universiteit Delft,
op gezag van de Rector Magnificus prof. dr. ir. T.H.J.J. van der Hagen;
voorzitter van het College voor Promoties,
in het openbaar te verdedigen op
dinsdag 3 december 2024 om 15:00

door

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Prof. dr. W.W. Veeneman	Technische Universiteit Delft, reservelid

Dit promotieonderzoek is gefinancierd als onderdeel van het onderzoeksprogramma RESPONSE (projectnummer 313-99-303). RESPONSE werd gefinancierd door de Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO) als onderdeel van het NWO-MVI onderzoeksprogramma 'maatschappelijk verantwoord innoveren' (NWO-MVI). Acht partijen co-financierden RESPONSE, waaronder Alliander, Gasunie, Eneco, NOGEPA, Berenschot, Arcadis, Royal HaskoningDHV en CE Delft.

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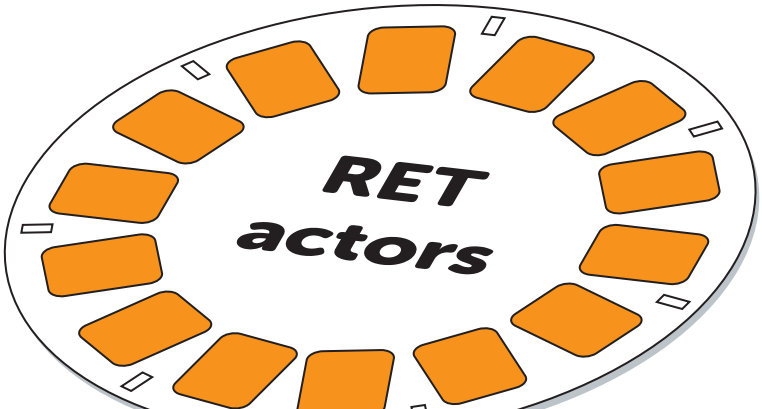

RET
actors

Summary

Samenvatting

Summary

All around the world projects are being developed as part of the move to more renewable systems of energy production and consumption, also known as the renewable energy transition. As global temperatures are reaching record levels there is an urgency to speed up progress. Unfortunately, numbers show that renewable energy developments are lagging behind and renewable energy ambitions on national levels are insufficient.

The realization of renewable energy transitions worldwide is not purely a technical affair – the use of new technologies by society comes with many challenges. For example, energy systems based on renewable energy become more decentralized compared to large-scale central energy production based on fossil resources. Renewable energy infrastructures are often large, technically complex installations with both social and environmental impact. This means that shifts in energy infrastructure have a substantial impact on our society, lifestyles and living environment. As a consequence of these changes and processes public conflict often occurs. Renewable energy controversies are a common part of renewable energy transitions.

Renewable energy controversies are social conflicts that articulate the values that are at stake for actors affected by new energy development, such as the establishment of a new location for wind turbines. As a controversy develops it reveals (hidden) social dimensions of the development and shows societal and ethical risks, costs and benefits that might have been unanticipated. The values that lead to conflict can concern the energy technology in question, the decision-making procedures or to those involved in or organizing these processes. As such, controversies can also be seen as a form of political engagement that has democratic value.

Conflicts over the planning and development of renewable energy and infrastructure, such as on- and offshore wind, solar, green hydrogen, geothermal, and transmission lines have been prominent over the past decades. These renewable energy controversies emerge when citizens, local residents, action groups or other stakeholders oppose plans or developments. Many controversies have resulted in delay or cancellation of projects. Controversies often end in unconstructive outcomes such as lengthy legal battles between project promoters and the challengers. As ongoing policy and societal efforts are put in effect to advance the global energy transition, it is likely that they will continue to arise in the years to come. As controversies are not a temporary phenomenon, but occur again and again, there is a need for better understanding controversies as well as searching for constructive ways to deal with them - especially given their democratic value.

Controversies have three general characteristics: (1) they are publicly salient meaning they take place in the public sphere, are covered in the media and have peaks in which the conflict heats up; (2) controversies are complex and dynamic as they involve a multitude of actors and issues which often change over time. Conflicts from the past, in other places or on other technologies can also become intertwined with or fuel renewable energy controversies; and (3) controversies consist of a series of discursive interactions: project developers, government representatives, local residents, the general public, NGO's and other stakeholders communicate and engage with each other in some kind of way. This means that the language used can be a starting point for further understanding.

These three characteristics reveal the strong relational nature of controversies. They comprise a cycle of interactions between a wide range of actors involved, their expectations of others feeding into engagement strategies and actions, which in turn shape interactions, and so on.

Over the past decades, renewable energy controversies have been widely studied by social science researchers from a variety of fields. The dominant approach here has been to approach controversies as lack of social acceptance, and renewable energy technology (RET) in need of social acceptance, which revolves around attitudes to and engagement with renewable energy technologies and infrastructure. In general, most research focuses on opposition or support of the general public, local residents and communities.

Despite the ongoing attention and developments in research focus within this field since the 80s, the investigation of renewable energy controversies generally (still) revolves around the perspectives, actions and experiences of the general public, local communities and opponents. This has resulted in the neglect of other important stakeholders involved in the development of renewable energy.

This dissertation seeks to address this important gap by focusing on the category of people representing organisations working on or supporting the renewable energy projects themselves in the context of renewable energy controversies. These actors are known as renewable energy technology actors (RET actors). The category of RET actors includes the project developers, their CEOs, engineers and communications managers, the consultants that are hired, trade associations as well as manufacturers and financiers of energy technologies. RET actors can be both private and public actors: depending on their role in projects, governments can be RET actors as well.

RET actors are important to investigate in renewable energy controversies for three reasons:

1. The relational aspect of controversies: interactions between RET actors and (local) opponents, residents and other stakeholders shape how local responses evolve and how different actors act and react. Within controversies, they are often powerful and incumbent actors, responding to demands from the political as well as the societal domain.
2. RET actors make decisions about the (project design and construction of) renewable energy technology itself and (the design and implementation of) processes for public participation, community engagement and decision-making. These choices, informed by experiences and expectations, play a role in the emergence and/or development of renewable energy controversies.
3. Existing research paints a seemingly homogenous picture of RET actors in the renewable energy controversies, portraying them as a group with common interests. Apart from the general category 'project developer', little research explores the diversity of types of actors and organizations involved.

The current body of literature on renewable energy controversies has a strong focus on the general public, creating a one-dimensional understanding of controversies. However, the actions, responses, assumptions and expectations of RET actors are equally important. This dissertation aims to make a contribution to the theorization of dynamics of renewable energy controversies by generating empirical knowledge on RET actors. The expectation is that RET actor-centered research will result in new perspectives on and insights into renewable energy controversies. This is needed as part of constructing a finer-grained, relational understanding of the (development of) conflict dynamics between the actors engaged in controversies and action perspectives for the involved actors. This is valuable for the overall governance of the energy transition, as partial understanding of controversies leads to one-sided (and therefore limited and not effective) action perspectives for the actors involved.

The main research question answered in this dissertation is:

How can the investigation of perspectives and interactions of RET actors help to explain the dynamics of renewable energy controversies?

This research question is broken down into four sub-questions (see Table 1). I use a mixed methods research approach for answering them as the use of different qualitative and interpretative methods allowed for exploration of RET actors and showcasing different types of insights that can be gained from RET actor-centered research.

Table 1. Overview of the research questions and methods used in each chapter of this dissertation.

Chapter	Focus	Research question	Research method
2	State-of-the-art literature on RET actors	What is the state-of-the-art in the literature about RET actors involved in controversies surrounding renewable energy technologies and infrastructure?	Systematic literature review
3	Perspectives of RET actors	How do community engagement professionals view community engagement in energy projects, and how do they view their own role therein?	Q Methodology
4	Interactions of RET actors	How do governmental actors engage in the discussion and decision-making process of a contested wind farm and what role do they play in the development of the wind energy controversy?	Case study using critical moments analysis
5	Researching RET actors	What methodological lessons can be learned from empirical research on RET actors in the context of controversies to support future research?	Reflexive analysis

With this dissertation, I contribute to the emerging field of social science of energy. This field is an intersection at which various social scientific disciplines meet, from public administration to psychology and anthropology. The research presented in this dissertation has been part of the research project RESPONSE ('RESPonsible innovation: linking formal and infOrmal assessmeNt in deciSionmaking on Energy projects') which was based at Delft University of Technology, the Netherlands. Within RESPONSE, we explored controversies as a source of information in order to gain insights into the conflict dynamics and look for constructive approaches to deal with them.

As a first step, **Chapter 2** presents a state-of-the-art literature review of RET actors involved with renewable energy controversies as it was unclear where this research currently stands. For this purpose, a systematic literature review was conducted which is a method that allows to identify, evaluate an synthesize academic literature.

The current literature (consisting of 89 publications) can be divided into two categories, each consisting of several themes. The first category concerns research into **RET actors' perceptions of public opposition**, reporting on how RET actors perceive the impact and causes of public opposition. This includes perceptions of specific groups of people and processes of engagement and decision-making. The second category concerns research **into how RET actors respond to public opposition**, identifying eight responses with different purposes, aimed at either preventing, reducing or delegitimizing public opposition.

Reflecting on these findings, five observations about the current state of empirical knowledge on RET actors involved in controversies are made:

1. There is **little diversity in social science research on RET actors** in terms of investigated actors, renewable energy technologies and infrastructure, and geographical contexts;
2. Most publications are **descriptive and do not provide explanations** for the reported perspectives, practices or discourses observed amongst RET actors;
3. Social science research on RET actors often reports on their practices as **perceived or experienced by other stakeholders**;
4. Most publications focus on RET actors and their **attempts to avoid or reduce opposition**; few publications investigate attempts to address or accommodate public concerns in controversies;
5. Some researchers explicitly label their **RET actor-centric research as biased**. Such labelling contributes to stereotyping of developers as villains on the one hand and romanticizing of opponents as the underdog on the other.

Based on these observations, several directions for future research are suggested in this chapter. The first one is diversification of research to reflect the diversity of RET actors and their practices, the diversity of energy technologies as well as the diverse geographical locations they work in. The second direction is explanatory research in order to unpack RET actors' perspectives, practices and discourses to understand their actions and interactions in controversies as there was little in-depth investigation for this topic. The third direction suggests investigation of responsiveness of RET actors when public opposition occurs as this review found few publications investigating (attempted) learning from public opposition or approaches to constructively engage with it.

These suggestions can result in a more nuanced understanding of RET actors, and in turn contribute to a finer-grained understanding of the (development of) conflict dynamics between the actors engaged in controversies.

Chapter 3 investigates RET actor perspectives in relation to renewable energy controversies. There has been limited attention for project developers and the way they shape community engagement. As such, this chapter focusses on the community engagement professional (or CEP) in the Dutch energy sector. These are individuals who are active within or for renewable energy companies tasked and are tasked with community engagement. By researching this particular group of RET actors, the chapter contributes to diversification of current research.

Q Methodology was used to explore perspectives that CEPs have on their work as the theoretical and empirical knowledge about this is scarce. This method combines statistical

analysis and qualitative interview data in order to uncover different perspectives and relationships between recurring themes.

The analysis revealed three different perspectives amongst the 37 CEPs that were interviewed, which can be summarized as follows: (1) community engagement as co-creation and the community engagement professional as intermediary, (2) community engagement as project management: everything under control, and (3) project development: no community engagement beyond legal requirements. When compared, these perspectives reveal the diversity amongst this (seemingly homogeneous) group in five different areas:

- **Mode of engagement with local residents, communities or stakeholders and general public**. While CEPs with perspective 1 and 2 seek partnerships or collaborations with local communities, those with perspective 3 focus on one-way communication as they perceive themselves not in a legitimate position to go beyond legal requirements for community engagement;
- **Position of the CEP vis-à-vis the organization** they represent and the community they work in. Those with perspective 1 see themselves to be at the boundary of both the organization and community, CEPs with perspective 2 think of themselves as embedded in the organization and reach out to the community if this serves the goal of implementing project plans. CEPs with perspective 3 draw a sharp boundary between their own organization and the community, limiting interaction to formal decision-making procedures;
- **View on social opposition and conflict and how to deal with it**. While CEPS with perspective 1 show a certain appreciation of conflict and early engagement as self-evident, those with perspective 2 accept that it can emerge but rather prevents it by timely engagement. According to CEPs with perspective 3, social opposition is a given in project development, but as they feel it is outside of their control they do not actively engage with it;
- **Responsibility for the representation of communitie**s. To varying degrees, CEPs with perspectives 1 and 2 share a sense of responsibility to take local interests into account in. CEPs with perspective 3, however, don't think of it as their responsibility as they feel that is what formal decision-making procedures are for;
- **Interaction with colleagues & stakeholders inside their own organization**. Perspective 2 and 3 are similar as they feel they are working more or less harmoniously on project realisation. CEPs with perspective 1 though, feel they need to put in extensive effort to convince colleagues of the need and necessity of community engagement and make sure they are actually part of the project team.

The different perspectives provide insight into practices regarding interactions with

local residents and communities in the context of controversies, as well as the different challenges experienced by CEPs in this work context. By comparing the three perspectives, Chapter 3 shines light on the heterogeneity of a subgroup of RET actors. It also shows that organizational dynamics have a large influence on CEP practices and are an interesting avenue for future research.

Chapter 4 investigates RET actors actions and interactions to learn more about the development of renewable energy controversies. Chapter 4 investigated the development of the controversy on the onshore wind farm N33 in the Netherlands by focusing on the different governments (national, provincial and municipal) involved in the planning process. Despite their obvious parts in controversial planning processes, governmental actors in renewable energy controversies are under-researched.

Critical moment analysis was used to unpack the developments and actions of governments within this case study. Critical moments are occasions in a controversy during which the nature or intensity of interactions between governmental actors change and studies actions and reactions as a chain of events. A performance perspective was used to guide the analysis as this views (inter)actions of governmental actors as attempts to actively influence uncertain developments.

The analysis revealed three occasions in which actions and reactions from governmental actors and interactions between actors from different governmental levels influenced the development of the controversy. It also showed the major impact of the policy context: the introduction of a new national policy context created a situation in which decision-making power shifted to the national government, resulting in local governments trying to regain influence in the formal decision-making process. Three different strategies were identified:

- **Venue shopping**: local governmental actors attempted to (formally and informally) influence decision-making in their favour and specifically focused their efforts at places where authoritative decision-making took place;
- **Strategic scaling**: lower governments responded to shifted power dynamics of the new policy context by explicitly placing responsibility for (unpopular) decisions at other governmental levels;
- **Governmental activism**: municipal governments attempted to oppose their political opponents by using conventional means (the public consultation procedure) for unconventional strategies (providing templates for notices of objection to residents).

This case study demonstrates what can learned about dynamics of renewable energy controversies when the research focus is shifted from interactions between proponents and opponents to interactions between RET actors. Focusing on the (inter)actions of

governmental actors enhanced the understanding of the multidimensional and complex character of the renewable energy controversy controversies and produced new insights into challenges of the multi-level governance of energy policy and planning.

Chapter 5 explores the act of investigating RET actors in the context of renewable energy controversies. One of the main challenges in conducting empirical research on RET actors is gaining and maintaining access, especially when using ethnographic methods such as participant observation. While conducting the research for this dissertation, I encountered several of such challenges. Sharing of experiences on research endeavours involving RET actors seems essential, but there are few publications on this topic. Therefore, Chapter 5 reflects on challenges of empirical investigation of RET actors to contribute to methodological conversations amongst researchers in the field of social science of energy to grow our research practice.

In order to analyse the encountered challenges, a reflexive analysis was conducted on our own experiences in using ethnographic methods in research on RET actors involved with two (potential) wind energy controversies in the Netherlands. This approach allows researchers to investigate and dissect their own research process. The concept strategic dilemma was used to guide the identification of encountered challenges related to gaining and maintaining access. Dilemmas can emerge while organizing or conducting research, which puts researchers in a situation in which they need to make a decision on how to move forward.

Based on the encountered dilemmas, three factors are that contributed to the emergence of these dilemmas:

- **Ascribed positionality**, which is how people perceive others. This 'assigned identity' can impact if and how people decide to interact with others and as such play a role in whether or not they will grant researchers access to themselves or others. Reflecting on our own positionality and how we think we might come across on (potential) respondents is especially important when collaborating with RET actors in research as ascribed positionality can play a part in gaining and maintain access to a case or (potential) research participants;
- **A multitude of contexts**, including the business context, the policy context and our own academic context. Interests of stakeholders that are related to these contexts can emerge and change over the course of conducting research. These interests can impact how stakeholders (including ourselves as researchers) interact and make decisions related to access. Interests emerging from our own academic context often stay implicit. However, they should be made explicit as they potentially shape how research is conducted.

- **Formal and informal gatekeepers**. These are individuals who can help obtain or obstruct access to specific stakeholders. When investigating energy controversies, it is highly likely that researchers will encounter multiple (sometimes unexpected) gatekeepers. These can be either people in a formal position (like the consortium partner) or people in an informal position who can influence others. As such, it is important to keep reflecting on what gaining and maintaining access to cases or participants requires from researchers, especially if this means making concessions to research.

These factors show that researchers of controversies are undeniably stakeholders themselves in the field that they are researching. The often subtle ethical questions that are encountered along the way are situational and usually have to be answered on the go. This requires reflexivity from those researching controversies in order to give these questions the attention they deserve as decisions can have consequences for the research. For the navigation of such dilemmas dialogue between researchers is especially valuable for novice researchers.

Chapter 6 answers the main research question by providing summarized answers to the sub questions. Opening the black box of RET actors is necessary to understand the dynamics of renewable energy controversies. Strictly looking at the general public, communities and opponents cannot explain why diverse groups of actors, including project developers, CEPs and governments, act or respond in certain ways in this specific context; this results in a one-dimensional, limited understanding of controversies.

The investigation of perspectives of RET actors helps to explain the dynamics of renewable energy controversies, as dynamics are (partly) determined by RET actors, like CEPs. Their perceptions show how they view their role and responsibility for how to interact with residents and how to engage with opposition. How they are able to translate this view into practice depends on their position in the organization, as organizational dynamics have a large influence on CEP practices.

Tracing the actions and interactions of RET actors in controversies shows how the dynamics of renewable energy controversies can be determined by the way in which governments are involved in project development. The coordination (both formal and informal) between government levels is also very important for the development of a controversy (e.g. overruling local government).

It is therefore very valuable to empirically investigate the perspectives and interactions of RET actors, however this is also challenging. So when conducting this type of research, it is important to take several aspects into account: (1) anticipate dilemmas relating to

our (ascribed) positionality as researchers, (2) expect a multitude of contexts and related interests to influence the process of conducting research, and (3) remain aware and continuously reflect on what gaining and maintaining access requires, specifically when interacting with gatekeepers.

In Chapter 6, I also reflect on the findings of my dissertation and my experiences of working as a social science researcher the past years. Not only in the academic world but also in practice, there is still a heavy focus on the public in renewable energy controversies. Therefore, Chapter 6 provides several recommendations for both academia and practice.

Recommendations for a research agenda on RET actors

Explanatory research into RET actors needs to be invigorated, specifically by researchers from disciplines such as organizational studies, organizational anthropology, business administration and the anthropology of policy. Such disciplines possess the theoretical and conceptual tools required to construct an organizational perspective in accounts of renewable energy controversies. This helps to increase the understanding of organizational culture, identity and power dynamics in the context of controversies. Such a focus would allow to unravel organizational cultures in the highly technical companies in the renewable energy sector and look for opportunities to integrate stakeholder and community engagement.

Recommendations for practice and policy

RET companies often have a strong technical and legal focus and are often knowledge-driven. The core business usually revolves around developing technical projects, adhering to rules & regulations and obtaining the required permits. Employees are highly skilled and experienced in these technical and legal ways of thinking and working, but not often do they also possess the specialized knowledge, skills and experience required for proper stakeholder engagement. This is typically solved by temporary bringing in external consultants. However, when projects end and the consultants leave, oftentimes so does this expertise. Such an approach contributes to stakeholder engagement remaining an isolated, add-on activity in the energy sector. In order to remedy this, several steps can be taken by different stakeholders.

- **CEOs, show leadership and give stakeholder engagement a full-fledged role within organizations**. organizations can do three things to integrate stakeholder engagement: (1) Recruit employees with the required specialized competences or offer courses to employees who want to develop such competences; (2) Grant stakeholder engagement a position equal to technical, legal and financial departments (amongst others) in projects and the organization; and (3) Stimulate collaboration between experts from different departments in the planning and development of projects.

- **Engineers, develop competencies that enable constructive dealing with questions, concerns and interests from the public and local communities**. This calls for ways of designing that facilitate uniting technical, legal and business development interests with local and public interests. This can be learned on the job, in collaboration with stakeholder or community engagement managers in projects. In addition, such skills can also be integrated into courses, for example as part of bachelor and master programs in engineering at technical universities.

- **Stakeholder and community engagement managers, create strategies to integrate stakeholder and community engagement in (practices of) technically oriented organizations**. Here, communities of practice play an important part as a hub to exchange experiences and share best practices. These can for example be strategies on how to gain support for stakeholder and community engagement on different levels of the organization (including CEO level). One such approach is collecting evidence of the fruits of stakeholder and community engagement work, such as putting monetary value to prevented appeal procedures.

- **Policymakers, provide RET actors with clear guidelines on community engagement for RET developments**. January 1st 2024, the *Omgevingswet* (or Environment Act) came into effect in the Netherlands. This is supposed to stimulate project initiators to consider participation. However, in practice this often results in a wait-and-see attitude among RET actors, as there is no obligation to organize such activities. Stakeholder engagement managers have already reported to use the Environment Act to motivate organizations of taking steps in this area. Clear guidelines on community engagement formulated by for example municipalities, to the extent permitted by law, would be beneficial to further stimulate RET actors in this area.

This dissertation has made a case for an actual shift of perspectives in research on renewable energy controversies by reinvigorating social science research into RET actors. By doing so, I hope it contributes to a more encompassing, relational perspective of renewable energy controversies, one that does look beyond the public.

Samenvatting

Overal ter wereld worden er duurzame energieprojecten ontwikkeld als onderdeel van de overgang naar meer duurzame systemen voor energieproductie en -consumptie, ook wel bekend als de duurzame energietransitie. Mondiale temperaturen bereiken recordniveaus en de verwachting is dat deze stijging snel toe zal nemen, samen met een toename van extreme weersverschijnselen. Dit maakt het dringend noodzakelijk om de voortgang van de energietransitie te versnellen. Helaas blijkt uit cijfers dat ontwikkelingen achterblijven en dat de nationale ambities op het gebied van hernieuwbare energie onvoldoende zijn.

Het realiseren van duurzame energietransities wereldwijd is niet een puur technische aangelegenheid: bij dergelijke processen gaat het zowel om (beslissingen over) de ontwikkeling en implementatie van technologische innovaties in de samenleving, als om het gebruik van deze innovaties door de samenleving. Energiesystemen op basis van hernieuwbare energie zijn bijvoorbeeld meer decentraal (en dus meer verspreid) in vergelijking met systemen op basis van fossiele hulpbronnen. Hernieuwbare energie-infrastructuren zijn vaak grote en technisch complexe installaties die zowel sociale als ecologische gevolgen hebben. Energie heeft daarmee dus een grote impact op onze samenleving, levensstijl en leefomgeving. Als gevolg van de veranderingen in het kader van de energietransitie zijn maatschappelijke conflicten, zoals *controverses over duurzame energie*, een inherent onderdeel van deze transitie.

Controverses over duurzame energie zijn maatschappelijke conflicten die laten zien welke waarden er voor betrokken partijen op het spel staan. Naarmate een controverse zich ontwikkelt worden (verborgen) sociale dimensies en maatschappelijke en ethische risico's, kosten en baten zichtbaar die eerder mogelijk niet waren voorzien. De onderliggende waarden die hier een rol spelen kunnen betrekking hebben op de energietechnologie in kwestie, op de besluitvormingsprocedures of op degenen die betrokken zijn bij deze processen of ze organiseren. Als zodanig kunnen controverses ook worden gezien als een vorm van politiek engagement die democratische waarde heeft.

De afgelopen decennia zijn conflicten over de planning en ontwikkeling van hernieuwbare energie en infrastructuur, zoals windenergie op land en zee, zonne-energie, groene waterstof, geothermie en het hoogspanningsnet, prominent aanwezig geweest. Deze controverses over duurzame energie ontstaan wanneer burgers, omwonenden, actiegroepen of andere belanghebbenden zich tegen plannen of ontwikkelingen verzetten. Veel controverses hebben in het verleden geleid tot vertraging of annulering van projecten. Controverses eindigen ook vaak in weinig constructieve uitkomsten, zoals langdurige juridische gevechten tussen initiatiefnemers en tegenstanders. Gezien de politieke en maatschappelijke inspanningen om energietransities wereldwijd te bevorderen is het dan

ook waarschijnlijk dat dit soort conflict zich de komende jaren blijft voordoen. Omdat het hier niet over een tijdelijk fenomeen gaat en gezien de democratische waarde is er zowel noodzaak tot een beter begrip van controverses als constructieve(re) manieren om hier mee om te gaan.

Controverses hebben drie kenmerken: (1) ze zijn publiek saillant, wat betekent dat ze plaatsvinden in de publieke sfeer, in de media worden besproken en pieken kennen waarin het conflict oplaait; (2) ze zijn complex en dynamisch omdat er een groot aantal actoren bij betrokken is en er veel issues spelen die vaak in de loop van de tijd veranderen. Conflicten uit het verleden, op andere plaatsen of over andere technologieën kunnen daarnaast ook verweven raken met controverses over duurzame energie of deze aanwakkeren; en (3) controverses bestaan uit een reeks discursieve interacties: projectontwikkelaars, vertegenwoordigers van de overheid, lokale bewoners, het grote publiek, ngo's en andere belanghebbenden communiceren en interacteren met elkaar. Dit betekent dat de taal die mensen gebruiken een startpunt kan zijn voor verder begrip.

Deze drie kenmerken laten het sterk relationele karakter van controverses zien. Ze bestaan uit een cyclus van interacties tussen een breed scala aan actoren, waarbij de verwachtingen die zij hebben van anderen worden omgezet in strategieën van omgang en acties, die op hun beurt weer van invloed zijn op interacties, enzovoort.

De afgelopen decennia zijn controverses over duurzame energie uitgebreid bestudeerd door sociaalwetenschappelijke onderzoekers uit verschillende vakgebieden. Hierbij zijn controverses hoofdzakelijk benaderd als zijnde een gebrek aan maatschappelijke acceptatie; vanuit een noodzaak aan maatschappelijke acceptatie van duurzame energietechnologie en -infrastructuur, waarbij de houding ten opzichte van en betrokkenheid bij dergelijke technologie centraal staan. Over het algemeen richt het meeste onderzoek zich op weerstand of steun van het brede publiek, omwonenden en gemeenschappen.

Ondanks de voortdurende aandacht en ontwikkelingen in onderzoeksfocus sinds de jaren 80, draait het onderzoek naar controverses over duurzame energie over het algemeen (nog steeds) om de perspectieven, acties en ervaringen van het grote publiek, lokale gemeenschappen en tegenstanders. Dit heeft geleid tot een verwaarlozing van andere belangrijke betrokkenen bij de ontwikkeling van duurzame energie.

Dit proefschrift richt zich op deze blinde vlek in het huidige onderzoek door middel van onderzoek naar duurzame energietechnologie-actoren (in het Engels *renewable energy technology actors,* oftewel RET-actoren) in controverses over duurzame energie. Deze term omvat een brede categorie mensen die organisaties vertegenwoordigen die zich bezighouden met het ondersteunen of realiseren van technologische ontwikkelingen

op het gebied van duurzame energie. Denk hierbij aan de projectontwikkelaars, CEO's, ingenieurs en communicatiemanagers, ingehuurde consultants, brancheverenigingen maar ook fabrikanten en financiers van energietechnologieën. RET actoren kunnen zowel private als publieke actoren zijn: afhankelijk van hun rol in projecten kunnen overheden ook RET-actoren zijn.

Het is belangrijk om onderzoek te doen naar RET-actoren die betrokken zijn bij duurzame energiecontroverses vanwege drie redenen:

1. Het relationele aspect van controverses: interacties tussen RET-actoren en (lokale) tegenstanders, bewoners en andere belanghebbenden bepalen hoe lokale reacties zich ontwikkelen en hoe verschillende actoren handelen en reageren. Binnen controverses zijn RET-actoren vaak machtige en gevestigde spelers die moeten reageren op eisen vanuit zowel het politieke als het maatschappelijke domein.
2. RET-actoren nemen beslissingen over het (projectontwerp en de constructie van) duurzame energietechnologie en (het ontwerp en de implementatie van) processen voor publieke participatie, omgevingsmanagement en besluitvorming. Deze keuzes, gebaseerd op hun ervaringen en verwachtingen, spelen een rol bij het ontstaan en/of de ontwikkeling van controverses over duurzame energie.
3. Bestaand onderzoek geeft een homogeen beeld van RET-actoren in de controverses en portretteert hen als een groep met gemeenschappelijke belangen. Los van de containercategorie 'projectontwikkelaar', wordt er weinig onderzoek gedaan naar de diverse soorten actoren en organisaties.

De huidige literatuur over duurzame energiecontroverses is sterk gericht op het grote publiek, waardoor een eendimensionaal begrip van controverses ontstaat. Acties, reacties, aannames en verwachtingen van RET-actoren zijn hiervoor echter even belangrijk. Dit proefschrift heeft daarom ook tot doel een bijdrage te leveren aan de theoretisering van de dynamiek van duurzame energiecontroverses door middel van nieuwe empirische kennis over RET-actoren. De verwachting is dat RET-actorgericht onderzoek leidt tot nieuwe perspectieven en inzichten in controverses. Dit is nodig om te komen tot een fijnmaziger, relationeel begrip van de (ontwikkeling van) conflictdynamiek tussen de betrokken actoren en handelingsperspectieven voor de betrokken actoren. Dit is waardevol voor de algehele governance van de energietransitie, omdat een gedeeltelijk begrip van controverses leidt tot eenzijdige (en dus beperkte en niet effectieve) handelingsperspectieven voor de betrokken actoren.

De centrale onderzoeksvraag die in dit proefschrift wordt beantwoord is:

Hoe kan het onderzoek naar perspectieven en interacties van RET-actoren de dynamiek van controverses over duurzame energie helpen verklaren?

Deze onderzoeksvraag is opgesplitst in vier deelvragen (zie Tabel 1). Om deze vragen te beantwoorden gebruik ik een onderzoeksaanpak die bestaat uit diverse methoden: het gebruik van verschillende kwalitatieve en interpretatieve onderzoeksmethoden maakt het mogelijk om diverse aspecten van RET-actoren te verkennen en verschillende inzichten te laten zien die kunnen worden verkregen uit dit soort onderzoek.

Tabel 1. Overzicht van de onderzoeksvragen en methoden die in elk hoofdstuk van dit proefschrift worden gebruikt.

Hoofdstuk	Focus	Onderzoeksvraag	Methode
2	Stand van zaken van literatuur over RET-actoren	Wat is de stand van zaken in de literatuur over RET-actoren die betrokken zijn bij controverses rond duurzame energietechnologieën en infrastructuur?	Systematische literatuurstudie
3	Perspectieven van RET-actoren	Hoe kijken professionals op het gebied van omgevingsmanagement tegen de betrokkkenheid van omwonenden aan bij energieprojecten, en hoe zien zij hun eigen rol daarin?	Q-methodologie
4	Acties en interacties van RET-actoren	Hoe nemen overheidsactoren deel aan het discussie- en besluitvormingsproces over een omstreden windpark en welke rol spelen zij in de ontwikkeling van de controverse?	Casestudie i.c.m. *critical moments analysis*
5	Het onderzoeken van RET-actors	Welke methodologische lessen kunnen worden getrokken uit empirisch onderzoek naar RET-actoren in de context van controverses om toekomstig onderzoek te ondersteunen?	Reflexieve analyse

Met dit proefschrift draag ik bij aan het opkomende veld van de sociale wetenschap van energie. Dit vakgebied is een kruispunt waar verschillende sociaalwetenschappelijke disciplines elkaar ontmoeten, van bestuurskunde tot psychologie en antropologie. Het onderzoek dat in dit proefschrift wordt gepresenteerd maakte deel uit van het onderzoeksproject RESPONSE (een acroniem van *RESPonsible innovation: linking formal and informal assessment in deciSionmaking on Energy projects*) dat werd uitgevoerd aan de Technische Universiteit Delft inNederland. Binnen RESPONSE beschouwden we controverses als een bron van informatie om inzicht te krijgen in de conflictdynamiek en te zoeken naar constructieve benaderingen om hiermee om te gaan.

Als eerste stap presenteert **Hoofdstuk 2** een overzicht van bestaand onderzoek naar RET-actoren die betrokken zijn bij duurzame energiecontroverses omdat het onduidelijk is wat de huidige stand van zaken in de literatuur is. Door middel van systematisch

literatuuronderzoek zijn hiervoor relevante wetenschappelijke publicaties geïdentificeerd, geëvalueerd en gesynthetiseerd.

De huidige literatuur (bestaande uit 89 publicaties) kan worden onderverdeeld in twee categorieën, elk bestaande uit meerdere thema's. De eerste categorie betreft onderzoek naar de **percepties die RET-actoren hebben van publieke weerstand**, waarbij wordt gerapporteerd over hoe RET-actoren denken over de impact en oorzaken van publieke weerstand. Dit omvat percepties van specifieke groepen mensen en processen van betrokkenheid en besluitvorming. De tweede categorie betreft onderzoek naar **de manier waarop RET-actoren reageren op publieke weerstand**, waarbij acht reacties zijn geïdentificeerd met verschillende doeleinden, gericht op het voorkomen, verminderen of ontkrachten van publieke weerstand.

Op basis van deze bevindingen worden vijf observaties gemaakt over de huidige stand van de empirische kennis over RET-actoren die betrokken zijn bij controverses:

1. Er is **weinig diversiteit in sociaalwetenschappelijk onderzoek naar RET-actoren** in termen van onderzochte actoren, technologieën en infrastructuur voor duurzame energie, en geografische contexten;
2. De meeste publicaties zijn **beschrijvend van aard en bieden geen verklaringen** voor de gevonden perspectieven, praktijken of discoursen die onder RET-actoren worden waargenomen;
3. Sociaalwetenschappelijk onderzoek naar RET-actoren rapporteert vaak over hun (werk)praktijken zoals **waargenomen of ervaren door andere belanghebbenden**;
4. De meeste publicaties richten zich op RET-actoren en hun pogingen om **weerstand te vermijden of te verminderen**; weinig publicaties onderzoeken pogingen om te engageren met publieke zorgen die worden geuit binnen controverses of hier aan tegemoet te komen;
5. Diverse onderzoekers bestempelen hun **RET-actorgerichte onderzoek** expliciet als **bevooroordeeld**. Een dergelijk label draagt enerzijds bij aan het stereotyperen van ontwikkelaars als schurken en anderzijds aan het romantiseren van tegenstanders als de underdog.

Op basis van deze observaties worden verschillende richtingen voor toekomstig onderzoek voorgesteld. De eerste is diversificatie van onderzoek om de diversiteit van RET-actoren en hun praktijken, de diversiteit van energietechnologieën en de diverse geografische locaties waarin zij werken, te weerspiegelen. De tweede richting is verklarend onderzoek om de perspectieven, praktijken en discoursen van RET-actoren te ontrafelen om hun acties en interacties in controverses beter te kunnen duiden, aangezien er daarnaar vooralsnog weinig diepgaand onderzoek is gedaan. De derde richting stelt onderzoek

voor naar de responsiviteit van RET-actoren wanneer er sprake is van publieke weerstand. Uit deze literatuurstudie kwamen weinig publicaties naar voren waarbinnen onderzoek werd gedaan naar (pogingen tot) leren van publieke weerstand door RET-actoren of benaderingen om hier constructief mee om te gaan.

Deze suggesties kunnen bijdragen aan een genuanceerder begrip van RET-actoren, wat bijdraagt aan een diepgaander begrip van de (ontwikkeling van) conflictdynamiek tussen de actoren die betrokken zijn bij controverses.

Hoofdstuk 3 onderzoekt de perspectieven van RET-actoren met betrekking tot duurzame energiecontroverses. Er is tot nu toe weinig aandacht geweest voor projectontwikkelaars en de manier waarop zij de betrokkenheid van de gemeenschap vormgeven. Dit hoofdstuk zich dan ook op omgevingsmanager (in deze dissertatie *community engagement professional* of CEP) in de Nederlandse energiesector. Dit zijn personen die activiteiten op het gebied van omgevingsmanagement of stakeholder management uitvoeren voor duurzame energiebedrijven. Door onderzoek te doen naar deze specifieke groep RET-actoren draagt het hoofdstuk bij aan de diversificatie van het huidige onderzoek.

Voor het verkennen van de perspectieven die CEPs hebben op hun werk is Q-methodologie gebruikt. Deze methode is geschikt voor onderwerpen waarover zowel de theoretische als empirische kennis schaars is. Q-methodologie combineert statistische analyse met kwalitatieve interviewdata om verschillende perspectieven en relaties tussen terugkerende thema's bloot te leggen.

Uit de analyse van Q-interviews met 37 CEPs kwamen drie verschillende perspectieven naar voren die als volgt kunnen worden samengevat: (1) omgevingsmanagement als co-creatie en de CEP als intermediair, (2) omgevingsmanagement als projectmanagement: alles onder controle en (3) projectontwikkeling: geen betrokkenheid van omwonenden buiten de wettelijke vereisten. Wanneer deze perspectieven worden vergeleken, laten ze op vijf verschillende gebieden diversiteit zien onder deze (ogenschijnlijk homogene) groep:

- **Wijze van betrekken van lokale bewoners, gemeenschappen of belanghebbenden en het bredere publiek**. Terwijl CEPs met perspectief 1 en 2 een partnerschap of samenwerking proberen te organiseren met lokale gemeenschappen, richten degenen met perspectief 3 zich op eenrichtingscommunicatie. Zij vinden dat zijzelf namelijk niet in een legitieme positie zijn om meer te doen dan de wettelijke vereisten voor publieke participatie;
- **Positie van de CEP ten opzichte van de organisatie** die zij vertegenwoordigen en de omgeving waarin zij werken. Degenen met perspectief 1 zien zichzelf op de grens van zowel de organisatie als de gemeenschap, CEPs met perspectief 2 beschouwen

zichzelf als ingebed in de organisatie en zoeken contact met omwonenden wanneer ze denken dat dit bijdraagt aan de realisatie van projectplannen. CEPs met perspectief 3 zien een scherpe grens tussen hun eigen organisatie en de omgeving waarin zij werken, waardoor zij de interactie beperken tot formele besluitvormingsprocedures;

- **Visie op maatschappelijke weerstand en conflicten en hoe daarmee om te gaan**. Terwijl CEPs met perspectief 1 blijk geven van een zekere waardering voor conflicten en het vroegtijdig betrekken van omwonenden vanzelfsprekend vinden, accepteren degenen met perspectief 2 het feit dat conflicten kunnen ontstaan, maar voorkomen ze deze liever door tijdig in te grijpen. Volgens CEPs met perspectief 3 is maatschappelijke weerstand een gegeven bij projectontwikkeling. Ze hebben daarnaast het gevoel dat dit buiten hun macht ligt en gaan er daarom niet actief mee aan de slag;
- **Verantwoordelijkheid voor de vertegenwoordiging van omwonenden**. Tot op een bepaalde hoogte ervaren CEPs met perspectief 1 en 2 een verantwoordelijkheidsgevoel om rekening te houden met belangen van omwonenden. CEPs met perspectief 3 ervaren deze verantwoordelijkheid niet omdat zij vinden dat dit de functie is van formele besluitvormingsprocedures;
- **Interactie met collega's & belanghebbenden binnen de eigen organisatie**. CEPs met perspectief 2 en 3 delen het gevoel dat zij min of meer harmonieus samenwerken met collega's aan de realisatie van projecten. CEPs met perspectief 1 vinden echter dat ze veel moeite moeten om ervoor te zorgen dat ze daadwerkelijk deel uitmaken van het projectteam. Daarnaast besteden ze veel tijd aan collega's overtuigen van het nut en de noodzaak van omgevingsmanagement.

De verschillende perspectieven geven inzicht in werkpraktijken met betrekking tot omgang met lokale bewoners en gemeenschappen in de context van controverses, evenals de verschillende uitdagingen die CEPs binnen deze werkcontext ervaren. Door de drie perspectieven te vergelijken laat Hoofdstuk 3 de heterogeniteit zien binnen een subgroep van RET-actoren. Het laat ook zien dat organisatiedynamiek een grote invloed heeft op CEP-praktijken en een interessante piste is voor toekomstig onderzoek.

Hoofdstuk 4 onderzoekt de acties en interacties van RET-actoren om meer te leren over de ontwikkeling van controverses rondom duurzame energie. In dit hoofdstuk wordt de ontwikkeling van de controverse rond Windpark N33 in Nederland onderzocht door te focussen op de verschillende overheden (nationaal, provinciaal en gemeentelijk) die betrokken zijn bij het planningsproces. Ondanks de voor de hand liggende rol van overheidsactoren in dergelijke controversiële planningsprocessen over duurzame energie wordt er weinig onderzoek naar hen gedaan.

Om de ontwikkelingen en acties van overheden binnen deze casestudy te ontrafelen is gebruik gemaakt van kritieke momentenanalyse. Kritieke momenten zijn momenten in

een controverse waarin de aard of intensiteit van interacties tussen overheidsactoren verandert; deze acties en reacties worden vervolgens bestudeerd als een reeks gebeurtenissen. Als leidraad voor de analyse is gebruik gemaakt van het zogenaamde *performance perspective*, (inter)acties van overheidsactoren beschouwt als pogingen om onzekere ontwikkelingen actief te beïnvloeden.

Uit de analyse kwamen drie momenten naar voren waarin acties en reacties van overheidsactoren en interacties tussen de verschillende overheidsniveaus de ontwikkeling van de controverse beïnvloedden. Daarnaast bleek uit deze analyse ook de grote impact van de beleidscontext: door de introductie van nieuw nationaal beleid ontstond er een situatie waarin het bevoegde gezag verschoof van de lokale naar de nationale overheid, waardoor lokale overheden probeerden opnieuw invloed te krijgen op het formele besluitvormingsproces. Er zijn drie verschillende strategieën geïdentificeerd:

- ***Venue shopping***: lokale overheidsactoren probeerden (formeel en informeel) om de besluitvorming in hun voordeel te beïnvloeden en richtten hun inspanningen specifiek op plaatsen waar gezaghebbende besluitvorming plaatsvond;
- ***Strategic scaling***: lokale overheden reageerden op het verschuiven van het bevoegd gezag als gevolg van de nieuwe beleidscontext door de verantwoordelijkheid voor (impopulaire) beslissingen expliciet bij andere overheidsniveaus te leggen;
- ***Governmental activisme***: gemeentelijke overheden probeerden hun politieke tegenstanders het hoofd te bieden door conventionele middelen (o.a. de openbare inspraakprocedure) in te zetten voor onconventionele strategieën (o.a. het verstrekken van sjablonen voor bezwaarschriften aan inwoners).

Deze casestudy laat zien wat we kunnen leren over de dynamiek van controverses over duurzame energie wanneer de onderzoeksfocus wordt verlegd van interacties tussen voorstanders en tegenstanders naar interacties tussen RET-actoren. De focus op de (inter)acties van overheidsactoren laat het multidimensionale en complexe karakter van duurzame energiecontroverses zien en levert nieuwe inzichten op in de uitdagingen die de verschillende overheidslagen tegenkomen bij de uitvoering van energiebeleid.

Hoofdstuk 5 verschuift de focus van RET-actoren naar het doen van onderzoek naar RET-actoren in de context van duurzame energiecontroverses. Eén van de belangrijkste uitdagingen bij het uitvoeren van dit soort empirisch onderzoek is het verkrijgen en behouden van toegang tot RET-actoren, vooral bij gebruik van etnografische methoden zoals participerende observatie. Tijdens het onderzoek voor dit proefschrift ben ik verschillende uitdagingen op dit vlak tegengekomen. Het uitwisselen van dergelijke onderzoekservaringen lijkt zeer nuttig, maar er is beperkt gepubliceerd over dit onderwerp. Daarom bestudeert Hoofdstuk 5 de uitdagingen van het doen van empirisch onderzoek naar RET-actoren om bij

te dragen aan methodologische gesprekken tussen sociale wetenschappelijke onderzoekers in het energieveld om de onderzoekspraktijk verder te laten groeien.

Voor het uitdiepen van de ondervonden uitdagingen is een reflexieve analyse uitgevoerd op onze eigen ervaringen met het gebruik van etnografische methoden in onderzoek naar RET-actoren die betrokken waren bij twee (potentiële) windenergiecontroverses in Nederland. Deze reflexieve aanpak stelt onderzoekers in staat hun eigen onderzoeksproces te ontleden. Het concept strategisch dilemma werd gebruikt als leidraad bij het identificeren van uitdagingen met betrekking tot het verkrijgen en behouden van toegang tot deelnemers. Bij het organiseren of uitvoeren van onderzoek kunnen namelijk situaties ontstaan waardoor onderzoekers een beslissing moeten nemen over hoe verder te gaan. Op basis van de aangetroffen dilemma's zijn er drie factoren aan te wijzen die hebben bijgedragen aan het ontstaan van hiervan:

- **Toegeschreven positionaliteit**, oftewel hoe mensen anderen waarnemen en hen op basis hiervan een identiteit toewijzen. Deze 'toegewezen identiteit' kan van invloed zijn op de vraag of en hoe mensen besluiten met anderen om te gaan. Het speelt dus een rol bij het al dan niet verlenen van toegang tot zichzelf of tot anderen. Reflecteren op onze eigen positionaliteit en hoe we denken dat we over komen op (potentiële) respondenten is belangrijk wanneer er met RET-actoren wordt samengewerkt voor onderzoek omdat toegeschreven positionaliteit een rol kan spelen bij het verkrijgen en behouden van toegang tot een casus of (potentiële) deelnemers;
- **Een veelvoud aan contexten**, waaronder de zakelijke context, de beleidscontext en onze eigen academische context. Belangen van betrokkenen die samenhangen met deze contexten kunnen in de loop van het onderzoek naar voren komen en veranderen. Deze belangen kunnen van invloed zijn op de manier waarop belanghebbenden (waaronder wijzelf als onderzoekers) met elkaar omgaan en beslissingen nemen met betrekking tot toegang. De belangen die voortkomen uit onze eigen academische context blijven vaak impliciet. Ze moeten echter expliciet worden gemaakt, omdat ze mogelijk invloed hebben op hoe onderzoek wordt uitgevoerd.
- **Formele en informele poortwachters.** Dit zijn personen die kunnen helpen de toegang te krijgen tot specifieke potentiele deelnemers of deze juist kunnen belemmeren. Bij het onderzoeken van energiecontroverses is de kans groot dat onderzoekers meerdere (soms onverwachte) poortwachters tegenkomen. Dit kunnen zowel mensen in een formele functie zijn (zoals een consortiumpartner) als mensen in een informele positie die anderen kunnen beïnvloeden. Het is daarom belangrijk om te blijven reflecteren op wat het verkrijgen en behouden van toegang tot cases of deelnemers van onderzoekers vraagt, vooral als dit om concessies vraagt van de onderzoeksaanpak.

De drie factoren laten zien dat onderzoekers van controverses onmiskenbaar zelf belanghebbenden zijn in het veld dat zij onderzoeken. De vaak subtiele ethische vragen die hierbij kunnen ontstaan zijn situationeel (en dus geen generieke vragen) en moeten meestal worden beantwoord terwijl het onderzoek in volle gang is. Dit vereist reflexiviteit van degenen die controverses onderzoeken om deze vragen de aandacht te geven die ze verdienen, aangezien beslissingen gevolgen kunnen hebben voor het onderzoek. Vooral voor beginnende onderzoekers is uitwisselen van ervaringen waardevol voor het navigeren van dergelijke dilemma's.

Hoofdstuk 6 beantwoordt de centrale onderzoeksvraag door de antwoorden op de deelvragen samen te vatten. Het openen van de spreekwoordelijke zwarte doos van RET-actoren is noodzakelijk om de dynamiek van controverses rondom duurzame energie te begrijpen. De strikte focus op het bredere publiek, gemeenschappen en tegenstanders alleen kan niet verklaren waarom diverse groepen RET-actoren, waaronder projectontwikkelaars, omgevingsmanagers en overheden, in deze specifieke context op een bepaalde manier handelen of reageren; een dergelijke strikte focus leidt tot een eendimensionaal en beperkt begrip van controverses.

Het onderzoeken van perspectieven van RET-actoren helpt om de dynamiek van controverses rondom duurzame energie te verklaren, aangezien deze dynamiek (deels) wordt bepaald door RET-actoren, zoals omgevingsmanagers. Hun perspectieven laten zien hoe zij hun rol en verantwoordelijkheden zien als het gaat om de omgang met bewoners en de omgang met weerstand. Hoe zij deze visie vervolgens naar de werkpraktijk kunnen vertalen, hangt af van hun positie in de organisatie aangezien de organisatiedynamiek een grote invloed heeft op de werkpraktijk van omgevingsmanagers.

Het volgen van de acties en interacties van RET-actoren binnen controverses laat zien hoe de dynamiek van controverses rondom duurzame energie kan worden beïnvloed door de manier waarop bijvoorbeeld overheden betrokken zijn bij projectontwikkeling. Zo is de coördinatie (zowel formeel als informeel) tussen overheidsniveaus van groot belang voor de ontwikkeling van een controverse (bijvoorbeeld wanneer het lokale bestuur terzijde wordt geschoven).

Het is daarom zeer waardevol om de perspectieven en (inter)acties van RET-actoren empirisch te onderzoeken, maar dit is tegelijkertijd ook uitdagend. Bij het uitvoeren van dit soort onderzoek is het daarom belangrijk om met verschillende aspecten rekening te houden: (1) het anticiperen van dilemma's met betrekking tot onze (toegeschreven) positionaliteit als onderzoekers, (2) het verwachten van een veelheid aan contexten en gerelateerde belangen die het onderzoeksproces en de -praktijk kunnen beïnvloeden, (3) het bewust blijven en voortdurend nadenken over wat het verkrijgen en behouden van

toegang vereist, vooral in de interactie met poortwachters.

In Hoofdstuk 6 reflecteer ik daarnaast ook op de bevindingen van mijn proefschrift en mijn werkervaring als sociaalwetenschappelijk onderzoeker de afgelopen jaren. Niet alleen in de wetenschappelijke wereld maar ook in de praktijk is er nog steeds veel aandacht voor het bredere publiek in controverses over duurzame energie. Daarom geeft Hoofdstuk 6 verschillende aanbevelingen voor zowel de wetenschappelijke wereld als de praktijk.

Aanbevelingen voor een onderzoeksagenda over RET-actoren

Eén van de overkoepelende aanbevelingen voor vervolgonderzoek is verklarend onderzoek naar RET-actoren door disciplines als organisatiekunde, organisatieantropologie, bedrijfskunde en antropologie van beleid. Dergelijke disciplines beschikken over de theoretische en conceptuele instrumenten die nodig zijn om tot een organisatorisch perspectief op duurzame energiecontroverses te komen. Dit helpt begrip van de dominante organisatieculturen, -identiteiten en machtsdynamiek in de context van controverses. Een dergelijke focus maakt het mogelijk om organisatieculturen in de over het algemeen zeer technisch georiënteerde bedrijven in de duurzame energiesector te ontrafelen en te zoeken naar mogelijkheden om de betrokkenheid van omwonenden en andere belanghebbenden te integreren in bestaande werkwijzen.

Aanbevelingen voor praktijk en beleid

RET-bedrijven hebben vaak een sterk technische en juridische focus en zijn vaak kennis gedreven. De kernactiviteiten draaien veelal om het ontwikkelen van technische projecten, het naleven van wet- en regelgeving en het verkrijgen van de benodigde vergunningen. Medewerkers zijn zeer bekwaam en ervaren in deze technische en juridische manieren van denken en werken, maar beschikken daarnaast niet vaak over de specialistische kennis, vaardigheden en ervaring die nodig zijn voor omgevingsmanagement. Regelmatig wordt dit opgelost door het tijdelijk inschakelen van externe adviseurs. Maar wanneer projecten eindigen en de consultants vertrekken, geldt dat vaak ook voor deze expertise. Een dergelijke aanpak draagt er daarom aan bij dat de omgevingsmanagement een geïsoleerde activiteit en bijzaak blijft in de energiesector. Om dit te verhelpen kunnen verschillende stappen worden ondernomen door verschillende partijen.

- **Directie en leidinggevenden, toon leiderschap en geef omgevingsmanagement een gelijkwaardige rol binnen organisaties**. Organisaties kunnen drie dingen doen om de omgevingsmanagement te integreren: (1) Medewerkers met de vereiste gespecialiseerde competenties werven of cursussen aanbieden aan medewerkers die dergelijke competenties willen ontwikkelen; (2) Geef omgevingsmanagement een positie die gelijk is aan (onder meer) de technische, juridische en financiële afdelingen in projecten en de organisatie; en (3) Stimuleer de samenwerking tussen experts van

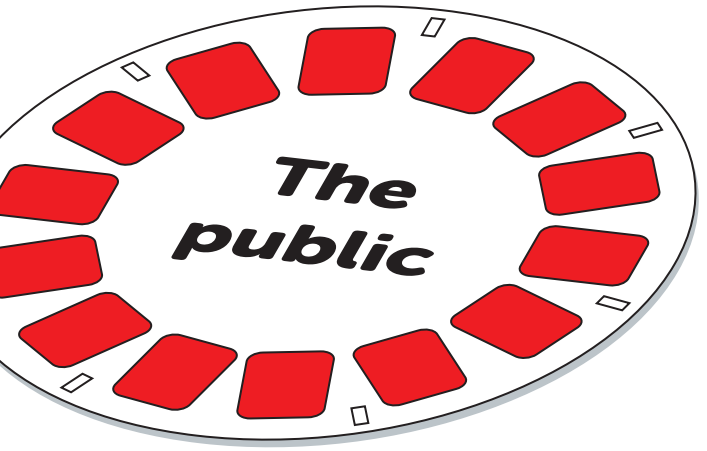
verschillende afdelingen bij de planning en ontwikkeling van projecten.

- **Ingenieurs, ontwikkel competenties die nodig zijn voor een constructieve omgang met vragen, zorgen en belangen van het publiek en omwonenden**. Dit vraagt om een benadering waarbij het ontwerpen van projecten technische, juridische en zakelijke belangen probeert te verenigen met lokale en publieke belangen. Dit kan o.a. in de praktijk worden geleerd in samenwerking met omgevingsmanagers. Daarnaast kan de ontwikkeling van dergelijke vaardigheden ook worden opgenomen in curricula van technische bachelor- en masteropleidingen.

- **Omgevingsmanagers, creëer strategieën om omgevingsmanagement te integreren in de werkpraktijk van technisch georiënteerde organisaties**. Hier spelen zogenaamde *communities of practice* een belangrijke rol voor de uitwisseling van ervaringen en *best practices*. Dit kunnen bijvoorbeeld strategieën zijn voor het verkrijgen van steun voor omgevingsmanagement op verschillende niveaus van de organisatie (inclusief het directieniveau). Eén van die benaderingen is het verzamelen van bewijsmateriaal over de resultaten van omgevingsmanagement, zoals het berekenen van de financiële besparing door het voorkomen van beroepsprocedures.

- **Beleidsmakers, geef RET-actoren duidelijke richtlijnen over publieke participatie bij RET-ontwikkelingen**. Op 1 januari 2024 is in Nederland de Omgevingswet in werking getreden. Deze wet moet initiatiefnemers van projecten stimuleren om publieke participatie te overwegen. In de praktijk leidt dit echter vaak tot een afwachtende houding onder RET-actoren, omdat er geen verplichting is om dergelijke activiteiten te organiseren. Omgevingsmanagers hebben al aangegeven de Omgevingswet te gebruiken om organisaties te motiveren stappen op dit vlak te zetten. Duidelijke richtlijnen over publieke participatie en omgevingsmanagement vanuit bijvoorbeeld gemeenten, voor zover is toegestaan door de wet, zouden nuttig zijn om RET-actoren op dit gebied verder te stimuleren.

Dit proefschrift heeft gepleit voor een verschuiving van perspectieven in onderzoek naar duurzame energiecontroverses door middel van sociaalwetenschappelijk onderzoek naar RET-actoren. Hiermee hoop ik bij te dragen aan een relationeel perspectief op duurzame energiecontroverses, een perspectief dat verder kijkt dan het brede publiek.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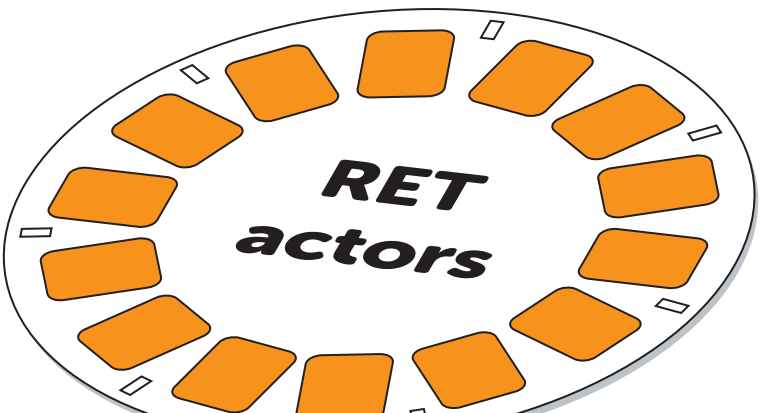
RET
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Chapter 1

Introduction

Fierce protest in Northeast Groningen [the Netherlands]. [It's not] about gas extraction this time, but against wind turbines. The Hague[1] *has plans for a wind farm along [highway] N33. A final location has not yet been designated, but emotions are heated* (NOS, 2015).

Dozens of projectiles that farmers in Meeden [village in province of Groningen] found on their land put relationships in the village on edge. 'It is now war in Meeden' (RTV Noord, 2016)

The fight against the wind turbines in [the province of] Groningen is intensifying. After threats, flags with swastikas and Nazi pamphlets, asbestos seems to be the new weapon in the battle (NOS, 2019).

You could call it a wind turbine war, according to Lies Zondag [both] a council member in Veendam [province of Groningen] and chairwoman of action group Tegenwind N33, who has been fighting against the construction of wind farm N33 in the area for nine years (NOS, 2019).

Two well-known wind turbine activists have been sentenced to 12 months in prison for their role in the 'wind turbine terror' in Drenthe and Groningen (van Heerde, 2021).
How residents rose up against 'bulldozer politics'. The [documentary] 'Tegenwind, the sorrow of the Peat Colonies' shows how an energy transition goes off the rails (de Veer, 2021).

Unrest around wind farms N33 and Drentse Monden & Oostermoer arose from a feeling of powerlessness. 'Participation was an empty formality' (de Veer, 2022).

Emotions flare up at the presentation of the N33 wind farm [community] fund: 'We have been fobbed off with a tip' (Willems, 2023).

These headlines and snippets are taken from national and local media reports on events that took place during the planning and realization of the onshore wind farm N33 in the province of Groningen, the Netherlands. Both land owners who were to get turbines on their land as well as representatives of local action groups are using language relating to war, which paints a picture of the severity and intensity of the controversy surrounding the wind farm.

Worldwide, projects such as wind farm N33 are being developed as part of the move to more renewable systems of energy production and consumption, also known as the energy transition. The Paris Agreement, signed by 196 countries in 2015 at the COP 21, has set a strong intent: keep the rise in temperature to a 2° Celsius maximum, with 1,5° Celsius as target (UNFCC, n.d.). This and other goals and agreements on climate change

1 The Dutch national government is based in The Hague.

and renewable energy production on global and national levels are translated into concrete projects at local levels, alongside other measures to limit temperature rise (IRENA, 2023). Organizations such as the World Meteorological Organization (2023) stress the urgency to speed up progress as global temperatures are likely to reach record levels in the coming five years; this means that exceeding the 1,5° Celsius has become a more-likely-than-not scenario. Unfortunately, numbers show that renewable energy developments are lagging behind in realization and updated renewable energy ambitions (as part of the COP 28) are both insufficient as well as '[falling] short of what countries have committed to in domestic policies that exist outside the framework of the Paris Agreement' (IRENA, n.d.). The pace of development of renewable energy technologies and infrastructure thus needs to pick up the coming decades (Anderson & Bows, 2011) and new, emerging technologies and other innovations are expected to be introduced to our living environments[2]. For example, the Netherlands is on the eve of the rollout of (green) hydrogen (Rijksoverheid, 2019) and geothermal energy (Vijlbrief, 2023).

Renewable energy controversies are here to stay

Conflicts over the planning and development of renewable energy and infrastructure, such as wind, solar, geothermal, and transmission lines, have been prominent over the past decades (Cuppen et al., 2020; Devine-Wright, 2011b; Roberts et al., 2013b; Sovacool et al., 2022). Such conflicts, or *renewable energy controversies*, emerge when citizens, local residents, action groups or other stakeholders oppose plans or developments (Devine-Wright, 2011a; Pesch et al., 2017; Roberts et al., 2013b). Many controversies, like the case of wind farm N33, have led to delays or cancellations of projects (Cotton & Devine-Wright, 2011; Kropp, 2018; Parkhill, 2007; Toke, 2005; Wolsink, 2010). As ongoing policy and societal efforts are put in effect to advance the global energy transition, it is likely that renewable energy controversies will continue to arise in the years to come.

Renewable energy controversies are social conflicts that 'articulate divergent values that are at stake in case of a new energy project' (Cuppen et al., 2014, p. 7); they can 'reveal unanticipated societal and ethical risks, costs and benefits' (Taebi et al., 2016, p. 1) or 'explicate mostly hidden social dimensions of science and technology' (Boucher, 2012, p. X). These values or dimensions can for example relate to the technology itself, to the decision-making procedures or to the ones involved in or organizing such processes (Correljé et al., 2015). As such, controversies provide an informal or societal assessment of an energy project and its (potential) impacts (Rip, 1986) and can be seen as a form of political engagement that has democratic value (Cuppen, 2018; Verloo, 2015).

Controversies often end in "unconstructive" outcomes where neither society in general nor those engaged in the conflict are better off (Coppens, 2014). Examples of such outcomes

2 https://www.irena.org/Energy-Transition/Technology

are 'conflicts that end up in lengthy juridical battles between the project promoters and its challengers, or those projects that remain unimplemented and fail to address the societal or spatial problem for which they have been set up' (Coppens, 2014, p. 96). Renewable energy controversies are not a temporary phenomenon that will disappear on its own accord (Rip, 1986, p. 350). As such, there is a need for better understanding them, (Cuppen et al., 2019; Roberts, T., Boucher, 2013; Vasstrøm & Kjetil Lysgård, 2021) as well as searching for constructive ways to deal with them given their democratic value (Cuppen, 2018; Pesch et al., 2017). This is important not only because of the academic value of such knowledge, but also because of 'a societal responsibility given the huge challenge that the energy transition imposes on us all' (Cuppen, 2018, p. 31).

The energy transition is not just a technical affair

Reading the headlines and snippets above and taking into account the amount of renewable energy controversies that have emerged, it is hard to deny that the realization of renewable energy transitions worldwide is purely a "technical" affair. Such transitions involve both (decisions on) the development and implementation of technological innovations in society, as well as the use of these innovations by society (Grin et al., 2010, p. 11). For example, renewable energy systems also require changes in our collective behaviour. Think of switching from gas to electricity for heating and cooling of homes, switching from airplanes to trains when travelling or changing to a flexitarian, vegetarian or vegan lifestyle. For this reason, renewable energy transitions are considered transitions of socio-technical systems (Geels & Kemp, 2007; Grin et al., 2010). Such transitions have a substantial impact on our society, lifestyles and living environment, making conflict, like renewable energy controversies, an inherent part of it (Cuppen, 2018).

As part of the energy transition energy systems based on renewable energy, like wind and solar, become more decentralized compared to large-scale central energy production based on fossil resources. Renewable energy infrastructures often 'are large, intrusive, technically complex and are perceived to have serious and possible irreversible environmental impacts' (Walker, 1995, p. 49). Energy is thus becoming increasingly visible in our landscapes as new ways of renewable energy generation, transport and storage are finding their place into existing landscapes, which (local) people use for numerous purposes and/or love for a myriad of reasons (Devine-Wright, 2009). Even though people are generally positive about renewable energy, 'attitudes towards specific projects among some parts of "the public" can be more negative, and conflict can appear particularly within processes of planning approval' (Walker, 1995, p. 49), or in response to such processes (Cuppen et al., 2020; Walker et al., 2011).

Unpacking renewable energy controversies

Controversies have three general characteristics: they are publicly salient, complex and

dynamic, and consist of a series of discursive interactions:

- **Controversies are publicly salient** (Boucher, 2012): they usually take place in the public sphere and become visible through media coverage as well. This public debate can take place and move between different levels, for example the country, municipality, city or neighborhood level. A controversy can have peak(s) of overheating: 'If there is no debate or the debate is lethargic, if all actors agree on the main questions and are willing to negotiate on the minor, then there is no authentic controversy' (Venturini, 2010, p. 264). The public debate on shale gas that took place in the Netherlands around 2010 until 2013 offers a clear illustration: this controversy started out as a local debate in response to a proposed project and evolved into a national discussion on both the need for and necessity of shale gas in the Dutch energy supply (Cuppen et al., 2019; Dignum et al., 2016). The publicly salient character of controversies means they are a stage on which public values and issues are expressed and can emerge, from which researchers, policy makers and other stakeholders can learn what is at stake for different groups in society.
- **Controversies are complex and dynamic:** Controversies are complex as they often involve a multitude of actors and issues. They are dynamic as these actors and issues can and often will change over the course of time. In controversies, actors and their interests, values and goals are not fixed or given (Lesbirel, 2005). Actors and/or interests often emerge (or disappear) over the course of a controversy. For example, the goal of a project developer might seem clear and fixed (develop the proposed project) but this can change over time, with the initiation of new projects, the encounter of local opposition or changes in government regulations or subsidy policies (Pesch et al., 2017). Conflicts from the past, in other places or on other technologies can also become intertwined with renewable energy controversies; an example of this is the controversy on wind farm N33 in which opponents made explicit references to the local history of peat and gas extraction, stating their province has been an 'energy colony' for the rest of the country for decades (Cuppen et al., 2020).
- **Controversies are a series of discursive interactions** (Boucher, 2012): Interactions form 'a space within which actors (project developers, government representatives, local stakeholders, the general public, NGOs and so on) communicate, exchange information and opinions, find out about and engage with each other' (Walker et al., 2011, p. 5). Examples of types of interaction are 'informal conversations, local media reporting, developers' brochures and exhibitions, public meetings, letters to [a newspaper], protest activities and petitions etc.' (Walker et al., 2011, p. 5). Interactions in controversies therefore have a discursive element, meaning 'language and its use for reasoning, argumentation, persuasion and so on' (Boucher as cited in Roberts et al., 2013a, p. 5) by the different actors involved in the controversies can be a starting point for further understanding.

The above implies that controversies have a strong relational nature (Cuppen & Pesch, 2021), which is visualized in the framework of Walker et al. (2011, see Figure 1). This framework was constructed based on empirical research aimed at 'understanding public engagement with renewable energy projects' (Walker et al., 2011, p. 11).

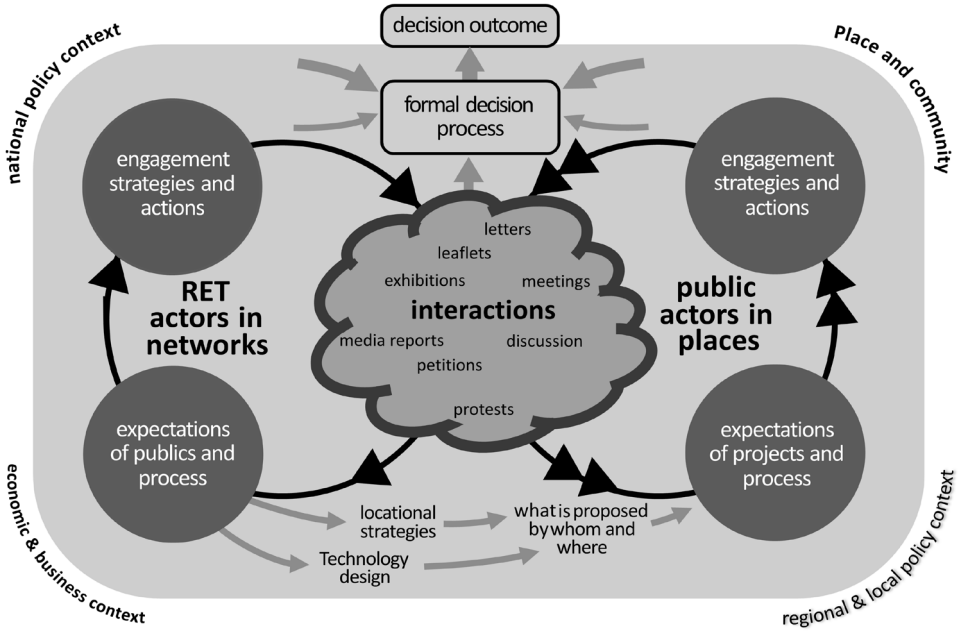

Figure 1. Visualization of interactions taking place. Original figure titled 'The full version of the framework' by Walker et al. (2011, p. 11), from 'Renewable Energy and the Public: From NIMBY to Participation'. Copyright by P. Devine-Wright, 2011, London: Earthscan. Reproduced with permission of The Licensor through PLSclear.

The framework reflects the three characteristics of controversies discussed above. It shows a cycle of interactions between a wide range of involved actors, their underlying expectations of others feeding into engagement strategies and actions, which in their turn shape interactions, and so on.

On the left side of this figure there are renewable energy technology actors, or 'RET actors in networks': 'a broad category of people in organizations with roles in supporting (planning) or implementing RET developments – including developers [including CEO's, engineers and communications managers] consultants, PR and marketing companies, trade associations, financiers and technology manufacturers' (Walker et al., 2011, pp. 4–5); RET actors can be both private and public actors: depending on their role in projects,

governments can be RET actors as well. On the right side are public actors (individuals as well as collectives) situated in places, 'comprising particular locations and communities that are the focus of RET development proposals, making responses that are also situated in particular spatial and cultural contexts (Walker et al., 2011, p. 4).

In a nutshell, the framework shows that actions, responses, assumptions and expectations of both public actors and RET actors are equally important for the understanding of how controversies evolve (Cuppen & Pesch, 2021; Walker et al., 2011).

RESPONSE: researching renewable energy controversies

The research presented in this dissertation has been part of the research project RESPONSE (a wonderful acronym for 'RESPonsible innovation: linking formal and infOrmal assessmeNt in deciSionmaking on Energy projects'[3]) which was based at Delft University of Technology, the Netherlands. As mentioned earlier, controversies can be considered as a societal or informal assessment of an energy project. This assessment often occurs parallel to formal assessments that are conducted as part of governmental planning and permit procedures. Examples are environmental impact assessments in which (positive and negative) effects of proposed projects are investigated. Often, such formal procedures seem unable to cope with the informal assessment occurring in controversies (Cuppen et al., 2020; Taebi et al., 2016).

Within RESPONSE, we investigated the interaction between these two types of assessments with a multidisciplinary team[4], ranging from philosophy, innovation sciences, (institutional) economy and anthropology; we explored controversies as a source of information in order to gain insights into the conflict dynamics. In this project we collaborated with several consortium partners[5] and a so-called valorisation panel which included energy companies, consultancies, governments and NGOs. The project was funded by the Dutch Organization for Scientific Research (NWO), as part of the Responsible Innovation programme (NWO-MVI[6]).

Controversies and social acceptance

Over the past decades, renewable energy controversies have been widely studied by social science researchers (Sovacool et al., 2022). Research comes from a variety of fields, for example policy and planning (Boucher, 2012; Hill & Knott, 2010; Parkhill, 2007; Pesch et al., 2017; Verhoeven, 2020; Walker et al., 2011; Wolsink, 2007), sociology (Fast, 2013; Pepermans & Loots, 2013; van Veelen & Haggett, 2017; Woods, 2003), (environmental) psychology (Batel & Devine-Wright, 2015; Carlisle et al., 2015; Devine-Wright, 2009),

3 https://www.tudelft.nl/en/tpm/research/projects/response.
4 The members included Eefje Cuppen (project leader), Aad Correljé, Udo Pesch, Behnam Taebi, Shannon Spruit, Toyah Rodhouse and myself.
5 See www.tudelft.nl/en/tpm/research/projects/response/partners for the full overview of partners and a statement describing the nature of our collaboration.
6 https://www.nwo.nl/en/projects/313-99-303.

anthropology (Boyer, 2019; Jolivet & Heiskanen, 2010; Müftüoglu et al., 2018; Zárate-toledo et al., 2019) and energy justice (Behrsin, 2020; Jenkins et al., 2020; Pesch et al., 2017; Siciliano et al., 2018; Van Uffelen et al., 2024; Zárate-Toledo et al., 2019).

Figure 2. Cartoon which represents interactions between wind energy initiators (left) and local residents (right) over the course of decision-making on renewable energy developments. Illustrator: Erwin Suvaal.

The topic of renewable energy controversies has been studied by many different fields, but the dominant approach here has been social acceptance. Social acceptance research revolves around attitudes to and engagement with renewable energy technologies and infrastructure. Research into social acceptance has been flourishing since the 80s (Wolsink, 2018), (see (Batel, 2018, 2020; Batel et al., 2013; Rand & Hoen, 2017; Whitmarsh et al., 2011) for comprehensive reviews). In general, social acceptance distinguishes three types: socio-political, community and market acceptance (Wüstenhagen et al., 2007). *Socio-political* acceptance refers to 'societal acceptance (or the lack thereof)' by the general public, key stakeholders and policy makers, *community acceptance* concerns 'acceptance of siting decisions and renewable energy projects by local stakeholders, particularly residents and local authorities'; and *market acceptance* refers to acceptance by both investors and consumers (Wüstenhagen et al., 2007, p. 2685). In general, most research focusses on socio-political acceptance, specifically on opposition or support by the general public, local residents and communities (for example, (Colvin et al., 2016; D'Souza & Yiridoe, 2014; Enevoldsen & Sovacool, 2016; Gross, 2007; Leiren et al., 2020; Zoellner et al., 2008)).

In a historical analysis on the development of research into social acceptance, Batel (2020) identified three waves. In the 1990s, the first wave of research revolved putting the

consideration of the social impacts of renewable energy technologies and infrastructure on the agenda. The aim of academic research then was to present 'possible responses and ways to reduce opposition' (Walker, 1995, p. 49). Better understanding of social acceptance of RET could 'reduce public opposition so that RET [could] be easily deployed and contribute to the greater good of mitigating climate change' (Batel, 2020, p. 2)

Research in the second wave (2000s) both criticized and deconstructed *Not in my backyard* (NIMBY), which explained opposition to renewable energy technologies and infrastructure as originating from selfishness, ignorance and emotional responses (Batel, 2020). Researchers now focused on finding different frameworks to facilitate a more encompassing comprehension of renewable energy controversies (ibid.). Part of this second wave was a shift of 'understanding local opposition through considering other RET-associated actors and scales beyond community members and local factors' (Batel, 2020, p. 1). In addition to the roles of other actors, researchers also started to investigate (designs of) processes and broader contexts (including the institutional context) in order to get a better understanding of opposition (Batel, 2020, p. 1).

The third wave of research (2010s) criticizes previous research for having 'the need to foster and facilitate the social acceptance of RET' as a premise, whilst perceiving opposition as 'something to understand only in order to be overcome' (Batel, 2020, p. 3). Researchers shifted their focus to investigate 'how RET are deployed in the relation between expert-political and lay systems and how democratic those relations are' (ibid.). As part of the third wave, researchers also started to investigate other types of public responses to renewable energy technologies and infrastructure, like 'support, tolerance, indifference' (ibid.). This also included the appreciation of public opposition (Cuppen, 2018) and controversies as a source of information about different (public) values at play, as was the premise of the RESPONSE project.

Shifting research focus to RET actors

Despite the ongoing attention and developments in this field, the investigation of renewable energy controversies generally (still) revolves around the perspectives, actions and experiences of the general public, local communities and opponents. This tendency to focus on "the public" has not gone unnoticed (Burningham et al., 2015; Devine-Wright, 2011b). A consequence, or side effect, of what Wolsink (2019) calls an "obsession" is the neglect of other important stakeholders in the field of renewable energy (Batel & Devine-Wright, 2015; Burningham et al., 2015). This neglect is problematic in the context of complex conflicts such as renewable energy controversies: how can one understand dynamics of a conflict between different public and private actors, with various roles, different (potentially conflicting) interests by continuous investigation of a singular group of actors (Cuppen, 2018; Cuppen et al., 2020; Pesch et al., 2017; Roberts, 2013; Walker et al., 2011)?

Over the years, several authors have made a case to broaden the scope of social science's research into renewable energy controversies (Batel & Devine-Wright, 2015; Burningham et al., 2015; Cuppen, 2018; Devine-Wright, 2011a; Devine-wright et al., 2017; van de Grift et al., 2020; van de Grift & Cuppen, 2022). Nevertheless, attention for other types of actors than the public, such as RET actors, is limited (Batel & Devine-Wright, 2015; Burningham et al., 2015; Songsore et al., 2018; van de Grift & Cuppen, 2022; Wolsink, 2019).

This dissertation is about RET actors in renewable energy controversies. RET actors are important to investigate in renewable energy controversies for three reasons. The first reason is the relational aspect of controversies. Interactions between RET actors and (local) opponents, residents and other stakeholders are 'potentially significant in shaping how the dynamics of local responses evolve and how different actors learn, react and strategically behave in relation to each other' (Walker et al., 2011, p. 5). This is especially important as RET actors are often powerful and incumbent actors: they are 'close to the cogwheels and power of society, and more than corporations in other fields they confront demands from both political spheres and civil society to attain sustainability and take responsibility for bringing society through the "green transition"' (Müftüoglu et al., 2018, p. 250). As such, a relational understanding of controversies considers perspectives and (inter)actions from multiple actors, including RET actors (Songsore et al., 2018) in an attempt to understand the different actors, their roles and the (contentious) relationships between them in order to learn more about specific conflict dynamics.

The second reason is that RET actors make decisions about the (project design and construction of) renewable energy technology itself and (the design and implementation of) processes for public participation, community engagement and formal decision-making. These choices play a role in the emergence and/or development of renewable energy controversies. For example, participation processes that are based on NIMBY assumptions often leave local stakeholders feeling powerless and disillusioned (Butler et al., 2011), which can amplify opposition (Cotton & Devine-Wright, 2011). Another example is the "decide-announce-defend" (DAD) approach, 'when results developed by "educated experts", project developers or government are simply communicated to the public', an approach which often results in controversies (Wolsink, 2010 in Komendantova & Battaglini, 2016, p. 225). The perspectives underlying these decisions and actions (as visualized above by the framework of Walker et al., 2011) provide insight into why RET actors respond to the general public, local communities etc. The perspectives for example entail assumptions about citizens and local residents and their involvement with energy technology development, and motivations for whether or not to engage with them in the context of (anticipated) opposition.

A third reason for directing research attention to RET actors is the seemingly homogenous picture existing research paints of RET actors in the renewable energy controversies. Perhaps a reason for this is that RET actor literature often investigates 'the challenges faced in terms of technical factors as opposed to social ones' (Songsore et al., 2018, p. 3), for example difficulties related to the construction of innovative design of wind turbines. In regards of this homogenous picture, there seems to be a similarity with actors in the fossil energy industry, who are often unjustly perceived as a 'unified bloc with common interests' (Stoddart et al., 2020, p. 2). Espig and De Rijke (2018, p. 220) ask themselves 'are the voices of petroleum reservoir engineers, drilling operators, gas traders, corporate vice-presidents or other more "powerful" social groups sufficiently written into the ethnographies of (..) unconventional gas developments? We would say "no"'. The same can be said for RET actors as there appears to be low resolution in analytical approaches to RET actors, apart from the general category 'project developer'.

Investigation of RET actors is challenging

Above, I make a case for more elaborate investigation of RET actors involved in renewable energy controversies. However, researching RET actors and gaining access to them is considered to be one of the main challenges experienced by social science researchers (Hall et al., 2020; Kirchherr et al., 2017; Lam et al., 2013; Maillé & Saint-Charles, 2014; Müftüoglu et al., 2018; Ryder, 2018; Songsore et al., 2018). In general, challenges related to access are common, particularly in ethnographic research on elite groups and organizations (Lønsmann, 2016), an activity which is also known as 'studying up' (Nader, 1972). Studying up is challenging because '[t]he powerful are out of reach on a number of different planes: they don't want to be studied; it is dangerous to study the powerful; they are busy people; they are not all in one place' (Nader, 1972, p. 302). Sharing of experiences on research endeavors involving RET actors therefore seems essential in order to grow understanding of this particular group. Though researchers have been calling to share insights on social science research practices (Goodman & Marshall, 2018; Marshall & Goodman, 2018), few of such studies have been published.

Objective of dissertation

As described above the current body of literature on renewable energy controversies seems to have a strong focus on the general public, which creates a one-dimensional understanding of controversies. A multidimensional, relational understanding of renewable energy controversies requires a multi-actor perspective, one that looks beyond the general public perspective and also investigates RET actors, their perspectives and practices. As such, it is crucial to diversify social science research and gain a better understanding of RET actors' practices and perspectives in response to or in anticipation of public opposition.

This dissertation aims to make a contribution to the theorization of dynamics of renewable energy controversies by generating empirical knowledge on RET actors involved with renewable energy controversies. The expectation is that RET actor-centered research will result in new perspectives on and insights into renewable energy controversies. This is needed as part of constructing a relational, finer-grained understanding of the (development of) conflict dynamics between the actors engaged in controversies and action perspectives for the involved actors. This is valuable for the overall governance of the energy transition, as partial understanding of controversies leads to one-sided (and therefore limited and not effective) action perspectives for the actors involved.
With this dissertation, I contribute to the social science of energy, a field that has been emerging over the past decade (which more or less coincided with my PhD trajectory). The field of social science of energy is an intersection at which various social scientific disciplines meet, from public administration and interpretative policy analysis to psychology and anthropology. How quickly this field has grown becomes evident from the journal Energy Research & Social Science[7], which has become a high-ranking journal since its launch in 2014[8].

Based on the discussed gaps in the social science of energy on RET actors in renewable controversies, the central research question of this dissertation is:

> *How can the investigation of perspectives and interactions of RET actors help to explain the dynamics of renewable energy controversies?*

With this question I will address both RET actors' perspectives and interactions as well as reflect on the act of conducting research in the context of renewable energy controversies itself.

Overview of dissertation: sub questions and research methods
This thesis starts from a constructivist-oriented view; I see social reality not as '[objectively given] but rather socially constructed over time and dependent upon the place and position of the actors' (Berger and Luckman, 1991 in Lee & Stech, 2020, p. 175). In line with this perspective, I use qualitative and interpretative methods to answer the main research question.
Below I will introduce each of the four sub-questions and my mixed methods research approach for answering them. The use of different qualitative and interpretative methods allowed for exploration of the field of RET actors and showcasing different types of insights that can be gained from RET actor-centered research. It also reflects the multi-disciplinary character of the social science of energy.

7 https://www.sciencedirect.com/journal/energy-research-and-social-science
8 https://www.scopus.com/sourceid/21100325067

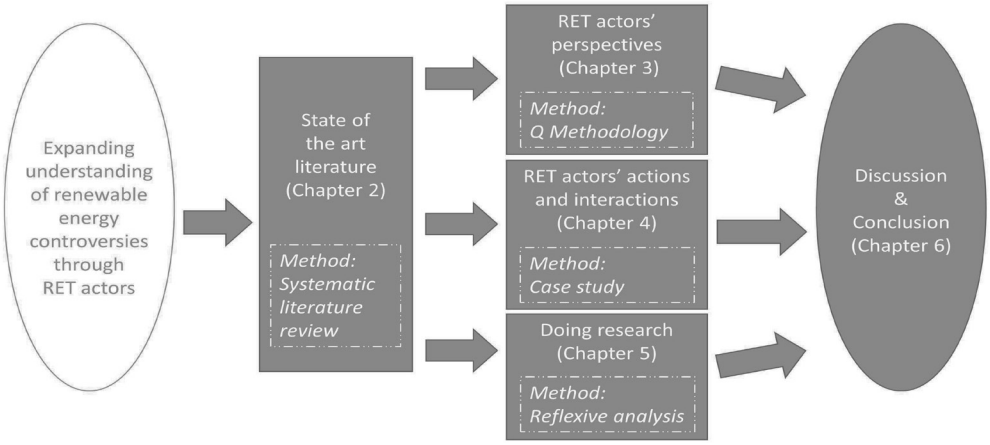

Figure 3. Outline of chapters and methods used in dissertation.

Chapter 2 – State of the art literature review

The objective of Chapter 2 is to support and illustrate my claim of RET actors being under-researched as actors in renewable energy controversies and provide suggestions for future research. Chapter 2 addresses the following sub-question:

> *What is the state-of-the-art in the literature about RET actors involved in controversies surrounding renewable energy technologies and infrastructure?*

To answer this sub-question a systematic literature review was conducted (Fink, 2014). A systematic literature review is an "explicit and reproducible method for identifying, evaluating, and synthesizing" academic literature on a specific topic (Fink, 2014, p. 3).

This literature review (van de Grift & Cuppen, 2022) is the first ever synthesis of empirical social science research on RET actors in the context of renewable energy controversies. In the chapter, my co-author and I reflect on existing social scientific knowledge based on the 89 reviewed publications. We identify knowledge gaps in the current body of literature and provide recommendations for a social science research agenda on RET actors.

One of the findings concerns the little diversity in terms of the different types of RET actors that are investigated. As such, one of the recommendations for future research is to diversify the range of RET actors and their practices as this allows moving beyond the generic category of 'project developer'. This recommendation is followed up in both Chapter 3 and Chapter 4, in which two particular subgroups of RET actors are investigated: the 'community engagement professionals' (or CEPs) and governmental actors.

Chapter 3 – RET actors' perspectives

The objective of Chapter 3 is to generate knowledge on perspectives of RET actors in relation to renewable energy controversies. As there has been limited attention for project developers and the way they shape community engagement in the literature, this chapter focusses on the work of professionals active within or for renewable energy companies by answering the following sub-question:

> *How do community engagement professionals view community engagement in energy projects, and how do they view their own role therein?*

Community engagement professionals (or CEPs) are individuals 'who are responsible for engaging communities in the development of energy projects' (van de Grift et al., 2020), p. 1). Community engagement concerns 'activities implemented by firms to work collaboratively with and through groups of people to address issues affecting the social well-being of those people' (Gawcett et al., 1995; Scantlebury 2003 in Bowen et al., 2010, p. 298).

The reason why this particular group of professionals is interesting to investigate is because of their position as so-called 'front-line workers' (Durose, 2009): they simultaneously work across and on the boundaries of the organization they represent and the society in which this organization aspires to realize renewable energy projects. As such, investigation of front-line workers who implement engagement strategies in the light of public opposition can reveal valuable insights on practices that feed into dynamics of renewable energy controversies.

As the theoretical and empirical knowledge of perspectives that CEPs have on their work is scarce, Q Methodology is a well-suited method for answering this chapter's sub question (Stephenson, 1953; van de Grift et al., 2020). This method combines statistical analysis and qualitative interview data in order to uncover different perspectives and relationships between recurring themes (Watts & Stenner, 2012); and it is particularly suited for empirical research that aims to explore and understand (Watts & Stenner, 2012).

Chapter 3 presents three different perspectives and discusses five differences between the perspectives, including modes of engagement and how CEPs perceive and engage with public opposition. We furthermore discuss the challenges encountered by the CEPs in their work (both within and outside their organization), and their implications for the governance of energy projects and infrastructure.

Chapter 4 – RET actors' actions and interactions

The objective of Chapter 4 is to gain insight into the development of renewable energy controversies by focusing on RET actors' actions and interactions. As the literature

review in Chapter 2 will point out, interactions in renewable energy controversies are often studied from a multi-actor perspective in which the focus is typically on developers versus opponents, governments versus the public, etc. The literature review also indicated that governmental actors in renewable energy controversies are under-researched: Little attention is paid to the roles of governments, despite their obvious parts in controversial planning processes. Therefore, the following sub-question is answered in this chapter:

> *How do governmental actors engage in the discussion and decision-making process of a contested wind farm and what role do they play in the development of the wind energy controversy?*

This sub question shifts the focus to the multiple governments (national, provincial and municipal) involved in the planning process of the controversial Dutch wind farm N33. The N33 controversy emerged during the planning process of the wind farm (2005) and is still ongoing at the time of writing. The wind farm went into operation in 2020.

In order to unpack the N33 controversy and actions of governments within it, we take a performance perspective (Hajer, 2009). The performance perspective views (inter) actions of governmental actors as attempts to actively influence 'potentially unstable situations' (Hajer, 2009). We use critical moment analysis (Verloo, 2015) to structure the empirical analysis of these 'performances' within the development of the controversy. Critical moments are occasions in a controversy during which the nature or intensity of interactions between governmental actors change and are studied as 'sequence of action and reaction' (Verloo, 2015, p. 69).

This chapter will show how interactions between the different governments exacerbated public opposition and thus influenced the development of the controversy. In doing so, our analysis '[challenges] the idea of 'the government' as a unified system' (Klijn, 2008 in Verhoeven, 2020). It also enriches understanding of conflict dynamics of controversies as opposed to strictly opponent-based perspectives, in which citizens are often seen as the driving force behind local opposition (Lintz & Leibenath, 2020).

Chapter 5 – Challenges of researching RET actors

The objective of Chapter 5 is to reflect on challenges of empirical investigation of RET actors and contribute to methodological conversations amongst researchers in the field of social science of energy.
This chapter explores the final sub-question:

> *What methodological lessons can be learned from empirical research on RET actors in the context of controversies to support future research?*

Researching RET actors and gaining access to them is considered to be one of the main challenges by social science researchers, as the literature review in Chapter 2 will show. Though there have been calls to increase shared learning within the social science of energy field (Goodman & Marshall, 2018; Marshall & Goodman, 2018), few publications address the particular challenge of access to RET actors.

Over the course of this PhD and the RESPONSE project, my colleagues and I experienced multiple challenges in gaining and maintaining access to RET actors when organizing or conducting our research. This was particularly the case for research that involved the use of ethnographic methods, such as participant observation. This chapter discusses our experiences with (attempts to use) ethnographic methods in research involving RET actors engaged in (potential) wind energy controversies, and specifically focusses on challenges related to gaining and maintaining access.

In order to answer the sub-question, we conducted a reflexive analysis (Lønsmann, 2016). Reflexive analysis allows researchers to investigate 'the processes underlying data collection', which puts the researcher's own context underneath a magnifying glass (Lønsmann, 2016, p. 20). In order to identify the encountered challenges related to gaining and maintaining access, we use the concept strategic dilemma (Jasper, 2006) as a guide in the reflexive analysis. Through the lens of strategic dilemmas, researchers can be perceived as part of a web of relationships in which they are trying to conduct research. As a result, strategic dilemmas can emerge from their interactions with different types of actors, which puts researchers in a situation in which they need to make a decision on how to move forward (Verhoeven et al., 2022, p. 2).

The analysis discusses several dilemmas encountered in two case studies and reveals three factors that play a part in the emergence of these dilemmas. These factors include (1) how researchers come across to (potential) research participants; (2) interests related to the multitude of contexts that are at play in controversies, including our own (often implicit) academic context and interests; and (3) formal & informal gatekeepers granting or obstructing access to (potential) research participants.

Chapter 6 – Conclusion and recommendations

The final chapter of this dissertation, Chapter 6, answers the central research question by providing summaries to the four sub questions. After the summaries, I make a final case for and show the value of researching RET actors in controversies. I end this dissertation with several recommendations for both academia and practice.

Table 1. Overview of the research questions and methods used in each chapter of this dissertation.

Chapter	Research question	Research method
2	What is the state-of-the-art in the literature about RET actors involved in controversies surrounding renewable energy technologies and infrastructure?	Systematic literature review
3	How do community engagement professionals view community engagement in energy projects, and how do they view their own role therein?	Q Methodology
4	How do governmental actors engage in the discussion and decision-making process of a contested wind farm and what role do they play in the development of the wind energy controversy?	Case study using critical moments analysis
5	What methodological lessons can be learned from empirical research on RET actors in the context of controversies to support future research?	Reflexive analysis

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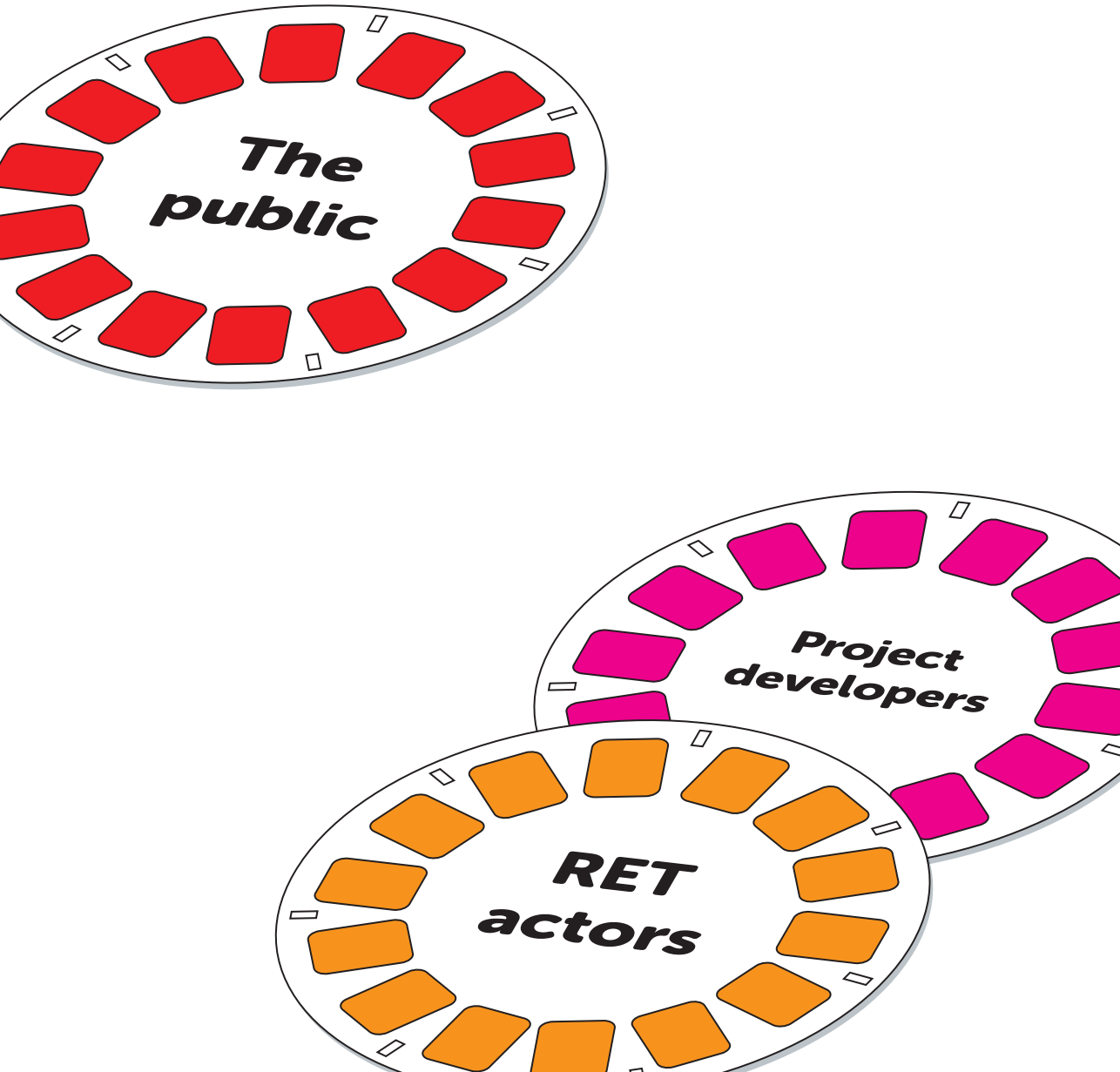
The public
Project developers
RET actors

Chapter 2

Beyond the public in controversies: A systematic review on social opposition and renewable energy actors*

* This chapter has been published as: Van de Grift, E., & Cuppen, E. (2022). Beyond the public in controversies: A systematic review on social opposition and renewable energy actors. Energy Research & Social Science, 91. https://www.sciencedirect.com/science/article/pii/S2214629622002535.

2.1 Introduction

Over the past decades, renewable energy controversies have received attention from scholars from multiple academic fields within social science (Sovacool et al., 2022), such as environmental psychology (Batel & Devine-Wright, 2015; Carlisle et al., 2015; Devine-Wright, 2009), sociology (Fast, 2013; Pepermans & Loots, 2013; van Veelen & Haggett, 2017; Woods, 2003), ethics (Behrsin, 2020; Jenkins et al., 2020; Siciliano et al., 2018; Zárate-Toledo et al., 2019) and policy and planning (Boucher, 2012a; Hill & Knott, 2010; Pesch et al., 2017; Verhoeven, 2020; Walker et al., 2011; Wolsink, 2007). In studying such controversies, researchers have a tendency to focus on opponents, the public and local communities (Burningham et al., 2015; Devine-Wright, 2011c). This is especially the case for the topic of social acceptance of renewable energy (See (Batel, 2018, 2020; Batel et al., 2013; Bell et al., 2013; Devine-Wright, 2007; Petrova, 2013; Rand & Hoen, 2017) for reviews). This tendency borders 'obsession' (Wolsink, 2019) and has resulted in the neglect of other key actors in the energy domain relevant for understanding controversies (Batel & Devine-Wright, 2015; Burningham et al., 2015).

This predominant focus on specific actors and neglect of others is problematic due to the complex nature of controversies. In this type of conflict, a multitude of different public and private actors with various roles, representing different, potentially conflicting interests interact (Cuppen, 2018; Cuppen et al., 2020; Pesch et al., 2017; Roberts, 2013; Walker et al., 2011). Aside from the general public, local residents or communities opposing a project, there are other key actors involved in controversies which are referred to as 'renewable energy technology' (RET) actors (Walker et al., 2011). Walker et al. describe RET actors as 'a broad category of people in organizations with roles in supporting or implementing [renewable energy technology] developments – including developers, consultants, PR and marketing companies, trade associations, financiers and technology manufacturers' (2011, pp. 4–5).

Interactions between RET actors and opponents are 'potentially significant in shaping how the dynamics of local responses evolve and how different actors learn, react and strategically behave in relation to each other' (Walker et al., 2011, p. 5). In these interactions, it is not just the choice of a particular renewable energy technology that can trigger or influence a controversy: processes of public participation and formal decision-making on renewable energy can also incite public opposition (Ellis et al., 2007; Walker et al., 2011; Wolsink, 2010a). For example, processes based on Not In My BackYard (NIMBY) assumptions often leave local stakeholders feeling powerless and disillusioned by formal processes of engagement (Butler et al., 2011). Another example is the "decide-announce-defend" (DAD) model: 'when results developed by 'educated experts', project developers or government are simply communicated to the public' (Komendantova & Battaglini, 2016,

p. 252). Both NIMBY assumptions and DAD approaches can result in (increased) public opposition (Cotton & Devine-Wright, 2011b; Hindmarsh, 2010; Wolsink, 2010a). This means that decisions and choices, and underlying assumptions, made by RET actors on how to engage with public opposition can teach us valuable insights about (the development of) controversies and related dynamics of interaction (Walker et al., 2011).

Better understanding of controversies is crucial as many have led to delays or cancellations of renewable energy projects (Breukers & Wolsink, 2007; Ciupuliga & Cuppen, 2013; Devine-Wright, 2011b; Wolsink, 2010a). However, such an understanding cannot be based on research into only the public, local residents or those opposing renewable energy projects. The complex nature of controversies also requires in-depth investigation into and understanding of RET actors, of the roles they play and their assumptions and expectations underlying decisions and actions (Devine-wright et al., 2017; Haggett & Futak-Campbell, 2011; Songsore et al., 2018; Walker et al., 2011). Such insights create opportunities for researchers to provide diverse and concrete recommendations for inclusive decision-making in energy controversies, such as recommendations that are more tailored to the challenges RET actors face in this area.

There have been calls for some years now to broaden the scope of social science research to include RET actors (Burningham et al., 2015; Devine-Wright, 2011a; Devine-wright et al., 2017; van de Grift et al., 2020). Nevertheless, attention for RET actors still seems to be limited and it is unclear where this area of research currently stands. Such insight is necessary for developing a substantiated research agenda. Therefore, we present a systematic literature review and ask the question: What do we know of RET actors when it comes to controversies surrounding renewable energy technologies and infrastructure? Our review is restricted to studies that cover energy technologies for production and transport of renewable energy. This includes technologies like wind, solar and hydropower, as well as the (re)development of infrastructure, such as transmission lines that are necessary for energy system transformation.

Below, we will first discuss the method we used for this literature review. Then, in Section 3, we present our findings. We identified two categories in existing social science research: (1) RET actors' perceptions of public opposition and (2) RET actors' responses to public opposition. Next, in Section 4, we discuss three observations related to the nature of the generated insights and characteristics of research approaches of the reviewed publications. In our conclusion (Section 5), we make a case for future social science research to be more explanatory and reflective of the diversity of RET actors.

2.2 Method

2.2.1 Data collection

We conducted a systematic literature review which uses an 'explicit, and reproducible method for identifying, evaluating, and synthesizing' a body of academic literature (Fink, 2014, p. 3). An iteratively developed list of key words was used to identify relevant records in academic databases Scopus and Web of Science[1]. The search string consisted of four word groups with variations of key words that together formed the building blocks for the scope of our review. We focused on the *development* (category 1) of *renewable energy technology and infrastructure* (category 2) by *(groups of) actors* (category 3), with a specific focus on projects that are characterized *by public opposition* (category 4, also see Table 1). For categories 1 and 2, the selection of key words was a straightforward process:

- Category 1 included key words referring to the development and implementation of specific projects regarding renewable energy technology or infrastructure. This meant that literature that concerned the operation or dismantling of energy technology was excluded from the search.
- Category 2, 'Renewable energy technology and infrastructure', included key words reflecting types of renewable energy technology and infrastructure.

For the third category, we used the description of RET actors from Walker et al. (2011) as a starting point for formulating the key words (see Section 1). The terms 'technology promoter', 'PR company' and 'marketing company' did not result in any hits with test rounds in Scopus so these were omitted as key words. 'Trade association' also resulted in zero hits so we changed this to 'association'. 'Project manager', 'initiator' and 'cooperative' were added based on publications that were deemed relevant for this review (including (Jami & Walsh, 2017; Jolivet & Heiskanen, 2010; Songsore et al., 2018; C. Walker & Baxter, 2017b; Wolsink, 2014)). Also key words referring to governmental actors were added to the list, as these actors are often involved with supporting or implementing renewable energy developments (Walker et al., 2011). Test searches on Scopus with the variations 'parish', 'civil servant' and 'housing corporation' led to zero results so these were not included.

'Public opposition' refers to societal, publicly salient conflict, opposition or controversy (Boucher, 2012b) in the context of renewable energy projects and infrastructure. The key words in the category 'public opposition' were variations on key terms that are commonly used in academic literature when discussing public opposition to renewable energy technology implementation. A test run revealed that more generic conflict-related words,

1 In this process, we used key words from several articles on RET actors, including (Bues, 2018; Burningham et al., 2015; Songsore et al., 2018; van de Grift et al., 2020), to further develop the list of key words.

such as 'contest', 'appeal', 'refuse', and 'reject', resulted in too many irrelevant results, so these were left out.

Table 1. Overview of key words used in search string. The * was used to include variations of key words.

Category 1: Project development	**Category 2: Renewable energy technology and infrastructure**	**Category 3: RET actor**		**Category 4: Public opposition**
Siting	Renewable energy	Developer	Policy maker	Controversy
Planning	Energy project	Initiator	Politician	Conflict
Develop*	Energy technology	Industry	Government	Opposition
Implement*	Low*carbon energy	Entrepreneur	Municipality	Hindrance
Deploy*	Wind	Consultant	Province	Contestation
	Solar	Corporation	Canton	Contention
	Photovoltaic	Association	County	Protest
	Biomass	Manufacturer	State	Resistance
	Bioenergy	Cooperative	Policy actor	
	Tidal	Compan*	Decision-maker	
	(Ocean) Wave energy	Energy actor	Protagonist	
	Hydro*power	Key actor	Supporter	
	Geothermal	Stakeholder	Business	
	Nuclear energy	Electric utility	Grid operator	
	Hydrogen			
	Energy infrastructure			
	Transmission line			
	Power line			
	High power voltage			
	Pipeline (for hydrogen or biogas)			

We performed our search in the online databases of Scopus and Web of Science (January 27th, 2021). We limited our review to records in English, which is a common practice for this type of literature review due to replicability and translation-related practicalities (Wilson et al., 2003)[2]. To be sure of scientific rigor, we only included records from international, peer-reviewed academic journals and established publishers (Dekker & Bekkers, 2015). The

2 This is a pragmatic choice, as both authors are proficient only in English and Dutch. Though pragmatic, this methodological choice impacts the publications that are taken into account for this literature review. We are aware that we are potentially missing relevant publications in languages other than English.

combined searches resulted in 3370 records, which were stored in an Excel database[3].

In the following step, records were screened using their title and abstract. The eligibility of a record was determined based on the following criteria (reflecting the four building blocks of the scope for this reviews): it contains empirical work on (1) actors in the process of (2) implementing (3) renewable energy projects or infrastructure which are characterized by (4) public opposition.

Results that did not address all four building blocks were excluded from the review, such as those publications that:

- Do not concern public opposition, but address conflict between governmental actors or between private actors;
- Strictly focus on other perspectives than those of RET actors (communities, opponents, etc.) related to the planning and development of a certain renewable energy technology or project;
- Do not concern the development or implementation of a specific project; or
- Do not specifically report original empirical research.

For several articles, the abstracts met all the requirements, but screening of the full text showed otherwise. This was often the case for results focusing on public or community acceptance and the effects of participation. These results were only included if the processes did take place in the context of public opposition and included for example perspectives, rationales or discourses of RET actors. If this was not the case, those results were excluded. Reviews of previous empirical work were also excluded. Work on energy policy evaluation was not included if it did not concern the implementation of energy projects or infrastructure. Also excluded were records strictly focusing on technical or financial aspects (see Appendix A for a flow chart of this process). This resulted in a final set of 89 records being included in the review (see Table 2 for an overview per theme and Appendix B for a full overview of the included publications)[4].

2.2.2 Analysis of publications included in review

Next, the full texts of all publications included in the review were coded using ATLAS.ti (version 9.1.4.0). We used an inductive coding approach to allow bottom-up generation of codes (Boeije, 2010), as the goal was to create an overview of social science literature on RET actors, without limitations from theoretical frameworks. Although our coding approach was inductive, it was sensitized by our main research question. As such, our coding was

3 Not related subject areas, such as Physics, Material Sciences, Agricultural and Biological Sciences, were excluded in both databases.

4 Two publications (Cotton, 2011; G. Wright et al., 2018) were excluded from the review due to issues with institutional access.

guided by the following questions: how do RET actors think about public opposition? How do they engage with or respond to public opposition? Why do they engage with public opposition in a particular way? In addition, we allowed other topics to emerge as part of the bottom-up approach and assigned codes concerning investigated actors, renewable energy technology or infrastructure and geography. Once all publications had been coded by the first author, the inductively generated codes were clustered into themes. The codes and themes were subsequently validated in several discussion rounds between the two authors. Two main categories emerged after this step:

- Perceptions of public opposition among RET actors
- Responses of RET actors to public opposition

Most records were assigned to one of the eleven themes, some (N = 25 were assigned to multiple themes. The results are presented in Section 3 (See Appendix C for an overview of the codes per theme and category).

2.3 Results

Figures 1–4 provide overviews of the focus of the publications included in this review in terms of types of actors, renewable energy technologies & infrastructure, geography and sources of publications. Figure 1 shows the actors studied in the publications. The category 'Multiple actors, including RET actors' concerns publications that study the interplay between a multitude of actors involved in a renewable energy controversy including RET actors. Many of the publications in this category only briefly or superficially discuss RET actors as part of a wider array of actors. In several publications there are no more than a couple of sentences specifically on RET actors, for example (Dunlap, 2018a; Jami & Walsh, 2017; Maillé & Saint-Charles, 2014). The high number for this category forms a striking contrast with the number of publications that focus on sub-categories of RET actors. Figure 2 shows the renewable energy technologies and infrastructure that publications focus on. More than 50 percent of the included publications concern onshore wind (N=48), with in total 60 publications for wind. The U.K., Mexico and Canada are the geographical areas that are most often investigated (Figure 3). For Canada, 6 out of 8 articles have a single focus on Ontario. Fourteen countries were investigated once. Figure 4 shows the sources of the publications: fifty different journal titles, ten of which published more than one article. Most articles are published in journals with a focus on policy and planning, where Energy Policy has the highest number of articles. All publications (with the exception of one) were published between 2001 and 2021.

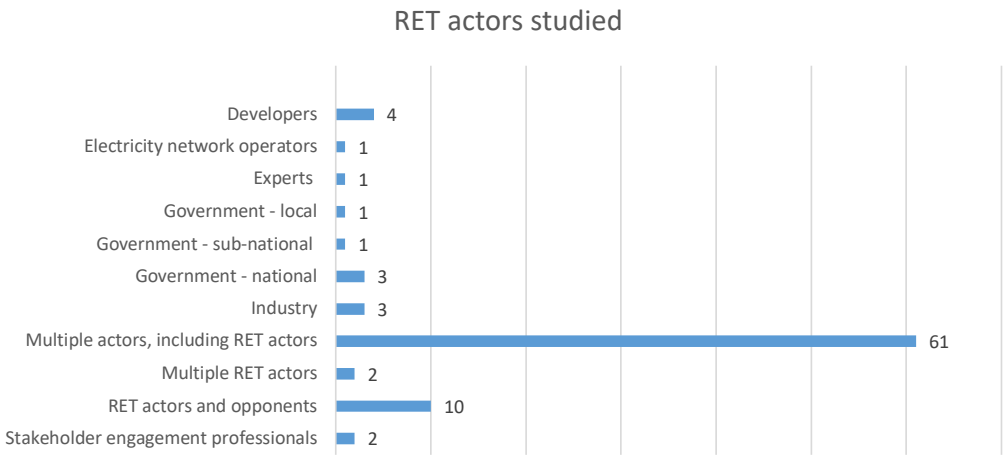

Figure 1. RET actors studied in empirical social science research (in alphabetical order). 'RET actors and opponents' concerns publications that analyze conflicts from two perspectives: RET actors and opponents. 'Multiple actors, including RET actors' concerns publications that study a multitude of actors involved in a renewable energy controversy, including RET actors.

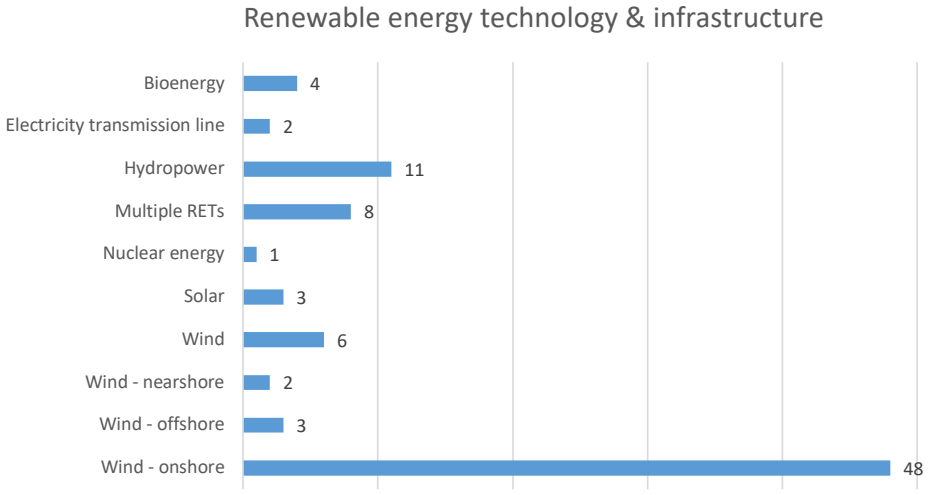

Figure 2. Renewable energy technologies and infrastructure studied in empirical social science research on RET actors (in alphabetical order). The general code 'wind' was used for results that did not clearly specify nearshore, offshore or onshore wind.

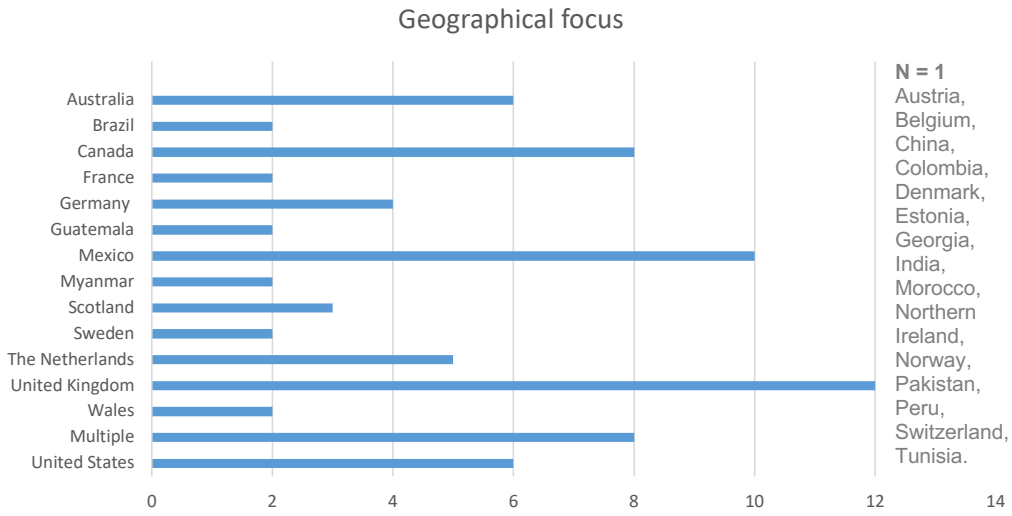

Figure 3. Geographical focus of empirical social science research on RET actors included in review (in alphabetical order).

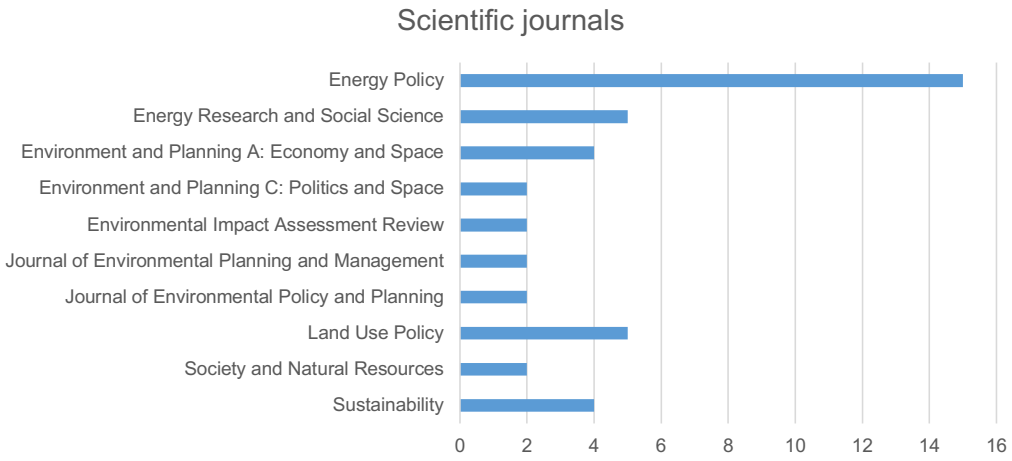

Figure 4. Titles of journals containing publications included in this literature review (in alphabetical order). Journal titles with N = 1 and book chapters (N=7) are not included in figure.

We identified two general categories in this literature review, each consisting of several themes (eleven in total, see Table 2). The first category discusses publications that report on RET actors and their perceptions of public opposition, including ideas about the nature, causes and impact of public opposition (Section 3.1). The second category concerns publications that address how RET actors respond to public opposition (Section 3.2). Below, each theme is described and illustrated by several examples (see Appendix A for a

full overview of publications per theme).

Table 2. Overview of the number of publications per theme.

	Theme	Publications
Category 1: RET actors' perceptions of public opposition	The impact of public opposition according to RET actors (Section 3.1.1)	5
	Causes of public opposition according to RET actors: processes of participation and decision-making (Section 3.1.2)	11
	Causes of public opposition according to RET actors: specific groups of people (Section 3.1.3)	19
Category 2: RET actors' responses to public opposition	Using public engagement instrumentally to prevent and reduce opposition (Section 3.2.1)	17
	Taking a reactive approach to public opposition and focus on project development (Section 3.2.2)	6
	Making strategic choices in public engagement to prevent public opposition (Section 3.2.3)	6
	Educating the public to reduce opposition (Section 3.2.4)	11
	Using community benefits to reduce public opposition (Section 3.2.5)	12
	Contrasting claims to delegitimize public opposition (Section 3.2.6)	14
	Using regulatory and power structures to restrict public opposition (Section 3.2.7)	14
	Accommodating public concerns to reduce opposition (Section 3.2.8)	13

2.3.1 RET actors' perceptions of public opposition

Below we discuss the first category of this literature review. This category reports on three themes distilled from the included publications on RET actors and their perceptions of public opposition, including ideas about the nature, impact and causes of public opposition.

2.3.1.1 The impact of public opposition according to RET actors

The literature reports on different assumptions and discourses of RET actors with regards to public opposition. Most RET actors have negative assumptions: public opposition is perceived as a barrier to the development of renewable energy projects (Jami & Walsh, 2017; Songsore et al., 2018; Spiess & De Sousa, 2016; G. Walker et al., 2010). A small number of publications report on RET actors who perceive opposition as neutral or positive. For instance, some developers find wind energy resistance movements to have a positive impact on a development, as they increase developers' accountability and 'in

some cases [secure] other benefits for the community that would not have been there otherwise' (Devine-wright et al., 2017, p. 7). Walker et al. (2010) show how industry and policy actors construct imaginaries of the public from first-hand and mediated experience and knowledge; they describe the impact of these imaginaries as a 'shared expectation of an ever present latent but conditional public hostility to renewable energy project development [that] is seen as shaping the material forms of the technologies, their evolving spatiality, and practices of public engagement involved in obtaining project consent' (p. 931). Cass and Walker (2009) find both neutral and negative perspectives on opponents of renewable energy developments among developers and other industry actors: the negative perspective views opponents as highly emotional, unreasonable and illegitimate, while the neutral perspective views such responses 'as understandable and an inherent part of the politics around proposals for developments such as wind farms' (p. 680). The authors find that, despite the different perspectives, developers perceive emotions of opponents as needing to be managed to keep the decision-making process 'unemotional, objective and rational' (p. 68).

2.3.1.2 Causes of public opposition according to RET actors: processes of participation and decision-making

RET actors see different causes for public opposition, several of which are related to processes of public participation, spatial proximity to the project, governmental authority in decision-making and type of technology (Bosley & Bosley, 1988; Cass & Walker, 2009; Christidis et al., 2017; Cotton & Devine-Wright, 2011b, 2011a; Díaz et al., 2017; Martínez-Mendoza et al., 2021; Simcock, 2016). RET actors feel that causes related to community engagement and public participation play a particularly important part in (triggering) public opposition. According to a survey among representatives of national wind energy associations and experts in Europe, inadequate public participation is a reason for opposition to wind energy projects. At the local level, for example, 'the less influence actors have the more likely it is that problems with social justice, participation and conflictive situations can arise' (Suškevičs et al., 2019, p. 321). Juerges and Newig (2015) show that German wind energy developers think less opposition will arise if decisions are made at the local governmental level, as opposed to top-down planning. Representatives of a Brazilian regulatory agency and electricity company state that not organizing community engagement and disseminating information on possible benefits can trigger local opposition when developing large-scale solar projects (Frate & Brannstrom, 2017).

2.3.1.3 Causes of public opposition according to RET actors: specific groups of people

RET actors, specifically wind energy developers, industry representatives (including a cooperative) and local government officials, think in many cases that public opposition originates only from a small group of people (Barry et al., 2008; Burningham et al., 2015; N. Hall et al., 2013; Jami & Walsh, 2017; L. Hall, 2014; Mulvaney et al., 2013; Proka et al.,

2018; Songsore et al., 2018; Waldo, 2012; G. Walker et al., 2010). Both local governments and developers see small groups of opponents as a particular challenge when balancing different local interests (Mulvaney et al., 2013). These small groups of vocal opponents are often perceived as coming from outside of host communities and stirring up local opposition (Juerges & Newig, 2015; Songsore et al., 2018). Multiple articles elaborate on this (Burningham et al., 2015; N. Hall et al., 2013; Mulvaney et al., 2013; Songsore et al., 2018; Waldo, 2012; G. Walker et al., 2010) and show that RET actors refer to the majority of residents as supportive, to explicitly contrast that to the image of small vocal groups of opponents. RET actors perceive this majority as silent or apathetic, not actively expressing any type of opinion: 'Passive local people are often described by authorities and developers as lacking interest in the process, or as a majority quietly in support of the project - acceptance is often measured in terms of activity' (Waldo, 2012, p. 700). Thus, public silence is seen as equal to acceptance (Waldo, 2012, p. 700).

NIMBYism and knowledge deficits are also common causes of public opposition according to RET actors (Wolsink, 2010b). Although few UK developers explicitly label opponents as NIMBYs, 'self-interest was often considered to be at the root of opposition' (Burningham et al., 2015, p. 250), p. 250]. Scherhaufer et al. (2017) also report on public opposition explained as driven by self-interest, specifically in the case of environmental impact assessment (EIA) procedures. In addition to the NIMBY label UK developers also ascribed knowledge deficits to opponents: '[they] were not so much characterized as having *insufficient* knowledge as having *incorrect* knowledge. Developers tended to characterize opponents as having faulty knowledge, rather than simply lacking information' (Burningham et al., 2015, p. 251). Though there is antipathy toward the use of the NIMBY model among National Grid representatives in the U.K. (Cotton & Devine-Wright, 2011a), most publications concern examples of discourses revolving around the attribution of the NIMBY label and knowledge deficits to those opposing developments. These publications report on wind energy developers and industry actors, including consultants, marketing and public relations companies (Barry et al., 2008; Burningham et al., 2015; Fast, 2015; Jenssen, 2010; McLachlan & Mander, 2013; Simcock, 2016). Related discourses are also found in the institutional context, in policies regarding wind power implementation and community engagement (Breukers & Wolsink, 2007; Hindmarsh, 2010).

2.3.2 RET actors' responses to public opposition

The second category concerns publications that address how RET actors respond to or interact with public opposition.

2.3.2.1 Using public engagement instrumentally to prevent and reduce opposition

Several articles describe how RET actors deploy participation instrumentally to prevent public opposition and gain acceptance (Aguilar-Støen & Hirsch, 2017; Bourdin et al., 2020;

Cotton & Devine-Wright, 2011b; N. L. Hall et al., 2020; Israel & Herrera, 2020; L. Hall, 2014; Landeta-Manzano et al., 2018; Rudolph & Kirkegaard, 2019; Sierra & Sarmiento, 2016; Simcock, 2016; Stafford & Hartman, 2012; van der Waal et al., 2020; G. Walker et al., 2010). For example, Walker et al. (G. Walker et al., 2010) identify highly instrumental motivations among RET actors to organize public engagement, with most focusing on 'obtaining planning permission, speeding up decision processes, and minimizing complications because of an anticipation that these could arise from antagonistic public responses' (p. 941). Anderson (Anderson, 2013) reports on similar motivations in a public engagement process for an Australian wind farm which was designed to 'reduce conflict and achieve acceptance' (p. 106). Although publications that report on instrumental motivations are in the majority, there are a few that go beyond a mere instrumental point of view on participation (van de Grift et al., 2020; C. Walker & Baxter, 2017b; Wolsink, 2014). These publications report on RET actors who perceive early and active engagement as good practice and opposition as a potential source of information. The investigated RET actors think that participation increases the chances of successful implementation and helps with reducing opposition.

2.3.2.2 Taking a reactive approach to public opposition and focus on project development

While the previous theme concerned an instrumental and preventive response to public opposition, this theme concerns RET actors who have a reactive approach to public opposition. Both Pasqualetti and Schwartz (2011) and Pepermans and Loots (2013) report on DAD-like approaches in solar and wind siting respectively, where opposition was responded to by defending announced decisions. In these cases, informing and consulting local stakeholders took place once project plans were at an advanced stage of formal decision making, leaving little room for addressing local concerns. Jami and Walsh (2016) report on similar findings in five wind projects, characterizing these processes as 'quite a reactive and tardy public consultation performance' [p.15]. Van de Grift et al. (2020) identified wind developers who had a similar approach. These developers strictly focus on technical project development and, as such, they feel they are not responsible for dealing with public opposition; they view opponents as outside of their sphere of influence and choose to not actively engage with them, but rather strictly adhere to legal requirements for public engagement. Another explanation for a reactive approach to public engagement and strictly adhering to regulations by RET actors are vague and unclear regulations regarding public participation and specifically the Social Impact Assessment (SIA) (Dai, 2019; Martinez & Komendantova, 2020).

2.3.2.3 Making strategic choices in public engagement to prevent public opposition

In order to prevent public opposition, RET actors make strategic choices regarding the project, type of technology and planning policy. For example, they apply specific locational strategies, such as 'the reuse of existing or historic locations of [renewable energy

technologies] for the installation of newer technology', as less disruption and opposition is anticipated compared to a new location (G. Walker et al., 2010, p. 940). In anticipation of public opposition related to wind energy, a Dutch energy cooperative made the decision to focus on solar projects instead, assuming general public support for this technology (Proka et al., 2018). This strategic choice of technology served to build trust and support for the cooperative's cause and avoid public opposition.

Two authors report on governmental actors making changes to policy for planning of renewable energy in anticipation of public opposition. Bues (2018) provides an example of spatial-discursive strategies from sub-national governments: 'In anticipation of conflict, Ontario [Canada] has chosen to raise planning responsibility for renewable energy facilities to the provincial level. In contrast, Brandenburg [Germany] has chosen to endorse its regional planning approach' (p. 34). Martinez and Komendantova (Martinez & Komendantova, 2020) describe how the Mexican federal government introduced social impact assessments (SIA) in laws and regulations in response to ongoing public opposition, hoping this would provide 'an institutional mechanism' to deal with controversies on social impacts (p.3).

While RET actors were aware of the limited public participation in the projects investigated by Pepermans & Loots (2013), 'they feared that more participation would only lead to more disappointment and increasing numbers of protests' (p.324). Although they knew about the potential positive effects of active public engagement, they 'did not see many options on how to further engage communities. They blamed the scarcity of possible locations, the competitive situation and the strict spatial planning guidelines' (p. 324). A similar sentiment is found among Austrian developers of wind energy, for whom the use of public opinion polls is controversial: although they find this tool can increase the accountability and legitimacy of decision-making, developers also perceive it as creating potential for polarization among local communities (Scherhaufer et al., 2017, p. 866).

2.3.2.4 Educating the public to reduce opposition

This RET actor response is about educating the public to reduce opposition. RET actors believe that educating the public on technical aspects related to risks and safety is an appropriate response to public opposition: by providing what they believe to be objective information, they attempt to debunk the "faulty" assumptions of opponents on wind power. This way they hope to convince opponents of the benefits of wind energy, and overcome NIMBY sentiments and knowledge deficits (Cass & Walker, 2009; Pepermans & Loots, 2013; Waldo, 2012). Burningham et al. elaborate on this:

> Developers speak of their hope that the deficits of understanding, information, and experience they identify might be filled by education or the provision of appropriate

> "experience", thus potentially transforming opponents into supporters. Here a clear public deficit model of understanding is evident, with the assumption being that given "facts" or shown "the reality", members of the public will think more like the experts. (..) (2015, pp. 257–258).

Worldwide, wind energy developers' legitimize their projects by referring to scientific consensus on climate change and surveys that highlight general public support for wind energy, a response that reveals NIMBY assumptions (Barry et al., 2008; Burningham et al., 2015; Cass & Walker, 2009; Pasqualetti, 2001; Pepermans & Loots, 2013). In the case of the Australian government, Hindmarsh (2010) found NIMBY assumptions leading to 'a regressive approach to community engagement (...) to facilitate wind farm development informed by an 'education' programme that dismally reflects the widely criticized information deficit approach (..)' (p. 559).

The belief that educating the public on the benefits and safety of energy technologies will reduce public opposition is also found among developers of solar, nuclear and biomass projects (Dai, 2019; Spiess & De Sousa, 2016; Upreti, 2004). Developers with what is described as a TINA (There Is No Alternative) attitude to a proposed project are skeptical of social and environmental public concerns and expect techno-centric arguments will convince opponents (Upreti, 2004, p. 793).

2.3.2.5 Using community benefits to reduce public opposition

RET actors often use community benefits as a way to reduce public opposition (Aitken, 2010b; Gray et al., 2005; Juerges et al., 2020; Kerr et al., 2017; McClanahan, 2015; Mjahed Hammami et al., 2018; Simcock, 2016). Developers explain their increased attention for community benefits as fueled by the challenge of obtaining community consent [103, p. 548]. For instance, according to Canadian wind energy developers, 'financial compensation is needed in order to address the situation where landowners holding turbine leases tend to be the only beneficiaries (..) (C. Walker & Baxter, 2017a, p. 760). Walker et al. (2010) identify a general utilitarian motivation for introducing community benefits in renewable energy projects among U.K. developers, who perceive public opposition as being driven by a balance between costs and benefits: 'If this balance could be redressed through a monetary transaction, then anticipated opposition could be counteracted and potentially overcome' (p. 942). Cowell et al. (2011) find instrumental motivations for the use of community benefits in wind energy developments in Wales.

For some policymakers, community benefits are part of conflict resolution: they perceive '"improving" the provision of community benefits from wind farm developers as one way of resolving social conflicts around the siting of facilities, and thereby expediting expansion' (Cowell et al., 2011, pp. 544–545). When developers use community benefits

to address anti-wind sentiments, they feel that such benefits in the form of financial compensation can trigger jealousy (C. Walker & Baxter, 2017a). Financial compensation being perceived as bribery is another fear expressed by Canadian wind energy developers: 'most [developers] struggled with the idea of making direct payments to host communities for two main reasons: (1) perceptions of bribery and (2) defining the spatial scope within which to distribute payments' (Songsore et al., 2018, p. 9). For the Australian wind industry community benefits are a way to 'secure community support and reduce (the impacts from) community opposition' (N. L. Hall et al., 2020, p. 125). Financial compensation is often an explicit part of processes aimed at gaining community consent or a social license to operate (SLO) (L. Hall, 2014). So called 'Community Engagement Plans' are an example, which 'encapsulate the intentions of developers for community engagement and benefit-sharing in specific wind farm developments' (N. L. Hall et al., 2020, p. 125). In SLO processes, negotiation on financial compensation on community funds is common. SLO processes 'are set up beyond compliance by most wind farm developers. One [developer] described the motivation for this as making a positive contribution to the region beyond lease payments to several landowners' (L. Hall, 2014, p. 455).

2.3.2.6 Contrasting claims to delegitimize public opposition

This response concerns framing practices of RET actors in the face of public opposition with the purpose of delegitimization. Some RET actors have framed landscape in a neutral manner, which denies landscape constructs by residents (Leibenath & Otto, 2014). In the case of resistance to a Dutch wind farm, the national government simply denied allegations of participatory tokenism and did not engage in further discussion, aside from a brief statement which declared that 'the whole process had been open and participatory (Verhoeven, 2020, p. 16)**.** In addition to this, two specific ways of RET actors contrasting claims in an attempt to delegitimize public opposition can be observed in the literature: (1) contrasting local or personal interests with national/global interests, using sustainability and the NIMBY label, and (2) contrasting experts with laymen.

With respect to the first, multiple authors have observed RET actors using sustainability as a contrasting frame in their communication to delegitimize opposition (Atkins, 2017; Barry et al., 2008; Hindmarsh, 2014; Howe, 2014; Scherhaufer et al., 2017). Sustainability was one of several frames used by the Brazilian national government in a controversial hydropower project 'to deflect opposition criticism and widen the scheme's perceived beneficiaries' (Atkins, 2017, p. 276). Wind developers in Mexico used similar contrasting framing: 'balancing local concerns of damage against the global gains of climatological cleansing has been a critical element in positioning the wind park and the company itself as environmental friendly' (Howe, 2014, p. 384). For these developers, presenting their practice as 'environmentally upstanding' (p. 396) was a way to delegitimize opposition. In one case of opposition to solar developments, the Moroccan government took on a

'technomanagerial eco-consensus' frame to contrast and overrule the complaints of residents, stating that 'the benefits of solar power outweighed any countervailing concerns: popular demands represented a barrier to clean energy to be overcome by transforming political claims into a technocratic problem to be addressed through development interventions' (Rignall, 2016, p. 542).

Several researchers identified RET actors using the NIMBY label to delegitimize public opposition (Burningham et al., 2015; Hindmarsh, 2010). According to Walker et al. (2010), developers framed local concerns regarding the impact of proposed wind farms as disingenuous, actively negating opponents' concerns. Tafon (2019) reports on an offshore wind developer painting a picture of 'recalcitrant NIMBYs, who would do everything in their power to block development, principally on the grounds of their limited self-interests, which would be detrimental to the interests of the 'broader' community' (p.170). Some RET actors highlight self-interest by vilifying residents opposing wind farms: 'politicians and entrepreneurs [refer to opponents] as a 'minority' of 'lazy,' 'drunk,' and 'violent' 'bandits' that are afraid of change and are just looking to get a better contract with companies' (Siamanta & Dunlap, 2019, p. 943).

The second manner in which RET actors delegitimize opposition is by contrasting experts (or expert knowledge) with laymen (or lay knowledge). In the case of a hydropower project in Pakistan, Niazi (2019, p. 441) reports on the use of the knowledge deficit label: 'the state and its administrative agencies that support dam building rest their case on 'expert' knowledge, while dismissing the counter knowledge produced by the anti-dam coalition of environmentalists, nationalists, and spiritualists as 'inexpert'.' By presenting their own arguments as objective and true, developers contrast opponents as unknowledgeable and thus attempt to delegitimize public opposition. Supporters of the project combined this approach with an appeal to public emotions by invoking patriotic sentiments in support of the dam's construction (Jijelava & Vanclay, 2018; Niazi, 2019). Aitken (2010a) shows how, in a public inquiry[5] on a Scottish windfarm, expertise of witnesses was highlighted by the developers' lawyer, 'typically [focusing] on discrediting those of the opposite side. Cross-examination was used to demonstrate that witnesses were less qualified or appropriately experienced than their counterparts who presented evidence on the same topic' (p.258).

2.3.2.7 Using regulatory and power structures to restrict public opposition

This category concerns publications which discuss responses of RET actors geared toward restricting of public opposition involving processes and actors from the institutional domain. Some developers and governments used legislation to bypass opponents and restrict their opportunities for opposition through formal decision-making (Aitken,

5 The project developers appealed the refusal of the planning application by the local authorities. This appeal brought about a public inquiry.

2010a; Dennison, 2017; Dunlap, 2018a; Jijelava & Vanclay, 2018; Lawrence, 2014; Maillé & Saint-Charles, 2014; Wolsink, 2010b), for example excluding opponents via a formal Environmental Impact Assessment procedure (Aguilar-Støen & Hirsch, 2015). In a less explicit way, Hindmarsh (Hindmarsh, 2010) found that governmental policy responses to public opposition towards wind farms "appear more about empowering wind farm development than also effectively addressing the important issues raised by those directly vulnerable to the adverse impacts of wind farms" [p. 560].

Dunlap (Dunlap, 2018b, 2018c, 2020) describes practices of developers, politicians and what he calls 'elites' in the context of wind energy development in Mexico to include several forms of deception, coercion, intimidation and unequal benefit-sharing. This also involved long term avoidance of large-scale public consultation by regional politicians and elites (Dunlap, 2020). In addition, 'Land control and wind energy development (..) was largely executed through force by various state and extra-judicial forces, employing diplomatic and counterinsurgency techniques' (Dunlap, 2020, p. 11). Huber and Joshi (2015) show a similar case in which national governmental actors and private developers attempt to restrict opposition toward hydropower projects in the Eastern Himalayas with authoritarian and coercive practices. Opponents were reportedly 'victimized or threatened to be victimized, both discursively through a distinct anti-protest narrative, and materially by withholding patronage' (p. 19). In both this case and the cases discussed by Siamanta and Dunlap (2019), national governments are seen to restrict basic democratic rights to counter opposition. This is characteristic for a practice that Siamanta and Dunlap (2019) label as 'green grabbing': 'land and resources grabbing under an environmental ethic and rational' in Crete, Greece and Oaxaca, Mexico (p. 926).

2.3.2.8 Accommodating public concerns to reduce opposition

Several articles address ways in which RET actors try to address and accommodate concerns of residents or opponents by making changes to renewable energy projects, for example in design or location (Jolivet & Heiskanen, 2010; McLachlan & Mander, 2013; Weir & Kerr, 2019). Jolivet and Heiskanen (2010) show French policymakers and project managers attempt to accommodate communities opposing wind energy by involving outside experts without ties to the developer and, eventually, making changes to the proposed projects to solve the controversies around size and visual impact. Most articles, however, focus specifically on governmental actors and their attempts to address public concerns in the energy domain (Cowell, 2007; Zárate-Toledo et al., 2019). Other authors report on governments trying to accommodate concerns, specifically via changes in policies (Boucher, 2013). Lintz and Leibenath (2020) also found evidence of a German state changing its policy to accommodate public concerns: 'the protests (along with other factors) significantly contributed to the readjustment by the Saxon coalition government of its energy and climate policy and thus to a slowdown of energy-related landscape change'

(p. 1). And in some cases, RET actors postpone or cancel projects in the face of, or in response to, opposition (Kirchherr et al., 2017; Mogensen, 2017; Ramirez, 2017; Saglie et al., 2020, p. 151; G. Walker et al., 2010), or withdraw financial support from controversial projects (Ramirez, 2021).

2.4 Discussion

Section 3 provides an overview of existing empirical social science research on RET actors in controversies surrounding renewable energy technologies and infrastructure. To answer our research question, we now know that this body of literature mostly focusses on two main categories. The first category (Section 3.1) concerns research on RET actors' perceptions of public opposition. These perceptions relate to the nature, impact and causes of public opposition, including specific groups of people and processes of engagement and decision-making. The second category (Section 3.2) describes research on different responses and strategies of RET actors to public opposition, which serve different purposes, including preventing, reducing and delegitimizing public opposition. On their own, these categories are helpful as they provide an overview of the type of research that has been conducted. Reviewed together, there are several observations to be made about this body of literature. Below, we discuss three characteristics regarding the diversity of the investigated actors, technologies and geography, the general descriptive nature of RET actor research and the type of practices that is mostly reported on. We end this section by discussing the implications of the reviewed literature for the broader context of research on energy controversies.

2.4.1 Little diversity in social science research on RET actors

Our methodological choice to only include English publications can be of influence on the diversity of the discussed publications: for example, had we included publications in other languages, we might have seen differences in the investigated countries, technologies, RET actors and journals. That being said, the included English publications do not reflect the diverse character of the renewable energy domain in terms of investigated actors, renewable energy technologies and infrastructure, and geography. The definition of RET actors that is used in this article describes a diverse group of actors in diverse organizations working on the implementation of renewable energy. However, in the discussed publications RET actors are often presented as a homogeneous and uniform group with similar interests, goals and discourses. Aside from the terms "developer" or "government", relatively little distinction is made within the RET actor category, the roles these actors take on or how they act in the context of public opposition (see also Figure 1). There is little distinction between actors representing different departments (technical, legal, stakeholder engagement) of organizations developing projects, different types of

organizations (public, private, etc.) or consortia consisting of different organizations.

The discussed publications also show little diversity in terms of the investigated renewable energy technologies and infrastructure: up till now the dominant focus has been wind energy, with little attention for other renewable energy technologies or infrastructure (Figure 2). The striking difference between the number of publications on wind and other technologies, suggests that wind is more contentious. However, recent years have seen growing local opposition towards (plans for) solar projects. As such, this difference could simply be explained by the sheer amount of global installed wind capacity (564GW in 2018 (International Renewable Energy Agency (IRENA), 2019)), as well as the relatively large number of (controversial) wind farms available for investigation. The geographical focus of the publications is also characterized by little diversity: five individual countries are investigated more often than five times (Figure 3). Well-established research groups either located in or with a geographical preference for these countries could explain these higher numbers. Or perhaps it is related to what Dai (2019, p. 53) points out: 'issues around public participation in energy transitions in non-Western democratic contexts have been an under-researched area'.

Most articles are found in journals related to policy and planning (Figure 4), which in itself is not surprising. What is notable is the limited presence of business, development or management-oriented journals. For example, we expected to find more research revolving around concepts such as social license to operate (SLO) and corporate social responsibility (CSR). These concepts are widely researched in the non-renewable energy industry and the extractive industry (for example (Gehman et al., 2017; Latapí Agudelo et al., 2020; J. M. Smith, 2019)). SLO and CSR practices in the renewable energy industry are investigated to a much lesser degree (Latapí Agudelo et al., 2020).

Future research needs to diversify in terms of renewable energy technologies and geographical contexts. This also opens up opportunities for comparative research: the publications included in this review offered a sample that was too small to make a meaningful comparison for example of the differences in technologies in relation to public opposition and the responses of RET actors. Future research could investigate questions such as: do RET actors' practices differ between different types of organizations (multinationals with no local connections, local energy cooperatives, etc.), energy technologies or geographical contexts? Comparison of RET actors' practices in projects with and without public opposition as well as comparison of RET actors with non-renewable energy actors are also interesting research avenues. Little is also known about the development of practices and assumptions over time: to what extent do RET actors (try to) learn from public opposition? Are there changes in their practices regarding (the design of) public participation or perspectives on the public and public opposition? Such

research requires methods for comparative and longitudinal case studies.

In order to unpack the diversity of RET actors and their practices in the context of controversies, we need to gain a better understanding of who these RET actors and the organizations they represent actually are. Projects are often developed by different types of consortia (for example, public-private) where different interests and values meet. Which departments are involved and what kind of decision-making power do they have regarding (interaction with) public opposition? What are RET actors' discourses, assumptions, expectations and practices in the context of energy controversies and public opposition? What are their approaches to the planning and development of renewable energy? Such questions help build a more fine-grained and rich understanding of RET actors that goes beyond current generic descriptions and classifications such as "project developer" or "government".

2.4.2 Descriptive nature of RET actor literature

What is also notable is that the majority of publications has a descriptive nature: actions, practices or discourses of RET actors in response to, or in anticipation of, public opposition are described, but the majority of results do not provide an explanation. For example, Landeta-Manzano et al. (2018) describe industry practices that are designed to achieve community acceptance of wind farms and simultaneously avoid conflict. However, in this publication, motivations or rationales underlying these practices, or explanations of why these practices are successful (or not), are not investigated. A reason for publications' descriptive nature might be that the majority of them concern case studies in which controversies are investigated from the perspective of multiple actors involved, including RET actors (see Figure 1). These multi-actor analyses often also have a strong focus on local communities or opponents and their experience of the controversy, while briefly reporting on RET actors. This means there is little room for in-depth investigation of RET actors and rationales underlying their responses to public opposition.

As such, there is a need for more explanatory research on RET actors and their practices. RET actors make assumptions and have expectations about the public, opponents, and their responses to renewable energy technologies and the planning process, which also shape RET actors' practices in terms of: 'how they ought to operate, how they do operate, and how they can and should engage with the public' (Walker et al., 2011, p. 7). Explanatory research can provide insights into how these actions and interactions of RET actors in energy controversies come about. What rationales do different types of organizations (public, private) have for their approach to public opposition, and how do these shape public engagement practices (Fiorino, 1990; Stirling, 2008; Walker et al., 2011)? Research that explores relationships between different categories of RET actors and develops an understanding of networks of RET actors and interactions between them is also lacking. Disciplines such as organizational studies, organizational anthropology and business

administration and methods such as ethnography (Espig & de Rijke, 2018; Goodman, 2018; J. Smith & High, 2017) can facilitate an explanatory understanding at inter- and intra-organizational levels. Questions related to organizational culture, identity and power dynamics (Kamsteeg & Wels, 2004; Müftüoglu et al., 2018) can help gain insights into intra-organizational dynamics and subsequently into explanations of (engagement) practices and interactions in the context of public opposition. For example, what kind of intra-organizational constraints and enablers do they experience when public opposition is anticipated or encountered (van de Grift et al., 2020)? How do organizational disagreements about (the level of) accommodation of public interests and concerns affect decisions on engagement with opposition?

2.4.3 Little research on RET actors accommodating public concerns

Most of the identified responses show RET actors trying to avoid or reduce public opposition. Or in a more direct way, they attempt to oppress or restrict it. Section 3.2.8 provides some examples of RET actors adapting projects or processes to accommodate public concerns. Nevertheless, this review has unearthed little research that investigates this type of responsiveness of RET actors toward public opposition in controversies. This is interesting, as there are more and more pleas for learning from public opposition and approaching it as a source of information about the diversity of normative appraisals in renewable energy planning (Cuppen, 2018; Cuppen et al., 2019; Pesch et al., 2017). These pleas are coming from academia, as well as practitioners. One example of RET actors attempting to engage with public opposition in a responsive way, that we know of from the Dutch context, is the Energy and Environment Learning Platform[6]. This community of practice, initiated by the energy industry and the Ministry of Economic Affairs and Climate, is geared toward knowledge exchange on community engagement in the energy transition. Other examples are voluntary codes of conduct on stakeholder engagement in renewable energy development, like the one created by the Dutch Association of Geothermal Operators (DAGO, 2019). However, such initiatives and practices of RET actors are not reported in this literature review. Perhaps the relatively slow speed of scientific publications is still catching up with such evolving practices in the world of energy transitions.

2.4.4 Implications for the broader context of research on energy controversies

Following the results discussed above, we share two observations that shed more light on the investigation of RET actors in the broader field of renewable energy controversies and its conflict dynamics.

The first observation we made while conducting this literature review is that some researchers explicitly highlight a bias in their research on RET actors (N. L. Hall et al., 2020;

6 LEO, in Dutch *Lerend Platform Energie en Omgeving*, www.platformleo.nl.

Songsore et al., 2018). For example, Hall et al. (N. L. Hall et al., 2020) use documents from wind energy developers to:

> understand the wind industry's current thinking, practices and trends in community engagement and benefit sharing. While we recognise a bias in this perspective, and note that research has recommended the benefits of holistic insights from multiple stakeholder perspectives and experiences (Songsore, Buzzelli, and Baxter 2018), these strategic documents are rarely shared externally and provide a unique developer-centric perspective that is rarely accessible (p. 125).

Although Hall et al. do explicitly state the value of this developer-centric approach, it is preceded by a disclaimer. One could ask why developer-centric research is explicitly labeled as biased, while most research on opponents, communities and residents engaged in energy controversies does not explicitly receive such a label. This creates the impression that investigation of certain actors is somehow equal to being their ally or championing their interests. We should follow the lead of Burningham et al. (2015), Cass and Walker (2009), and Hall (2014), and be cautious 'not to vilify developers or to romanticize project opponents (Lake 1993, Wexler 1996)' (Burningham et al., 2015, p. 258).

The second observation was made while we determined the eligibility of publications for this literature review. During this process, we noticed quite a number of articles and chapters that investigated practices of RET actors through the eyes of other stakeholders. Often these publications concerned stakeholders who were affected by RET actors' practices, such as residents and opponents (Aguilar-Støen & Hirsch, 2015; Dennison, 2017; Dunlap, 2018c, 2018a, 2018b; Jami & Walsh, 2017; Jijelava & Vanclay, 2018; Kirchherr et al., 2017; Lawrence, 2014; Maillé & Saint-Charles, 2014; Ramirez, 2021; Walsh, 2018). Researchers described and discussed these practices in more depth through accounts of other actors and their experiences with these practices. Often, these analyses "through the eyes of others" discuss practices that are characterized as having harmful consequences for local communities and opponents. Though several of these publications were out of scope for this literature review, we do feel it is important to share this observation, as it illustrates the aforementioned "obsession" of social science researchers with the public (Wolsink, 2019) and perhaps also hints at the tendencies to vilify RET actors and romanticize opponents (Burningham et al., 2015).

The above observations point to two 'tendencies' of researchers investigating RET actors: presenting RET actor research as biased and investigating RET actors through the perspective of other stakeholders. These tendencies could be born out of necessity and pragmatism: several researchers (Kirchherr et al., 2017; Maillé & Saint-Charles, 2014; Songsore et al., 2018) report that developers were not willing to participate in research projects due to existing tensions in controversies, or were only willing to respond via a

written statement. Getting access to RET actors is thus an important challenge for social science researchers.

The two tendencies could also indicate potential implicit assumptions among researchers regarding which perspectives, and subsequently which information, is considered relevant and legitimate when investigating energy controversies. This is potentially problematic as such research often serves as a starting point for recommendations to RET actors: what they should and should not do from the perspective of the affected or opposing stakeholders, or according to the researchers (for example (Díaz et al., 2017; Jami & Walsh, 2017; Upreti, 2004; Walsh, 2018)). As a research field that prides itself on a critical and reflective attitude, it might be insightful to apply this attitude to our own assumptions regarding RET actors.

One could argue that RET actors are generally in a more powerful position compared to communities and those opposing projects, and therefore the latter are often provided with a voice by researchers as a type of counterhegemonic action. Such an approach is justifiable as a way of addressing power asymmetries. At the same time, the importance of investigating powerful actors and elites has long been pointed out (Nader, 1972; S. Wright & Reinhold, 2011). By "obsessing" over publics (Wolsink, 2019), we run the risk of missing or misinterpreting potential valuable insights when investigating renewable energy controversies. We may very well come to different conclusions or recommendations if we opened up our research attention to include RET actors – especially given our finding that RET actors are treated with low resolution, i.e., as a rather homogeneous group, without much attention to diversity among RET actors. As a field, we need to have discussions on how to investigate multiple actors and perspectives, without compromising our ability to address apparent power asymmetries.

2.5 Conclusion

With this literature review we set out to map the current state of knowledge on RET actors in controversies surrounding renewable energy technologies and infrastructure. Reviewing the existing empirical social science research on RET actors reveals two main categories in this body of literature: RET actors' perceptions of public opposition (Section 3.1) and their responses to public opposition (Section 3.2). Reflecting on the literature, we made three observations (Section 4): (1) The diversity of RET actors, types of energy technologies or geographical areas is not reflected in the body of literature; (2) Publications are mainly of a descriptive character; (3) there is little research on how RET actors (attempt to) accommodate public concerns. Reflecting on the reviewed literature in the context of the broader field reveals that research that does focus on RET actors is on multiple occasions presented as biased. In addition, it often investigates RET actors

through the eyes of others, emphasizing a counterhegemonic perspective on renewable energy controversies.

With this review, we add to the current literature by providing a substantiation for existing calls (Burningham et al., 2015; Devine-Wright, 2011a; Devine-wright et al., 2017; van de Grift et al., 2020) to broaden the scope of social science research. In the discussion (Section 4), we have provided a number of suggestions for future research. These suggestions translate into an agenda for future social science research into RET actors involved in energy controversies:

1. The reviewed literature (with a few exceptions) currently shows a one-dimensional, generic picture of RET actors, their perspectives and practices. As such, this diversity of RET actors and their practices in the context of controversies needs to be unpacked. Future research also needs to diversify in terms of renewable energy technologies and geographical contexts. This also opens up opportunities for comparative research.
2. Due to the mainly descriptive character research into RET actors, future research needs to be aimed at providing explanations for RET actors' perspectives and practices. Such explanatory research helps build a more fine-grained and rich understanding of RET actors that goes beyond current generic descriptions.

Besides these two general directions, we want to make two additional points resulting from our research design. First, as mentioned earlier, our methodological choice to only include publications in English means we are potentially missing valuable insights into RET actors in the context of controversies published in other languages. As such, future research should include publications in other languages. Second, as we reviewed RET actors in the context of societal conflict means that related studies on this group which do not explicitly focus on societal conflict were not included. Such publications could provide valuable insights in terms of practices regarding engagement with (local) publics and communities (for example (Novikova, 2016; J. M. Smith, 2019). Reviewing RET actors, their perspectives and practices without societal conflict as a demarcation would provide a more comprehensive picture.

There is a clear need to further unpack the metaphorical black box of RET actors. Such research can contribute to a more fine-grained understanding of the (development of) conflict dynamics between the actors engaged in controversies and action perspectives for the involved actors. These insights would allow researchers to identify challenges and opportunities in the governance of renewable energy controversies, and provide recommendations for just and democratic energy transitions that are more attuned to RET actors. This would be both timely and necessary considering the continuation and upscaling of energy transitions worldwide.

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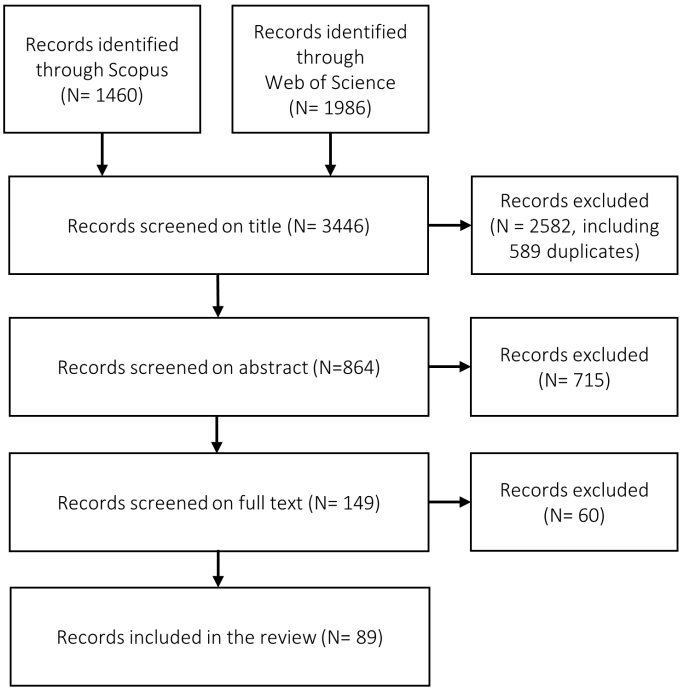
Appendix A. Flow chart of selection publications for systematic literature review



Appendix B. Overview publications included in literature review

Publications (in alphabetical order)	RET actors studied	Renewable energy technology & infrastructure	Geographical focus	Theme
M. Aguilar-Støen, C. Hirsch, Bottom-up responses to environmental and social impact assessments: A case study from Guatemala, Environ. Impact Assess. Rev. 62 (2017)	Multiple actors, including RET actors	Hydropower	Guatemala	3.2.1
M. Aguilar-Støen, C. Hirsch, Environmental Impact Assessments, local power and self-determination: The case of mining and hydropower development in Guatemala, Extr. Ind. Soc. 2 (2015) 472–479.	Multiple actors, including RET actors	Hydropower	Guatemala	3.2.7
M. Aitken, A three-dimensional view of public participation in Scottish land-use planning: Empowerment or social control?, Plan. Theory. 9 (2010) 248–264	Multiple actors, including RET actors	Onshore wind	Scotland	3.2.6; 3.2.7
M. Aitken, Wind power and community benefits: Challenges and opportunities, Energy Policy. 38 (2010) 6066–6075.	Multiple actors, including RET actors	Onshore wind	United Kingdom	3.2.5
C. Anderson, The networked minority: How a small group prevailed in a local windfarm conflict, Energy Policy. 58 (2013) 97–108.	Multiple actors, including RET actors	Onshore wind	Australia	3.2.1
E. Atkins, Dammed and diversionary: The multi-dimensional framing of Brazil's Belo Monte dam, Singap. J. Trop. Geogr. 38 (2017) 276–292.	Government - national	Hydropower	Brazil	3.2.6
J. Barry, G. Ellis, C. Robinson, Cool rationalities and hot air: A rhetorical approach to understanding debates on renewable energy, Glob. Environ. Polit. 8 (2008) 67–98.	RET actors and opponents	Onshore wind	Northern Ireland	3.1.3; 3.2.4; 3.2.6
P. Bosley, K. Bosley, Public acceptability of California's wind energy developments: Three studies, Wind Eng. 12 (1988) 311–318.	Multiple actors, including RET actors	Onshore wind	United States	3.1.2
P. Boucher, Biofuel development in the UK: Regulatory and engineering visions beyond a changing controversy, in: T. Roberts, P. Upham, C. Mclachlan, S. Mander, C. Gough, P. Boucher, D. Abi Ghanem (Eds.), Low-Carbon Energy Controv., 1st ed., Routledge, London, 2013: pp. 177–196.	Multiple actors, including RET actors	Bioenergy	United Kingdom	3.2.8

Table continues

Publications (in alphabetical order)	RET actors studied	Renewable energy technology & infrastructure	Geographical focus	Theme
S. Bourdin, M. Colas, F. Raulin, Understanding the problems of biogas production deployment in different regions: territorial governance matters too, J. Environ. Plan. Manag. 63 (2020) 1655–1673.	Multiple actors, including RET actors	Bioenergy	France	3.2.1
S. Breukers, M. Wolsink, Wind power implementation in changing institutional landscapes: An international comparison, Energy Policy. 35 (2007) 2737–2750	Multiple actors, including RET actors	Onshore wind	Multiple: England, Germany, The Netherlands	3.1.3
A. Bues, Planning, Protest, and Contentious Politics: The Governance of Wind Energy in Brandenburg and Ontario, Disp - Plan. Rev. 54 (2018) 34–45.	RET actors and opponents	Wind	Multiple: Canada, Germany	3.2.3
K. Burningham, J. Barnett, G. Walker, An Array of Deficits: Unpacking NIMBY Discourses in Wind Energy Developers' Conceptualizations of Their Local Opponents, Soc. Nat. Resour. 28 (2015) 246–260.	Multiple - industry	Multiple RET	United Kingdom	3.1.3; 3.2.4; 3.2.6
N. Cass, G. Walker, Emotion and rationality: The characterisation and evaluation of opposition to renewable energy projects, Emot. Sp. Soc. 2 (2009) 62–69.	Multiple actors, including RET actors	Wind	United Kingdom	3.1.1; 3.1.2; 3.2.3; 3.2.4
T. Christidis, G. Lewis, P. Bigelow, Understanding support and opposition to wind turbine development in Ontario, Canada and assessing possible steps for future development, Renew. Energy. 112 (2017) 93–103.	Multiple actors, including RET actors	Wind	Canada	3.1.2
M. Cotton, P. Devine-Wright, Discourses of energy infrastructure development: A Q-method study of electricity transmission line siting in the UK, Environ. Plan. A. 43 (2011) 942–960.	Multiple actors, including RET actors	Electricity transmission lines	United Kingdom	3.1.2
M. Cotton, P. Devine-Wright, NIMBYism and community consultation in electricity transmission network planning, in: P. Devine-Wright (Ed.), Renew. Energy Public From NIMBY to Particip., Earthscan, Routledge, London, 2011: pp. 115–128.	Electricity network operators	Electricity transmission lines	United Kingdom	3.1.2; 3.2.1
R. Cowell, Wind power and "the planning problem": The experience of Wales, Eur. Environ. 17 (2007) 291–306.	Government - national	Onshore wind	Wales	3.2.8

Table continues

Publications (in alphabetical order)	RET actors studied	Renewable energy technology & infrastructure	Geographical focus	Theme
R. Cowell, G. Bristow, M. Munday, Acceptance, acceptability and environmental justice: The role of community benefits in wind energy development, 0568 (2011).	Multiple actors, including RET actors	Onshore wind	Wales	3.2.5
Y. Dai, Policy instrument designed to gain transition legitimacy: A case of Chinese nuclear development, Environ. Innov. Soc. Transitions. 30 (2019) 43–58.	Multiple RET actors	Nuclear energy	China	3.2.2 3.2.4
J. Dennison, Entangled sovereignties: The Osage Nation's interconnections with governmental and corporate authorities, Am. Ethnol. 44 (2017) 684–696.	Multiple actors, including RET actors	Onshore wind	United States	3.2.7
P. Díaz, C. Adler, A. Patt, Do stakeholders' perspectives on renewable energy infrastructure pose a risk to energy policy implementation? A case of a hydropower plant in Switzerland, Energy Policy. 108 (2017) 21–28.	RET actors and opponents	Hydropower	Switzerland	3.1.2
A. Dunlap, "A Bureaucratic Trap:" Free, Prior and Informed Consent (FPIC) and Wind Energy Development in Juchitán, Mexico, Capital. Nature, Social. 29 (2018) 88–108.	Multiple actors, including RET actors	Onshore wind	Mexico	3.2.7
A. Dunlap, Counterinsurgency for wind energy: the Bíi Hioxo wind park in Juchitán, Mexico, J. Peasant Stud. 45 (2018) 630–652.	Multiple actors, including RET actors	Onshore wind	Mexico	3.2.7
A. Dunlap, Insurrection for land, sea and dignity: Resistance and autonomy against wind energy in Álvaro Obregón, Mexico, J. Polit. Ecol. 25 (2018) 120–143.	Multiple actors, including RET actors	Onshore wind	Mexico	3.2.7
A. Dunlap, The Politics of Ecocide, Genocide and Megaprojects: Interrogating Natural Resource Extraction, Identity and the Normalization of Erasure, J. Genocide Res. 0 (2020) 1–24.	Multiple actors, including RET actors	Onshore wind	Mexico	3.2.7
S. Fast, Qualified, absolute, idealistic, impatient: dimensions of host community responses to wind energy projects, Environ. Plan. A. 47 (2015) 1540–1557.	Multiple actors, including RET actors	Onshore wind	Canada	3.1.3

Table continues

Publications (in alphabetical order)	RET actors studied	Renewable energy technology & infrastructure	Geographical focus	Theme
C.A. Frate, C. Brannstrom, Stakeholder subjectivities regarding barriers and drivers to the introduction of utility-scale solar photovoltaic power in Brazil, Energy Policy. 111 (2017) 346–352.	Multiple - industry	Solar	Brazil	3.1.2
T. Gray, C. Haggett, D. Bell, Offshore wind farms and commercial fisheries in the UK: A study in stakeholder consultation, Ethics, Place Environ. 8 (2005) 127–140.	Multiple actors, including RET actors	Offshore wind	United Kingdom	3.2.5
N. Hall, P. Ashworth, P. Devine-Wright, Societal acceptance of wind farms: Analysis of four common themes across Australian case studies, Energy Policy. 58 (2013) 200–208.	Multiple actors, including RET actors	Onshore wind	Australia	3.1.3
N.L. Hall, J. Hicks, T. Lane, E. Wood, Planning to engage the community on renewables: insights from community engagement plans of the Australian wind industry, Australas. J. Environ. Manag. 27 (2020) 123–136.	Developers	Onshore wind	Australia	3.2.1
N. L. Hall, The discourse of "social licence to operate": case study of the Australian wind industry, AIMS Energy. 2 (2014) 443–460.	Stakeholder engage-ment pro-fessionals	Onshore wind	Australia	3.1.3; 3.2.1; 3.2.5
R. Hindmarsh, Wind Farms and Community Engagement in Australia: A Critical Analysis for Policy Learning, East Asian Sci. Technol. Soc. 4 (2010) 541–563.	Government - sub-national	Onshore wind	Australia	3.1.3; 3.2.4; 3.2.6; 3.2.7
R. Hindmarsh, Hot air ablowin! "Media-speak", social conflict, and the Australian "decoupled" wind farm controversy, Soc. Stud. Sci. 44 (2014) 194–217.	Multiple actors, including RET actors	Onshore wind	Australia	3.2.6
C. Howe, Ecoautoridad Antropocenica: Los Vientos de Oaxaca, Anthropol. Q. 87 (2014) 381–404.	Multiple actors, including RET actors	Onshore wind	Mexico	3.2.6
A. Huber, D. Joshi, Hydropower, Anti-Politics, and the Opening of New Political Spaces in the Eastern Himalayas, World Dev. 76 (2015) 13–25.	Multiple actors, including RET actors	Hydropower	India	3.2.7
A. Israel, R.J. Herrera, The governance of Peruvian energy transitions: Path dependence, alternative ideas and change in national hydropower expansion, Energy Res. Soc. Sci. 69 (2020) 101608.	Multiple actors, including RET actors	Hydropower	Peru	3.2.1

Table continues

Publications (in alphabetical order)	RET actors studied	Renewable energy technology & infrastructure	Geographical focus	Theme
A.A. Jami, P.R. Walsh, From consultation to collaboration: A participatory framework for positive community engagement with wind energy projects in Ontario, Canada, Energy Res. Soc. Sci. 27 (2017) 14–24.	Multiple actors, including RET actors	Onshore wind	Canada	3.1.1; 3.1.3
A.A. Jami, P.R. Walsh, Wind power deployment: The role of public participation in the decision-making process in Ontario, Canada, Sustain. 8 (2016).	Multiple actors, including RET actors	Onshore wind	Canada	3.2.2
T. Jenssen, The good, the bad, and the ugly: Acceptance and opposition as keys to bioenergy technologies, J. Urban Technol. 17 (2010) 99–115.	Multiple actors, including RET actors	Bioenergy	Germany	3.1.3
D. Jijelava, F. Vanclay, How a large project was halted by the lack of a social Licence to operate: Testing the applicability of the Thomson and Boutilier model, Environ. Impact Assess. Rev. 73 (2018) 31–40.	Multiple actors, including RET actors	Hydropower	Georgia	3.2.5; 3.2.7
E. Jolivet, E. Heiskanen, Blowing against the wind-An exploratory application of actor network theory to the analysis of local controversies and participation processes in wind energy, Energy Policy. 38 (2010) 6746–6754.	Multiple actors, including RET actors	Onshore wind	France	3.2.8
N. Juerges, J. Leahy, J. Newig, A typology of actors and their strategies in multi-scale governance of wind turbine conflict within forests, Land Use Policy. 96 (2020) 104691.	Multiple actors, including RET actors	Onshore wind	Multiple: Germany, United States	3.2.5
N. Juerges, J. Newig, What role for frames in scalar conflicts?, Land Use Policy. 49 (2015) 426–434.	Multiple actors, including RET actors	Onshore wind	Germany	3.1.2; 3.1.3
S. Kerr, K. Johnson, S. Weir, Understanding community benefit payments from renewable energy development, Energy Policy. 105 (2017) 202–211.	Multiple actors, including RET actors	Multiple RET	United Kingdom	3.2.4
J. Kirchherr, K. J. Charles, M.J. Walton, The interplay of activists and dam developers: the case of Myanmar's mega-dams, Int. J. Water Resour. Dev. 33 (2017) 111–131.	RET actors and opponents	Hydropower	Myanmar	3.2.8

Table continues

Publications (in alphabetical order)	RET actors studied	Renewable energy technology & infrastructure	Geographical focus	Theme
B. Landeta-Manzano, G. Arana-Landín, P.M. Calvo, I. Heras-Saizarbitoria, Wind energy and local communities: A manufacturer's efforts to gain acceptance, Energy Policy. 121 (2018) 314–324.	Developers	Onshore wind	Multiple	3.2.1; 3.2.5
R. Lawrence, Internal colonisation and Indigenous resource sovereignty: Wind power developments on traditional Saami lands, Environ. Plan. D Soc. Sp. 32 (2014) 1036–1053.	Multiple actors, including RET actors	Onshore wind	Sweden	3.2.7
M. Leibenath, A. Otto, Competing Wind Energy Discourses, Contested Landscapes, Landsc. Online. 38 (2014) 1–18.	RET actors and opponents	Onshore wind	Germany	3.2.6
G. Lintz, M. Leibenath, The politics of energy landscapes: The influence of local anti-wind initiatives on state policies in Saxony, Germany, Energy. Sustain. Soc. 10 (2020).	RET actors and opponents	Onshore wind	Germany	3.2.8
M.È. Maillé, J. Saint-Charles, Fuelling an environmental conflict through information diffusion strategies, Environ. Commun. 8 (2014) 305–325.	RET actors and opponents	Onshore wind	Canada	3.2.7
N. Martinez, N. Komendantova, The effectiveness of the social impact assessment (SIA) in energy transition management: Stakeholders' insights from renewable energy projects in Mexico, Energy Policy. 145 (2020) 111744.	Multiple actors, including RET actors	Multiple RET	Mexico	3.2.2; 3.2.3
E. Martínez-Mendoza, L.A. Rivas-Tovar, L.E. García-Santamaría, Wind energy in the Isthmus of Tehuantepec: conflicts and social implications, Environ. Dev. Sustain. (2021)..	Multiple actors, including RET actors	Onshore wind	Mexico	3.1.2
A. McClanahan, The ethics of landscape: Discourses of cultural and environmental sustainability in the heart of Neolithic Orkney World Heritage Site, in: L. Bourdeau, M. Gravari-Barbas, M. Robinson (Eds.), World Heritage, Tour. Identity Inscr. Co-Production, Routledge, 2015: pp. 217–226.	Multiple actors, including RET actors	Onshore wind	Scotland	3.2.5

Table continues

Publications (in alphabetical order)	RET actors studied	Renewable energy technology & infrastructure	Geographical focus	Theme
C. McLachlan, S. Mander, What have facts got to do with it anyway? Competing knowledge claims in low-carbon energy controversy, in: T. Roberts, P. Upham, C. Mclachlan, S. Mander, C. Gough, P. Boucher, D. Abi Ghanem (Eds.), Low-Carbon Energy Controv., 1st ed., Routledge, London, 2013: pp. 85–113.	Multiple actors, including RET actors	Multiple RET	United Kingdom	3.1.3; 3.2.8
S. Mjahed Hammami, S. Chtourou, H. Al Moosa, A holistic approach to understanding the acceptance of a community-based renewable energy project: A pathway to sustainability for Tunisia's rural region, Bus. Strateg. Environ. 27 (2018) 1535–1545.	Multiple actors, including RET actors	Onshore wind	Tunisia	3.2.5
K. Mogensen, From public relations to corporate public diplomacy, Public Relat. Rev. 43 (2017) 605–614.	Multiple actors, including RET actors	Hydropower	Myanmar	3.2.8
K.K. Mulvaney, P. Woodson, L.S. Prokopy, A tale of three counties: Understanding wind development in the rural Midwestern United States, Energy Policy. 56 (2013) 322–330.	RET actors and opponents	Onshore wind	United States	3.1.3
T. Niazi, Contesting Instrumental Knowledge With Communicative Action: Why Kalabagh Dam (Pakistan) Remains Unbuilt, Organ. Environ. 32 (2019) 441–465.	Multiple actors, including RET actors	Hydropower	Pakistan	3.2.6
M.J. Pasqualetti, C. Schwartz, Siting Solar Power in Arizona: A Public Value Failure?, in: P. Devine-Wright (Ed.), Renew. Energy Public From NIMBY to Particip., 1ste ed., Routledge, London, 2011: pp. 167–185.	Multiple actors, including RET actors	Onshore wind	United States	3.2.2
M.J. Pasqualetti, Wind energy landscapes: Society and technology in the california desert, Soc. Nat. Resour. 14 (2001) 689–699.	Multiple actors, including RET actors	Solar	United States	3.2.4
Y. Pepermans, I. Loots, Wind farm struggles in Flanders fields: A sociological perspective, Energy Policy. 59 (2013) 321–328.	Multiple actors, including RET actors	Onshore wind	Belgium	3.2.2; 3.2.3; 3.2.4
A. Proka, M. Hisschemöller, D. Loorbach, Transition without conflict? Renewable energy initiatives in the dutch energy transition, Sustain. 10 (2018).	Multiple RET actors	Multiple RET	The Netherlands	3.1.3; 3.2.3

Table continues

Publications (in alphabetical order)	RET actors studied	Renewable energy technology & infrastructure	Geographical focus	Theme
J. Ramirez, Contentious Dynamics Within the Social Turbulence of Environmental (In)justice Surrounding Wind Energy Farms in Oaxaca, Mexico, J. Bus. Ethics. 169 (2021) 387–404.	Multiple actors, including RET actors	Onshore wind	Mexico	3.2.8
J. Ramirez, Indigenous communities and mega-projects: Corporate social responsibility (CSR) and consultation-consent principles, in: D. Blowfield, M., Karam, C., & Jamali (Ed.), Dev. Corp. Soc. Responsib. Vol. 1 Multinatl. Corp. Glob. Context, 1st editio, Routledge, 2017.	Multiple actors, including RET actors	Onshore wind	Mexico	3.2.8
K.E. Rignall, Solar power, state power, and the politics of energy transition in pre-Saharan Morocco, Environ. Plan. A. 48 (2016) 540–557.	Government - national	Solar	Morocco	3.2.6
D. Rudolph, J.K. Kirkegaard, Making Space for Wind Farms: Practices of Territorial Stigmatisation in Rural Denmark, Antipode. 51 (2019) 642–663.	Developers	Onshore wind	Denmark	3.2.1
I.L. Saglie, T.H. Inderberg, H. Rognstad, What shapes municipalities' perceptions of fairness in windpower developments?, Local Environ. 25 (2020) 147–161.	Government - local	Onshore wind	Norway	3.2.8
P. Scherhaufer, S. Höltinger, B. Salak, T. Schauppenlehner, J. Schmidt, Patterns of acceptance and non-acceptance within energy landscapes: Acase study on wind energy expansion in Austria, Energy Policy. 109 (2017) 863–870.	Multiple actors, including RET actors	Onshore wind	Austria	3.1.3; 3.2.3; 3.2.6
Z.C. Siamanta, A. Dunlap, "Accumulation by wind energy": Wind energy development as a capitalist Trojan horse in Crete, Greece and Oaxaca, Mexico, Acme. 18 (2019) 925–955.	Multiple actors, including RET actors	Onshore wind	Multiple: Greece, Mexico	3.2.6; 3.2.7
R.G. Sierra, A.Z. Sarmiento, Hydropower megaprojects in Colombia and the influence of local communities: A view from prospect theory to decision making process based on expert judgment used in large organizations, Int. J. Energy Econ. Policy. 6 (2016) 408–420.	Multiple actors, including RET actors	Hydropower	Colombia	3.2.1
N. Simcock, Procedural justice and the implementation of community wind energy projects: A case study from South Yorkshire, UK, Land Use Policy. 59 (2016) 467–477.	RET actors and opponents	Onshore wind	United Kingdom	3.1.2; 3.1.3; 3.2.1; 3.2.5

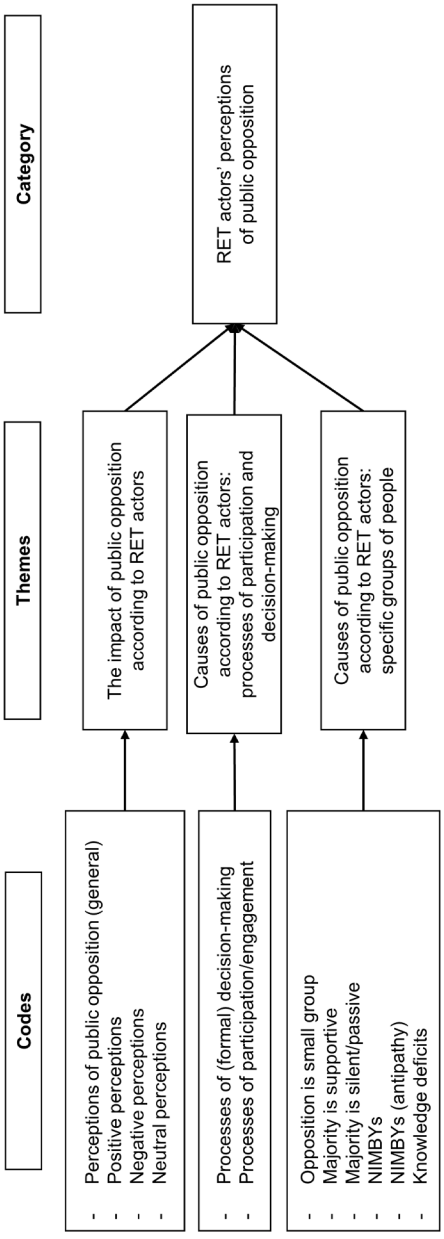
Table continues

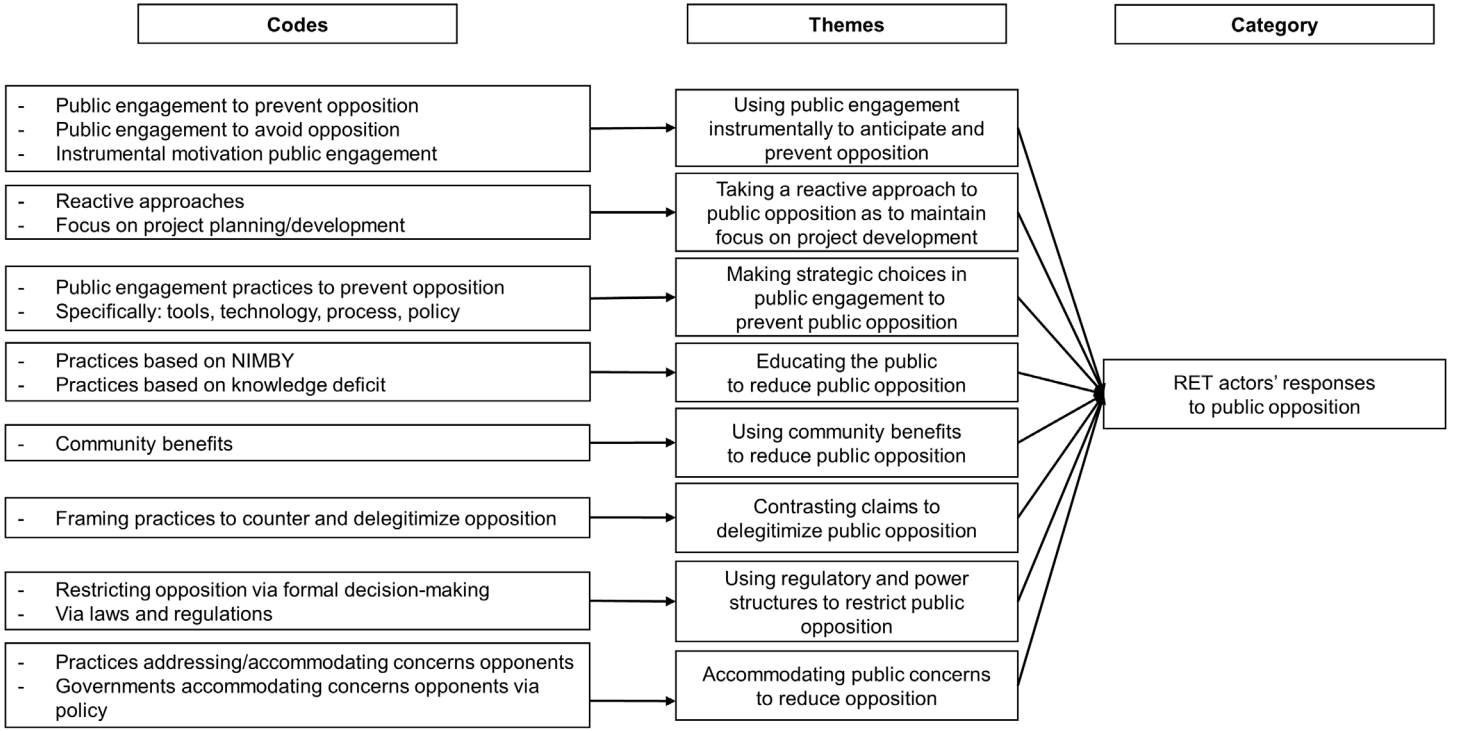
Publications (in alphabetical order)	RET actors studied	Renewable energy technology & infrastructure	Geographical focus	Theme
E. Songsore, M. Buzzelli, J. Baxter, Understanding developer perspectives and experiences of wind energy development in Ontario, Environ. Plan. C Polit. Sp. 36 (2018) 649–668.	Developers	Wind	Canada	3.1.1; 3.1.3; 3.2.5
T. Spiess, C. De Sousa, Barriers to Renewable Energy Development on Brownfields, J. Environ. Policy Plan. 18 (2016) 507–534.	Multiple - industry	Multiple RET	Multiple: majority participants United States	3.1.1; 3.2.4
E.R. Stafford, C.L. Hartman, Resolving community concerns over local wind power development in Utah, Sustainability. 5 (2012) 38–43.	Multiple actors, including RET actors	Onshore wind	United States	3.2.1
M. Suškevičs, S. Eiter, S. Martinat, D. Stober, E. Vollmer, C.L. de Boer, M. Buchecker, Regional variation in public acceptance of wind energy development in Europe: What are the roles of planning procedures and participation?, Land Use Policy. 81 (2019) 311–323.	Experts	Wind	Multiple: Europe	3.1.2
R. Tafon, D. Howarth, S. Griggs, The politics of Estonia's offshore wind energy programme: Discourse, power and marine spatial planning, Environ. Plan. C Polit. Sp. 37 (2019) 157–176.	Multiple actors, including RET actors	Offshore wind	Estonia	3.2.6
B.R. Upreti, Conflict over biomass energy development in the United Kingdom: Some observations and lessons from England and Wales, Energy Policy. 32 (2004) 785–800.	Multiple actors, including RET actors	Bioenergy	United Kingdom	3.2.4
E. van de Grift, E. Cuppen, S. Spruit, Co-creation, control or compliance? How Dutch community engagement professionals view their work, Energy Res. Soc. Sci. 60 (2020).	Stakeholder engage-ment pro-fessionals	Multiple RET	The Netherlands	3.2.1; 3.2.2
E.C. van der Waal, H.J. van der Windt, R. Botma, E.C.J. van Oost, Being a better neighbor: A value-based perspective on negotiating acceptability of locally-owned wind projects, Sustain. 12 (2020) 1–18.	Multiple actors, including RET actors	Onshore wind	The Netherlands	3.2.1
I. Verhoeven, Contentious governance around climate change measures in the Netherlands, Env. Polit. 00 (2020) 1–23.	RET actors and opponents	Nearshore wind	The Netherlands	3.2.6

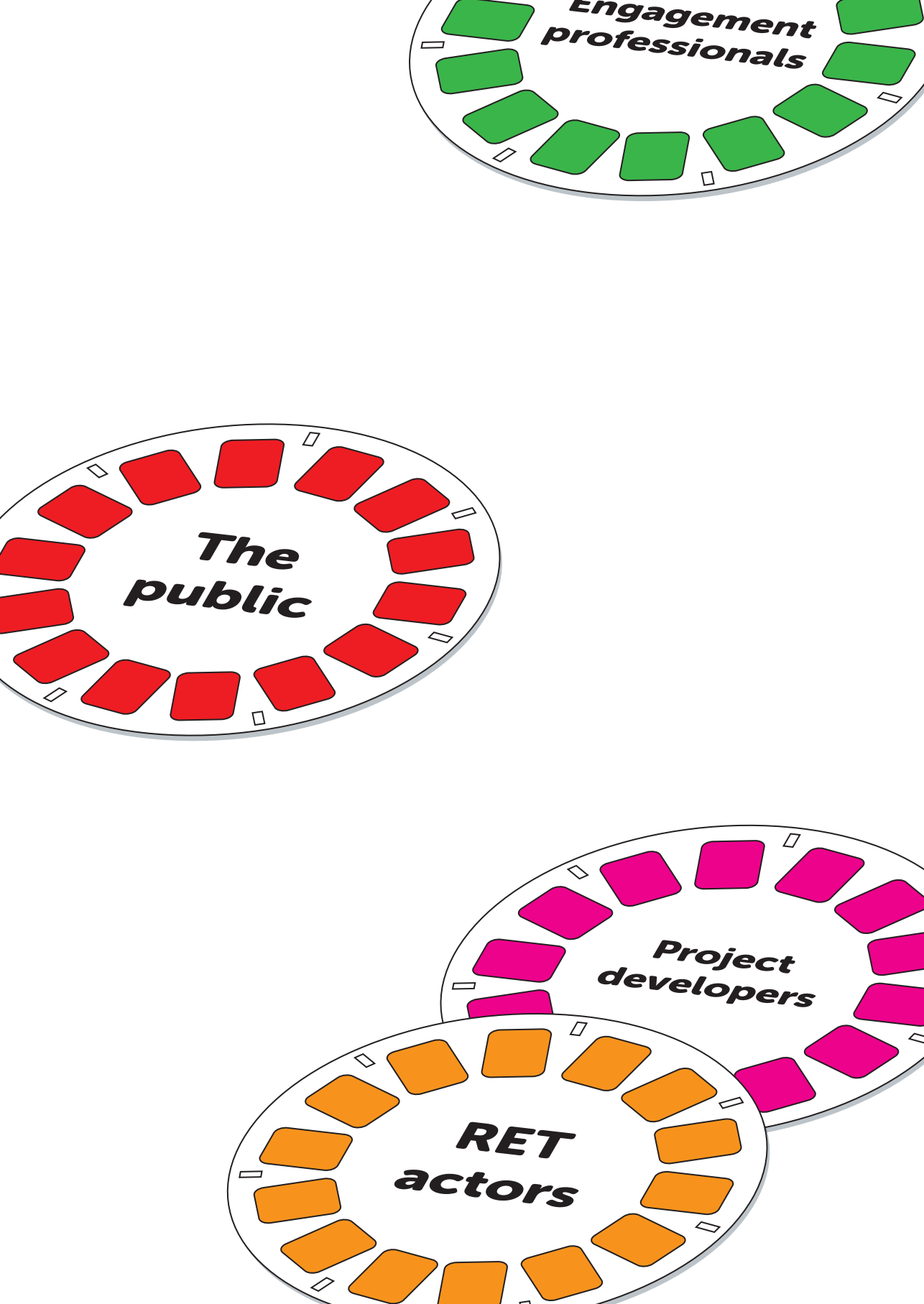
Table continues

Publications (in alphabetical order)	RET actors studied	Renewable energy technology & infrastructure	Geographical focus	Theme
Å. Waldo, Offshore wind power in Sweden-A qualitative analysis of attitudes with particular focus on opponents, Energy Policy. 41 (2012) 692–702.	Multiple actors, including RET actors	Offshore wind	Sweden	3.1.3; 3.2.4
C. Walker, J. Baxter, Procedural justice in Canadian wind energy development: A comparison of community-based and technocratic siting processes, Energy Res. Soc. Sci. 29 (2017) 160–169.	Multiple actors, including RET actors	Wind	Canada	3.2.1
C. Walker, J. Baxter, "It's easy to throw rocks at a corporation": wind energy development and distributive justice in Canada, J. Environ. Policy Plan. 19 (2017) 754–768.	Multiple actors, including RET actors	Onshore wind	Canada	3.2.5
G. Walker, N. Cass, K. Burningham, J. Barnett, Renewable energy and sociotechnical change: Imagined subjectivities of "the public" and their implications, Environ. Plan. A. 42 (2010) 931–947.	Multiple actors, including RET actors	Multiple RET	United Kingdom	3.1.1; 3.1.3; 3.2.1; 3.2.5; 3.2.8
S. Weir, S. Kerr, Property, power and planning: Attitudes to spatial enclosure in Scottish seas, Mar. Policy. 108 (2019) 103633.	Multiple actors, including RET actors	Multiple RET	Scotland	3.2.8
M. Wolsink, Discourses on the Implementation of Wind Power: Stakeholder Views on Public Engagement, in: P. Devine-Wright (Ed.), Renew. Energy Public From NIMBY to Particip., 1st ed., Routledge, London, 2014: pp. 75–87.	Multiple actors, including RET actors	Onshore wind	Multiple: England, Germany, The Netherlands	3.2.1
M. Wolsink, Near-shore wind power-Protected seascapes, environmentalists' attitudes, and the technocratic planning perspective, Land Use Policy. 27 (2010) 195–203.	Multiple actors, including RET actors	Nearshore wind	The Netherlands	3.1.3; 3.2.7
E. Zárate-Toledo, R. Patiño, J. Fraga, Justice, social exclusion and indigenous opposition: A case study of wind energy development on the Isthmus of Tehuantepec, Mexico, Energy Res. Soc. Sci. 54 (2019) 1–11.	Multiple actors, including RET actors	Onshore wind	Mexico	3.2.8

Appendix C. Overview of main codes per theme and category




Codes
Themes
Category
- Public engagement to prevent opposition
- Public engagement to avoid opposition
- Instrumental motivation public engagement
Using public engagement instrumentally to anticipate and prevent opposition
- Reactive approaches
- Focus on project planning/development
Taking a reactive approach to public opposition as to maintain focus on project development
- Public engagement practices to prevent opposition
- Specifically: tools, technology, process, policy
Making strategic choices in public engagement to prevent public opposition
- Practices based on NIMBY
- Practices based on knowledge deficit
Educating the public to reduce public opposition
- Community benefits
Using community benefits to reduce public opposition
- Framing practices to counter and delegitimize opposition
Contrasting claims to delegitimize public opposition
- Restricting opposition via formal decision-making
- Via laws and regulations
Using regulatory and power structures to restrict public opposition
- Practices addressing/accommodating concerns opponents
- Governments accommodating concerns opponents via policy
Accommodating public concerns to reduce opposition
RET actors' responses to public opposition


Engagement professionals
The public
Project developers
RET actors

Chapter 3

Co-creation, control or compliance? How Dutch community engagement professionals view their work*

* This chapter has been published as: Van de Grift, E., Cuppen, E., & Spruit, S. (2020). Co-creation, control or compliance? How Dutch community engagement professionals view their work. Energy Research & Social Science, 60(September 2019). https://doi.org/10.1016/j.erss.2019.101323

3.1 Introduction

Transformation of the energy system presents a wide variety of actors across different sites and scales with numerous challenges spanning technical, legal, policy, and social dimensions (Fraune and Knodt 2018; Richards, Noble, and Belcher 2012; Rogge, Kern, and Howlett 2017; Sarrica et al. 2016; Schumacher 2019). Among these are social conflicts over the planning and development of energy infrastructure, such as wind, solar, geothermal, and transmission lines (Breukers and Wolsink 2007; Ciupuliga and Cuppen 2013; Devine-Wright 2011b; Ejderyan, Ruef, and Stauffacher 2019; Fast et al. 2016; Moore and Hackett 2016). Such planning conflicts typically concern not only the technology itself (such as its risks or its fit in the landscape), but also the procedures and processes of decision-making (Pesch et al. 2017).

Local opposition to energy technology is a widely studied phenomenon. There is a plethora of research on community acceptance, typically investigating the positions and viewpoints of opposing publics (Aitken, Haggett, and Rudolph 2016). The idea that their responses can be considered purely as NIMBY ('not in my backyard') reactions (Walker et al. 2010) has been criticized for being too simplistic and ineffective in dealing with public responses (Burningham, Barnett, and Thrush 2006; Haggett 2011; Wolsink 2000). Misconceptions of this kind may even leave local stakeholders feeling powerless and disillusioned by formal processes of engagement (Butler, Parkhill, and Pidgeon 2011) and so amplify public opposition (Cotton and Devine-Wright 2011).

In policy and planning theory, participation by the local community is typically considered to be critical to energy technology planning. This has led to criticism of, for instance, the way decision-making procedures have traditionally been dominated by top-down approaches (Devine-Wright 2011a) known as the 'decide-announce-defend' (DAD) model (Ducsik 1981). In this paper we use the term community engagement (CE) to denote all activities by project developers intended to involve people living close to a (planned) energy project in decision-making or planning. The project developers in this case can be companies, governments, public-private networks, or energy cooperatives. Community engagement refers to 'activities implemented by firms [in our case project developers] to work collaboratively with and through groups of people to address issues affecting the social well-being of those people' (Gawcett et al., 1995; Scantlebury 2003 in (Bowen, Herremans, and Newenham-Kahindi 2010)).

Obviously, how public engagement takes shape and plays out in real energy planning processes depends on the interactions between project developers, or those 'inviting' communities to participate, and the invited (as well as non-invited) communities or individuals. CE is a dynamic process of sociopolitical interactions between publics on

the one hand and project developers (e.g. energy companies and/or governments) on the other (following (Devine-Wright 2011a)).

Although the literature is rich in studies investigating public responses or engagement in planning processes, a good understanding of how project developers' motivations, beliefs, and strategies shape CE remains lacking. Such understanding is necessary, however, in order to arrive at a comprehensive and holistic understanding of CE. It requires the uncovering of internal organizational and institutional dynamics (Breukers et al. 2008), as well as project developers' rationales and beliefs, since such factors drive interactions with publics (Burningham, Barnett, and Walker 2015). There has been only very limited attention to project developers in the literature on CE (some exceptions, most in relation to onshore wind, are (Burningham et al. 2015; Cotton and Devine-Wright 2011; Fast et al. 2016; Jami and Walsh 2017; Songsore, Buzzelli, and Baxter 2018)), and it is this gap that we intend to address with this paper.

Our focus is on the work of the professionals responsible for organizing participation related to energy projects on behalf of a project developer. We refer to these individuals as 'community engagement professionals' (CEPs). They are concerned with the way projects are embedded in a specific living or natural environment and the participation of local communities in those projects. For instance, they organize local information meetings, bring local stakeholders together, build relationships with landowners, and set up funds for community resources. Since CEPs play a pivotal role in community engagement, empirical investigation of how they view their practice can contribute to a more comprehensive understanding of dynamics of CE.

The research question we address in this paper is: *How do community engagement professionals view community engagement in energy projects, and how do they view their own role therein?*

Empirically, our study focuses on the Netherlands. In recent years there have been renewed attempts there to organize CE in more open and deliberative ways. In our fieldwork we have encountered energy companies that are experimenting with engagement processes for projects where it has not even yet been decided what technology will be used or where the project will be located. In addition, a number of municipalities are developing participatory processes to engage citizens in developing energy landscapes or scenarios for transitioning to CO_2-neutral energy provision, linking energy to other social issues and concerns (e.g. safety, poverty). There is a growing group of professionals working on CE in the planning and development of new energy projects, and a strong network of CEPs who have organized themselves into a community of practice (called 'Learning Platform

Energy & Surroundings'[1]). This new participatory surge is driven partly by the fierce opposition that numerous energy projects have faced in recent years, combined with the need to speed up efforts to transition to a more renewable energy system.

The Netherlands is a relatively small and densely populated country; space for new infrastructural developments is scarce. The government has set a national target to reduce CO_2 emissions by 49% in 2030, as compared to 1990, and 95% in 2050. Over the past year, more than 100 organizations have taken part in negotiations resulting in a National Climate Agreement, which describes the measures that need to be taken in different sectors and domains to achieve the targets for 2030. Such negotiation processes, involving governments, industries, interest groups, and civil society are typical of Dutch decision-making (an approach often referred to as 'polder culture'). The energy transition is a heavily debated topic, with increasing coverage in the media. The implementation of mitigating measures has proven difficult in recent years, with social conflict and opposition to technologies such as onshore wind and carbon capture and storage being key examples. It is against this backdrop that public and private actors are seeking to find feasible and societally supported alternatives for the production and transport of electricity and heat. These include for instance solar, onshore and offshore wind, biogas, and geothermal energy,[2] as well as storage and flexibility technologies such as hydrogen, batteries, and power-to gas.

The structure of this paper is as follows. Section 2 provides theoretical foundations for community engagement in order to further articulate the scope of analysis and to elaborate conceptualization of CEPs. Section 3 substantiates and describes the research method. Q methodology is then applied to identify CEPs' perspectives on their work. Analysis of the results produces three broad perspectives, which are described in Section 4. This is followed by a discussion and comparison of those perspectives in Section 5. We conclude with the implications of our findings for project developers and energy governance in Section 6.

3.2 Community engagement professionals as front-line workers

3.2.1 Community engagement

Community engagement research is undertaken in several different disciplines, ranging from business ethics and strategic management to public policy and planning (see (Bowen et al. 2010) for a review). Our understanding of CE is embedded in policy and planning literature, where it is typically understood as interactions between project actors (companies, governments, and cooperatives initiating energy projects) and local publics (Coppens 2014; Cuppen et al. 2015; Reed et al. 2018; Walker et al. 2011). Engagement

1 In Dutch *Lerend Platform Energie & Omgeving*, www.platformleo.nl.
2 There is no hydro-energy in the Netherlands, nor are there any plans to develop this technology.

takes place between multiple actors and in multiple directions (Innes and Booher 2004). It includes invited as well as self-organized (Cuppen 2018) or bottom-up participation (Reed et al. 2018). In this study we narrow down our focus to one subset of engagement: how project developers engage with local communities. CE is aimed at individual residents and community groups, where a community can be seen as "a set of citizens drawn together by geography, interaction, or identity and may consist of individual citizens or of groups of citizens organized to represent their shared interests" (Lee and Newby, 1983, Crane et al., 2004 in (Bowen et al. 2010)). The notion of 'community' is understood and defined in different ways (e.g. (Walker 2011)). We adopt a broad and general understanding of the term, whereby it may refer to either community an actor, a scale, a place, a network, a process, or an identity (Walker 2011), so as to allow for the analysis of different understandings of community among CEPs. Since the object of this study is invited engagement from the perspective of project developers, this means that the perspectives on CE discussed here mostly concern the engagement of communities of the affected rather than communities of interest (Aitken 2010).

Project developers may have different reasons for engaging with communities. Fiorino (1990) distinguishes three rationales for participation, which may be translated into three types of motivation for project developers to engage with citizens or communities as part of the planning process. First, there is an instrumental rationale based on the idea that CE can increase the social acceptability of planned projects and the legitimacy of decision-making. Second, a substantive rationale based on the idea that engagement is a means to arrive at better policy plans that incorporate local knowledge or concerns. And third, a normative rationale referring to the empowerment of local communities and the idea that engagement is not a means but a democratic goal in itself.

Project developers may also adopt different modes of engagement. Typically, these are thought to lie along a continuum from one-way-only to full two-way information flows, or from communication to consultation to co-production (Aitken et al. 2016; Reed et al. 2018). Frequently cited in this respect is Arnstein's ladder of participation (Arnstein 1969), which not only suggests that there are different modes but also incorporates a normative judgment about them (i.e. the higher up the ladder, the better). Yet it may very well be that there are circumstances in which modes 'higher up the ladder' do not work, e.g. because of legal restrictions. Reed et al. (2018) have developed a more neutral typology of engagement, based on two dimensions: top-down or bottom-up and mode (communication, consultation, deliberation, coproduction), with all (2x4) combinations of these possible. Based on a literature review of CE in predominantly business-oriented academic literature (business ethics, organization and management journals), Bowen et al. (2010) reformulate the top-down engagement modes as engagement strategies of firms. They frame the one-way communication modes as transactional strategies, which involve communication to "reduce

the transaction cost of, for example, a planning approval process, or help to gain access to critical resources" (Bowen et al. 2010:304). The co-production mode of participation is framed as a transformational strategy, which involves – for instance – joint management of projects or communities that take leadership in decision-making. Between transactional and transformational strategies are transitional strategies, which are characterized by 'two-way communication, consultation and collaboration' (p. 306).

In addition to the academic literature, we can also observe this emphasis on participation in energy policy discourses (Bell et al. 2007; Cuppen 2018; Haggett 2010; Rydin and Pennington 2010). There now seems to be a widely shared understanding that participation is a crucial element in the planning of energy technology and that it may have to be organized differently than before. Such observations suggest that engagement practices may be moving beyond concepts such as NIMBY and DAD, making it interesting empirically to dive deeper into CEPs' understandings of community engagement.

3.2.2 The role of community engagement professionals (CEPs)

The role of CEPs is critical for community engagement. After all, these are the people responsible for setting up interactions between publics and project developers, and they are generally also engaged in those interactions themselves. CEPs can be seen as so-called 'front-line workers' (Durose 2009): individuals tasked with the translation and implementation of organizational policy 'on the ground' (Durose 2009), in this case with a focus on CE. Front-line workers are intermediaries at the intersection of their own organization and local communities. They are considered pivotal in collaborative processes, as the 'effectiveness and success of inter-organizational ventures rests equally with the people involved in the process and their ability to apply collaborative skills and mind-sets to the resolution or amelioration of complex problems' (Williams 2002:106). The front-line worker concept also allows us to further specify the research question. To wit: we are interested in how, and to what extent, CEPs view community engagement as a boundary-spanning activity (Aldrich and Herker 1977) with them as the individuals operating on the boundary between their organization (the project developer) and local communities.

Local communities can consist of different actor groups, e.g. residents (organized or otherwise), local governments, and NGOs. In practice, which actors are seen as relevant stakeholders depends on how a CEP defines and constructs certain groups, organizations, or people as 'stakeholders'. Especially when it comes to local 'publics', CEPs face an intangible phenomenon, namely a 'differentiated, fluid, but politically meaningful category of civic discourse' (Walker et al. 2010:931) or a 'heterogeneous conceptual category' of groups and individuals (Cotton and Devine-Wright 2012:23). In other words, it is very hard – if not impossible – to identify 'the public' empirically. At best, CEPs can empirically construct, or model (Michael, 2007), a public, e.g. through stakeholder analysis, surveys, or

interviews. The engagement practices of CEPs should thus be viewed as "part of broader assemblages in which publics… are 'made' or 'performed' (e.g. (Horst 2007; Irwin and Michael 2003; Michael 2007:617). Walker and Cass (2007) have shown how the identities and roles connected to these perceived publics are part of socio-technical configurations, implying that publics are co-constructed with the technical and institutional development of energy projects.

3.3 Method

3.3.1. Q methodology

Q methodology was developed by William Stephenson in the 1930s as a way of studying people's subjectivity; in other words, their 'subjective viewpoints' (Brown 1980; Stenner, Cooper, and Skevington 2003:2162). In the field of energy research and social science, Q methodology has been used in studies focusing on energy-related topics such as the planning of renewable energy technologies and policies (Breukers 2006; Cuppen et al. 2010, 2019; Ellis, Barry, and Robinson 2007; Hooff, Botetzagias, and Kizos 2017; Jepson, Brannstrom, and Persons 2012; Kerr, Gouldson, and Barrett 2018; Ligtvoet et al. 2016; Parkins et al. 2015; Wolsink and Breukers 2010). It has also been used in the public participation and engagement literature to explore participant perspectives (Cuppen et al. 2010; Webler and Tuler 2006). Q methodology *'inverts* the R methodological tradition by employing persons as its variables and tests traits or other items as its sample or population (of cases)' (Watts and Stenner 2012:22). It takes a holistic approach, asking research participants to rank statements in the context of all those presented as opposed to ranking isolated statements as surveys do (Dryzek and Berejikian 1993). Combining statistical analysis and qualitative interview data then allows researchers to uncover shared perspectives and relationships between themes, thus understanding 'the whole' (Watts and Stenner 2012). Q methodology is therefore suited for empirical research focusing on 'exploration, discovery and attempts to properly *understand* its subject matter' (McGuire, 1997; Stephenson, 1953 in Watts and Stenner 2012:176). As there is scarce theoretical and empirical understanding of the types of perspectives that CEPs take on their work, Q methodology is well-suited to answering our exploratory research question. Below we describe what each step entails and how we approached it in this study.

3.3.2 Concourse definition and selection of Q sample

A concourse is the "full range of discussions and discourses on the particular issue under study" (McKeown and Thomas 1988:582), reflecting 'ordinary conversation, commentary and discourse of everyday life' (Brown 1993:94). It consists of statements on the researched topic that are relevant to the first person-perspective; a concourse 'is to a Q set what population is to person sample (or P set)' (Watts and Stenner 2012:34). From the

concourse, the Q sample is selected; this is a subset of statements representative of the wider concourse (Watts and Stenner 2012).

In this study, the concourse pertains to CEPs' views of the practice of community engagement and of their own role therein, operating on the boundaries between their own organization and local communities. As this is a little-researched topic, we decided to capture the concourse by conducting qualitative open interviews with practitioners. We thus followed an unstructured approach to constructing the concourse, rather than developing a structured or theory-based one (Watts and Stenner 2012). We interviewed twelve CEPs plus two other professionals working in different capacities in the energy sector, in which they collaborate closely with CEPs. These subjects were selected because we expected them to put forward different types and ideas about community engagement and the role of CEPs within it. The interviewees were a diverse group of people, all with several years of experience working in a variety of fields, including engineering, project development, research, and government policy, and covering different energy technologies and related infrastructure, such as wind, gas, and transmission lines. Statements were then extracted from these qualitative interviews. Further statements were garnered from observations of meetings attended by the first author as part of case studies on CE within Dutch energy projects. This resulted in a set of over 170 statements in all.

The 170 statements were categorized inductively, resulting in the following themes: 1) community engagement in general; 2) the role and position of CE within one's own organization; 3) characteristics of community engagement professionals; 4) interaction with local stakeholders, including residents and municipalities 5) participation by the local community in decision-making on energy projects; 6) communication; and 7) other. The original set of 170 statements was then reduced to a Q sample of 57, which still covered all seven themes above, by means of an iterative process. That was as follows. First, redundant statements were eliminated and similar ones merged into unique statements (Watts and Stenner 2012)(, p. 34). The Q sample was then discussed by the research team members and subsequently piloted with three scholars working on energy and community engagement. Based on the pilot, we decided to add a small number of statements based literature and representing a more conservative perspective on CE, as we found that this was not sufficiently reflected in the existing sample.

This process resulted in a Q sample balanced in both content and formulation, providing participants with equal opportunities to agree or disagree with statements (Stephenson 1953). The final Q sample consisted of 57 statements (see Appendix B). In addition to conducting the pilot, we also checked the comprehensiveness of the Q sample during the actual interviews by asking participants if they felt any specific topics were missing. Most, however, found the Q sample to be representative of the ideas and opinions currently

existing CE in energy projects. Some did want to add a statement, but in most cases this in fact resulted in them elaborating on a theme already included or rephrasing one of the existing statements in order to emphasize their own point of view.

3.3.3 Selection of participants

Participant sampling (i.e. selecting the P set) in Q methodology is purposive. This study seeks to uncover extant perspectives in respect of a particular topic but does not consider how representative any such perspective is (Cuppen et al. 2010, 2019). General rules of thumb concerning adequate P-set size suggest fewer participants than statements and saturation, meaning that no new perspectives emerge during the interviews (Watts and Stenner 2012).

The selection criterion in this study was that participants are responsible for local CE in energy projects. This led to the selection of persons with job titles such as community engagement manager, public relations, stakeholder or project manager. We used three different methods to identify them. We started with a selection of diverse CEPs from our own network (N= 21): people we knew through other research projects. At the end of each Q interview we employed the snowball-sampling technique by asking participants if they knew a CEP or an organization with different or opposite attitudes towards community engagement. These were then invited as well (N= 20). We also conducted an online search, using Google, to identify potential participants working on solar projects (N=2).[3] Thirty-seven out of the 43 people invited were willing to participate in the Q interview. In the few cases in which invitations were declined, respondents stated that they had no time to participate (N= 2) or were not interested (N=2). Two invitees did not respond to invitations. The total P set consisted of 37 CEPs working independently (for instance, as self-employed consultants) or as employees for private companies, semi-public or public organizations (such as grid operators), or energy cooperatives, focusing on a range of energy technologies and infrastructures in the Netherlands.[4]

3.3.4 Q interview

The main component of the Q interview is the Q sort. Participants are asked to rank the set of statements on a forced-choice normal distribution ranging from 'agree most' to 'disagree most' (Brown 1980). This forces participants to "evaluate statements in relation to other statements rather than individually (as in Likert-scale surveys)" (Cuppen et al. 2016:1352). A 'shallow', rather than 'steep', normal distribution (see figure 1) is typically suitable when the P set involves experts, as this allows "greater opportunity to make fine-grained discriminations at the extremes of the distributions" (Watts and Stenner 2012:80).[5]

3 Here we used the search terms 'community engagement professional + solar park' in Dutch ('omgevingsmanager + zonnepark').

4 See Appendix A for an overview of participants.

5 In this case, the vertical position has no meaning.

We conducted face-to-face Q interviews between January and April 2018. Interviews generally lasted between 90 and 120 minutes and took place at locations chosen by participants. Each Q interview followed a protocol consisting of several parts. This included a short introduction to the research project and a number of open questions concerning the participant's job description, the types of energy technologies they are working on, their work experience, and their understanding of CE. This was followed by an introduction to the Q sort. Participants were then presented with the set of statements printed on small numbered paper cards and asked to divide them into three categories (agree, disagree, and neutral) based on the following question: '*Which statements best represent your ideas on the community engagement professional as the link between the organization and the community?*'. This relates directly to the research question presented in the introduction above.

Next, participants were given a forced normal distribution printed on a sheet of paper (A1 size) (Figure 1). They were asked to return to the statements they had sorted into the three categories and rank each of them by assigning it a place in the normal distribution, starting with the 'agree most' statements, then 'disagree most', and finally the neutral ones.

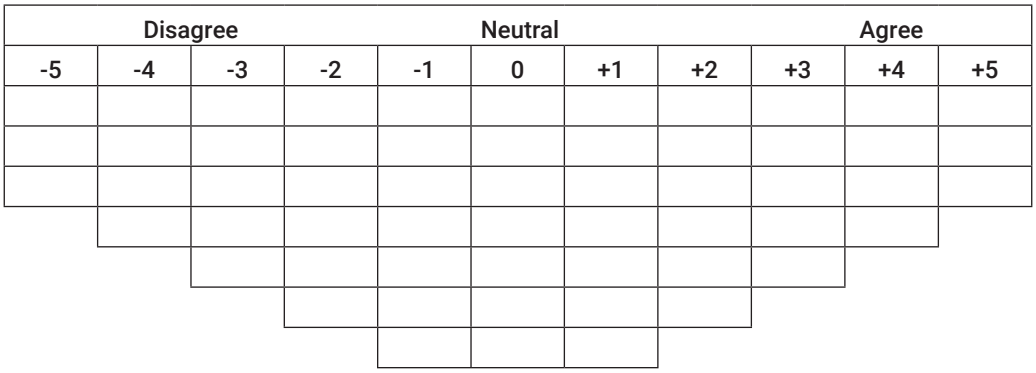


Figure 1. Q sort distribution.

After the sorting exercise, participants were asked why they had placed particular statements at the extremes of the distribution (+/-5 and +/-4), if they wanted to discuss other specific statements not at the extremes, and if they wanted to add anything or elaborate on any topics discussed earlier in the interview. The qualitative data from the interviews was recorded and transcribed.

3.3.5 Q analysis and factor interpretation

The first step in the analysis was the extraction of factors from all the Q sorts, which was done with the help of the dedicated software program PQMethod (Schmolck n.d.). This offers Centroid Analysis and Principal Components Analysis as options for factor

analysis, and rotation of extracted factors can be performed manually or with Varimax. The analysis resulted in clusters of participants whose Q sorts were alike (i.e. had a high correlation). These clusters were the factors, for which factor arrays were then identified. Factor arrays represent a typical Q sort for each factor and highlight 'the defining statements, i.e. the statements with highest and lowest scores and the statements that distinguish one factor from another' (Cuppen et al. 2016:1352). The aim here is to augment the differences between the factors (McKeown 2013 in Zabala and Pascual 2016) via 'a procedure of weighted averaging i.e. loading exemplars are given more weight in the averaging process since they better exemplify the factor' (Stenner et al. 2003:2164–65), also known as 'flagging' Q sorts. In the final step, the factor arrays were developed into factor interpretations, i.e. 'a careful and holistic inspection of the patterning of items in the factor array' (Stenner et al. 2003:2165). This was done using: 1) defining statements; 2) distinguishing statements; and 3) qualitative interview data about the statements. The results of these factor interpretations were rich shared viewpoints representing each particular factor (Watts and Stenner 2012:181).

Principal Component Analysis was used for factor extraction and Varimax for rotation.[6] An iterative approach, going back and forth between various factor extractions and rotations, was adopted. As criteria for the factor analysis, we used two criteria for the extraction of factors: a minimum of two significant factor loadings and Humphrey's rule (Brown 1980).[7] Next, we cross-checked these with the qualitative interview data to see if they could be interpreted as meaningful perspectives. This led us to select a three-factor solution, with factor loadings of 0.34 and higher accepted as statistically significant at the $p<0.01$ level.[8] All 37 Q sorts loaded significantly on one (or more) of the three factors: factor 1 had twelve unique loadings, factor 2 had seven and factor 3 had four (see Appendix C). Q sorts with unique factor loadings of 0.60 and higher (Jordan, Capdevila, and Johnson 2005) were flagged manually, as these are the Q sorts closest resembling the factor. Factor 1 had nine sorts, factor 2 had six and factor 3 had two (see Appendix C). Each factor was then translated into a perspective using the defining and distinguishing statements for that factor and quotes from the interviews with those participants with a flagged sort for that factor. In addition, other (less saliently ranked) items were checked to see if they confirmed or challenged this interpretation (Watts and Stenner 2012). Finally, for each perspective a title was formulated that captured its essence.

6 Both of these approaches are accepted and standard procedures within the field of Q methodology (Watts and Stenner 2012).

7 According to Humphrey's rule, "a factor is significant if the cross-product of its two highest loadings (ignoring the sign) exceeds twice the standard error" (Brown 1980).

8 Calculated as 2.58 *standard error (SE); SE=1/√(number of statements). See (McKeown and Thomas 1988).

3.4 Three perspectives of community engagement professionals

Three perspectives of community engagement professionals are presented below. Their descriptions include relevant statements and their rankings, illustrated by quotes from respondents in *italics*. The numbers in each narrative below refer to the statements (see accompanying tables).

3.4.1 Perspective 1 – Community engagement as co-creation and the community engagement professional as intermediary

Perspective 1 has twelve participants loading significantly. CEPs in this group work in a range of energy technologies: onshore wind (N=7), geothermal (N=2), solar (N=2), heat networks (N=3), high-voltage power lines (N=4), and natural-gas infrastructure (N=1). They are employees of public and semi-public organizations (N=6), of a cooperative (N=1), and of private companies (N=5).

In this perspective, project development is about *co-creation* and the exploration of possibilities together with local communities. Community engagement is a way to *facilitate meaningful participation* by local residents (40). This starts with truly knowing and understanding residents' interests and concerns related to project plans (30; 53; 46). These CEPs have *a proactive attitude* towards opposing perspectives, as they believe that early encounters with proponents as well as opponents will benefit all stakeholders (32; 43; 56). They operate 'between the lines' separating their own organization, local residents, stakeholders, and public administrators; as intermediaries, they see their role as representing and communicating underrepresented community interests and values to their own organization (15; 18; 45). And also as *managing internal stakeholders*. This is perceived as effortful, since they have to advocate – and sometimes even fight – for CE as part of (technical) project management (37; 4; 16).

Quotes from Q interviews

"*A lot of people say 'You go ahead and go play outside,' but in practice it comes down to spending half your time inside the organization in order to get everyone on board. And that leads to a lot of tension. Often, clients are more worried that 'Yes, you are organizing opposition' and the community perceives you as 'Yes, you're only here because of the project'. That is the field of tension you find yourself in.*"

"*The point, quite simply, is that you give them a role in the first place. And when you involve them early on, they have more influence and you produce better plans because you are also utilizing their knowledge.*"

Table 1. Overview of defining statements (agree = +5/+4; disagree = -5/-4) and distinguishing statements for Perspective 1. An asterisk (*) indicates significance for distinguishing statements at $p<0.01$.

Agree (+5)	15: It is my job to make sure values from the community are taken into consideration in internal decision-making.*
	30: You have to put yourself in the shoes of your counterparty and realize why people take a certain position.
	56: You want to encounter proponents as well as opponents as early as possible in the process, so you need to wake up sleeping dogs.*
Agree (+4)	10: It is necessary that community engagement be represented throughout the organization, including at the strategic, tactical, and operational levels.
	11: It is necessary to cooperate with local municipalities for the development of energy projects.
	18: I operate between the lines separating my own organization, local residents, stakeholders, and public administrators: it is my job to be the link between them.*
	43: Community engagement might cost a lot, but opposition is more expensive.
Disagree (-5)	32: You should only start active communication once there is a concrete project plan.
	40: Community engagement is a tool to pacify conflicts between certain groups of residents, so that decision-making can take a faster course.
	45: Community engagement professionals are actually communication officers.
Disagree (-4)	2: As a community engagement professional, you are a plaything of the authority in charge of decision-making.
	3: As a community engagement professional, you are not in a position to communicate the necessity of the energy transition in a credible way.*
	25: Informal interaction with local residents contributes to building relationships, but is at odds with the corporate identity an organization wants to convey.
	46: Residents often just need to vent their frustrations; it is not always about addressing their concerns in a concrete way.
Other distinguishing statements (with rank in parenthesis)	4: As a community engagement professional, you need to make sure that other departments within the organization are on board with you (+3).*
	37: Community engagement requires an change of internal organizational culture (+2).*
	16: I need to keep my colleagues focused when it comes to implementing community engagement, because some of them have a strong drive to develop projects (+2).*
	14: Ensuring a fair distribution of local benefits and burdens is something I consider part of my job (0).*
	23: In practice you need to experiment with solutions, but there is not enough room for that within the organization (0).*
	8: It is pointless to defend yourself when opponents make claims about the impact of a project on a specific living environment (0).*

Table continues

Other distinguishing statements (with rank in parenthesis)	5: As a community engagement professional, you are often stuck between existing laws and regulations on the one hand and objections expressed by local residents on the other (-1).*
	48: Plenary meetings provide opponents with too prominent a platform to scream from (-1).*
	50: Strategic community engagement management is just a buzzword (-2).*
	57: There are plenty of opportunities for local residents to have a say within formal decision-making procedures (-3).*
	53: When residents get carried away by emotions, there is no way back; you therefore need to prevent projects ending up embroiled in an emotional atmosphere (-3).*

3.4.2 Perspective 2 – Community engagement as project management: "everything under control"

Perspective 2 has seven participants loading significantly. CEPs in this group work in a range of energy technologies: onshore wind (N=2), geothermal (N=1), solar (N=3), biomass (N=1), and natural gas production (N=2). They are employees of private companies (N=6) and a cooperative (N=1).

Project development is the main goal in this perspective. But as well as technical aspects, these CEPs keep a close eye on social, political, and administrative aspects of energy projects (44). Community engagement is seen as an integral part of *project management*, since ensuring a fair distribution of local benefits and burdens is important (14). There is *close collaboration with other departments* within their own organization (17; 37). CE is custom work, so these CEPs act based on organizational policy as well as their own gut feeling (21; 41). Mapping local interests, thus *knowing the community* and what could potentially frustrate a project, is a way to keep everything under control and increase the chances that a project is actually developed (9; 26; 30; 54). Ideally, opposition is prevented, but it is not shied away from (1; 8; 46). In this perspective, municipalities represent local interests and so are important stakeholders (11; 49). CE is based on *professional relationships with communities*, with clear rules of engagement (7; 25).

Quotes from Q interviews

"If people from the technical department want something but I think 'No, that's not going to happen – you can't do it that way', or 'This will trigger opposition', or 'This will cause hindrance for people', then I'm the one who speaks to them about it. Because the organization I work for is quite sensitive to concerns coming from the local community."

"In the end, there are maybe three reasons that recur every time, so it's pretty predictable: it's almost not necessary that we go out into the neighborhood to find out what [concerns residents] will bring up."

Table 2. Overview of defining statements (agree = +5/+4; disagree = -5/-4) and distinguishing statements for Perspective 2. An asterisk (*) indicates significance for distinguishing statements at $p<0.01$.

Agree (+5)	9: Mapping the interests of local residents and other stakeholders creates more space for negotiation and increases chances that a project will be developed.
	11: It is necessary to cooperate with local municipalities for the development of energy projects.
	30: You have to put yourself in the shoes of your counterparty and realize why people take a certain position.
Agree (+4)	20: I think it is important to show that I am going beyond what existing laws and regulations require.
	21: I work on the basis of both organizational policy and my own gut feeling.
	44: Community engagement professionals are 'jacks-of-all-trades': they need to have an eye for the technical, social, political, and administrative aspects of energy projects.
	49: It is sometimes necessary to help local municipalities behind the scenes, to speed up decision-making.*
Disagree (-5)	17: I sometimes take decisions without informing management up front, because I can foresee that good solutions will be rejected.
	26: You can go out into the neighborhood all you want, but you can never really figure out what might make a project more difficult.
	46: Residents often just need to vent their frustrations; it is not always about addressing their concerns in a concrete way.
Disagree (-4)	25: Informal interaction with local residents contributes to building relationships, but is at odds with the corporate identity an organization wants to convey.
	40: Community engagement is a tool to pacify conflicts between certain groups of residents, so that decision-making can take a faster course.
	41: Community engagement needs to be standardized.
	54: We often have no idea what the majority of residents think about a particular project, and we also have no good way to find that out.
Other distinguishing statements (with rank in parenthesis)	7: The way you as a community engagement professional interact with residents should not become too personal; you need to keep professional distance (+3).*
	14: Ensuring a fair distribution of local benefits and burdens is something I consider part of my job (+3).*
	1: Publicly, you should pay as little attention as possible to extreme actions and reactions by opponents because that only causes more unrest (+2).*
	35: You need to make sure that residents feel they can have a say in decision-making (+1).*
	57: There are plenty of opportunities for local residents to have a say within formal decision-making procedures (0).*
	37: Community engagement requires an change of internal organizational culture (-1*)

Table continues

Other distinguishing statements (with rank in parenthesis)	3: As a community engagement professional, you are not in a position to communicate the necessity of the energy transition in a credible way (-1).*
	24: In the Netherlands, community engagement mostly consists of informing people; not a lot is usually done with feedback from the local community (-1).*
	52: If you keep speaking to the same opinionated proponents and opponents, you develop tunnel vision (-2).*
	5: As a community engagement professional, you are often stuck between existing laws and regulations on the one hand and objections expressed by local residents on the other (-2).*
	8: It is pointless defending yourself when opponents make claims about the impact of a project on a specific living environment (-3).*

3.4.3 Perspective 3 – Project development: no community engagement beyond legal requirements

Perspective 3 has four participants loading significantly. CEPs in this group work only in onshore wind. They are employees of private companies (N=2) and self-employed entrepreneurs (N=2).

In this perspective, *technical project development* is the main goal. CEPs with this perspective see no responsibility for community participation beyond the legal requirements. Internal stakeholders are not an issue for these small organizations, as all eyes are on a *shared goal* (6; 17; 23; 37). With development being the focus, engaging with local municipalities takes priority over engaging with local communities (11; 36): there is a time and place for local residents, and that is *within formal participation* procedures (38; 57), e.g. as part of a licensing process. *Community engagement is about following the law* and CEPs are not in a legitimate position to represent local interests within project planning (3; 12; 14; 35; 47; 51). However, they do feel they are often stuck between existing laws and regulations on the one hand and objections expressed by local residents on the other (5). Conflict and opposition are accepted as 'facts of life', but not something to actively engage with. These CEPs feel that attempts to do so are not perceived as genuine due to their own business interests (8); they even question whether CE is worth spending resources on (9; 43).

Quotes from Q interviews

"[It] *is the process of political decision-making. It's fine to oppose something, but not at untimely moments. Nowadays, whenever societal pressure emerges, people listen. But that just means chasing the delusions of the day. This is not the way we should make decisions. But it is the current standard*."

"*The amount of money spent on community engagement is huge, but does it help? No. I often hear that 'Participation is bribery or blackmail.' It is the hype of the moment. Big developers started doing it to keep residents calm, not to let them actually participate*."

Table 3. Overview of defining statements (agree = +5/+4; disagree = -5/-4) and distinguishing statements for perspective 3. An asterisk (*) indicates significance for distinguishing statements at $p<0.01$.

Agree (+5)	5: As a community engagement professional, you are often stuck between existing laws and regulations on the one hand and objections expressed by local residents on the other.*
	11: It is necessary to cooperate with local municipalities for the development of energy projects.
	57: There are plenty of opportunities for local residents to have a say within formal decision-making procedures.*
Agree (+4)	3: As a community engagement professional, you are not in a position to communicate the necessity of the energy transition in a credible way.*
	8: It is pointless to defend yourself when opponents make claims about the impact of a project on a specific living environment.*
	47: You need to communicate clearly to residents what influence they can have over decision-making, so as to prevent disappointment.
	51: For a local community, you will always be the person with the bad message, coming along at the wrong time.*
Disagree (-5)	6: The challenge is to bring the internal organization on board for solutions that are beneficial for the community but more costly for the organization.*
	27: It is better not to implement projects by overriding the authority of the provincial or national government; that leads to local public and political opposition.*
	35: You need to make sure that residents feel they can have a say in decision-making.
	37: Community engagement requires an change of internal organizational culture.
Disagree (-4)	12: It is wise to provide opponents with space during public communication activities.*
	17: I sometimes take decisions without informing management up front, because I can foresee that good solutions will be rejected.
	23: In practice you need to experiment with solutions, but there is not enough room for that within the organization.*
Other distinguishing statements (with rank in parenthesis)	22: I am easily swayed by the issues of the day, leaving me with little time to reflect on my own practice (+3).*
	25: Informal interaction with local residents contributes to building relationships, but is at odds with the corporate identity an organization wants to convey (+1).*
	2: As a community engagement professional, you are a plaything of the authority in charge of decision-making (+1).*
	32: You should only start active communication once there is a concrete project plan (0).*
	54: We often have no idea what the majority of residents think about a particular project, and we also have no good way to find that out.

Table continues

Other distinguishing statements (with rank in parenthesis)	40: Community engagement is a tool to pacify conflicts between certain groups of residents, so that decision-making can take a faster course (0).*
	46: Residents often just need to vent their frustrations; it is not always about addressing their concerns in a concrete way (-1).*
	43: Community engagement might cost a lot, but opposition is more expensive (-1).*
	38: Project development is about exploring possibilities with the people involved, rather blindly trusting technical aspects of a project (-2).*
	36: I am also successful in my work when the outcome is a well-considered 'We are not going to proceed with our plans after all' (-2).*
	9: Mapping the interests of local residents and other stakeholders creates more space for negotiation and increases that chances that a project will be developed (-3).*
	14: Ensuring a fair distribution of local benefits and burdens is something I consider part of my job (-3).*

Table 4. Summary of each of the perspectives.

Perspective 1 – Community engagement as co-creation and the CEP as intermediary
- Co-creation. - Facilitate participation. - Proactive attitude. - Managing internal stakeholders.
Perspective 2 – Community engagement as project management: "everything under control"
- Project management. - Close internal collaboration. - Know the community. - Professional relationships with communities.
Perspective 3 – Project development: no community participation beyond legal requirements
- Technical project development. - Shared internal goal. - Formal participation. - Legal compliance.

3.4.4. Recap of the three perspectives

At first sight, perspectives 1 and 2 may seem fairly similar as they are quite community-minded, whereas Perspective 3 stands out as very distinctive due to its relatively narrow understanding of the task and need for community engagement in project development. On closer inspection, however, there are also salient differences between perspectives 1 and 2. For example, Perspective 1 devotes a lot of effort to advocating and accounting for CE among internal organizational stakeholders, whereas Perspective 2 features close collaboration between those stakeholders. Comparing the perspectives raises questions

concerning various themes related to modes of engagement, the position of CEPs, attitudes towards conflict, responsibility for CE, and interaction with internal stakeholders. The next section discusses these themes in depth.

3.5 Discussion of the three perspectives on community engagement practice

This section compares the three perspectives to identify key similarities and differences between them. It also situates them in relation to the community engagement literature.

3.5.1. Mode of engagement

The three perspectives differ in terms of the mode of engagement they consider appropriate or desirable. Perspective 1 adopts a deliberative, co-productive mode; CEPs with this perspective try to seek partnerships with local communities by engaging them and bringing their views into the project development process. The space for communities to inform the planning and implementation of energy infrastructures is more limited in Perspective 2; here, CEPs create room for community deliberation and consultation in so far as this serves project development. Perspectives 1 and 2 can be seen as illustrations of what Bowen et al. (2010) refers to respectively as 'transitional' and 'transactional' strategies. Perspective 1 reflects a transitional strategy (Bowen et al. 2010), since these CEPs try to develop shared goals and benefits within partnerships while going beyond the interest of the project developer alone. Although this perspective aims at deep engagement and co-production, it is not a transformational strategy (Bowen et al. 2010) or partnership (Arnstein 1969), as that would involve either joint management of projects or communities that take the lead in decision-making. Perspective 2 reflects a transactional strategy (Bowen et al. 2010), since these CEPs view community engagement as a way to reduce transactional costs by creating goodwill and reducing conflict. The mode of engagement under Perspective 3 can be regarded as the most restricted, being characterized by one-way communication through which citizens are informed (and to a limited extent consulted) about what decisions are made. One-way communication is sometimes understood to reflect a perspective informed by the deficit model (Burningham et al. 2015). The reason these CEPs prefer engagement as 'communication only', however, is not because they think the community lacks knowledge or information, but because they do not feel they are in a legitimate position to engage communities beyond what is legally required.

3.5.2. Position of the CEP

Although CEPS in perspectives 1 and 2 alike see their role as front-line workers between their own organizations and local communities, and the boundary between those actors

as permeable, they position themselves differently vis-à-vis the community. Perspective 1 CEPs orient themselves most outwardly. They see themselves as boundary-spanner (Sandmann et al. 2014; Williams 2002), straddling the border between their own organizations and the local community and undertaking stakeholder management in two directions: internal and external. Perspective 2 CEPs, on the other hand, view themselves more as a central part of their organization and traverse the boundaries between it and the external world of the local community only as long as this is in line with the technical and legal aspects of the planned project. This is consistent with the main goal in perspective 2: working towards the implementation of project plans. Whereas we might have expected that CEPs working for energy cooperatives would be most closely working from and with the community and hence found in Perspective 1, in fact we also find one such professional in Perspective 2. When it comes to the perception of boundaries, perspective 3 articulates a sharp boundary between CEPs' own organizations and the communities in which their projects are planned; as far as possible, interactions with those communities are limited to formal decision-making trajectories. It can thus be said that, although CEPs in Perspective 3 are front-line workers technically, they do not necessarily position themselves as such.

3.5.3. Dealing with local conflict

The three perspectives differ in their views of conflict and opposition. Perspective 1 takes a proactive attitude towards the local community and opponents; indeed, a certain appreciation of opposition can be discerned in the data from our Q interviews. Early engagement with local communities and opponents is perceived as self-evident and good practice, with conflict viewed as potentially useful: in this perspective, conflict can lead to social learning about differences in normative appraisals of the proposed project (Cuppen 2018; Verloo 2018). Perspective 2 accepts local opposition, but would rather prevent it by way of timely engagement. These CEPs feel that they need to take additional steps beyond public participation in formal planning procedures in order to accommodate local input, and to mitigate conflict so as to enhance the chances of project implementation. It thus reflects a conflict-management approach, in which CE is seen as a way to achieve mutual gains (Susskind and Cruikshank 1987).Perspective 3 CEPs perceive and accept opposition as an inherent 'part of the game' when it comes to project development, but do not actively engage with it as it is beyond their span of control.

3.5.4. CEP responsibility for community representation

Whereas perspective 1 and 2 CEPs do not question their own responsibility for taking into account the views of local communities, those in Perspective 3 do not consider that part of their responsibility. In Perspective 1 it is seen as part of the job, and to a fairly great extent, to represent the interests of the local community within project planning. This, in Fiorino's terms (Fiorino 1990), is the most normative approach; CE is undertaken because communities should have a say over their own living environments. CEPs in Perspective

1 may even see themselves as playing a role in empowering local communities by giving them a voice within the organization and the opportunity to influence the planned project. No specific mention was made in any of the interviews of a role for CE in the emancipation of existing disadvantaged or minority communities, however, which is what we would expect from an emancipatory approach to CE (Renn and Schweizer 2009). Perspective 2 is at first glance similar to 1, but has a stronger focus on project management; these CEPs will at least try to see if they can accommodate the interests of communities in their project plans, with the aim of optimizing payoffs in line with an instrumental or neoliberal approach to participation (Renn and Schweizer 2009). Perspective 3 has quite a distinctive view, as they perceive themselves as not being in a legitimate position to actively bring the concerns and values of local communities into project development. They feel that formal planning procedures involve legitimate structures for public participation, which are open to anyone, as opposed to organized participation procedures that usually favor the loudest voices and thereby typically do not represent the interests of the whole community (Pesch 2019). Perspective 3 thus seems to reject CE as a means for the justification of decisions in project development (Stirling 2006). As such, it may also be interpreted as a normative perspective: it recognizes the importance of local participation for democratic decision-making, but a proactive role for CEPs and project developers to engage communities does not fit into their rationale about what makes decision-making democratic.

3.5.5. Interaction with internal stakeholders

One final theme salient to the comparison is interaction with other people and departments within the CEP's own organization. Here, perspectives 2 and 3 are quite similar in that they do not experience friction in those interactions. In Perspective 2, the added value of CE is clear to internal stakeholders and so results in close collaboration with other departments or expert colleagues inside the organization. In Perspective 3, CE is not a prominent issue or a topic of contention with other departments or colleagues: their shared focus is technical project management, with CE just something that has become a mandatory activity over the years. CEPs in both Perspective 2 and Perspective 3 seem to share their vision of CE with the organization they are part of. This is where both differ from Perspective 1, where several CEPs indicate that they spend a large part of their time – in one case even 50 percent of it – managing internal stakeholders, convincing them of the usefulness and necessity of CE, and trying to secure a seat at the project team's table in order to push for higher levels of CE in project development. This relatively extensive effort devoted to managing internal stakeholders resonates with how these CEPs view their own position (5.2), which is as involving both internal and external stakeholder management.

3.6 Conclusion

The results of our study show that community engagement professionals are heterogeneous in terms of how they see their role in engaging local communities in the context of energy projects. Three perspectives on their practice were identified using Q methodology. Perspective 1 is held by CEPs who view community engagement as co-creation and themselves as intermediaries between their organization and the community. Perspective 2 views CE as an inherent part of project management, and as a way to remain in control of the process. In Perspective 3, CE is something done as part of complying with laws and regulations in project development. Comparison of the three perspectives shows variation in terms of mode of engagement, the position of the CEP, dealing with local conflicts, responsibility for the representation of communities, and interaction with internal stakeholders.

Our findings also show that organizational dynamics can be very influential over CEP practice. Specifically, in Perspective 1 the friction resulting from interaction with internal stakeholders particularly stands out as these CEPs state that they spend a large part of their time dealing with those internal stakeholders. For some, this time is perceived as 'wasted'; they would rather spend it on constructive collaboration with external stakeholders. This study thus helps to open up the 'black box' of project development organizations, which reveals them as collections of individuals rather than homogeneous entities, by showing how CEPs perceive and navigate their organizational dynamics. It also suggests that the alignment of CE with other organizational goals and activities deserves closer empirical and conceptual investigation.

Furthermore, the three perspectives resulting from this study seem to reflect different rationalities on democratic legitimacy in decision-making. Whereas perspectives 1 and 2 see a role for community engagement organized by CEPs working for private organizations, as a way to achieve more inclusive project development, Perspective 3 questions this. CEPs in that group feel that they should not go beyond what is legally required, since representing community interests is not part of their legitimate responsibility. One could argue that this goes against the general trend towards increased forms and levels of CE, and is thus a sign of conservatism within the profession. However, we believe that this perspective can also be interpreted as honest and transparent: the CEPs who participated in this study work for private parties pursuing private goals and private interests, so suggesting that their efforts should also protect and work towards public interests may create unwarranted expectations within local communities.

This study shows that there is awareness among CEPs of the social challenges triggered by strategies such as DAD. Perspectives 1 and 2, in particular, share similarities in

terms of their views on the need for and necessity of CE. We also see here a form of interaction, aimed at active engagement with communities, that goes beyond the typical DAD approach; both perspectives are open to facilitating diverse community perspectives in project planning (Cuppen 2018), which can contribute to more inclusive planning and decision-making procedures on energy projects. A possible explanation for this might be that community engagement in the Netherlands is gaining more traction in the energy sector; as there is ongoing opposition emerging in local communities, there is also a sense of urgency for realising renewable energy projects. It might also be prompted by – and it certainly coincides with – changes in Dutch national policies concerning energy project planning and development, as well as public participation (Rijksoverheid n.d.).

As our respondents represent only a subgroup of all those working in CE in the Netherlands, we do not claim that the three perspectives found represent the sector as a whole. Nevertheless, our findings do provide insights into a group of respondents from a diverse mix of organizations (with respect to size, type, and technology), most of which are also active in a community of practice (LEO)[9] with 37 member organizations from the Dutch energy sector. However, they say nothing about CEPs' actual *practice* during real-world projects. We are therefore unable to make any claims related to willingness to act and actual actions based on the perspectives we have identified, or to say whether, for example, CEPs show signs of 'deliberative speak' in practice (Hindmarsh et al. 2008). That said, on a daily basis the participating CEPs do find themselves in a position where they are interacting with local communities and many other types of stakeholder, which does at least give some credibility to the actionability of these perspectives.

One final point that requires further investigation is the relationship between community engagement and the organizational types of the project developers concerned. This study included CEPs working for organizations with different aims (for example, development for investment or long-term exploitation), of different sizes (large and small) and types (national and international corporations, energy cooperatives), and developing different technologies. With these differences come different perspectives on CE (and its related responsibilities) within the organization and within project development, and from that different perspectives on the needs and resources it requires. Perspective 3, for example, was espoused mainly by CEPs in the wind sector; based on the data from this study, however, we cannot say if that is because it particularly reflects the norms, practices, or culture prevalent in this sector. More research is thus needed into sectoral and organizational types, structures, and culture, and into what they mean for CE and CEPs.

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3.7 Implications for the governance of energy infrastructures

This study raises several questions with respect to the governance of energy infrastructures. Participants often find themselves, as private actors, in a position that resembles that of a public administrator assigned to represent public values through their work. Is that legitimate? Answering this question requires normative reflection, from practitioners as well as researchers. Who, ultimately, should be responsible for community engagement? What should be its goals? Can and should we expect private actors to further, or even champion, democratic goals? This study shows that more remains to be said about private actors dealing with public values. Such public-private tension also raises practical questions. For example, what does a CEP need as a private actor working in the public domain? Respondents state that they often try to collaborate closely with municipalities as part of formal licensing trajectories, and also perceive them as stakeholders knowing and representing the interests of local residents (as the three perspectives show; see Appendix B, statement 11). Clear municipal guidelines on how to engage with the interests and values of local communities is something CEPs would certainly benefit from, as that would ease some of the friction that comes from being a representative of a private company dealing with public values and interests.

3.8 Implications for project developers

So-called 'front-line work' suggests a paradox: the more CEPs interact with and try to accommodate local communities (as in Perspective 1), the greater they seem to distance themselves from the goals and practices of their own organizations. This seems to lead to a lot of effort on the part of these CEPs going into internal organizational alignment and resolving internal friction, which may actually stand in the way of achieving their CE goals. Perspective 2 also involves engagement with the community and the exchange of information, but is less ambitious than Perspective 1 with respect to co-creation and the extent of influence. However, it may well be that, because of the closer alignment of Perspective 2 CEPs with their own organizations, in practice this leads to a greater uptake of local knowledge and better organizational learning by comparison with Perspective 1.
The participants in this study indicated that taking part in the Q interviews helped them to reflect on their own practice and to communicate about CE within their organization. Something similar happened with two workshops at which we presented our preliminary findings to a CEP community of practice. Here, they were used to identify and discuss tensions and challenges in community engagement with eighteen CEPs. As mentioned above, Perspective 1 CEPs spend a lot of time on internal alignment and communication, which actually makes it harder to achieve their CE goals. Especially given that, in a number of such cases, organizations have made community engagement part of their official

policy, CEP time and resources could be better spent if their organizations were to 'walk the talk' by actually putting that policy into practice. Academic research can help to generate more internal support for CEPs, and thereby stimulate an organizational learning process. Advancing our understanding of community engagement requires that we dive more deeply into the processes of sociopolitical interaction between project developers and publics. And into the organizational and institutional dynamics of project developers and, in general, of the sectors in which they are active. As we have outlined above, there is still a lot to learn. With this paper, we hope that we have made a meaningful contribution to the academic debate on community engagement, opening up new avenues for further empirical and conceptual analysis.

Acknowledgements

We are very grateful to the respondents of the qualitative interviews and the community engagement professionals who participated in the Q interviews. We would like to thank our colleagues Udo Pesch, Aad Correljé and Behnam Taebi for their participation in the pilot of this Q study. We would also like to thank the editors and reviewers for their constructive suggestions for our manuscript. This study has been conducted as part of the research programme RESPONSE project number 313-99-303). RESPONSE is (partly) financed by the Netherlands Organisation for Scientific Research (NWO) and co- financed by a consortium of public and private partners. Please see http:// www.tbm.tudelft.nl/en/research/projects/response/partners/ for the complete list of consortium partners. This study has been approved in advance by the Human Research

Ethics Committee of Delft University of Technology, the Netherlands. The application is filed under ID number 229. For more information, please visit https://hrec.tudelft.nl/.

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Appendix A. Overview participants Q interviews

Overview of participants in the Q study. All 37 participants loaded significantly on one or two factors. Asterisks (*) indicate participants flagged for factor arrays (see 3.5).

Information is provided on the job description of participating CEPs. *Community engagement* refers exclusively to activities related to engaging with local communities. *Stakeholder engagement* refers to interaction, communication, and negotiations with the diverse set of stakeholders involved in project development, such as local communities and businesses, municipalities, provincial authorities, including local communities. *Project management* refers to work involving coordination between technical aspects of project development and stakeholder/community engagement. CEPs working in *project development* focus primarily on technical project development, often including licensing and stakeholder/community engagement. *Licensing* refers to activities involving licensing and permit procedures, in such domains as the environment, safety, and spatial planning. *Public affairs* encompasses communications and public relations for the organization, beyond the project level.

Respondent	Technology	Job description	Organization type	Factor
1	Heat network	Project management, community engagement	Semi-public	1*
2	Wind, solar	Community engagement	Self-employed	1*
3	Wind, geothermal	Community engagement	Private (consultancy)	1*
4	Wind	Community engagement	Private (consultancy)	1, 2
5	Wind	Project development, stakeholder engagement	Semi-public	1*
6	Natural gas	Stakeholder engagement	Public	1
7	Natural gas	Stakeholder engagement	Public	1, 2
8	Wind	Project development, stakeholder engagement	Cooperative	1*
9	High-voltage transmission lines	Community engagement	Public	1*
10	High-voltage transmission lines	Community engagement	Public	1, 2
11	Geothermal	Community engagement	Private (consultancy)	1*
12	Wind	Project development, stakeholder engagement	Private	1, 2
13	Natural gas	Licensing, stakeholder engagement	Private	2*
14	Wind, high-voltage transmission lines	Stakeholder engagement	Self-employed	1*

Table continues

Respondent	Technology	Job description	Organization type	Factor
15	Energy grid	Project management, stakeholder engagement	Semi-public	1
16	Energy grid	Project management, stakeholder engagement	Semi-public	1, 2
17	Natural gas	Community engagement, licensing	Semi-public	1, 2
18	Wind	Community engagement	Private	1
19	Wind	Community engagement	Private	1, 2
20	Wind, solar	Stakeholder engagement, public affairs	Private	2*
21	Solar, bio, geothermal	Stakeholder engagement, public affairs	Private	1, 2
22	Solar, bio	Project development, stakeholder engagement	Private	2*
23	Energy grid	Project development, stakeholder engagement	Semi-public	1, 2
24	High-voltage transmission lines	Project management, stakeholder engagement	Public	1, 2
25	High-voltage transmission lines	Project management, stakeholder engagement	Public	1*
26	Wind	Project development, community engagement	Private	2, 3
27	Wind, solar	Project development, stakeholder engagement	Cooperative	1, 2
28	Natural gas	Project development	Private	2*
29	Geothermal energy	Community engagement, licensing	Private	2*
30	Wind, solar, bio	Project development, including stakeholder	Cooperative	2*
31	Wind	Project development	Self-employed	3*
32	Wind	Project development	Self-employed	3*
33	Wind	Project development	Self-employed	2, 3
34	Solar	Project development, stakeholder engagement	Private	2
35	Wind	Project management, stakeholder engagement	Private	3
36	Wind	Project management, stakeholder engagement	Private	3
37	Solar	Project development, stakeholder engagement	Private	1, 2

Appendix B. Overview of statements

Factor Q-sort values for statements, sorted by consensus versus disagreement (variance across factor Z-scores).

Number	Statement	Factor 1	Factor 2	Factor 3
19	I take the space I need to find solutions that fit the situation.	3	3	3
11	It is necessary to cooperate with local municipalities for the development of energy projects.	4	5	5
33	You need to give retired residents a role in the decision-making process, otherwise they become a risk factor.	-1	-2	-2
30	You have to put yourself in the shoes of your counterparty and realize why people take a certain position.	5	5	3
42	Community engagement is risk management: it is about increasing the predictability of residents' behavior.	0	0	0
26	You can go out into the neighborhood all you want, but you can never really figure out what might make a project more difficult.	-3	-5	-3
44	Community engagement professionals are 'jacks-of-all-trades': they need to have an eye for the technical, social, political, and administrative aspects of energy projects.	2	4	2
41	Community engagement needs to be standardized.	-2	-4	-2
31	You have to ask yourself continuously if agreements with residents concerning compensation are ethically responsible.	-1	1	2
10	It is necessary that community engagement be represented throughout the organization, including at the strategic, tactical, and operational levels.	4	2	2
55	Opposition is a good thing: then you know who you need to talk to.	0	-1	-2
29	You need to keep in touch with the media to prevent them from feeding public opposition.	-1	0	-2
17	I sometimes take decisions without informing management up front, because I can foresee that good solutions will be rejected.	-2	-5	-4
28	It is not possible to make tight plans for community engagement: you rush from one complex situation to the next, and they involve many different parties.	-1	-1	2

Table continues

Number	Statement	Factor 1	Factor 2	Factor 3
18	I operate between the lines separating my own organization, local residents, stakeholders, and public administrators: it is my job to be the link between them.	4*	1	1
47	You need to communicate clearly to residents what influence they can have over decision-making, so as to prevent disappointment.	3	1	4
34	You need to prevent people from forming the wrong image based on information from Google and social media by actively supplying information from an objective source.	1	2	-1
21	I work on the basis of both organizational policy and my own gut feeling.	1	4	1
46	Residents often just need to vent their frustrations; it is not always about addressing their concerns in a concrete way.	-4	-5	-1*
15	It is my job to make sure values from the community are taken into consideration in internal decision-making.	5*	3	1
39	Community engagement does not yet have an equal role within project management.	1	-2	-2
54	We often have no idea what the majority of residents think about a particular project, and we also have no good way to find that out.	-3	-4	0*
20	I think it is important to show that I am going beyond what existing laws and regulations require.	0	4	3
23	In practice you need to experiment with solutions, but there is not enough room for that within the organization.	0	-3	-4
45	Community engagement professionals are actually communication officers.	-5	0	-2
13	It takes time to build good relationships with local residents; you cannot rush these kinds of processes.	3	1	-1
24	In the Netherlands, community engagement mostly consists of informing people; not a lot is usually done with feedback from the local community.	2	-1*	1
40	Community engagement is a tool to pacify conflicts between certain groups of residents, so that decision-making can take a faster course.	-5	-4	0*
32	You should only start active communication once there is a concrete project plan.	-5	-3	0*
50	Strategic community engagement management** is just a buzzword.	-2	-1	2
38	Project development is about exploring possibilities with the people involved, rather blindly trusting technical aspects of a project.	2	2	-2*

Table continues

Number	Statement	Factor 1	Factor 2	Factor 3
48	Plenary meetings provide opponents with too prominent a platform to scream from.	-1	1	2
36	I am also successful in my work when the outcome is a well-considered 'We are not going to proceed with our plans after all.'	2	2	-2*
52	If you keep speaking to the same opinionated proponents and opponents, you develop tunnel vision.	1	-2*	3
56	You want to encounter proponents as well as opponents as early as possible in the process, so you need to wake up sleeping dogs.	5*	0	0
2	As a community engagement professional, you are a plaything of the authority in charge of decision-making.	-4	-3	1*
1	Publicly, you should pay as little attention as possible to extreme actions and reactions by opponents because that only causes more unrest.	-2	2*	-1
49	It is sometimes necessary to help local municipalities behind the scenes, to speed up decision-making.	0	4*	-1
43	Community engagement might cost a lot, but opposition is more expensive.	4	2	-1*
22	I am easily swayed by the issues of the day, leaving me with little time to reflect on my own practice.	-1	-2	3*
6	The challenge is to bring the internal organization on board for solutions that are beneficial for the community but more costly for the organization.	1	-1	-5*
35	You need to make sure that residents feel they can have a say in decision-making.	-2	1*	-5
4	As a community engagement professional, you need to make sure that other departments within the organization are on board with you.	3*	0	-3
16	I need to keep my colleagues focused when it comes to implementing community engagement, because some of them have a strong drive to develop projects.	2*	-2	-3
12	It is wise to provide opponents with space during public communication activities.	1	1	-4*
25	Informal interaction with local residents contributes to building relationships, but is at odds with the corporate identity an organization wants to convey.	-4	-4	1*
7	The way you as a community engagement professional interact with residents should not become too personal; you need to keep professional distance.	-2	3*	0
27	It is better not to implement projects by overriding the authority of the provincial or national government; that leads to local public and political opposition.	1	0	-5*

Table continues

Number	Statement	Factor 1	Factor 2	Factor 3
53	When residents get carried away by emotions, there is no way back; you therefore need to prevent projects ending up embroiled in an emotional atmosphere.	-3*	3	1
14	Ensuring a fair distribution of local benefits and burdens is something I consider part of my job.	0*	3*	-3*
8	It is pointless to defend yourself when opponents make claims about the impact of a project on a specific living environment.	0*	-3*	4*
9	Mapping the interests of local residents and other stakeholders creates more space for negotiation and increases that chances that a project will be developed.	3	5	-3*
37	Community engagement requires an change of internal organizational culture.	2*	-1*	-5*
51	For a local community, you will always be the person with the bad message, coming along at the wrong time.	-3	-3	4*
57	There are plenty of opportunities for local residents to have a say within formal decision-making procedures.	-3*	0*	5*
3	As a community engagement professional, you are not in a position to communicate the necessity of the energy transition in a credible way.	-4*	-1*	4*
5	As a community engagement professional, you are often stuck between existing laws and regulations on the one hand and objections expressed by local residents on the other.	-1*	-2*	5*

** A particular approach to community engagement in the Netherlands

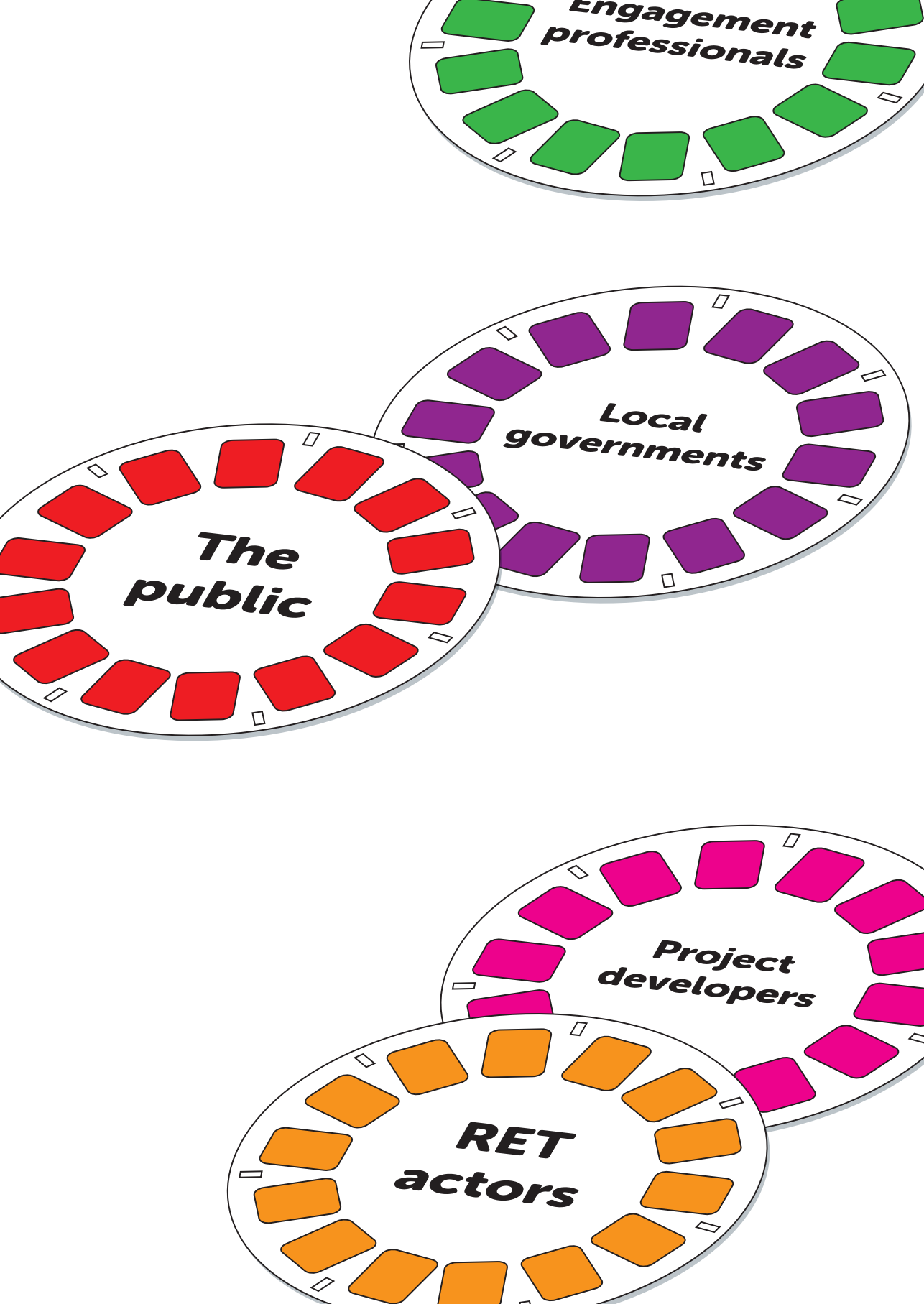
Appendix C. Factor Matrix

Factor matrix, with an X indicating a defining sort loading.

Q sort	Factor 1	Factor 2	Factor 3
1	0.6876X	0.3323	0.0578
2	0.7702X	0.1439	-0.1774
3	0.8139X	0.1501	0.0120
4	0.5113	0.5587	0.1650
5	0.6743X	0.0808	0.0506
6	0.5821	0.1630	0.3357
7	0.5105	0.5570	0.1376

Table continues

Q sort	Factor 1	Factor 2	Factor 3
8	0.6651X	0.2888	-0.3129
9	0.8057X	0.1955	-0.2441
10	0.7530	0.3514	-0.0619
11	0.7646X	0.1526	0.1832
12	0.6059	0.4118	0.1406
13	0.2073	0.6920X	0.3043
14	0.7935X	0.0121	0.1957
15	0.5121	0.2817	0.0057
16	0.6634	0.3553	-0.0022
17	0.5477	0.3682	0.1351
18	0.5082	0.2081	0.2702
19	0.5080	0.2818	0.3691
20	0.3332	0.7110X	0.0060
21	0.5814	0.3789	0.1881
22	0.3370	0.7695X	0.2325
23	0.6640	0.3907	-0.0247
24	0.6573	0.4410	0.1831
25	0.7938X	0.2219	0.0698
26	0.0830	0.4802	0.3986
27	0.4725	0.4087	-0.0598
28	0.3043	0.6694X	-0.0148
29	0.1546	0.6613X	-0.1104
30	0.2122	0.7041X	0.0367
31	-0.2406	0.0583	0.6783X
32	0.1571	-0.1195	0.6497X
33	-0.2403	0.4609	0.4428
34	0.3218	0.5381	0.0360
35	0.0317	0.0479	0.5019
36	0.2468	0.1968	0.4792
37	0.6648	0.3787	0.0827
% explained variance	30	17	7


Engagement professionals
Local governments
The public
Project developers
RET actors

Chapter 4

Why controversies are more than social opposition: Unpacking governmental interactions in a Dutch wind farm-siting conflict*

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4.1 Introduction

A key challenge that policymakers face when implementing renewable energy technology is how to deal with the controversies that often surround new projects (Batel, 2018; Cuppen et al., 2020; Pesch et al., 2017; Walker et al., 2011; Wolsink & Breukers, 2010; Wüstenhagen et al., 2007). Such controversies are often studied with a focus on social acceptance, in which conflict is regarded as a lack of support. The body of literature on social acceptance of renewable energy technologies has been steadily growing since the 1980s (for reviews see (Batel, 2018, 2020; Batel et al., 2013; Rand & Hoen, 2017)). Most studies in this field focus on opposition or support by local communities and the general public (for example, (Colvin et al., 2016; D'Souza & Yiridoe, 2014; Enevoldsen & Sovacool, 2016; Gross, 2007; Leiren et al., 2020; Zoellner et al., 2008)).

In light of this dominant focus on the public, there have been several calls for diversification of research into energy controversies (Batel & Devine-Wright, 2015; Burningham et al., 2015; Devine-wright et al., 2017; Devine-Wright, 2011; van de Grift et al., 2020; van de Grift & Cuppen, 2022). These calls refer to the complex nature of controversies, as they consist of interactions between public and private actors with potentially clashing interests, who encounter each other in different types of contexts (Boucher, 2012; Cuppen et al., 2020; Pesch et al., 2017; Roberts, 2013; Sovacool et al., 2022; Walker et al., 2011). Some actors aim to develop a renewable energy project to realize certain policy agreed-upon targets. Others resist this development, because they believe that the local environment will be negatively affected. As such, energy controversies represent a space in which different assessments of a certain policy or project are articulated, which means that they can be seen as an important venue for learning 'what society wants' (Cuppen & Pesch, 2021).

There is a clear need for increased understanding of the dynamics of controversies (Cuppen et al., 2019; Vasstrøm & Kjetil Lysgård, 2021). Few studies have investigated the interactions between governmental actors, which is surprising considering that they are key players in energy controversies (Bues, 2018; Cowell, 2007; Dermont et al., 2017; Verhoeven, 2020; Verhoeven et al., 2022; Wüstenhagen et al., 2007). Research into governmental actors has looked into local governments as either supporting (Christidis et al., 2017; Sperling & Arler, 2020; van der Waal et al., 2020) or opposing wind energy policy (Verhoeven, 2020; Verhoeven et al., 2022). Local governments are embedded in a multi-level system, where governments on different levels do not necessarily align in their support of wind energy policy. Governmental actors have different administrative responsibilities in the energy domain and different public interests to represent, and as a result they can take up potentially clashing positions within controversies (Bergek, 2010; Iglesias et al., 2011). **C**onflictual interactions between governmental levels due to differing roles and responsibilities is thus not uncommon in the multi-level setting of energy policy

(Hill & Knott, 2010; Pepermans & Loots, 2013; Verhoeven, 2020; Verhoeven et al., 2022).

In this article, we present an exemplary case that demonstrates how interactions between governmental levels matter for the dynamics of the controversy. We use the planning process of the N33 wind farm, a large-scale onshore wind farm (120MW) in the Netherlands, as a qualitative case study. This project was highly controversial, triggering fierce opposition from both the general public and the municipalities concerned (DvhN, 2019; RTV Noord, 2019; Verhoeven et al., 2022). As such, it warrants further investigation to understand how all governmental actors, not just those opposing the project, have contributed to the development of the controversy.

The aim of this paper is to look beyond the rather one-sided focus on controversies, in which citizens are seen as the driving force behind local opposition to wind farms (Lintz & Leibenath, 2020). The current dichotomous understanding allows for little distinction in and nuancing of the roles of governmental actors in controversies (van de Grift & Cuppen, 2022). As such, there is need for research that '[challenges] the idea of 'the government' as a unified system' (Klijn 2008 in Verhoeven, 2020, p. 2). By analyzing different governmental actors in the context of societal conflict and complex governance relations, we want to make an empirical contribution to the theorization of dynamics of renewable energy controversies. Our research question is: How do governmental actors engage in the discussion and decision-making process of a contested wind farm, and what role do they play in the development of the wind energy controversy?

In Section 2, we first discuss literature on governmental actors in the context of wind energy controversies. This is followed by our analytical framework, based on Hajer (2009) and Verloo, (2015). Our longitudinal approach facilitates untangling of the interactions taking place in the context of the N33 controversy (Section 3), of which we present the results in Section 4. Next, we analyse the controversy dynamics by characterising the actions and strategies of lower governmental levels vis-à-vis a new national policy context (Section 5), and end with our conclusion (Section 6).

4. 2 Governmental actors in renewable energy controversies

Earlier, we conducted a systematic literature review (van de Grift & Cuppen, 2022), which showed that there are few publications focusing specifically on governmental actors in the context of renewable energy controversies (5 out of 89). Governmental actors are generally investigated as part of multi-actor analysis, which mostly provides insights into interactions between governments and public opponents. The review discusses governmental actors' perceptions of and responses to public opposition, with most

publications describing the responses of national governments. When confronted with opposition, national governments often act on NIMBY (Not in my Backyard**)** and knowledge-deficit assumptions (Barry et al., 2008; Hall et al., 2020; Hindmarsh, 2010; Jijelava & Vanclay, 2018). Several researchers have reported on national governments who contrast claims of opponents in order to delegitimize public opposition (Atkins, 2017; Howe, 2014; Rignall, 2016; Verhoeven, 2020). Other more oppressive responses describe attempts of national governments to restrict public opposition through formal decision-making procedures and legislation (Dunlap, 2018a, 2018b, 2020; Huber & Joshi, 2015; Siamanta & Dunlap, 2019). In addition, research shows how these actors adapt renewable energy policies or plans in an attempt to accommodate opponents' concerns or in anticipation of opposition (Boucher, 2013; Cowell, 2007; Jolivet & Heiskanen, 2010; Lintz & Leibenath, 2020; Zárate-toledo et al., 2019).

4.2.1 Governments opposing governments in wind energy controversies

Conflict and tensions between governmental levels have been investigated from the perspective of the institutional context, focusing on land use and energy policies, legislation, and formal procedures. Nadaï (2007) analyzes the political conflict that preceded the formulation of a new French policy framework for wind power development. The intention to decentralize energy policy triggered the conflict between different governmental actors. Parkhill (2007) discusses a siting conflict in Scotland, in which a local government had denied planning permission to a wind farm as they 'were critical not of the policy flowing from [the national government], but of the science behind the policy, and whether the planning guidance was sufficiently up to date' (p. 314).

González et al. (2016) provide examples of local governmental actors opposing the national government in Ireland. In these cases, several local governments responded to top-down national policy on setback distances in several ways: they proposed alternative setback policies, and one mayor "initiated legal proceedings against the Minister for Environment for intervening to reduce the setback distances[1] proposed" (Scanlon, 2014 in González et al., 2016, p. 18). In addition, several local governments were reluctant to allocate areas for wind energy development, but were overruled by the national government.

Hill and Knott (2010) also report on a wind energy controversy related to setback distances. In this Canadian case, the controversy revolved around noise. Due to changes in wind energy policy, a new decision-making procedure shifted planning authority from the local to the provincial level. This removal of decision-making power triggered several municipalities to formulate policy that allowed them to legally bypass the national setback policy, which received broad support from other municipalities. The authors conclude that

1 Setbacks refer to 'provisions in local land use policies that dictate required separation distances between wind turbines and other land uses' (Watson et al., 2012, p. 782).

'the loss of local autonomy in wind turbine siting decisions and what is often perceived as 'token' public consultation under the [national policy] approvals process have alienated opposition groups and exacerbated the risk controversy' (p. 168).

Aside from municipal contention, there also examples of other governmental actors opposing wind energy developments. In their analysis of Dutch wind energy implementation processes, Agterbosch et al. (2009, p. 398) found that:

> inconsistency in planning on provincial and municipal level turned out to be food for objection for several administrative stakeholders on different levels of authority. Among the opponents were (regional departments of) the ministries that simultaneously supported the project through granting subsidies, which is a sign of internal fragmentation or dispersed decision-making powers and interests within both ministries.

This case shows contention from the province toward the municipality, eventually resulting in the rejection of permits by the national government.

When governments oppose other governments in wind energy controversies, they sometimes collaborate with non-governmental actors in their opposition. For example, Verhoeven (2020) showed that, in a nearshore wind energy controversy in the Netherlands, municipalities collaborated with non-governmental opponents to contest plans of the national government using specific framing and collective actions. Doing so, Verhoeven demonstrates "the importance of not overlooking the agency of lower tiers of government in the resistance to [national] mitigation measures" (p. 18-19).

The collaboration of municipalities with non-governmental actors in their opposition to wind energy in the Netherlands is further explored by Verhoeven et al. (2022). The authors address different types of dilemmas that several municipalities encountered in their collaboration with action groups, and how both collaborations and dilemmas evolved over the course of controversies. The article also discusses the N33 controversy and provides insights that are complementary to the analysis in this article.

Broader research into controversies shows that governmental actors continuously and actively try 'to create order and structure in potentially unstable situations' (Hajer and Laws 2006 in Hajer, 2009, p. 54). These series of contextualized actions, reactions and interactions can be empirically investigated as a performance (Hajer, 2009). As we are specifically interested in wind energy controversies, these performances cannot be understood without the context of the political, institutional and societal environment (Juerges et al., 2020, p. 8). We will elaborate on our analytical approach for opening up the

black box of governmental interactions in the context of wind energy controversies below (Section 3).

4.3 Methods

As introduced above, we use Hajer's performance perspective (2009) to investigate how the different governmental actors in the N33 controversy attempted to mobilize other (non-)governmental actors for their cause. For example, '[o]ne important form of interaction (…) is when an actor can make others see the world according to a preferred frame and thus generate the legitimacy for a preferred course of action' (Hajer, 2009, p. 55) also see Section 3.2).

To map the dynamics of interaction following the governmental performances, we used *critical moments* (Verloo, 2015; Yuana et al., 2020). Critical moments provide a structure to empirically analyze controversies through the "sequences of action and reaction", focusing on both the process and outcomes (Verloo, 2015, p. 69). Moments are *critical* when they change the nature and/or intensity of interactions between governmental actors in the controversy (Verloo, 2015). During such moments, "actors do something to try to produce a change in the sequence of events" (Verloo, 2015, pp. 67–68). This sequence of conflictual social interactions (Turner 1992 in Verloo, 2015), shapes the way a controversy unfolds, or shifts "the meaning of events in a social process" (Wheeler and Green 2004; Cobb 2006; Leary 2004 in Verloo, 2015). As a result, dominant narratives or power dynamics can change. For example, governmental actors challenging other governmental actors can lead to a disruption of the status quo, causing them to "re-establish legitimacy and strengthen their capacity to govern" (Verloo, 2015, p. 18).

4.3.1 Data collection

We collected the data for this article as part of a larger case study on the N33 wind farm (Cuppen et al., 2020; see Verhoeven et al., 2022). We collected both primary and secondary data in order to triangulate our findings (Jijelava & Vanclay, 2018). The first and third authors conducted eighteen semi-structured in-person interviews between March 2017 and January 2018 (see Table 1 for an overview; participants are anonymized). Most interviews lasted between one and two hours, with some exceptions. The interviews served to provide a comprehensive understanding of the development of the controversy, covering general topics such as the decision-making process, interactions between actors, and interviewees' own involvement in the controversy. Participant observation of three public information events and one closed meeting of the project developer (between April and November 2017) by the first and third authors served to support understanding of the local context.

Document research was used to identify media articles (N = 150) from regional as well as national media, and a wide variety of policy documents (N = 114). For media articles, we conducted an initial search on LexisNexis (April 7, 2017). Thereafter, we tracked media using Google Alerts with "*windpark N33*" as keywords. We collected policy documents providing insight into governmental logics (Espig & de Rijke, 2018), which included minutes from project group and council meetings, transcripts of governmental debates, Environmental Impact Assessment (EIA) documents, public consultation procedures, and letters sent between the different governments[2].

Table 1. Overview of interviewees.

Background	Interviewees
National government	N33 project manager from the Ministry of Economic Affairs and Climate (1)
Regional government	Civil servant, Groningen (1)
Municipal government	Civil servant, Menterwolde (1) Civil servant, Veendam (1) Civil servants, Oldambt (2)
Project developers	Project developer N33 wind farm consortium (5) Land owner (1)
Technical experts	Project development consultant (1) Environmental Impact Assessment expert (1)
Local community	Representative of opposition group (2) Representative of village association (2)
Other	Journalist from regional newspaper (1)

4.3.2 Analysis of performances in critical moments

We focus on those critical moments that mainly concern sequences of interactions between the governmental levels that reflect and/or result in apparent changes. Each moment reveals changes in actions from the governmental actors, which at the same time trigger responses from other governmental actors, as well as the societal environment. These changes fuel the controversy and accumulate in the consecutive moments. A good indicator of a critical moment is when multiple interviewees stress "the importance of a similar [sequence]" (Yuana et al., 2020, p. 159). Following this approach, we used our interview data to identify critical moments. As such, our analysis considered events up until January 2018.

After identifying the critical moments, we constructed timelines for each moment using our combined data. In these timelines, we deductively coded the actions and reactions of the governmental actors using the four elements of the performance perspective (Hajer, 2009, p. 67):

2 Documents retrieved from governmental websites (including www.rvo.nl, www.officielebekendmakingen.nl, www.raadvanstate.nl) and the websites of the three municipalities.

- *Scripting*: 'efforts to create a particular political effect' and to provide cues for a desired course of action;
- *Counter-scripting*: efforts of actors to undo or counter the (effect of) scripts of others;
- *Staging*: 'organization of an interaction', using existing or new symbols or artifacts;
- *Setting*: 'the physical and organizational situation in which the interaction takes place'.

For the final step, we constructed narrative descriptions for each critical moment based on our analysis and data to highlight the governmental performances in the N33 controversy (Brown, 2017; Metze, 2010).

4.4 Results

Below, we introduce the N33 wind farm and briefly discuss the Dutch policy context. Next, we present the governmental performances in four critical moments in the controversy (see Figures 2, 4-6 for an overview).

4.4.1 Policy context and case study introduction

Since the early 1990s, wind energy has become increasingly important in Dutch national policy on the energy transition. However, planning processes have often been problematic (Agterbosch & Breukers, 2008)[3]. In the Netherlands, three levels of government are responsible for planning and implementation of energy policy: the national government, the regional government (consisting of twelve provinces), and the local government (consisting of 352 municipalities in 2021). In general, the national government places responsibility for implementation of energy policy at the provincial and municipal levels. This resembles the European Union subsidiarity principle, with the caveat that there is no constitutional obligation and the national government can impose objectives or take over responsibilities from other levels (Koelman et al., 2021). Provinces and municipalities develop their own approaches to implement energy policies. In this system, municipalities "can object to regional development plans but are obliged to cooperate whenever provinces apply [what is known as] a regional embedding plan. In such a case the province will become the leading authority" (Koelman et al., 2021, p. 70).

In 2005 a consortium of project developers and local farmers requested the municipalities of Veendam and Menterwolde[4] to start the formal spatial planning procedure for a 60 MW wind farm next to highway N33 (Grontmij Nederland BV, 2005) (see Figure 1). In the Dutch decentralized planning system, "[a] pro-active decision of the local authority in [charge]

3 See Agterbosch & Breukers (2008) and Breukers & Wolsink (2007) for more detailed descriptions and analysis of Dutch energy policy up to 2008.

4 Since the municipal reorganization in January 2018, Menterwolde has been known as Midden-Groningen.

is needed before any permitting procedure can start, because a change in the local land use plan is required that allows for wind power developments" (Agterbosch & Breukers, 2008, p. 640). An EIA is the first step of the formal procedure and is typically initiated by governments to help them assess the environmental impacts of proposed plans. For wind farms up to 100 MW, municipalities are the authorities in charge. However, Veendam had already declared a moratorium on the development of wind farms on their territory in 2002 (Parkstad Veendam, 2005), and Menterwolde was also not in favor of a wind farm near the N33. Both municipalities strategically refused to initiate the EIA, and thus the formal procedure – something that had never occurred before in the Netherlands; They knew that once the formal planning procedure was initiated, the project could be delayed but almost never stopped (Agterbosch & Breukers, 2008).

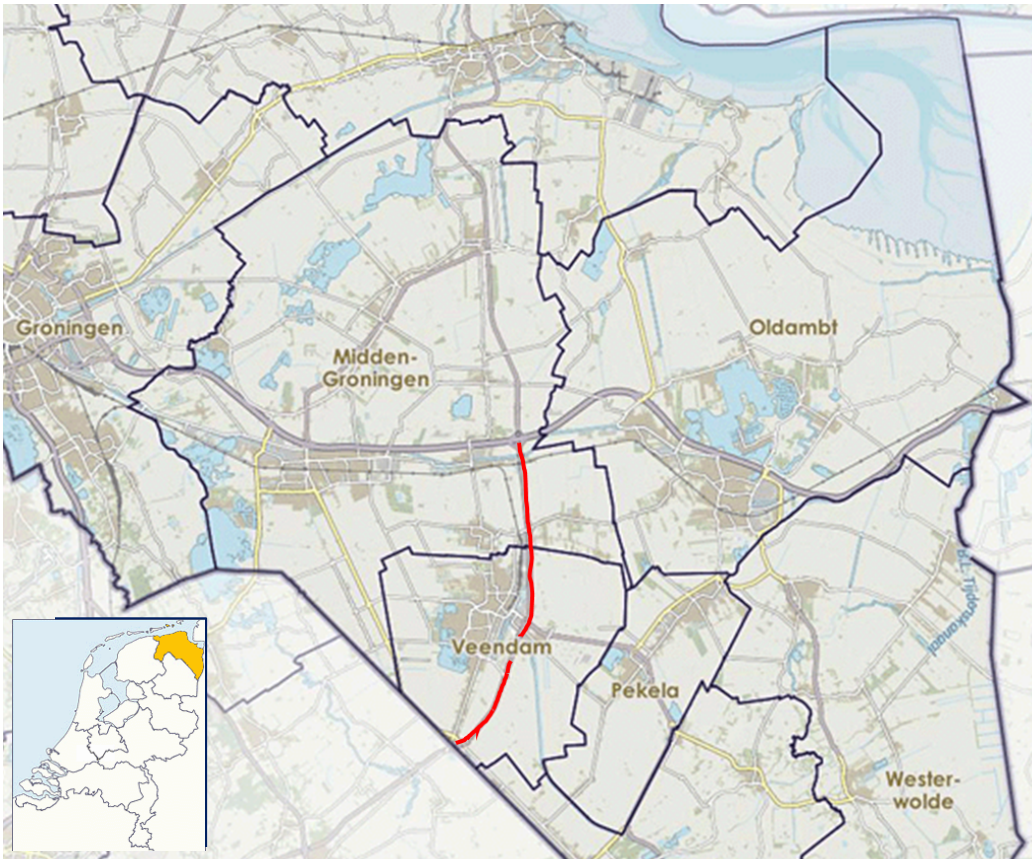

Figure 1. Map of the municipalities of Veendam, Midden-Groningen (formerly known as Menterwolde), and Oldambt in the Province of Groningen in the Netherlands. The red line indicates highway N33 along the search area indicated suitable for wind development. Source: Adapted from Janwillemvanaalst – own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=46312398.

4.4.2 Critical moment 1: The National Coordination Regulation comes into effect

In the first critical moment (see Figure 2), the authority shifts from the municipalities to the national government due to new national policy and upscaling of the original plans for the wind farm. This changes power dynamics and clears the way for initiation of formal decision-making on the N33 wind farm. From this moment on, an increasingly fierce conflict unfolds between opponents, farmers who are to have wind turbines on their land, project developers, and the municipal, provincial and national governments.

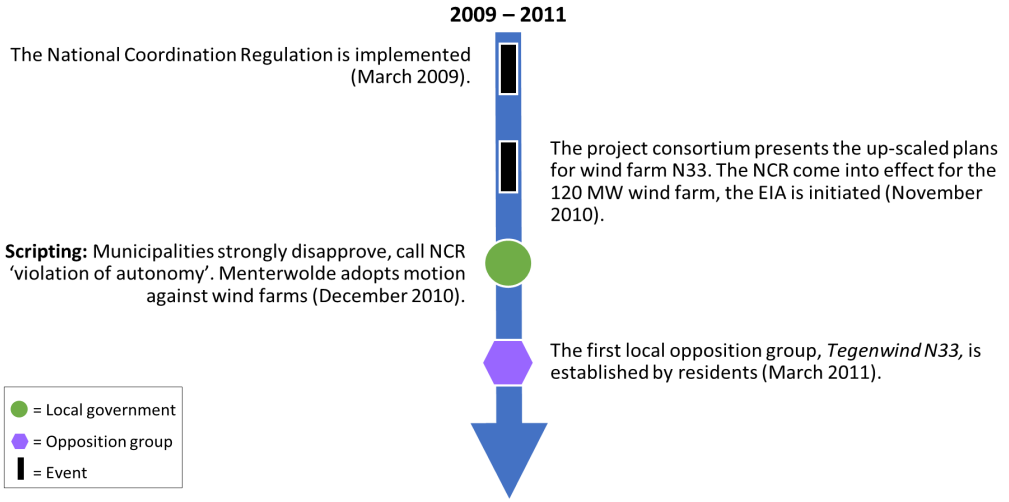

Figure 2. Timeline of interactions in critical moment 1.

In March 2009, a new policy framework called the 'National Coordination Regulation' (NCR, in Dutch *Rijkscoordinatieregeling*) was implemented by the national government. The NCR makes it possible to run several spatial planning procedures simultaneously (instead of consecutively) to speed up decision-making for projects of national importance. When the NCR is in effect, the authority in charge of the planning procedure shifts from the municipal to national government. Under the NCR, wind farms with a capacity of at least 100 MW fall under the authority of the Minister of Economic Affairs and Climate. The ministry coordinates the required decisions for the wind farm and is in charge of the public consultation procedures that precede all necessary (preliminary) decisions (RVO, n.d.). A project team consisting of representatives from each governmental level and the project developers regularly convenes to monitor and discuss the process.

A significant difference between NCR projects and non-NCR projects is that for the former a 'non-central government authority' cannot appeal spatial planning decisions (Ministerie van Economische Zaken, 2017). This means that municipalities cannot formally object to

plans. Although the municipalities are no longer in charge of the formal planning procedure under the NCR, they remain responsible for environmental permits and exemptions to local regulation such as zoning plans. However, if (spatial) decisions encounter difficulties or opposition, the Minister has the power to overrule local governments.

After the municipalities' refusal of the 60 MW wind farm in 2005, the consortium did not take any action against the municipalities. Instead, they continued work on their plans for the wind farm, motivated by the long-term policies of both the provincial and national governments, which designated the N33 area as suitable for wind energy development. The efforts resulted in an up-scaled version of the N33 wind farm, which the consortium presented in 2010: the plans now concerned a 120 MW project, which meant the NCR was in effect. As a result, the authority shifted from the municipal to the national level. This time, the Minister initiated the EIA procedure, in which five siting variants were investigated (see variants 1-5 in Figure 3). The municipalities strongly disapproved of the NCR, which was "seen as a violation of the autonomy of the municipality" (Gemeenteraad Menterwolde, 2010, p. 1). Local opposition started to arise among residents, and a few months later the first opposition group *Tegenwind N33* was established.

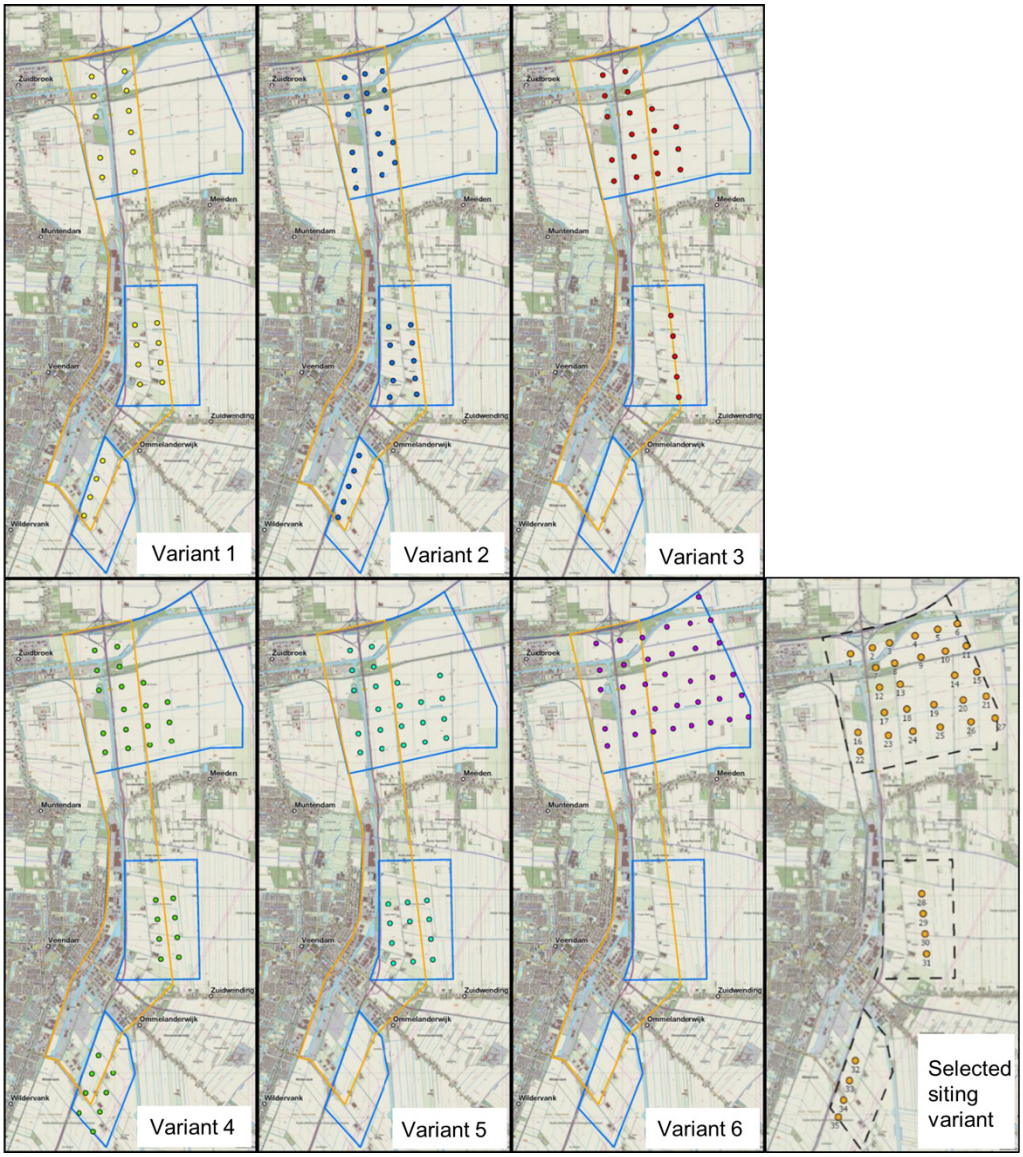

Figure 3. Siting variants for wind farm N33. The yellow lines indicate the original planning area, and the blue lines indicate the expanded planning area. The colored dots represent the individual turbine positions (Source: Pondera Consult, 2016a. Reproduced with permission of Pondera Consult).

4.4.3 Critical moment 2: Siting variant six triggers local opposition and divides municipalities

The second critical moment occurs when Provincial Executive member Moorlag introduces a new siting variant (see variant 6 in Figure 3). Initially, Moorlag was backed

by a coalition of societal and governmental actors. However, variant 6 results in tensions between Moorlag and governmental actors from all levels: his coalition crumbles and the relationship between Moorlag and the two municipalities turns from fairly cooperative to adversarial, simultaneously causing a rift between the municipalities (see Figure 4).

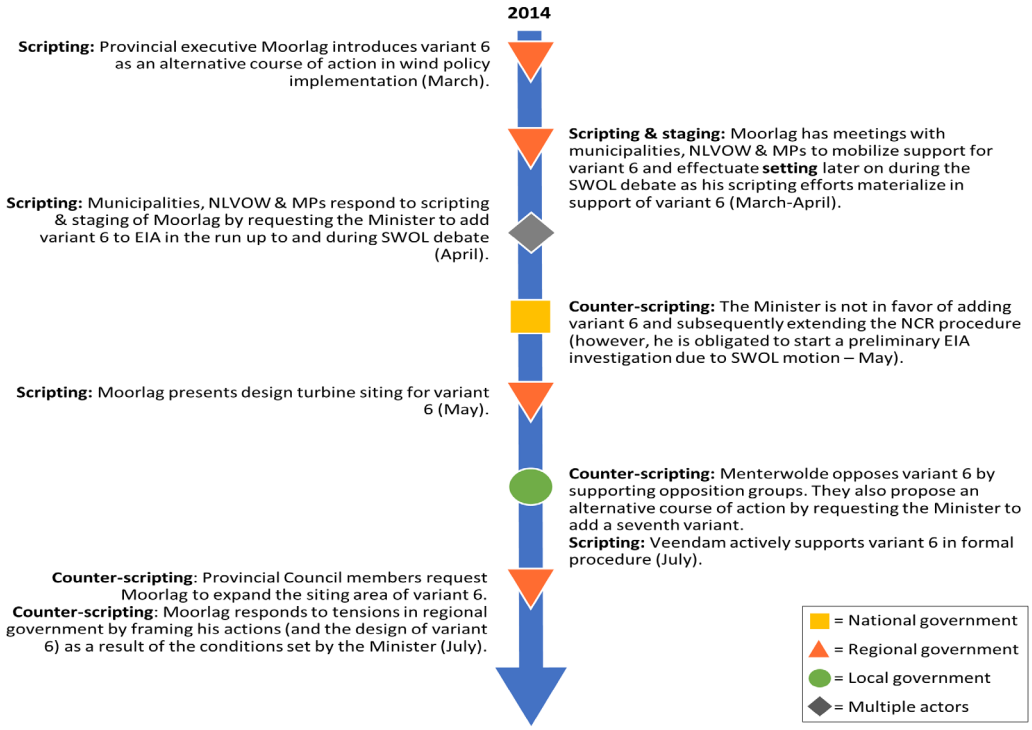

Figure 4. Timeline of interactions in critical moment 2.

Between 2010 and 2014, several steps in the formal decision-making procedure were completed[5]. During this time five siting variants were investigated in the EIA. These variants were determined based on the characteristics of the area, the space required for the turbines, and several conditions including energy yield and impact on the living environment (noise and shadow flicker) (Pondera Consult, 2016b). Early March 2014, the preliminary EIA results were presented during a formal project meeting on the wind farm. In the report siting variant 6 is introduced as an alternative as it was expected to "[score] significantly better on the aspect of quality of life (especially noise and shadow flicker) and energy yield" (Tauw & Ecofys, 2014, p. 8). Following the project meeting, Moorlag requested the new variant to be added to the pending EIA procedure so variant 6 could

5 For a detailed description of the full EIA procedure, see https://commissiemer.nl/projectdocumenten/00001255.pdf (only available in Dutch).

be thoroughly compared with variants 1 to 5 considering "the principle of good spatial planning (Gedeputeerde Staten van Groningen, 2014, p. 8). The representative of the Ministry indicated he would discuss this request with the Minister (Gedeputeerde Staten van Groningen, 2014).

Following this, the upcoming debate on national policy regarding onshore wind (in Dutch *Structuurvisie wind op land, SWOL*) became an opportunity for Moorlag to make a case for variant 6 via this formal decision-making stage. In the run-up to this debate, he held a series of meetings to gather support from a varied group of stakeholders: he met with the municipalities, an association of residents living near the proposed wind turbines (NLVOW[6]) and several members of parliament (MPs) who were part of the SWOL committee. After the meetings, the municipalities and NLVOW were on board, and NLVOW wrote to the Minister to express its support: 'it seems that with this variant 6 a broad social collaboration can be set up to achieve a siting variant that for some will be called the 'least bad' and for others will be the 'best' variant' (RVO, 2016b, p. 52).

Moorlag also mobilized support amongst MPs: during the SWOL debate (March 2014), several made a case for variant 6. Echoing Moorlag's arguments, they stated that this variant would cause less local inconvenience and was expected to score better in the EIA than the current five variants. The MPs stressed that variant 6 could count on more local support among the province and residents. They were aware that including the new variant in the pending EIA would mean an extension of the NCR procedure, which was almost nearing completion. Nevertheless, the MPs believed that policy should not be implemented blindly if there was a good alternative. As such, a motion for adding variant 6 was passed with the broad support of the committee (Tweede Kamer der Staten-Generaal, 2014).

The Minister was not pleased with this development: he stated that his ministry was acting in accordance with both regional policy and the recently adopted national SWOL policy, which was based on regional policy. Deviation from these policies could create a precedent that would potentially open the door to discussions on other large wind energy projects. The Minister also feared that adding variant 6, which entailed delaying the NCR procedure by two years, would jeopardize the national energy transition goals. Nevertheless, due to the passed motion of the SWOL committee, the Minister was obligated to investigate the procedural and legal consequences of adding a new variant to the pending EIA (RVO, 2016b).

This investigation resulted in the Minister granting the province permission to conduct a preliminary EIA into variant 6 (May 2014 -RVO, 2016b), setting a strict deadline and

6 In Dutch *Nederlandse Vereniging Omwonenden Windturbines*.

requiring the prospected project developer to be in the possession of contracts for the area. For the investigation of variant 6, Moorlag intended to have all 35 turbines sited above Meeden (a small village in part of Menterwolde, Figure 3). This was the turning point in this critical moment: once it became known what variant 6 specifically entailed, Menterwolde and NLVOW withdrew their support for variant 6, and fiercely declared their opposition: they had not previously discussed specifics regarding turbine siting, and the suggested set-up did not adhere to the two kilometer-setback they had insisted upon (RVO, 2016b).

In formal letters to the Minister, both Menterwolde and NLVOW tried to convince him of a different course of action. Menterwolde wrote: '[Variant] 6 is disastrous for the village of Meeden with regards to the aspects of the living environment and landscape. The landscape aspect obviously concerns a much larger area [than just Meeden]. A wind farm of this size and height cannot be located a short distance from a village. The consequences are unacceptable' (RVO, 2016b, p. 30). They also asked why the Minister set such strict conditions for the EIA investigation into variant 6. The Minister replied that he did 'not specify what the alternative to be investigated should look like. It is up to the province to determine what it wants to have investigated. In that light, I advise you to keep in touch with the province' (RVO, 2016b, p. 4).

Following the news on variant 6, Menterwolde decided on three actions: (1) they funded two opposition groups and joined them in signing a petition against variant 6 (Menterwolde.info, 2014); (2) they reached out to party members at the national level for support against the wind farm; and (3) they requested the Minister to investigate a seventh siting variant (two kilometers from Meeden and other villages), which had the support of two opposition groups and NLVOW (RVO, 2016a). While Menterwolde was now actively opposing variant 6, Veendam continued to actively support it: in a letter to the Minister they expressed this would the best option, as there would be no turbines on Veendam's territory.

Around the same time, tensions also arose within the regional government as Provincial Council members started to question Moorlag's activities related to variant 6. They called upon Moorlag to expand the siting area to northern grounds above the A7 highway to come to a locally supported variant. Moorlag stated that the province had to make do with the conditions set by the Minister resulting in variant 6 (RVO, 2016b), and "the chance that we get the national government on board [with the northern expansion] is nil" (Dagblad van het Noorden, 2014).

In August 2014, Moorlag presented the preliminary report on variant 6 to the Minister, stating it would lead 'to a substantially better situation with regard to liveability and landscape integration' as it had one (instead of three) cluster of turbines (Provincie

Groningen, 2014, p. 1). This was a major disappointment for residents, and added to the growing discontent with Moorlag and the Labor Party (*Partij van de Arbeid, PvdA* in Dutch) he represents (DvhN, 2014).

Shortly after, in October, variant 6 was officially added to the EIA procedure (RVO, 2016b). This meant expansion to the territory of Oldambt, a municipality which had not been involved in the formal procedure so far. Oldambt, who adopted a policy against wind energy without public support in 2012, was not in favor of the plan (Ministerie van Economische Zaken, 2017).

4.4.4 Critical moment 3: The Provincial Council elections

In the third critical moment, mounting societal discontent culminates in the Provincial Council elections, changing the composition of the Provincial Council coalition and introducing a new Provincial Executive that is not in favor of variant 6 (see Figure 5). This results in another change of the political playing field with new dynamics, this time not instigated by changes in the policy context but by voters. Whereas the former Provincial Executive took a proactive stance in collaborating with the national government and project developers, the new one is more oriented toward the municipalities and does not treat the N33 plans as set in stone.

In the run-up to the elections, local opponents and action groups started to fiercely criticize Moorlag for his actions regarding wind farm N33 (November 2014). Around the same time, during a meeting of the Provincial Council, political party *GroenLinks* tried to force Moorlag to change variant 6: they filed a motion stating that the distance between Meeden and the wind farm needed to be at least 1500 meters (Provincie Groningen - GroenLinks, 2014). The motion was rejected.

Early February 2015, the N33 project developers asked all governmental levels for active support for variant 6, and urged them to exercise the greatest speed and not create any blockades. This request was not well received by Menterwolde. In response, they commissioned 'an external agency to investigate legal options for forcing the minister to include variant 7 in the EIA investigation' (Zuijlen & Wal, 2015, p. 1). They also employed a spatial planning consultancy to investigate the feasibility of this variant.

By this time, the wind farm had become a major topic in the Provincial Council elections (March 2015). Protest signs called upon residents not to vote for the *PvdA* and 200 of their campaign posters were smeared with black paint (DvhN, 2019). The extent of the societal discontent with Moorlag became clear: the *PvdA* suffered great losses, while *GroenLinks*, for whom the wind farm was a prominent campaign topic, gained many votes.

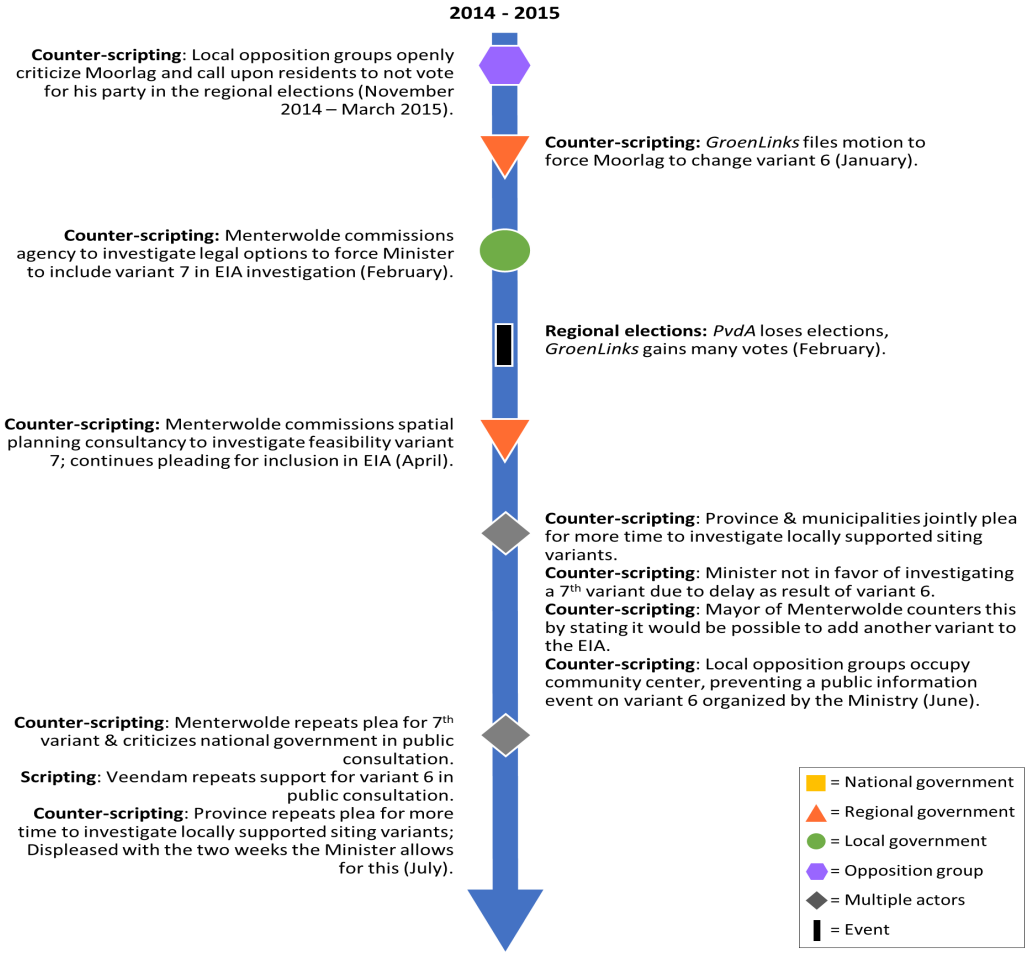

Figure 5. Timeline of interactions in critical moment 3.

During the presentation of the coalition agreement (April 2015), the new Provincial Executive member Homan (GroenLinks) stated that not enough attention had been paid to residents at the right time: 'We will do things differently. [We will have a n]ew style of governing' (RTV Noord, 2015c). During a N33 project meeting (June 2015), Homan and the municipalities jointly pleaded with the Minister for more time to investigate locally supported siting variants (RVO, 2016b). After the meeting, the Minister indicated to the press that a lot of time had already been lost due to the additional EIA study into variant 6, and that he was not in favor of losing more time**.** The Mayor of Menterwolde, however, did think that a new variant could be added to the EIA procedure. He stated to the press that 'steps could be taken if we come up with a reasonable alternative' (RTV Noord, 2015a).

Between May and July 2015, a formal public consultation took place: all who wanted could

submit viewpoints on the six variants in the EIA. Here, Menterwolde again requested adding variant 7 to the EIA procedure. Their plea now also targeted the national government, the formal procedure and the NCR: they felt the NCR had sidelined the municipalities, that the national government was ignoring their suggestions, and that there was a lack of serious public consultation. Veendam continued its plea against variants 1-5 and support for variant 6, stating that this would result in the smallest number of residents affected by the turbines (Gemeente Veendam, 2015).

During this time, the province repeatedly requested postponement of the EIA procedure to investigate a variant that would be locally supported. The Minister was willing to give Homan two weeks to come up with an alternative, which she did not find sufficient (RVO, 2016b). Meanwhile, local tensions were running high: two opposition groups warned they were no longer able to control their followers and feared serious incidents (DvhN, 2019).

4.4.5 Critical moment 4: The siting variant nobody wants

The fourth critical moment revolves around the final siting variant (see Figure 6). The decision on this final siting variant made by the ministry triggers several changes in the interaction between the other governmental levels and the societal environment. Veendam, who up to this moment had been supporting variant 6, actively joins Menterwolde in its opposition. The provincial government takes a more reactive stance, criticizing the national government but explicitly leaving decisions to them. This provincial response receives heavy criticism from both the municipalities as well as the societal environment. As a result, the controversy further intensifies.

In an attempt to move forward, the Minister asked the municipalities for a joint recommendation on a preference for the final siting variant (September 2015, RVO, 2016c). However, the municipalities were not able to formulate such a recommendation as their interests did not align. The province was then approached with the same question, which Homan refused to answer: she said the Ministry was not giving the province enough time to come up with a locally supported variant, and expressed her disappointment in the national government (Provincie Groningen, 2015).

Initially, residents and opposition groups had high hopes for Homan because she promised to do things differently from her predecessor. However, her explicit choice to not state a preference was perceived as her not defending local interests against national interests and received a wave of criticism (FluxEnergie.nl, 2015). Opposition groups felt deeply disappointed by Homan not living up to her promises (Menterwolde.info, 2015). These broken promises also created tensions within the Provincial Council as well as with the municipalities (Veer, 2015). Veendam stated that this choice worsened their already bad relationship: they felt the province was offered an opportunity by the Ministry, and

blamed them for not using it to fight for a locally supported variant (RTV Noord, 2015b).

After the EIA investigation was concluded (October 2015), the Minister presented the siting variant that was preferred by the Ministry: variants 4 and 6 were combined into a new variant, in which the turbines were distributed amongst the municipalities (Figure 3). 27 turbines would be placed in the northern cluster, and four in both the middle and southern clusters (DvhN, 2015a). This decision was a turning point in this critical moment: so far, it had mostly been Menterwolde that was explicitly opposing the provincial and national governments' plans for the wind farm. However, this new variant meant that Veendam was getting turbines on their territory after all. From this moment, they started with active opposition, allocating 50,000 euros to a fund supporting residents in their legal fight against the wind farm (DvhN, 2015b), and seeking legal advice: 'The municipality itself cannot do much, but it will support citizens' initiatives'. Even though Menterwolde and Veendam differed in their preferences for a siting variant, they were now both actively opposed to the wind farm.

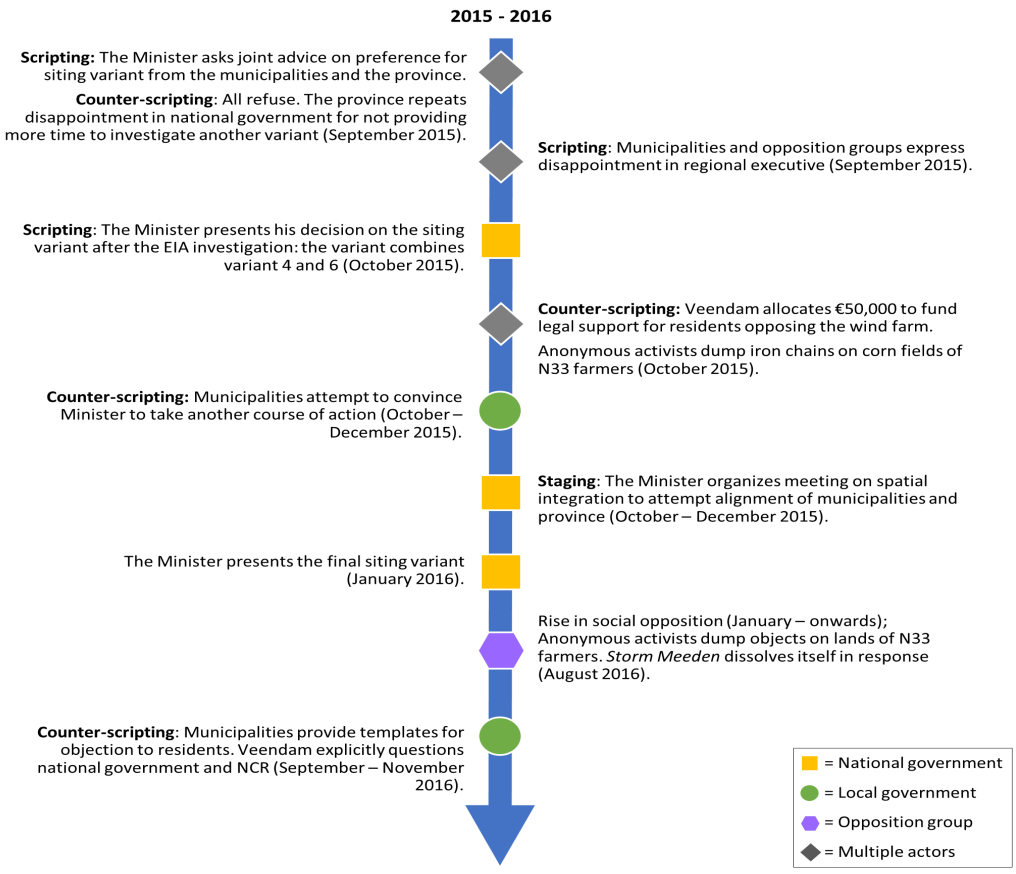

Figure 6. Timeline of interactions in critical moment 4.

Distribution of the wind turbines thus had the opposite effect, as it fueled both municipal and social opposition. In the following months, the municipalities attempted to convince the Minister to take another course of action (RVO, 2016a, 2016b): Menterwolde repeated its plea for variant 7, and Veendam its preference for variant 6. In an attempt to align the municipalities and province, the Minister organized a series of meetings on the spatial integration of the wind farm (October – December 2015). The meetings resulted in three agreed-upon factors: reducing noise nuisance as much as possible, the greatest possible distances to residential areas and houses, and landscape integration (Ministerie van Economische Zaken, 2017). This led to the presentation of the final version of the formal project plans (January 2016), including the selected variant. The Minister proceeded with the combined siting variant (DvhN, 2015a).

The following months showed a rise in activities from anonymous activists: cans filled with concrete and iron pins were dumped on agricultural lands of N33 farmers, damaging two combine harvesters (August 2016) (DvhN, 2019). In response, local opposition group *Storm Meeden* dissolved itself, as it did not want to be held accountable for these actions (Veer, 2016).

It was not only local opposition that intensified in response to the Minister's decision. The municipalities were also looking for avenues to express their opposition. They used the formal decision-making procedure, and provided online templates for objection to support residents opposing the wind farm (Windpark N33, 2017). Here, Veendam started to explicitly question the role of the national government – which Menterwolde had already been doing early on (November 2016). Veendam also questioned the legality of the application of the NCR, and simultaneously submitted a request based on the public disclosure law (in Dutch *WOB-verzoek*) for disclosure of the calculations regarding the financial viability of the wind farm (Bureau Energieprojecten, 2016).

4.4.6 Epilogue

In the following years, the municipalities attempted to delay the construction of the wind farm, for example by refusing or attempting to revoke local permits (Braakman, 2019; Gemeente Oldambt, 2019). Social opposition became more extreme: activists sent personally threatening letters to companies involved with the wind farm (July 2018), and asbestos was dumped around N33 construction sites (December 2018 & January 2019) (RTV Noord, 2019), amongst other things. In 2019, the country's highest administrative court (*Raad van State*) declared the objections of opponents unfounded. Despite the fierce opposition, the wind farm was realized in 2020 and has been operational since then.

4.5 Analysis and discussion: unpacking governmental interactions

The performance perspective highlights actions and reactions of the three governmental levels in critical moments of the N33 controversy. Unpacking these interactions reveals the lower governmental levels responding to the new policy context. Below, we will first discuss the nature of the policy context, followed by three governmental responses.

4.5.1 The NCR's shadow of hierarchy

One of the aims of the NCR was to facilitate collaboration between governmental levels to speed up development of energy projects of national importance (RVO, n.d.). However, there were several caveats, one being the Minister's power to overrule local governments (see Section 4.2). There were no clear rules for when the national government would exercise this right, aside from a statement regarding cautiousness in applying this (RVO, n.d.). As such, this policy cast a *shadow of hierarchy* (Scharpf, 1997), which is 'the capacity of the State to reassert its authority over decisions, if those decisions should deviate markedly from the goals of those political (or administrative) leaders' (Scharpf 1997; Heritier/Lehmkuhl 2008 in Peters, 2010, p. 4).

The shadow of hierarchy materialized most visibly during critical moment 4: as the lower governments refused to state a mutual preference for a siting variant, the Minister exercised his right to make this decision. This effectuated a hierarchical relationship between the governmental levels, which was met with an increase in both municipal and social opposition, with the former becoming more unconventional (see Section 5.3). In general, decision-making processes that span different governmental levels are said to benefit from horizontal relationships (Scholten, 2013). However, when the NCR came in effect, formal power dynamics shifted and changed the institutional stage for interactions between the governmental actors. The resulting loss of local autonomy led lower governmental actors to seek alternative ways to influence decision-making and fend for local public interests (see Sections 5.2 and 5.3).

4.5.2 Response to changed policy context: Venue shopping

One response to the new power dynamics of the NCR we identified is *venue shopping*. This is when governmental actors look for places of authoritative decision-making to tip the balance in their favor (Guiraudon, 2000, p. 252). Impact assessment methods often become stages for conflict involving different governmental levels (Hertin et al., 2011). This was also the case in the N33 controversy: the EIA procedure turned into an important stage for venue shopping, as lower governments used it to directly and indirectly influence this process through their performances.

The SWOL debate became an indirect space for attempts to influence the EIA procedure.

Provincial Executive member Moorlag's performance in the run-up to the SWOL debate seemed to culminate in societal and political pressure on the Minister. It was the formal political pressure from the MPs (materializing in the passed motion) that the Minister could not ignore. On this occasion, Moorlag's venue shopping tipped the balance in his favor, as the Minister eventually had to add variant 6 to the pending EIA. Subsequently, variant 6 set off a series of contentious municipal and societal reactions, which meant a continuation of the controversy.

This example also illustrates that the venue shopping contributed to the upscaling of the controversy: (counter-)scripting, staging and setting activities from the lower governments shifted the political discussion on the N33 from the municipal and provincial level to also include the national level. Similar upscaling of energy controversies has been observed in other cases (Cuppen et al., 2019; Hill & Knott, 2010). In these cases, the upscaling was mostly instigated by societal actors, whereas in the N33 controversy it was triggered by lower governmental actors.

4.5.3 Response to changed policy context: Strategic scaling

A second response of the lower governmental actors is *strategic scaling*, which is related to venue shopping. This is when actors script problems at governmental levels they can control or at the level they prefer to handle the problem: "framing policy problems as local, regional, national (...), involves strategic upscaling and downscaling and can be considered a political act' (Termeer et al., 2010, p. 11). Strategic scaling can help in taking or rejecting responsibility as well as gaining access to decision-making (Lebel et al. 2005 in Termeer et al., 2010). Such behavior is common in governance processes spanning multiple levels (Termeer et al., 2010, p. 11).

What the N33 case study shows is that strategic scaling can backfire and fuel controversy. In critical moments 2 and 4, the strategic scaling of the Provincial Executive members played a key role in triggering contentious reactions at municipal and societal levels. At the end of critical moment 2, both Moorlag and the Minister strategically scaled the siting of turbines for variant 6 at each other's level. Eventually, Moorlag's strategic scaling resulted in electoral loss. Homan, on the other hand, first took charge of the N33 siting conflict (critical moment 4). This was followed by rejecting responsibility when she attempted to rescale the siting problem from the provincial to the national level, claiming the Minister left her no choice other than not choosing a siting preference. Homan's strategic scaling also backfired, as it was met by municipal criticism and opposition groups' public disappointment.

4.5.4 Response to changed policy context: Governmental activism

The third response we identified concerns the municipalities. Unlike other local governments

engaged in wind energy controversies (González et al., 2016), the municipalities involved in the N33 case were not allowed to initiate legal proceedings against the national government due to the NCR. Initially, the municipalities focused their efforts on the EIA procedure, and lobbying at the national level. However, this shifted during critical moment 4: in response to the changed policy context, their performance took the form of *governmental activism* (Verhoeven & Duyvendak, 2017), which is when actors "recombine formal and informal rules and narratives in attempts to form or reinforce coalitions and combat their political opponents" by adapting, bending or resisting rules and ideas (Verhoeven & Duyvendak, 2017, p. 569).

Characteristic of governmental activism is the municipalities' use of conventional means (the public consultation procedure) for unconventional strategies (providing templates for notices of objection to residents) in several critical moments (Verhoeven & Duyvendak, 2017, p. 570). Governmental activism is also expressed through the allocation of resources (Verhoeven & Duyvendak, 2017): both Veendam and Menterwolde allocated funds to support residents and action groups in their opposition, resulting in temporary informal coalitions[7]. Menterwolde using funds to investigate the viability and feasibility of their own siting variant to counter variant 6 is another example.

Governmental activism also became visible in the counter-scripting of the municipalities, which marked a noticeable change. At first, the municipalities tried to convince the Minister to take a specific course of action (often regarding a siting variant). As the controversy progressed, the counter-scripting of Veendam and Menterwolde became of a more procedural nature, '[questioning] the validity of decision-making (Gordon and Jasper 1996: 163) and [declaring] proponents' hierarchical strategies as undemocratic' (Verhoeven, 2018, p. 4). For example, Veendam used the public consultation procedure to question both the legality of the application of the NCR as well as the financial viability of the wind farm. Both municipalities also sought legal consultation in their search for spaces or ways to oppose or circumvent the NCR.

4.5.5 The role of the EIA in the N33 controversy

The responses discussed above were aimed – some more directly than others – at influencing the EIA. Persevering with the EIA framework contributed to a deepening of the controversy, especially as the use of the EIA also provoked strategic behavior amongst different governmental actors who attempted to influence the procedure. Though the EIA is an important instrument to support decision-making, it also reinforces the technocracy of decision-making on energy projects as specific public interests are investigated. Expanding EIAs to cover all types of (local and national) interests is overambitious (Hertin et al., 2011). Instead, it is necessary to be aware of its limitations and (strategic) use by

7 See (Verhoeven et al., 2022) for a detailed analysis.

actors, and to overcome these limitations with other sources or policy instruments to include interests that do not fit within the EIA framework (Hertin et al., 2011), for example the Social Impact Assessment (Martinez & Komendantova, 2020), and the Participatory Value Evaluation (Mouter et al., 2019).

At the time of this case study, there seemed to be little opportunity for such participatory practices, as there was a lack of supporting institutions, and the Ministry of Economic Affairs often overruled municipalities in siting decisions (Breukers & Wolsink, 2007; Wolsink, 2010). Top-down national policy and use of hierarchical power has been known to be problematic in the contested domain of wind power, and has formed an obstacle in the realization of targets (Wolsink & Breukers, 2010). Even though wind farm N33 was realized, the implementation was immensely delayed, and caused municipal as well as intense social opposition. Following ongoing opposition toward onshore wind farms, recent years have shown several institutional changes in decision-making on the Dutch energy transition, for example the Regional Energy Strategies (RES): "the representative bodies of the Dutch subnational governments in collaboration with the Dutch government initiated the [RES] programme (..) to steer the energy transition towards a more decentralised and renewable system" (van Dijk et al., 2022, p. 92). Participatory practices are also becoming more institutionally embedded, for example in the new Environment and Planning Act (enactment expected January 2023) (Overheid.nl, 2021).

To facilitate wind energy developments and deal with persistent opposition, González et al. (2016) suggest a tightened centralized spatial control. The N33 case shows that this suggestion rests on naïve starting points, disregarding the heterogeneity of decision-making, and the dynamics of interactions between governmental actors themselves and their societal environments. Most of all, it maintains the idea that the public interest can be expressed as a singular policy goal, which not only disregards the multi-level character of decision-making in the energy domain, but also prevents conceptions of the public interest which emerge at different levels throughout the process from being taken into account.

From our case analysis, it seems more productive to think about ways to include horizontal as well as vertical relationships (Knill and Lenschow 1998 in Adam et al., 2019). Cross-disciplinary research on the governance of socio-ecological systems (for example Termeer et al., 2010) offers useful insights to policy actors regarding the improvement of multi-level governance of energy infrastructure. This allows a focus on aligning or uniting public interests at different scales. For example, regional executives could facilitate deliberation between the different governmental levels (i.e., vertical interplay (Young, 2006) as intermediaries between public interests on the national and municipal levels. In this, the question of how conceptions of public interests are and can be articulated

deserve more attention than is currently given in the literature. Making such conceptions explicit will help governmental actors to understand which commonalities and differences they have to deal with in their interaction with other actors.

4.6 Conclusion

In this article, we set out to investigate how governmental actors engaged with the contested wind farm N33. We showed that interactions between governmental levels are crucial drivers for the dynamics, and thus development, of the controversy. The top-down policy context and the shadow of hierarchy set the stage for interactions of an increasingly contentious nature between governmental actors as well as between governmental and societal actors. Over the course of the controversy, the EIA procedure became an important stage for governmental actors to direct their actions toward. After losing their local autonomy, the lower governmental levels attempted to influence the decision-making on the wind farm through venue shopping, strategic scaling, and governmental activism. Each of these activities was also met with a response from other governmental or societal actors, contributing to a continuation of the controversy.

The period investigated in this case study is limited, and therefore only provides a partial understanding of the controversy. We realize that our approach describes the development of events and dynamics and that, based on this, we cannot make statements about the causes of these dynamics, since this would require more explanatory research (van de Grift & Cuppen, 2022). Nevertheless, we do think that investigation of the interactions of governmental actors enhances our understanding of wind energy controversies, and gives new insights into the challenges of (implementing) energy policy and planning. This case counters the idea of controversies as dichotomous conflicts between the government (as a unified entity) and citizens, between project initiators and opponents, or between proponents and opponents. By providing a more nuanced perspective, we hope to add to the literature on governmental actors engaged in wind controversies, as well as existing work on conflicts between national and local public interests in hierarchical wind planning and siting (Bergek, 2010; Hill & Knott, 2010; Nadaï, 2007; Parkhill, 2007; Pepermans & Loots, 2013).

The multilevel dynamic between governments in energy controversies deserves more attention from researchers, especially 'the ways in which relations of hierarchy are constituted, constructed and contested' (Bulkeley, 2005, p. 897) and 'the contexts which sustain them' (Cowell, 2007, p. 293). We hope our empirical contribution to the theorization of dynamics of renewable energy controversies has made a clear case for further unpacking these governmental interactions.

Acknowledgements

The authors are grateful to the interviewees who participated in this research project and to Joost Vervoort for valuable feedback on the manuscript. This study has been approved in advance by the Human Research Ethics Committee of Delft University of Technology, the Netherlands. The application is filed under ID number 231. Each interviewee has signed an informed consent form.

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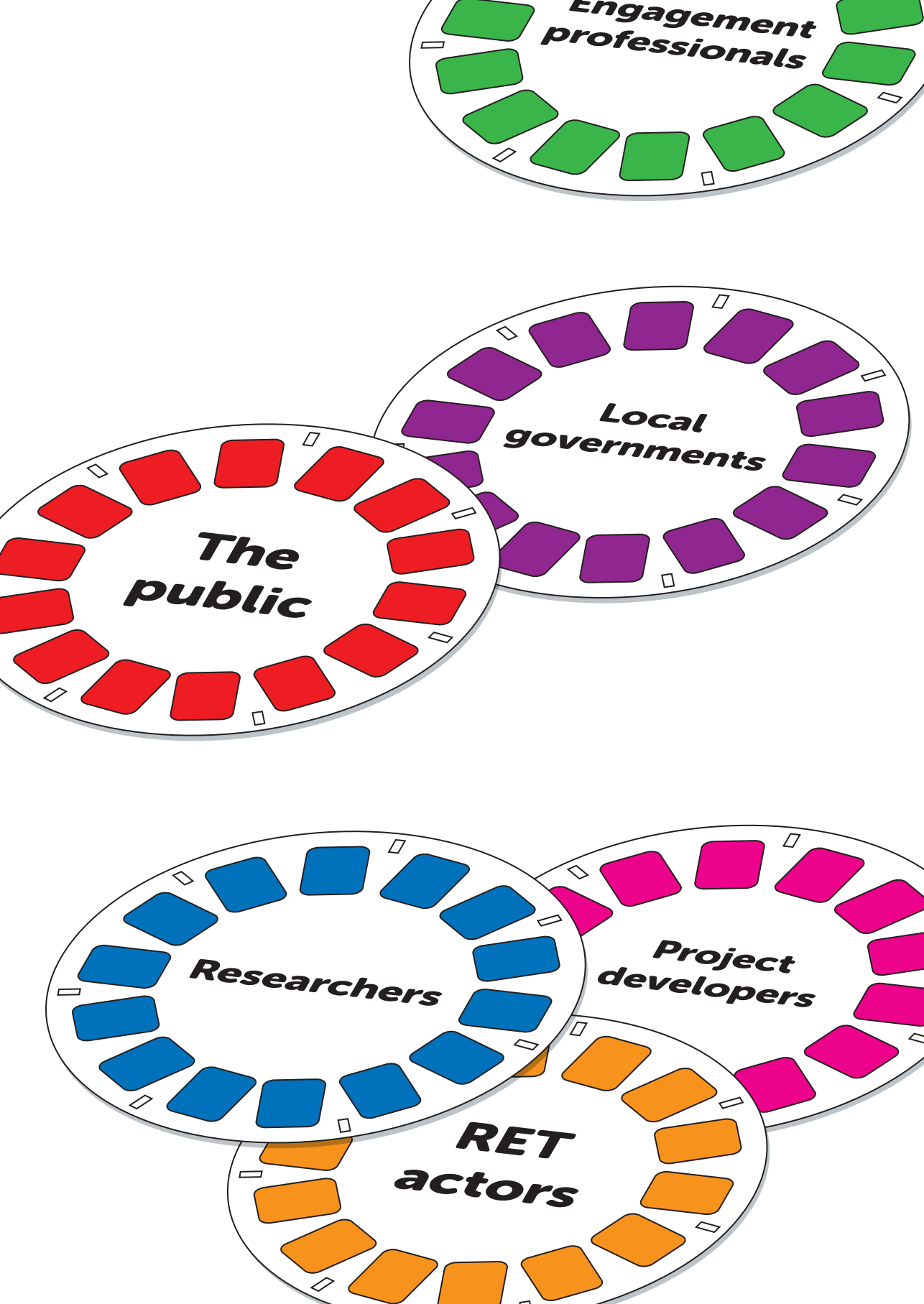
Engagement professionals
Local governments
The public
Researchers
Project developers
RET actors

Chapter 5

What's behind the curtains? Access dilemmas in research involving energy actors in renewable controversies*

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5.1 Introduction

Over the past decades, there has been a growing focus from social science researchers on renewable energy controversies (Batel & Devine-Wright, 2015; Devine-Wright, 2011b; Fast, 2013; Roberts et al., 2013; Sovacool et al., 2022). Yet, while a lot of attention has been directed toward opponents, the general public or local communities, other key actors, such as energy actors, have received little attention (Batel & Devine-Wright, 2015; Burningham et al., 2015; van de Grift & Cuppen, 2022; Wolsink, 2019). Energy actors are a diverse group of people representing organizations that are involved with the planning and implementation of energy projects and infrastructure (Walker et al., 2011). People in such positions can be viewed as powerful actors in the energy domain, as they are 'close to the cogwheels and power of society, and more than corporations in other fields they confront demands from both political spheres and civil society to attain sustainability and take responsibility for bringing society through the "green transition"' (Müftüoglu et al., 2018), p.250].

Investigation of such powerful (and often incumbent) actors and organizational contexts is important to understand how the transformation of energy systems does, or does not, take place. As such, more social science research into energy actors is needed (Burningham et al., 2015; Devine-Wright, 2011a; Devine-wright et al., 2017; van de Grift et al., 2020; van de Grift & Cuppen, 2022). Ethnographic methods, such as participant observation, have the potential to help open up the black box of energy actors (Goodman & Marshall, 2018; Müftüoglu et al., 2018; Rauter, 2022; van de Grift & Cuppen, 2022)[1]. These methods provide researchers with tools to investigate power dynamics and 'locate the agents and processes at work within economies of energy production, and identify tensions and dynamics both within the corporation and at the interface with society' (Müftüoglu et al., 2018, p. 250).

One of the main challenges of social science research into energy actors is gaining and maintaining access (Espig & de Rijke, 2018; Hall et al., 2020; Kirchherr et al., 2017; Lam et al., 2013; Maillé & Saint-Charles, 2014; Müftüoglu et al., 2018; Ryder, 2018; Songsore et al., 2018; van de Grift & Cuppen, 2022)[2]. This is particularly the case for research that involves the use of ethnographic methods, such as participant observation (Espig & de Rijke, 2018; Müftüoglu et al., 2018). Accessing energy actors is challenging, as 'the most powerful and influential individuals working in the fossil fuel industry have little incentive to opt in to these [...] studies' (Ryder, 2018, p. 273). Access-related challenges are common in ethnographic work on elite groups or organizations (Lønsmann, 2016), also known

1 Espig and De Rijke provide an insightful discussion of ethnographic methods versus ethnography (Espig & de Rijke, 2018).

2 See (Goodman & Marshall, 2018) for an elaborate overview of general challenges for social science research in the energy domain.

as 'studying up' (Nader, 1972). According to Nader, '[t]he powerful are out of reach on a number of different planes: they don't want to be studied; it is dangerous to study the powerful; they are busy people; they are not all in one place (...)' (1972, p. 302).

Several authors describe experiences with energy actors who only want to provide a written statement, or who are unwilling to participate due to controversy surrounding the project they are working on (Kirchherr et al., 2017; Lam et al., 2013; Maillé & Saint-Charles, 2014; Songsore et al., 2018). Others encounter energy actors who attempt to control and limit access to sites or information (Espig & De Rijke, 2016; Müftüoglu et al., 2018). What further complicates studying up is the energy domain itself: it is characterized by interactions between multiple actors, who are often embedded in multiple contexts in which (local & national) policy, social and business interests are at play (Walker et al., 2011). All of these can be encountered in the process of gaining and maintaining access. Despite access being such a common challenge in this type of research, there are few publications addressing the topic, especially when related to the position of researchers (with (Espig & de Rijke, 2018; Müftüoglu et al., 2018) as notable exceptions). For example, in this journal, only three publications using ethnographic methods to study energy actors have discussed ethical and methodological challenges (Espig & de Rijke, 2018; Müftüoglu et al., 2018; Ryder, 2018)[3]. Data collection in empirical qualitative social science research is a messy business, yet we researchers tend to present polished methodology sections (Huisman, 2008; Lønsmann, 2016). This is problematic as it omits our daily decision-making on challenges we encounter. In this decision-making, universal research ethics can only help us so far, since 'vague and generic prescriptions such as "do no harm" and "obtain informed consent" do not always help to guide the decisions we confront in the field' (Bantjes & Swartz, 2018, p. 395), p.395).

This article thus answers Goodman and Marshall's call for increased sharing of learning in research practices in the energy domain (Goodman & Marshall, 2018; Marshall & Goodman, 2018). The call encourages 'people to think about the problems they faced with, or with finding, their own method, and the ways that the methods' interaction with the resistant nature of reality, caused problems, and what we can learn from those problems' (Goodman & Marshall, 2018, p. 10). Though such an investigation of one's own work can be uncomfortable, it contributes to shared learning as a field (Lønsmann, 2016), is "an important ethical safeguard" for our research ethics in practice (Bantjes & Swartz, 2018), p.395), and can help make our research methods more rigorous (Sovacool et al., 2018).

In this article, we perform a reflexive analysis (Lønsmann, 2016) of our own experiences in using ethnographic methods in research on energy actors involved with (potential) wind

3 In one publication the authors indicated access was not an issue (Toft & Rüdiger, 2020). For this study, three semi-structured interviews were conducted with public affairs, sustainability and climate change managers at Danish energy firms.

energy controversies. In Section 2, we introduce the Dutch research project RESPONSE and the two wind projects in which we encountered multiple dilemmas[4]. We present the encountered dilemmas and discuss how we navigated these at the time in Section 3. This is followed by an in-depth reflection in Section 4 in light of the literature from the social science of energy as well as broader literature on ethnographic methods.

5.2 Reflexive analysis of research practice

In this article, we draw on the experiences of researchers working on the RESPONSE project (2015–2021). In RESPONSE, we investigated decision-making on controversial energy projects and infrastructure, further exploring the value of social conflict and the involvement of citizens in decision-making processes (Cuppen, 2018; Pesch et al., 2017). Due to co-funding requirements, we were obligated to collaborate with eight Dutch energy actors. This enabled us to investigate decision-making on energy projects from inside (partner) organizations. In the context of RESPONSE, we investigated multiple energy controversies, using ethnographic methods for our data collection, which included qualitative interviewing, participant observation, and informal conversations.

In order to investigate our own research practice in the RESPONSE project, we conducted a reflexive analysis. 'A reflexive analysis is one that focuses on the processes underlying data collection. This type of analysis entails turning the attention "inwards" towards the research context' (Alvesson & Sköldberg, 2009 Lønsmann, 2016, p. 20). To guide the reflexive analysis, we used the concept of strategic dilemmas (Jasper, 2006). This concept allows an identification of dilemmas resulting from interactions between different actors, and perceives researchers as part of a web of relationships, in which they need to make a decision (Verhoeven et al., 2022, p. 2). The dilemmas are presented in two narratives, which describe the actions of and interactions between the energy actors, other stakeholders and us as researchers (Section 5.3). The two narratives have been validated with a member of the RESPONSE project who participated in the fieldwork activities.

5.2.1 RESPONSE case studies

In this article we draw on two cases of onshore wind energy in the Netherlands. The first case (Section 3.1) concerns a stakeholder engagement process on wind and solar energy development (early 2017). In the target area, existing wind turbines were causing nuisance for residents, and earlier plans for wind turbines had encountered opposition. Together with a renewable energy cooperative, one of the RESPONSE consortium partners (CPs) decided to try a different approach, involving local stakeholders early in the planning process. For us, this was a unique opportunity to investigate such an approach in

4 https://www.tudelft.nl/en/tpm/research/projects/response

a conflict setting. The second case (Section 3.2) concerns wind farm N33 in the province of Groningen (February 2017). We decided to investigate this controversy as the siting process ongoing at the time had spanned almost two decades, whilst long-term societal opposition was becoming more extreme (DvhN, 2019; RTV Noord, 2019).

The data we use in this analysis was collected as part of the RESPONSE project. It contains personal & methodological notes, minutes of meetings and conference calls with CPs, interview transcripts, email exchanges between RESPONSE researchers, correspondence with CPs and a consultant, media articles, and social media posts.

5.3 Access dilemmas in research involving energy actors

Below, we present the two categories of dilemmas we encountered in fieldwork involving energy actors on (potential) wind energy controversies in the Netherlands. The first category concerns dilemmas related to gaining access (Section 5.3.1), and the second concerns dilemmas related to maintaining access (Section 5.3.2). For each category, we provide a narrative describing the events leading up to and following the dilemmas, the choices we made at the time, and the considerations that informed our actions.

5.3.1 Dilemmas in gaining access

We faced three dilemmas in gaining access to the stakeholder engagement process for wind energy development initiated by one of the RESPONSE CPs. Between February and April 2017, we had several conversations and email exchanges with representatives of the CP regarding an investigation of the stakeholder process. There was much at stake for them: the sensitive nature of the process was repeatedly stressed, and they felt they were taking a business risk by approaching stakeholders this early in the planning process. As the process took place behind closed doors, we were depending on the CP for access. Once the representatives had gained permission for our research from both their CEO as well as the partnering energy cooperative, and had provided us with stakeholder contact information, we faced our first dilemma: should we proactively contact stakeholders or passively follow the lead of the CP?

We chose to do the latter for several reasons: Realizing our potential influence on the course of this sensitive stakeholder process, we wanted to limit interference caused by research activities as much as possible. Moreover, such interference could have led to a deterioration of our relationship with the CP, jeopardizing access to future case studies. We also did not want to compromise the current working relationship with the CP, as they did not seem comfortable with us actively contacting other stakeholders at this point. So we decided to wait, which was also fine given the duration of our project.

Our first official meeting with the representatives took place in early April. They informed us about the stakeholder process so far, and we[5] presented our research approach. By the end of the meeting, we made several agreements: there would be regular meetings with the representatives to document their experiences of the stakeholder process, we would provide an overview of our intended research activities, and the representatives would get in touch with the consultant hired to facilitate the stakeholder process to discuss the possibility of observing stakeholder meetings.

A RESPONSE researcher emailed the research plan to the CP, illustrating our accommodating attitude:

> We [discussed] limiting our research activities with regard to external parties in the exploration phase to prevent our research from playing a role in the public discussion. To this end, we have included a list of names that we want to invite for an interview for each phase. (…) I would like to invite you to view the plan and to write down any comments. We can also (...) go through the list together.[6]

Several days later, a CP representative discussed the plan with the RESPONSE researcher. On the representative's request, we changed it to accommodate a more step-by-step approach: we would start by interviewing the representatives and the cooperative, while opportunities for observation were to be discussed with the consultant.

Late May, the RESPONSE researcher met with the same representative after he discussed our plan within their working group (which included the CP, cooperative, municipality, province and consultant). In an email to update the RESPONSE project leader, the researcher wrote:

> Not entirely unexpectedly, [the working group] did not immediately say 'yes' and reacted somewhat reluctantly. [The consultant] will contact you to ask more questions about the RESPONSE project. According to [the CP], this is mainly to build a relationship of trust with the municipality and the province. (...) As it stands, we will have to wait a little longer before contacting [other stakeholders].[7]

The meeting between the consultant and the project leader did not take place until late August due to scheduling issues. In the meantime, the first author interviewed three CP representatives. They all stressed that the consultant only required additional information about RESPONSE to convince the province and the municipality:

5 A RESPONSE researcher and the first author.
6 Personal communication of RESPONSE researcher, translated from Dutch.
7 Personal communication of RESPONSE researcher, translated from Dutch.

> [They think] that it's not a good idea to do something like [this] and start interviewing people in the process we're in right now. So we (...) agreed [the consultant] will contact [the project leader], and he can then take that back to the working group and again explain the research process. (...) I think it will contribute to the cold feet disappearing a bit at some point. So it also needs some time (Interview with CP representative 1).

On August 23, during our recurring talk with the representatives, we inquired about the possibility of observing upcoming meetings with the municipality. They then referred to the consultant and his role in the process: "he's the facilitator of the process so it's important he talks to the RESPONSE researchers" (CP representative 1)[8].

On August 30, we[9] met with the consultant and the CP. The consultant stressed our research approach was difficult to unite with his own: he perceived that our activities would result in stakeholders taking a stand, which he wanted to prevent in order to maintain space to maneuver. He did not want the process to be disturbed, and felt that our activities would create additional uncertainty in a high-pressure setting that he was trying to control. While he did not explicitly state it, observation of the process was out of the question. As a consequence, our research activities would be limited to interviewing stakeholders approved by the consultant, mostly excluding local communities. This presented us with a second dilemma: adapt to the consultant's conditions or discontinue our investigation.

We chose to adapt to the new conditions for several reasons. Again, we did not want to risk the relationship we had developed with the CP. Like us, they had also invested time in RESPONSE, which they needed to justify to their organization, and they seemed keen to continue. We also did not want our efforts of the past seven months to go to waste. There was still time within the duration of RESPONSE, so we decided to see where this adapted approach would take us, hoping to gain at least some useful insights despite the restricted access.

Two days after our meeting, the consultant emailed to say that he had spoken to the province and municipality:

> If [your research] is limited to the participants of the working group, as we discussed, then they are willing to cooperate. The municipality in particular [is hesitant], because of the sensitivity of the subject of wind energy. I explained to them that your research is about the process approach of controversial projects and not about how much wind energy [can potentially be developed][10].

8 Meeting notes of first author, translated from Dutch.
9 The first and second author with one of the RESPONSE researchers.
10 Translated from Dutch.

The consultant requested an update of our research plan so he could discuss this with the working group. Based on our meeting, we made several changes, which included removing specific references to research on perceptions regarding wind energy, removing references to observations of meetings with village councils, and explicitly referring to the consultant as a gatekeeper.

On September 11, the consultant informed us that the working group had accepted our plan and provided contact details for five members. Two days later we had our recurring meeting with the CP representative, who seemed content with the developments:

> This is also the problem that preceded it, why people struggled to participate in an interview. The project is sensitive and they are unfamiliar with [the consultant's] approach, which is also experimental. This [meeting] was simply necessary. I notice that with regard to these kinds of matters, [the consultant] can exert a major influence on people in the working group and how they respond.[11]

Although we were keen to move forward, we were simultaneously conducting fieldwork in several other cases. In addition, as the consultant's report on the first stage of the stakeholder process was expected, we decided to postpone interviewing the working group. This way, we would be better prepared for the interviews and the start of the second stage of the stakeholder process. In the meantime, between September 2017 and February 2018, we had seven meetings with the CP representatives. However, there was not a lot they could update us on, as developments in the process were slow.

Early February 2018, we encountered a third dilemma: should we stop trying to gain access to the other stakeholders or carry on with the given limitations? We reflected on the collected data; so far, our efforts had not yielded sufficient data on the process to conduct a meaningful analysis. We also knew that developments in the case were not to be expected for several months, as the second stage of the stakeholder process was postponed due to municipal elections. We realized that our adapted approach was not going to allow us to investigate the stakeholder process within the duration of RESPONSE. As such, after investing a year in this case, we decided to cut our losses and cease our activities.

Before we could communicate this to the CP, a university colleague informed us he had had a conversation with the CP's CEO, who was not happy with RESPONSE and was considering withdrawing from the consortium. A few weeks earlier, the CP representatives had asked about the progress of our research, which we interpreted as impatience rather than dissatisfaction. As such, the news about the CP's potential withdrawal was unexpected and proved an unfortunate outcome of our choices.

11 Meeting notes 13-09-2017, translated from Dutch.

5.3.2 Dilemmas in maintaining access

We encountered two dilemmas in maintaining access to different stakeholders whilst investigating the controversy on wind farm N33. Our consortium partner (CP) introduced us to the project developers, who were willing to participate. We interviewed multiple stakeholders, including the project developers, action groups, and governments. We also approached a journalist from a local newspaper who had been reporting on wind farm N33 for many years (August 16). Our standard practice was to send an invitation via email including a project description (see Appendix A).

On August 19, the journalist published an article titled 'TU Delft dives into wind farm N33' (de Veer, 2017), which referred to information from our invitation:

> Delft University of Technology wants to know what went wrong between project developers, farmers, government and residents at wind farm N33. (...)
>
> To gain insight into decision-making processes and the interaction between energy producers, landowners and local residents, the researchers are investigating the state of affairs surrounding wind farm N33 near Meeden and Veendam. This is done as part of the Response project. Partners in the project are utility company Alliander, Gasunie, energy company Eneco, the Netherlands Oil and Gas Exploration and Production Association (NOGEPA) and consultancy firms (...)
>
> The results of the investigation will be presented to Energiebeheer Nederland (EBN). This is a company with the state as the sole shareholder. EBN plays a crucial role in the exploration, production and sale of Dutch petroleum and natural gas (...)[12].

Most of the information about RESPONSE was correct, aside from the reference to EBN: EBN was not part of the consortium and there was no agreement about sharing our results. The article was somewhat subjective in some sections. There was no mention of our main funder, the Dutch Research Council (NWO)[13]. This could have created the impression that RESPONSE was completely funded by private organizations, some of whom have a complicated history in Groningen due to natural gas production (Cuppen et al., 2020; M. Weijnen & Correljé, 2021). The explicit reference to EBN, a fossil fuel company, can only have strengthened this impression.

The same day, a local opposition group that we also interviewed posted a link to this article on their public Facebook page with the following caption:

12 Translated from Dutch.
13 NWO required 25% of the funding to come from private organizations.

> We have invaded the fortress of science. During extensive discussions with the researchers, their jaws dropped in surprise. It is bizarre to note how huge the distance is between theory and reality. HOW LOUD DO WE HAVE TO SHOUT BEFORE THINGS REALLY GO WRONG HERE??? (TegenwindN33, 2017)[14]

One of the comments on the Facebook post questioned the objectivity of RESPONSE, referring to the private organizations involved. The first author was notified of these messages via Google Alerts, which she used to keep track of developments in the case. She informed the rest of the research team[15] via email:

> It was a matter of time before we would become the subject of debate ourselves. (...) Do we need to communicate this, for example, to [consortium partners]? How do we communicate with the journalist in question? And (how) could this potentially have an (negative) effect on other cases we are investigating? Because I expect other project owners to be wary of (social) media attention. We've spent so much time setting up these cases that I'm feeling a little panicked. On the other hand, what is happening here is also very interesting in terms of framing.[16]

The research team agreed that the article was to be expected due to the controversial nature of the wind farm. Our intention was not to become part of the controversy we were investigating, but to be what resembled a bystander: "By definition bystanders do no more than watch an interaction, but they usually have the potential to become more actively involved" [(Jasper, 2006), p. 123]. In this case, engaging with different actors in the controversy through interview invitations resulted in them involving us, which presented us with the first dilemma: do we actively engage in the public discussion or not? Such a choice is what Jasper (Jasper, 2006) calls the 'engagement dilemma', as the outcome of this decision is characterized by uncertainty: "Engagement puts good reputations (...) on the line, where they can be ruined" [pp. 26-27].

We felt both our reputation and perceived scientific integrity were being jeopardized due to collaboration with private organizations, potentially resulting in losing access to stakeholders. However, as researchers we felt we had been straightforward and sincere in our motives and goals. Nevertheless, we took several actions: 1) we fast-tracked publication of our statement[17] on our collaboration with the consortium partners to increase transparency. This included information on funding, scientific freedom and integrity; 2) we had a meeting with communications specialists at our university to discuss communication with external stakeholders; and 3) we started a popular science

14 Translated from Dutch.
15 Eefje Cuppen, Udo Pesch, Aad Correljé, Behnam Taebi and Shannon Spruit.
16 Personal communication of the first author, translated from Dutch.
17 https://www.tudelft.nl/tbm/onderzoek/projecten/response/partners

blog to communicate our findings and increase transparency and the accessibility of our research, circumventing lengthy academic publication processes.[18]

The interview with the journalist took place a few weeks later, and the discussion following the opposition group's Facebook post ended soon after the initial post.

Several weeks later, on September 29, the first author and her colleague conducted an interview with one of the project developers. During this meeting we also discussed the intensification of local opposition. The previous day, a local farmer had posted a public message including photos on Facebook, warning colleagues about wooden poles which had been discovered on cornfields in Meeden.[19] An opposition group reposted this with the caption 'It is harvest time again', hinting that these poles were a protest against wind farm N33. When we brought this up, the project developer was not aware of what had happened. This was unexpected, because we thought he would have already been informed, as had been the case on other occasions. We showed him a screenshot of the original message, assuming it would be okay as this was a public post.

The next day, the original post was no longer accessible. This led to several public Facebook posts from the opposition group, referencing 'wind farmers' and the cans filled with concrete and iron bars that were scattered in the same area a year ago as a protest against the wind farm (RTV Noord, 2019). That same day, the project developer sent an email to our colleague, asking her to forward the message about the wooden poles. This request presented us with the second engagement dilemma: should we share this piece of collected data?

We did not feel comfortable to share it as the Facebook message had shifted from a public to a private status. In this process, the message became part of the public discussion on the wind farm. In addition, as with the first engagement dilemma, we did not want to become active participants in the controversy but maintain our role as observers to the best of our ability. Sharing this data would potentially be a course-changing intervention. At the same time, we felt that not reciprocating the developer's request could potentially damage our relationship. Gaining access to project developers was notoriously challenging, but so far they had been cooperative, sharing documents and inviting us to observe information events. Would saying 'no' to the request mean the end of our access?

Before we could discuss the developer's request with the research team, the opposition group had posted a screenshot of the original Facebook post, making the information public again. Though this made our dilemma less salient, we nevertheless discussed it amongst our team. This conversation is summarized in our email to the developer:

18 https://response.weblog.tudelft.nl.

19 The plans to construct 27 (out of the 34) turbines near the village of Meeden led to fierce opposition (DvhN, 2019).

> As far as sharing the photo is concerned, we think it is irresponsible to share collected data with research respondents during an ongoing investigation. Doing so, we could [potentially] play too large a role in the course of our research topic. Showing the Facebook message during our conversation already went too far in that regard. I hope you understand that we cannot send you the document.[20]

We felt it was our responsibility (and main priority) to act as independent researchers and, with that, potentially risk losing access to the developer. Though the developer did not respond to our email, his colleagues did respond positively to interview invitations and document requests thereafter.

5.4 Reflecting on encountered access dilemmas

Closer investigation of the encountered access dilemmas reveals three factors that contributed to their emergence: ascribed positionality, a multitude of contexts, and gatekeepers. We explore these below in light of the literature from social science research into energy actors, as well as the broader field of social science disciplines using ethnographic methods.

5.4.1 Access and ascribed positionality

The engagement dilemmas we encountered in the case of wind farm N33 emerged from stakeholders' reactions toward ourselves or our actions: our investigation of the controversy was apparently newsworthy, according to the journalist, and there was skepticism toward our scientific integrity due to our collaboration with industry partners. Simultaneously, other opponents and the developer approached us as a potential ally. Our position as researcher thus played an important role in the emergence of the engagement dilemmas. This relates to the broader topic of positionality, which is 'the stance or positioning of the researcher in relation to the social and political context of the study—the community, the organization or the participant group. The position adopted by a researcher affects every phase of the research process' (Coghlan & Brydon-Miller, 2014), including gaining and maintaining access.

There are several researchers who also shared challenges originating from their positionality while investigating energy actors (Espig & de Rijke, 2018; Lawrence, 2014; Müftüoglu et al., 2018). However, these differ from the engagement dilemmas as they originated from stakeholders' perception of us, or, in other words, 'ascribed positionality' (Lønsmann, 2016). Ascribed positionality 'is not always one you 'choose' – it is also one you might be ascribed based on your associations with [certain] groups, and which might shut down discussion because you are assumed to be committed to a preconceived idea' (Müftüoglu et al., 2018,

20 Personal communication of RESPONSE researcher, translated from Dutch.

p. 255). In some cases, it may be impossible to prevent 'being identified with one faction or another' (DeWalt & DeWalt, 2002, p. 39). As far as we know, our ascribed positionality did not result in the loss of access to stakeholders over the course of the engagement dilemmas. Espig and De Rijke had a different experience: their university received 'industry funding for a [coal seam gas] research centre' (2018, p. 219) and this affiliation initially resulted in opponents not wanting to participate in interviews (Espig & De Rijke, 2016).

Ascribed positionality, in which researchers are perceived as 'part of the company's strategy or 'risk management' whether or not we signal an explicit position of advocacy' (Müftüoglu et al., 2018, p. 254), can result in questions related to reciprocity, as the second engagement dilemma illustrates. A (growing) sense of familiarity between participants and researchers can trigger expectations of reciprocity among participants, who then might present researchers with requests (Bantjes & Swartz, 2018, p. 391), such as the developer asking us to forward the Facebook message. As reciprocity is a crucial aspect in developing relationships with research participants (DeWalt & DeWalt, 2002, p. 40), the developer's request resulted in the second engagement dilemma. For us, it was this dilemma which prompted us to reflect on our position as researchers and consequently on our ethical responsibilities regarding the level of reciprocity toward the developer. However, when it comes to investigating energy actors, and (gaining and maintaining) access, it should be part of good research practices to ask ourselves: 'how we may be embedded in and – willingly or not – be 'intimate with' representatives from the energy corporations' (Müftüoglu et al., 2018, p. 254).

Ascribed positionality can determine if access to a case is "obtained" (Espig & De Rijke, 2016) or, as the engagement dilemmas show, if access is maintained. The engagement dilemmas illustrate that researcher positionality is a dynamic, relational process (Espig & de Rijke, 2018; Hopkins, 2007; Lønsmann, 2016): positions are 'emergent and negotiated in the interactions between the researcher and the informants' (Lønsmann, 2016, p. 14). This process of negotiation deserves our explicit attention as, among other things, it impacts gaining and maintaining access to organizations, individuals, and topics (Lønsmann, 2016, p. 14). In any case, a reflexive stance toward our own positionality seems a prerequisite when researching energy actors; in the process, it can deliver valuable insights into those we want to learn about (see (Müftüoglu et al., 2018) for an in-depth discussion on reflexivity and related insights).

5.4.2 Access in a multitude of contexts

The dilemmas we encountered in case 1 (Section 5.4.1) illustrate how different contexts were at play while we attempted to gain access to the stakeholder engagement process. Below, we discuss the three contexts and interests arising therefrom: the business context, the policy context, and our own academic context.

First, the *business context*: in general, this context shapes 'engagement, technology and locational strategies of renewable energy developers, their relationships with other [energy] actors and their degree of sensitivity to public responses' (Walker et al., 2011, p. 12). In this case, business-related interests shaped both the CP's and consultant's interactions with us, and consequently influenced the permitted level of access. The CP anticipated that their development plans would be locally sensitive which led them to call in the consultant. However, his approach was new for the CP and came with potential business risks, for example the project being delayed or cancelled as a result. As facilitator of the stakeholder engagement process, the consultant was responsible for bringing it to a successful conclusion. Our investigation of the process created an additional factor of uncertainty and thus posed a business risk for both the CP and the consultant.

The second context that came into play over the course of our attempts to gain access was the *regional & local policy context* (Walker et al., 2011). Policy contexts inform 'drivers of, and funding support for, project development; shaping the discourses, legitimation and engagement strategies that are employed and determining the processes and boundaries of decision-making through, for example, land use policy' (Walker et al., 2011, p. 12). Representatives from both the province and municipality anticipated some form of local opposition in response to the developer's plans. As such, the topics we intended to investigate within the stakeholder process were perceived as too sensitive, especially considering the upcoming municipal elections. Here, the political nature of wind energy became apparent. As the municipality and province were key actors in the stakeholder process, the consultant had to take their interests into account when deciding on our level of access.

The third context that played a role in the process of gaining access was our *academic context*. Where it is becoming more common to discuss researchers' positionality (Section 5.4.1), interests originating from our own academic context often stay implicit. Some are interests common to researchers in academia originating from the general publishing pressure in the academic system. Furthermore, in order to comply with the grant requirements, we had to produce several deliverables within the duration of the RESPONSE project. For these as well as the PhD dissertation of the first author, we were in need of case studies to investigate. And a third interest informing our decisions in the dilemmas was safeguarding our scientific integrity.

In addition to these common interests, there were specific interests originating from the funding requirements of the Dutch Research Council that funded the RESPONSE project. At the time, the NWO specifically required co-funding from private actors. So although we ideally would have collaborated with a diverse set of consortium partners, including other representative groups, NGOs, public bodies, etc., this was not possible due to grant requirements. In the Netherlands, it is becoming more common for funding agencies to

require researchers to collaborate with private actors such as the energy industry. It was therefore in our interest to maintain good relations with the consortium partners, which informed our choices in the access dilemmas in the stakeholder engagement process. In the meantime, adjustments have been made to funding structures and a multitude of organizations can now join research projects. Nevertheless, the impact of funding structures on research should remain a point of attention.

The above illustrates that a variety of contexts are at play in research on energy controversies, which result in access dilemmas. The contexts influence and inform decisions we make throughout the research process, as shown in case 1. The encountered dilemmas illustrate that not only the business and policy contexts of energy actors and other stakeholders involved in controversies present researchers with challenges and dilemmas; our own academic context and related interests also present us with dilemmas. These interests need to be made explicit as they potentially shape how we (can) conduct our research.

5.4.3 Access and gatekeepers

The access dilemmas in the stakeholder engagement process taught us a second important lesson: access to participants in research on sensitive topics, like energy controversies, is likely to be negotiated via multiple gatekeepers (Sanghera & Thapar-björkert, 2008). Gatekeepers are those 'individuals, groups, or organizations who have control or influence over a researcher's access to participants' (Latchem-hastings, 2019, p. 2). As such, they can facilitate as well as obstruct research (de Laine, 2000). Gatekeepers can change according to temporal, spatial, or organizational context (Sanghera & Thapar-björkert, 2008, p. 549). In our case, we confused 'gaining permission' in the organizational context of the CP with 'gaining access' in the context of the stakeholder process. The distinction between formal and informal gatekeepers is helpful here (Reeves, 2010). While *formal gatekeepers* are in a position to allow 'access to a population (within which individuals consent to take part in the research or not)' (ibid, p.321), *informal gatekeepers* can influence 'others through the strength of their personality and charm' (ibid, p.322'. In hindsight, the consultant was an obvious informal gatekeeper we could have contacted sooner in our investigation.

In the end, we perceived the consultant mainly as an obstacle to the stakeholder process. However, instead of an endpoint, 'not gaining the expected access might rather be considered a door opener into important knowledge' (Müftüoglu et al., 2018, p. 254). For Müftüoglu et al., who had a similar experience, this was knowledge about what energy companies did not want the researchers to know (Müftüoglu et al., 2018). For us, it could have been an opportunity to gain understanding about the nature of the stakeholder process. For example, which sensitivities did the consultant see as insurmountable, which the CP did not? Asking such questions would perhaps have resulted in valuable insights

into the intricacies of collaborations between multiple actors and their interests at stake. On this occasion, advice to investigate our own process of doing research, rather than fixate on 'the case', i.e., 'to consider the ethics and politics of the face-to-face encounter between ethnographer and informant' (Ghosh, 2018, p. 30) would have been helpful.

The dilemmas in the stakeholder engagement process illustrate that the relationship between researchers and gatekeepers is an ever-evolving one; they show 'the ways in which it may facilitate, constrain or transform the research process by opening and/or closing the gate' (Sanghera & Thapar-björkert, 2008, p. 544). Over the course of months, we gradually made multiple changes to our research plan, allowing the gatekeepers to shape our research. This process of (re)negotiation requires researchers' explicit attention (Espig & de Rijke, 2018). For example: in exchange for access to the desired objects or subjects of study, do the required concessions still allow scientifically and ethically sound research? There will always be different understandings and expectations of access between gatekeepers and researchers (Jordan & Lambert, 2010; Müftüoglu et al., 2018). As such, gaining access is 'not a single event but part of an ongoing process' during research activities (Reeves, 2010, p. 322). Ongoing reflection on the relationship with gatekeepers is thus important, especially when research takes place in a setting with a controversial political history (Sanghera & Thapar-björkert, 2008), which is often the case with energy controversies (Cuppen et al., 2020).

5.5 Conclusion

In this article, we have unpacked the access dilemmas we encountered while using ethnographic methods to investigate energy actors in controversies. The reflexive analysis revealed three factors which played a part in the emergence of dilemmas: the (ascribed) positionality of researchers, the multitude of contexts that characterize energy controversies, and gatekeepers.

What these dilemmas and factors together show is that we as researchers are unmistakably stakeholders in the field that we are investigating. This is especially the case when using ethnographic methods in which research boundaries tend to blur and roles shift as our research progresses (Bantjes & Swartz, 2018). As such, it is important we 'recognise that [we] both effect and are affected by the shared experience of research' (Gilbert, 2002; Valentine, 2007 in Reed & Towers, 2021, p. 2). Conducting research on energy controversies with its multiple actors and contexts at play thus requires flexibility and constant (re)negotiation of our own position (Espig & de Rijke, 2018, p. 219).

As a result of this complex point of departure, the types of dilemmas we encounter are often situational. This means they require 'context-specific, unpredictable, and subtle ethical decisions [which] have to be confronted in the field and on the run' (Goodwin, Pope, Mort, & Smith, 2003; Guillemin & Gillam, 2004 in Bantjes & Swartz, 2018, p. 394). Universal ethics conventions, however, fall short in helping us navigate these situational challenges (Bantjes & Swartz, 2018; Hopkins, 2007). Instead of more guidelines, we need more dialogue and exchange between researchers about the dilemmas we experience and how we (want to) deal with them. Such dialogue would be especially valuable for novice researchers[21] in the growing field of the social science of energy. For example, some questions we would have benefitted from considering at the beginning of our investigation are:

- How do we perceive our own positionality in the context of the field we are researching? And how could others potentially perceive our positionality?
- How can contexts (including our own) come into play in the investigation of the intended topic/case?
- Who are (possible) formal and informal gatekeepers in the intended topic/case study?

Sharing experiences and insights into research practices can support researchers to be (better) prepared for using ethnographic methods when investigating energy actors. Such transparency will also contribute to more rigorous methods and practices (Sovacool et al., 2018). But being transparent and reflexive requires us to be vulnerable, by 'writ[ing] in an authentic, open, and non-defensive way about the ethical challenges we confront and the decisions we make to resolve them [and b]eing reflective about our practices and inviting others to witness and comment on our decisions' (Bantjes & Swartz, 2018, p. 395). We hope our reflection contributes to the normalization of an ongoing exchange on the practice of researching energy actors in controversial settings (Goodman & Marshall, 2018).

Acknowledgements

The authors are grateful to the participants of the RESPONSE project and to Marja Spierenburg for valuable suggestions in the early stages of this article. The research on which this article is based was funded by the Responsible Innovation program of the Dutch Research Council (NWO) and co-financed by a consortium of private partners (project number 313-99-303). Please see http://www.tbm.tudelft.nl/en/research/projects/response/partners/ for the list of partners.

21 Which the first author also was, at the time of the encountered dilemmas.

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Appendix A. Information letter RESPONSE project

You have participated in an interview or activity part of the RESPONSE project[22]. With this letter, we inform you about the data storage and the handling of the collected research materials in this research project.

Aim of the project

Within the RESPONSE project, Delft University of Technology is conducting research into the origins and course of social controversy surrounding energy projects. A number of recent energy projects are examined, in which controversy has or has not occurred, for example the construction of a wind farm, a biogas installation or natural gas drilling. Through this project, the research team wants to contribute to decision-making regarding energy projects, in such a way that the diversity of views and values that play a role in society can be better taken into account.

Data storage:

- Interviews are, depending on the preference of the interviewee, recorded with a voice recorder or in note form. Audio recordings will be deleted within six months of project completion.
- During observations, the researcher will make notes of topics of discussion.
- The data is stored anonymously on a secure server of Delft University of Technology.

We wish to make the anonymized data available for future research. If you want to impose restrictions on this, please contact project leader Dr. Ir. Eefje Cuppen (E.H.W.J.Cuppen@tudelft.nl).

Access:

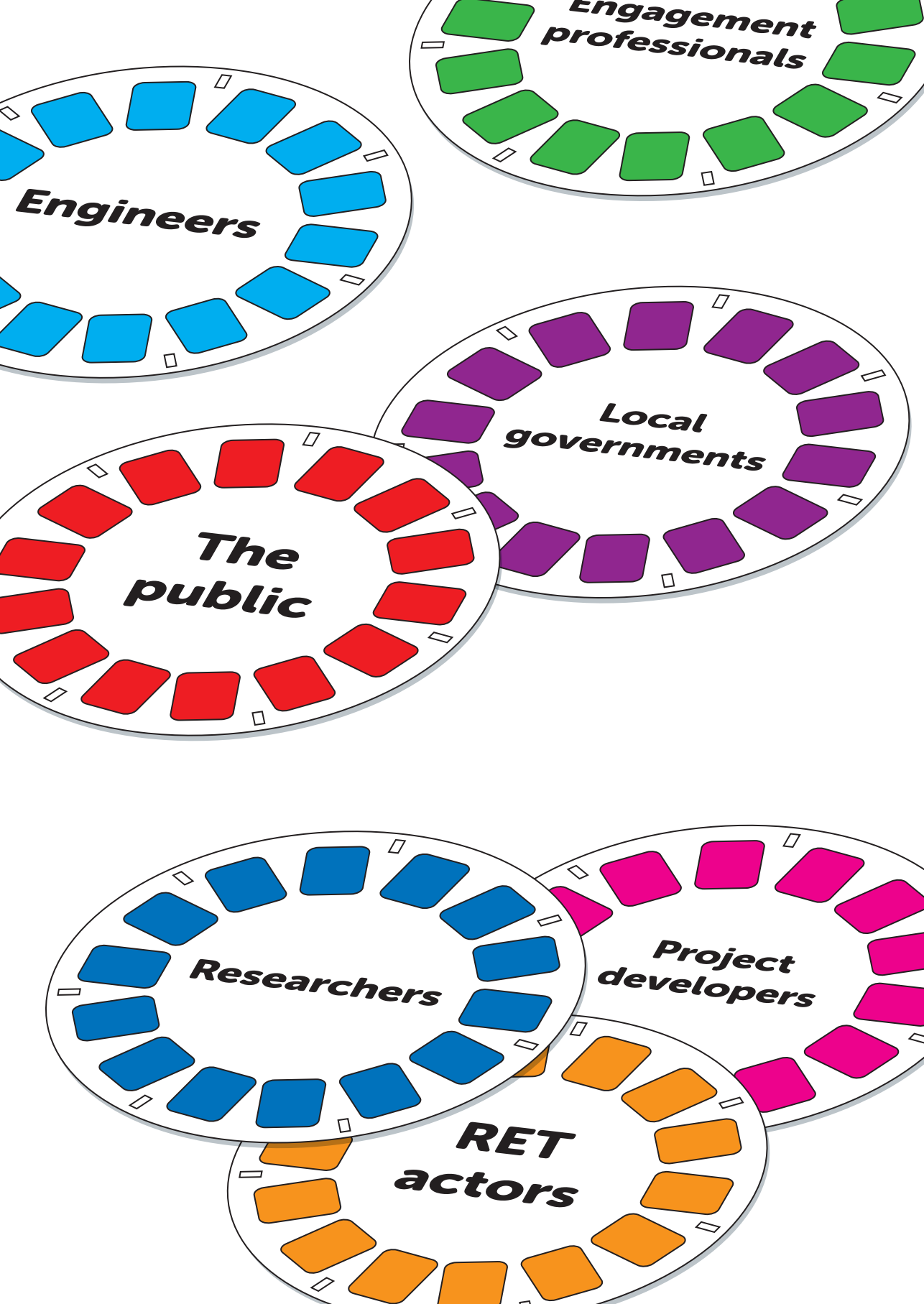
- Only the researchers involved in the RESPONSE project, Eefje Cuppen (project leader), Aad Correljé, Udo Pesch, Behnam Taebi, Shannon Spruit (post-doc researcher) and Elisabeth van de Grift (PhD candidate) or researchers under the supervision of the RESPONSE researchers have access to the data collected in this project.
- You have the possibility to view the saved transcripts of your own interview and to listen to the recordings of your interview on request.
- When sharing sensitive information, you can request an embargo period. We will then temporarily (period in consultation) withhold your research information, but no later than the end date of this project (01-03-2020).

22 RESPONSE stands for 'RESPonsible innovation: linking formal and infOrmal assessmeNt in deciSionmaking on Energy projects', more information can be found at www.tbm.tudelft.nl/research/projects/response/.

Report:

- When direct quotes from interviews are used in scientific publications, these will be presented to the relevant persons.
- The results of this research will be published in (international) scientific journals and during what are called valorization workshops. These are meetings where we invite a broad representation of industry, government, interest groups and social groups to reflect with us on the research findings. All interviewees are invited to these meetings.

Scientific publications can be sent on request, please contact project leader Dr. Ir. Eefje Cuppen (E.H.W.J.Cuppen@tudelft.nl).


Engagement professionals
Engineers
Local governments
The public
Researchers
Project developers
RET actors

Chapter 6

Conclusion

> *(..) the energy transition has a major impact on the living environment for all of us. Given the impact, the energy transition will be accompanied by resistance. With a good approach to stakeholder management*[1]*, I have the confidence that I can realize the energy transition together with all parties.*
>
> *The aim of stakeholder management is for all parties involved to discuss their own role in the energy transition, resulting in faster and better decision-making. Although involving [a multitude of local stakeholders] in policy and projects is already a starting point for the government and for various initiators, the energy transition makes cooperation between governments, citizens, companies and social organizations even more important. This means that, even more than in the past, governments, citizens, companies and social organizations must work together to implement the energy transition and integration into the [local surroundings]. Stakeholder management is crucial, from policy to implementation* (Kamp, 2016, pp. 1–2).

The above is an excerpt from a letter to the House of Representatives from the then Minister of Economic Affairs in February 2016. In it, he stresses the importance of stakeholder management by saying it needs to become an organizational competence and highlights the responsibility of the energy sector in this regard. At that time, I had been working on my PhD for about seven months. Like so many PhD candidates, I began my own doctoral journey with an exploration of the scientific literature. In these initial months, I was soaking up (mostly) social scientific literature on renewable energy controversies. One thing started to stand out: the heavy focus on the public (see Chapter 1).

I found that while researchers were pointing out the involvement of a multitude of actors in controversies, such as project developers and governments, their research oftentimes investigated only citizens and local communities, and why these communities would or would not support specific renewable energy projects or technologies. I remember being both surprised and intrigued by this: here we are, trying to understand this complex phenomenon, but at the same time we are directing most of our research efforts only at one particular group. As such, I decided to focus my PhD thesis on the group of actors actually responsible for implementing the energy transition so-called RET actors[2] (Walker et al.,

1 This quote is translated from Dutch. The Dutch term referred to here is *omgevingsmanagement*. Generally, *omgevingsmanagement* is understood as a combination of stakeholder management and issue management. Though there is not one clear definition, it generally refers to the set of activities that an organization undertakes to develop a relationship with its stakeholders. This is 'based on mutual respect for each other's interests and aimed at realizing added value for all parties', by 'analyzing issues, followed by actions to create harmony between organization and society' https://boommanagement.nl/artikel/definities-van-omgevingsmanagement/.

2 Renewable Energy Technology actors: 'a broad category of people in organizations with roles in supporting or implementing [renewable energy technology] developments – including developers, consultants, PR and marketing companies, trade associations, financiers and technology manufacturers' (Walker et al., 2010, p.4-5).

2010) - in an effort to gain understanding of energy controversies from a different viewpoint.

Following the minister's letter in 2016, several initiatives were launched to stimulate involvement of citizens in the realization of the Dutch energy transition. In November 2016, the community of practice 'Learning Platform Energy and Environment'[3] was initiated by the energy sector and the (then) Ministry of Economic Affairs, which is geared toward knowledge exchange within the sector on community engagement. Between 2018 and 2021 the so-called 'Green Deal Participation of stakeholders from the local environment in sustainable energy projects' ran[4]. During this Green Deal voluntary codes of conduct were signed by the solar and geothermal energy sector and an elaborate Framework for shaping participation in sustainable energy projects (Rijnveld & Schie, 2019) was published. All in all these were promising developments.

Fast forward to 2024: In my current work at research institute TNO I find myself frequently having conversations with stakeholder and community engagement professionals working in the Dutch energy sector. They share their struggles in getting engineers, technical project managers and CEOs on board in the (timely) engagement of citizens and local communities in the planning and development of projects. In these conversations, I hear the same challenges shared by the community engagement professionals I interviewed early 2018 (Chapter 3); Stakeholder management and community engagement is often still an isolated, add-on activity in the energy sector.

In my current role I often hear RET actors ask questions that boil down to gaining social acceptance, or preventing opposition: 'how do we gain support for our projects?'. Aside from a strong technical and legal focus in their development of projects, there does not seem to be awareness or acknowledgement that RET actors themselves play a major role in social acceptance. Their focus seems to be directed outward; that in order for social acceptance to emerge, it is the public that has to come to accept changes or risks that are consequences of renewable energy projects or infrastructure. Aside from the community engagement professionals, I hardly see representatives of companies taking a step back and assessing: 'What is our actual motivation for engaging with residents and communities? And how does this influence our actions in this process?'; And in doing this, realising that perhaps it is them who need to accept that their ways of working might require change.

What I have also seen is that guides or toolboxes on stakeholder and community engagement are (requested to be) short, preferably in bullet points and/or presented in slide decks. This

3 In Dutch *Lerend Platform Energie en Omgeving* also known as Platform LEO, www.platformleo.nl.
4 In Dutch *Participatie van de Omgeving bij Duurzame Energieprojecten*. A 'Green Deal' is a policy initiative in which the national government collaborates with companies, local governments and citizens to tackle bottlenecks in sustainable initiatives. See www.greendeals.nl/english.

requires reducing elaborate ways of working[5], which require specific skills, knowledge and experience, to a short and practical document. The target group of such documents is often technically oriented employees who are expected to start using such guides on their own accord. For me, this feels like giving a car to someone without a driver's license.

In the end, we have little insight into whether or not all the toolboxes, guides and frameworks[6] for stakeholder and community engagement, into which so much time and effort is invested, are actually used, or even read. And despite all these documents, the actual learning within the energy sector seems limited, or at least slow-paced. From my perspective, it appears this sector is either underestimating, not acknowledging or ignoring (intentionally or not) what engaging with citizens requires from them. This could indicate that working towards a supported energy transition requires more than providing RET actors with participation tools and methods.

At the end of my long PhD journey in RET actor research, both practice as well as academia still seem to have an obsession with the public (Wolsink, 2019; also see Chapter 1). Therefore, answering the main research question of this dissertation seems more timely than ever.

6.1 Answering the research questions

As discussed in the introduction of this dissertation, social science research into renewable energy controversies has been steadily growing over the past decades (Sovacool et al., 2022). While there has been a lot of academic attention for the general public, local communities and opponents, other actors involved in controversies such as RET actors have been under-researched. The focus on "the public" is problematic as controversies are complex and dynamic, involving multiple (groups of) stakeholders, interests and issues. Growing our understanding of the dynamics within renewable energy controversies therefore requires the investigation of a multitude of stakeholders, including RET actors (Cuppen & Pesch, 2021; Walker et al., 2010)[7].

Below, I will first answer the main research question as discussed in the introduction:

> *How can the investigation of perspectives and interactions of RET actors help to explain the dynamics of renewable energy controversies?*

5 Such as conducting a stakeholder analysis and writing participation and communication plans for different stages of project development.
6 With respect to the authors and their intentions. I have co-authored such documents myself as well.
7 See Chapter 1 for a more elaborate discussion of renewable energy controversies and the importance of investigating RET actors in this context.

The answer to the main question consists of summaries of chapters 2-5 and a brief synthesis of the answers to the sub questions. Then, I move to discuss limitations of this dissertation and recommendations for academia, practitioners and policymakers to elaborate on my case for RET actor research.

6.1.1 State of the art literature on RET actors

As it was unclear where RET actors research currently stands, the first sub question of this dissertation asked:

> *What do we know of RET actors when it comes to controversies surrounding renewable energy technologies and infrastructure?*

To answer this question, we conducted a systematic review of the literature on RET actors in relation to energy controversies. This way, Chapter 2 served as a departure point for this dissertation by providing the state of the art in social science literature.

We identified 89 relevant publications, which could be divided into two categories, each consisting of several themes. The first category concerns research into RET actors' perceptions of public opposition. These publications report on how RET actors perceive the impact and causes of public opposition. This includes perceptions of specific groups of people and processes of engagement and decision-making. The second category concerns research into how RET actors respond to public opposition. We identified eight different responses, serving different purposes, which included prevention, reduction or delegitimization of public opposition.

Reflecting on the findings of the review, we made five observations about the current state of empirical knowledge on RET actors involved in controversies:

1. There is little diversity in social science research on RET actors in terms of investigated actors, renewable energy technologies and infrastructure, and geographical contexts;
2. Most publications are descriptive and do not provide explanations for the reported perspectives, practices or discourses observed amongst RET actors;
3. Social science research on RET actors often reports on their practices as perceived or experienced by other stakeholders;
4. Most publications focus on RET actors and their attempts to avoid or reduce opposition, while few publications investigate attempts to address or accommodate public concerns in controversies;
5. Some researchers explicitly label their developer-centric research as biased. Such labelling contributes to the vilification of developers on the one hand and the romanticizing of opponents on the other (Burningham et al., 2015).

Based on these observations, we suggest several directions for future research. The first one is diversification of research to reflect the diversity of RET actors and their practices, the diverse renewable energy technologies they are involved with as well as the diverse geographical locations they work in. What kind of groups are behind the "container concept" RET actor? For example, think of the employees from different departments collaborating on project development, instead of the generic category 'project developer'. The second direction is explanatory research in order to unpack RET actors' perspectives, practices and discourses and attempt to understand their actions and interactions in controversies. This review found many multi-actor analysis on controversies, but these publications briefly reported on RET actors. In these cases, often the main focus was the public or local communities. As such, there was little in-depth investigation attempting to explain RET actors' actions.

The third direction suggests investigation of responsiveness of RET actors when public opposition occurs. This review found few publications investigating (attempted) learning from and constructively addressing public opposition. Such research fits within the growing line of research that approaches social conflict as a valuable source of information (Batel & Rudolph, 2021; Cuppen, 2018; Cuppen et al., 2020).

Together, these suggestions can result in a more nuanced understanding of RET actors. In turn this contributes to a finer-grained understanding of the (development of) conflict dynamics between the actors engaged in controversies.

6.1.2 How Dutch community engagement professionals view public opposition

The two chapters that followed the literature review provided examples of in-depth empirical research to illustrate what insights can be gained when investigating RET actor perspectives and (inter)actions.

Chapter 3 focused on perspectives and investigated the community engagement professional (or CEP) in the Dutch energy sector. By researching a particular group of RET actors, this chapter simultaneously contributed to diversification of research. The sub question answered in this chapter was the following:

> *How do community engagement professionals view community engagement in energy projects, and how do they view their own role therein?*

Using Q methodology (Brown, 1980), we identified three different perspectives amongst the interviewed CEPs which we described as: (1) community engagement as co-creation and the community engagement professional as intermediary, (2) community engagement as project management: "everything under control", and (3) project development: no

community engagement beyond legal requirements. Compared to each other, these perspectives reveal the diversity amongst this (seemingly homogeneous) group in five different areas:

1. Mode of engagement with local residents, communities or stakeholders and general public. While CEPs with perspective 1 and 2 seek partnerships or collaborations with local communities, those with perspective 3 focus on one-way communication as they perceive themselves not in a legitimate position to go beyond legal requirements for community engagement;
2. The position of the CEP vis-à-vis the organization they represent and the community they work in. Those with perspective 1 see themselves to be at the boundary of both the organization and community, CEPs with perspective 2 think of themselves as embedded in the organization and reach out to the community if this serves the goal of implementing project plans. CEPs with perspective 3 draw a sharp boundary between their own organization and the community, limiting interaction to formal decision-making procedures;
3. How social opposition and conflict is viewed and dealt with. While CEPS with perspective 1 show a certain appreciation of conflict and early engagement as self-evident, those with perspective 2 accept that it can emerge but rather prevents it by timely engagement. According to CEPs with perspective 3, social opposition is a given in project development, but as they feel it is outside of their control they do not actively engage with it;
4. The extent to which CEPs see themselves as responsible for the representation of communities. To varying degrees, CEPs with perspectives 1 and 2 share a sense of responsibility to take local interests into account in. CEPs with perspective 3, however, don't think of it as their responsibility as they feel that is what formal decision-making procedures are for;
5. Interaction with colleagues & stakeholders inside their own organization. Perspective 2 and 3 are similar as they feel they are working more or less harmoniously on project realisation. CEPs with perspective 1 though, feel they need to put in extensive effort to convince colleagues of the need and necessity of community engagement and make sure they are actually part of the project team.

The different perspectives provide insight into practices regarding interactions with local residents and communities in the context of controversies, as well as the different challenges experienced by CEPs in this work context. By comparing the three perspectives, Chapter 3 shines light on the heterogeneity of a subgroup of RET actors; showing 'them as collections of individuals rather than homogeneous entities' (this dissertation, p. X). This chapter also shows that organizational dynamics have a large influence on CEP practices and are an interesting avenue for future research. For example, how do different

organizational types approach community engagement? And how is it embedded in the organizational practices?

6.1.3 Governmental actors and their roles in a wind energy controversy

Following the investigation of perspectives in Chapter 3, Chapter 4 focused on interactions of RET actors to gain a better understanding of renewable energy controversies. Interactions in controversies are frequently studied from a multi-actor focus which often results in a dichotomous perspective, reporting on developers versus opponents, governments versus the public, etc. (Chapter 2). Considering the complexity of controversies, such a focus is a far too simple perspective. In order to understand how decision-making in the context of controversies takes place, interactions between the governmental actors involved need to be investigated. However, governments have received little attention from researchers, despite their key roles in the development of RET. Therefore, Chapter 4 opened the black box on governmental actors in controversies.

In this chapter the development of the controversy on the onshore wind farm N33 in the Netherlands was investigated by focusing on the different governments (national, provincial and municipal) involved in the planning process. The following sub question was answered:

> *How do governmental actors engage in the decision-making process of a contested wind farm and what role do they play in the development of the wind energy controversy?*

Using *critical moments* (Verloo, 2015), we identified three occasions in which actions and reactions from governmental actors and interactions between actors from different governmental levels influenced the development of the controversy. Analysis of these critical moments showed the major impact of the policy context: the introduction of a new national policy created a situation in which decision-making power shifted to the national government, resulting in local governments trying to regain influence in the formal decision-making process.

We identified three different responses from lower governments, which in turn aggravated the controversy. The responses are summarized below:

Local governmental actors attempted to (formally and informally) influence decision-making in their favor and specifically focused their efforts at places of authoritative decision-making. This is also known as *venue shopping* (Guiraudon, 2000). Venue shopping is often observed in impact assessment procedures, as was also the case with the N33 controversy. Another action of lower governments in response to the new policy context (specifically the shifted power dynamics)was explicitly placing responsibility for

(unpopular) decisions at other governmental levels. This is known as *strategic scaling* (Termeer et al., 2010). A third strategy that was identified amongst the municipal governments in attempts to oppose their political opponents was *governmental activism* (Verhoeven & Duyvendak, 2017). This is when municipalities use conventional means (in the N33 case the public consultation procedure) for unconventional strategies (in this case providing templates for notices of objection to residents).

This chapter demonstrates what we can learn about conflict dynamics of energy controversies when the research focus is shifted from interactions between proponents and opponents to interactions between RET actors, in this case the three governmental levels involved with the formal decision-making. In the case of the N33 controversy, this perspective facilitates comprehension of the controversy as more than a simple case of 'Not In My Backyard'. Focusing on the (inter)actions of governmental actors showcases the multidimensional and complex character of renewable energy controversies and produces new insights into challenges of the multi-level governance of energy policy and planning.

6.1.4 Lessons learned from "doing" RET actor research

While conducting the empirical research for this dissertation, we encountered several challenges in gaining and maintaining access to RET actors. As Chapter 2 indicated, we were not alone in this: one of the main challenges in conducting empirical research on RET actors as reported by other researchers, is gaining and maintaining access. This is particularly the case for research that involves ethnographic methods, such as participant observation (Espig & de Rijke, 2018; Müftüoglu et al., 2018). As such, we decided to further investigate these challenges in Chapter 5 with the following sub question:

> *What methodological lessons can be learned from empirical research on RET actors in the context of controversies to support future research?*

To answer the final sub question, we performed a *reflexive analysis* (Lønsmann, 2016) on our own experiences in using ethnographic methods in research on RET actors involved with (potential) wind energy controversies in the Netherlands. Using the concept *strategic dilemma* (Jasper, 2006), we reported on several challenges in both gaining and maintaining access that we encountered in two case studies. Based on the encountered dilemmas, we identified three factors that contributed to the emergence of these dilemmas:

1. **Ascribed positionality,** which is how people perceive others. For example, our collaboration with industry partners made some stakeholders sceptical of our scientific integrity. This 'assigned identity' can impact if and how people decide to interact with others and as such play a role in whether or not they will grant

researchers access to themselves or others. Reflecting on our own positionality and how we might come across on (potential) respondents is especially important when collaborating with RET actors in research as ascribed positionality can play a part in gaining and maintain access to a case or (potential) research participants;

2. **A multitude of contexts,** including the business context, the policy context and our own academic context. Interests of stakeholders that are related to these contexts can emerge and change over the course of conducting research. These interests can impact how stakeholders (including ourselves as researchers) interact and make decisions related to access. For example, interests emerging from our own academic context, in which there is a great demand from funding agencies for applied and societally relevant research. This often results in collaborations with different types of organizations, depending on the specific funding requirements.

   For the RESPONSE[8] project, we formed a consortium together with eight Dutch energy actors. Whilst we attempted to investigate a stakeholder engagement process organized by one of our consortium partners, the dependent character of our relationship become apparent: we were depending on the consortium partner for access to this case as well as hoping for access to cases in potential future collaborations. These interests resulted in us making changes to our research plan to accommodate the consortium partner and maintain a good relationship Interests like these, originating from our own academic context often stay implicit. However, they should be made explicit as they potentially shape how we (can) conduct our research and the choices we make along the way.

3. **Formal and informal gatekeepers.** These are individuals who can help obtain or obstruct access to specific stakeholders. When investigating energy controversies, it is highly likely that researchers will encounter multiple (sometimes unexpected) gatekeepers. These can be either people in a formal position (like the consortium partner) or people in an informal position who can influence others (such as the consultant in charge of the stakeholder engagement process). Over time, our consortium partner and the consultant decided to limit access to specific stakeholders and topics in the case in response to concerns of the municipality and the province, who perceived the case too sensitive to be investigated[9]. In the process of negotiating access, we agreed to adjust our research plan on several occasions, allowing the gatekeepers to influence our research. As such, it is important to keep

8 RESPONSE is the research programme of which the research presented in this dissertation has been part of. See https://www.tudelft.nl/en/tpm/research/projects/response for more information.

9 Here, the consortium partner and consulted safeguarded their own interests, whilst the municipality and province also tended to their interests. This shows the earlier mentioned business and policy context at play in the dynamics of researching renewable energy controversies.

reflecting on what gaining and maintaining access to cases or participants requires from us as researchers, especially if this means making concessions to research.

Through the reflexive analysis, we provided an in-depth picture of experienced dilemmas and our research practice. Together, the dilemmas and factors show that researchers of controversies are undeniably stakeholders themselves in the field that they are researching. The often subtle ethical questions that are encountered along the way are situational and usually have to be answered on the go (Goodwin et al., 2003; Guillemin & Gillam, 2004 in Bantjes & Swartz, 2018). This requires reflexivity from those researching controversies in order to give these questions the attention they deserve as decisions can have consequences for the research.

What would be beneficial for the navigation of such dilemmas is increased dialogue and exchange between researchers on how (we want) to act, to prevent reinventing the wheel and collectively grow our research practice in the social science of energy. This is especially valuable for novice researchers, like I was myself at the time. Such dialogue and exchange between social scientists is pivotal as universal ethics conventions and checks by university ethics committees often fall short in these situational challenges (Bantjes & Swartz, 2018; Hopkins, 2007).

6.1.5 How the investigation of perspectives and interactions of RET actors helps to explain the dynamics of renewable energy controversies

Opening the black box of RET actors is necessary to understand the dynamics of renewable energy controversies. Strictly looking at the general public, communities and opponents cannot explain why diverse groups of actors, including project developers, CEPs and governments, act or respond in certain ways in this specific context; this results in a one-dimensional, limited understanding of controversies.

The investigation of perspectives of RET actors helps to explain the dynamics of renewable energy controversies, as dynamics are (partly) determined by RET actors, like CEPs. Their perceptions show how they view their role and responsibility for how to interact with residents and how to engage with opposition. How they are able to translate this view into practice depends on their position in the organization, as organizational dynamics have a large influence on CEP practices

Tracing the actions and interactions of RET actors in controversies shows how the dynamics of renewable energy controversies can be determined by the way in which governments are involved in project development. The coordination (both formal and informal) between government levels is also very important for the development of a controversy (e.g. overruling local government).

t is therefore very valuable to empirically investigate the perspectives and interactions of RET actors, however this is also challenging. So when conducting this type of research, it is important to take several aspects into account: (1) anticipate dilemmas relating to our (ascribed) positionality as researchers, (2) expect a multitude of contexts and related interests to influence the process of conducting research, and (3) remain aware and continuously reflect on what gaining and maintaining access requires, specifically when interacting with gatekeepers.

In Chapter 6, I also reflect on the findings of my dissertation and my experiences of working as a social science researcher the past years. Not only in the academic world but also in practice, there is still a heavy focus on the public in renewable energy controversies. Therefore, Chapter 6 provides several recommendations for both academia and practice.

6.2 Limitations of this dissertation

A first limitation is that there is no chapter that solely investigates what can perhaps be perceived as the most obvious subgroup of RET actors: the project developer. A chapter investigating one or multiple project developers would be expected of a dissertation on RET actors. This is not for lack of trying.

Over the course of this PhD project, I initiated several case studies to investigate project developers; one of these experiences is described in Chapter 5 and there was another attempted case. Over the course of one year, I observed project consortium meetings and conducted interviews with developers who wanted to pursue plans for a deep geothermal energy project in the built environment in the Netherlands. After a year, meetings ground to a halt due to issues related to government grants which impacted the business case of the project. At that point, I had not yet collected sufficient data to conduct a proper analysis, so unfortunately this was the end of the line for that case[10]. Together with the challenges with getting access described in Chapter 5, this explains the lack of a chapter specifically on project developers.

A second limitation is the specific focus on RET actors engaged in renewable energy controversies. As mentioned in Chapter 2, reviewing and subsequently investigating RET actors, their perspectives and practices in a situation or in cases without controversy as a demarcation would provide a more comprehensive picture of this group of actors. In addition, comparison of RET actors with non- renewable energy actors is also suggested as an interesting research avenue.

10 Compared to the challenges discussed in Chapter 5, this example illustrates challenges of a more practical nature that can be at play when investigating RET actors.

6.3 Implications for the topic of renewable energy controversies in the social science of energy

In this final section of my dissertation I want to return to the controversy on the Dutch wind farm N33 (Chapter 4 and 5). Returning to this case allows me to illustrate the imperative part that research on RET actors plays in the social science of energy. At the time of writing, the N33 controversy is ongoing and spans over two decades. Nowadays, the conflict revolves around low frequency sounds[11], the obstruction lights on the wind turbines[12] and the community compensation fund[13].

It is safe to say that, at the start of our investigation early 2017, I was intimidated by the thought of trying to figure out what was happening in this long-running controversy with ever-increasing tensions, dozens of stakeholders and interests, a maze of formal decision making procedures in an area with a decades-long history of gas extraction[14]. We started our investigation bottom up by interviewing different stakeholders and see where this would take us. The case proved so complex and the data we collected so rich that in addition to Chapter 4 and 5, we wrote several other articles to "uncover" different layers of the N33 controversy:

- In Verhoeven et al. (2022) we unpack the collaboration between local governmental actors and actions groups in their attempts to oppose the N33 wind farm. We analysed it as a process of c*ontentious governance*, identifying *strategic dilemmas* (Jasper, 2006) for the governmental actors involved;
- In Cuppen et al. (2020) we demonstrate how earlier experiences related to energy developments in the same area played an important part in the development of the N33 controversy using the notion of *controversy spillover*; By doing so, we make a case for 'context' as an object of investigation instead of an external condition;
- In Spruit et al. (n.d.) we use the concept of *epistemic cultures* (Knorr Cetina, 1999) to analyse how different types of knowledge, knowledge claims and knowledge creation related to the environmental impact assessment clashed in the formal decision-making procedure on wind farm N33.

11 https://www.rtvnoord.nl/nieuws/1018749/nieuwe-meting-van-bromtonen-bij-windmolens-meeden-hopelijk-begin-van-een-oplossing

12 https://www.rtvnoord.nl/nieuws/1034622/rode-lampen-op-windmolens-kunnen-grotendeels-uit-dankzij-detectiesysteem

13 https://www.menterwolde.info/nieuws/meeden/rommelige-aftrap-gebiedsfonds-windpark-n33-in-mfa-de-rode-beuk/

14 This resembles an experience described as 'intellectual vertigo' (Espig & de Rijke, 2018). Espig and De Rijke use this term to characterize their experience of conducting ethnographic research in the oil and gas sector, which they describe as 'a deeply confusing experience [resulting] from the pervasiveness of the global fossil fuel sector. Where to begin such research and what scope is achievable?' (ibid, p.218).

Together with Chapter 4 and 5, the above illustrates the richness and diversity of insights gained from in-depth investigation into multiple actors by applying different analytical approaches to the same controversy. This is a testimony of the complex nature of renewable energy controversies, the diversity of the actors and interests involved and their complex relations. It underlines the importance of taking a relational perspective for the social science of renewable energy controversies, which entails investigating the multiple actors involved, their perspectives and actions and peeling back the different layers of controversies (Cuppen et al., 2020; Cuppen & Pesch, 2021; Fisher & Brown, 2009; Verhoeven et al., 2022).

Simultaneously, this collection of chapters and articles provides an argument to not abandon in-depth case studies as comparative research into renewable energy controversies seems to be in demand (see (Sovacool et al., 2022) for an example). Especially for wind energy controversies there is a vast amount of published single case studies, but only a few comparative studies. Indeed, comparative research is needed to further theorize and validate general dynamics of renewable energy controversies. But whilst pursuing this goal, as a field we should not fixate on it as it could mean potentially missing valuable insights from in-depth single cases.

This dissertation has demonstrated the value and necessity of research into RET actor in controversies. It's an essential part of a future line of research for the field of social acceptance as outlined by Batel:

> In the same vein, social conflict over RET – at local, national, and global levels – will also be more acknowledged and examined not as a problem, but as participation [59,84], with the challenge being on how to devise ways to transform those conflicts - or agreeing to disagree [93] -, into practices, policies and regulations that give voice and reflect everyone interested and affected [94] (Batel, 2020, p. 3).

Reflecting on the findings of my dissertation and my experiences of working as a researcher the past years, I wonder though: are we in danger of losing sight of RET actors in controversies amidst the growth spurts of the broader field of the social science of energy? At the end of this PhD journey in RET actor research, I notice disappointment creeping in, despite the developments described above. I expected (perhaps naively) that by now we would surely be having different conversations about the involvement of citizens and local publics in the planning and development of renewable energy technologies and infrastructure; I expected that RET actor research was going to be a growing topic considering the importance of moving forward together in the global energy transition and the role of RET actors in this.

However, the obsession with the public seems very persistent (Wolsink, 2019). Not only in the academic world, as illustrated by the scarcity of RET actor research in Chapter 2. But also in practice, where companies in the energy sector are seemingly looking at everyone for ways to get projects developed, but neglect to look at themselves.

6.4 Recommendations

Below I will provide recommendations for both academia and practice, based on the research conducted for this dissertation and experiences gained over the past years as a social science researcher.

6.4.1 Recommendations for a research agenda on RET actors

In the past two years at TNO I have worked on an exploratory research project in which we investigated the types of challenges companies in the Dutch energy sector encounter when integrating stakeholder and community engagement within their organizations (van de Grift & Jeude, 2024). In interviews, CEPs shared stories about technical project managers who learned the hard way about the need and necessity of community engagement after they encountered local resistance resulting in Council of State procedures and massive project delays. Another example tells a story about engineers who collaborated with CEPs on a project for four years and experienced how well their "new" community engagement approach worked. However, after the project ended, the engineers resumed their business as usual: designing projects behind their computer, without consulting local communities or stakeholders. In this occasion, their positive experience with community engagement did not translate to changes in their way of working.

The above shows different learning processes taking place in highly technical companies. If we are to gain a deeper understanding of the 'why' behind RET actors' perspectives, actions and interactions, we need to increase our understanding of organizational culture, identity and power dynamics (Kamsteeg & Wels, 2004; Müftüoglu et al., 2018) in the context of controversies. Questions that can be asked to gain insight into the actions and behaviour of RET actors involved in controversies are 'what are the rules of the play' (organizational culture), 'what is the position of the players in the organization' (identity) and 'what is the strength of the different players in the play' (power) (Kamsteeg & Wels, 2004).

Such a focus would allow to unravel organizational cultures in highly technical companies in the energy sector and show how to integrate new disciplines like stakeholder and community engagement. In highly technical organizations, the core business often revolves around technical project development, business development and permitting & procedures. This translates into certain ways of working and appreciation of specific

types of knowledge (technical, legal etc.). As such, research could focus on how technical and legal oriented employees value other types of knowledge and ways of working related to community engagement. How do team members with different types of expertise collaborate during the different phases of project development? What place do local knowledge and values have in technical and financial optimal designs that consider available resources? And, what role does leadership play in integrating community engagement practices into the core business of an organization?

Throughout the consecutive chapters, I have made a case for more explanatory research into RET actors as part of the social science of energy. Although this is already an interdisciplinary field, I see further opportunities for development, inspired by work from disciplines such as organizational studies, organizational anthropology, business administration and the anthropology of policy (Baba et al., 2013; Espig & de Rijke, 2018; Goodman, 2018; Smith & High, 2017). The reason for this is twofold:

1. Such disciplines possess the theoretical and conceptual tools required to construct an organizational perspective in accounts of renewable energy controversies;
2. They can unpack processes of socio-political interactions both within RET actors as well as between RET actors and other stakeholders, such as residents, local interest groups etc.

A conceptual lens that is interesting to apply to RET actors is front stage & backstage behaviour (Goffman, 1959). Goffman considered interactions between different actors

> a *performance* where a target interaction (a meeting, game, gang behavior or whatever) is compared to the staging of a play to identify the underlying strategies, rules and functions of social conduct and the ways in which people negotiate and interpret their place in interactions (as cited in Harvey, 2008, p. 150).

The front stage is the place where 'self-managed' identities are performed for an audience (Mansvelt, 2005, p. 89); the backstage is the place 'in which preparation for [said] performance takes place' (Ibid.). For example, moments in controversies that require researchers' attention are public participation events (taking place on the front stage) in which RET actors interact with local residents and other stakeholders: 'particularly when events are properly influential in terms of policy and decision making, because they are singular opportunities for "front-stage" work by actors who may typically be politically "back-staged"' (Harvey, 2008, p. 150). As such, ethnographic research into front stage & backstage behavior of RET actors can shed new light on what shapes actions and interactions in controversies and thus contributes to the further unpacking of dynamics in renewable energy controversies.

Considering the ongoing changes in both institutional and policy contexts and efforts being undertaken as part of energy transition processes worldwide and dealing with the effects of climate change, a specific type of ethnography is especially relevant for the investigation of RET actors in energy controversies: policy ethnography, which is 'a form of extended, multisited ethnography that incorporates organizational and policy analysis alongside ethnographic observations and interviews, and operates with a policy goal in mind' (Brown et al. 2010 in Ryder, 2018, p. 271). This type of ethnography facilitates 'studying through': '[following] a discussion or a conflict as it ranges back and forth and back again between protagonists, and up and down and up again between a range of local and national sites' (Wright & Reinhold, 2011, p. 110). Studying through facilitates a more holistic understanding of the 'production, politics, organization and technology of energy decisions, the role of power, privilege, oppression and access to participate in energy decision-making processes, and the subsequent socio-environmental consequences' (Ryder, 2018, p. 272).

6.4.2 Recommendations for practice and policy

As mentioned at the start of this chapter, I feel that the findings presented in this dissertation and my research experiences gained over the past years point towards a lack of reflection (or recognition) amongst RET actors regarding the role they themselves play in renewable energy controversies. This relates to their general attitudes towards the "public" and how these impact their (inter)actions. Below are several suggestions in response because more or "better" participation of the public in decision making on RET projects that affect their living environment can only do so much for the sector itself. In addition to the findings presented in this dissertation, I have taken the liberty to incorporate insights from follow-up research with RET actors and observations that I have made as a researcher based on interactions with RET actors to formulate these recommendations. Not to imply these suggestions are panaceas, but given the perspectives and (inter)actions of RET actors reported on in this dissertation, it is where I see opportunities for RET actors to contribute to realizing an energy transition that is societally supported.

CEOs, take stakeholder engagement serious and give it an integral role within organizations. This requires both attention and leadership at the CEO level to raise awareness within the organization (Boverhoff, 2022). Several expert practitioners have recently written books in which they stress the importance of leadership for organizations who are serious about integrating stakeholder engagement within their organization (Boverhoff, 2022; Wesselink, 2022). This process can start with a reflection on stakeholder engagement: What is your general attitude towards the public and their involvement in projects? What is your motivation for (not) engaging with the public? What is the purpose of it? Which knowledge is considered valuable (and which is not) within the organization and why?

Such a reflection is an important step due to the strong technical and legal nature of RET companies; The core business often revolves around developing technical projects, adhering to rules & regulations and obtaining the required permits (Funder et al., 2021; van de Grift & Jeude, 2024; Chapter 3, this dissertation). When employees are highly skilled and experienced in technical and legal ways of thinking and working, it is likely that they do not possess the specialized knowledge, skills and experience required for stakeholder engagement (Delannon et al., 2016; van de Grift & Jeude, 2024). So what are opportunities to integrate stakeholder engagement given these technical and legal ways of thinking and working?

An approach to deal with this lack of expertise that is often seen in practice is to temporarily bring in external consultants (van de Grift & Jeude, 2024) However, when projects end and the consultants leave, oftentimes so do the knowledge, skills and experience. Such an approach contributes to stakeholder engagement remaining an isolated, add-on activity in the energy sector (Chapter 3, this dissertation). In order to counter this, organizations can do three things to integrate stakeholder engagement: (1) Recruit employees with the required specialized competences or offer courses to employees who want to develop such competences; (2) Grant stakeholder engagement a position equal to technical, legal and financial departments (amongst others) in projects and the organization; and (3) Stimulate collaboration between experts from different departments in the planning and development of projects (van de Grift & Jeude, 2024).

Engineers, develop competencies that enable constructive dealing with questions, concerns and interests from the public and local communities. This calls for ways of designing that facilitate uniting technical, legal and business development interests with local & public interests. It requires, among other things, to reflect on one's own role as an engineer in the realization of the energy transition: how does someone fit project designs into existing (built) environments? How to design or adapt designs in such a way that these (attempt to) accommodate local and public concerns and interests? This can be learned on the job, in collaboration with stakeholder or community engagement managers in projects. In addition, such skills can also be integrated into courses, for example as part of bachelor and master programs in engineering at technical universities.

Stakeholder and community engagement managers, create strategies to integrate stakeholder and community engagement in (practices of) technically oriented organizations. Here, communities of practice, such as the earlier mentioned Platform LEO, play an important part as a hub to exchange experiences and share best practices. These can for example be strategies on how to gain support for stakeholder and community engagement on different levels of the organization (including CEO level). One such approach is collecting "evidence" of the fruits of stakeholder and community

engagement work, such as putting monetary numbers to a prevented appeal procedure (van de Grift & Jeude, 2024). There is also a need for exemplary projects where stakeholder and community engagement was applied both successful as well as unsuccessful to communicate the need and necessity within the organization (van de Grift & Jeude, 2024); This includes projects that went awry because there were no opportunities created for local residents to be involved in the decision making, or residents were not involved until the project realization phase, in which they could have little influence.

Policymakers, provide RET actors with unambiguous and clear guidelines on community engagement for RET developments. Since January first 2024, the *Omgevingswet* (or Environment Act) came into effect in the Netherlands. This new national policy was formulated to simplify and improve spatial planning of complex developments related to sustainability and the energy transition (Ministerie van Infrastructuur en Mileu, 2016). For RET project initiators, this means that when they apply for an environmental permit, it is obligated to report if they have organized participation activities for local residents and other stakeholders, and if so what the activities consisted of and their results. Initiators are not obligated to organize participation (though there are exceptions), however it is supposed to stimulate them to consider participation. Under the Environment Act, municipalities are not allowed to impose requirements on participation (Overheid.nl, 2021). As such, there is a wait-and-see attitude among RET actors as the Environment Act just came into effect and it is unclear how municipalities are going to assess participation in applications. Stakeholder engagement managers have already reported to use the Environment Act to convince their organizations of taking steps in participation activities (van de Grift & Jeude, 2024). As such, unambiguous and clear guidelines on stakeholder and community engagement formulated by municipalities, to the extent permitted by law, would be beneficial to further stimulate RET actors in this area.

This dissertation has made a case for an actual shift of perspectives in research on renewable energy controversies by reinvigorating social science research into RET actors; By doing so, I hope it contributes to a truly relational perspective of renewable energy controversies (Batel & Rudolph, 2021; Goodman, 2018), one that does look beyond the public.

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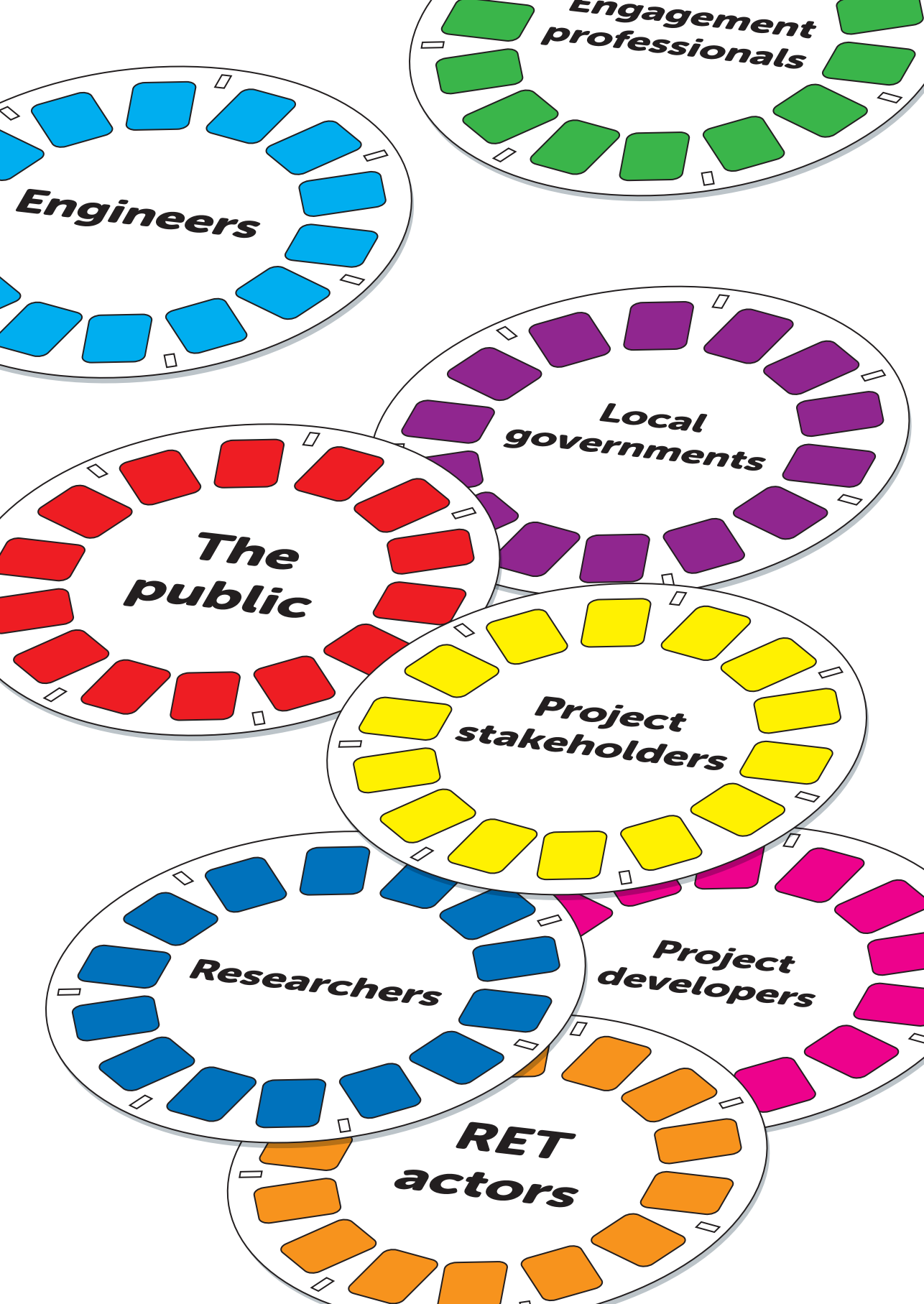
Engagement professionals
Engineers
Local governments
The public
Project stakeholders
Researchers
Project developers
RET actors

Acknowledgements

About the author

List of publications

Acknowledgements

For a long time and for different reasons, it was difficult to imagine that I would ever finish my PhD. However, quitting was equally hard to imagine. Now that I finished this NeverEnding Story, I feel relieved and proud. But most of all, I feel extremely grateful for the many wonderful people in my life who have supported me along the way.

Hans, to be honest, I have always found you a bit intimidating. Not because of you as a person (you are a true gentleman), but because of your razor sharp mind which in the early days of my PhD would send me back to the drawing board. After our meetings, my mind was always racing with new and unfamiliar concepts, from a discipline other than my own. Along the way, this inspired me to explore other disciplines and feel the freedom to "borrow" concepts I found exciting and useful. This strategy helped me throughout my PhD. So thank you (also for making me aware of my tendency to *schools schrijven* in the early days).

Eefje, you taught me being a scientist is (among other things) about *grasduinen* and *chocola maken* (in that order). You showed the power of simplicity in academic writing, which made me no longer want to hide behind complicated words and sentences. Through your supervision, you motivated and stimulated me to stand for what I wrote and helped me see the value of my own research. Thank you for all your faith and patience. This gave me confidence in times I didn't have it of my own. I am lucky I ended up with a supervisor who is both a major source of inspiration as well as an amazing human being in general.
Committee members Tamara Metze, Katrien Termeer, Christian Zuidema and Charlotte Koot, thank you for taking the time to read my dissertation and participate in the defence ceremony.

The RESPONSE team: Udo, Aad, Behnam, Shannon, Toyah (and Eefje of course). Udo, Aad, Behnam and Eefje, thank you for providing such a nurturing and supportive space for young researchers. I have fond memories of our time as a project team: the study days in the former theatre in Rotterdam, staying at a house together whilst visiting a conference in the UK, the workshop in Cardiff (to name a few). Here is to many more surprising and insightful conversations in our joint WhatsApp group and RESPONSE dinners! A special thank you to Shannon and my paranymph Toyah. Shannon, my fieldwork buddy. Going on fieldwork expeditions together was really special. I hope that one day we get to visit the Klokkengieterijmuseum Heiligerlee. Toyah, we have shared our trials, tribulations and milestones (of both the PhD process and home renovations) over the years. Thank you for being such a great cheerleader, especially in the final stretch of our PhDs.

Also thank you to Olivier Ejderyan and Imrat Verhoeven for the valuable and enjoyable experience of collaborating on publications together with the RESPONSE team.

I want to extend my gratitude to the organizations part of the RESPONSE consortium, especially to the representatives participating in our meetings, workshops and the many conversations about the energy sector. Everyone who participated in the research presented in this dissertation: thank you for taking the time to participate in an interview or have a chat with a curious anthropologist with a notepad and voice recorder. I am very grateful that you have shared your stories and experiences with me. Without you, this dissertation would not have been possible.

My former colleagues at Multi-Actor Systems in the Organisation & Governance group at the faculty of Technology, Policy and Management and my former fellow PhDs: Eva (my lockdown phone buddy), Maria and Femke in particular. Thank you for the time we spent together, either working on our PhDs or sharing stories over a cup of coffee. We all went different ways but I am happy we are still in touch. Also special thanks to the support of the (former) section leaders Bram, Wijnand and Mark, and the secretariat: Joy, Wendela, Jolanda and Maaike.

My (some now former) colleagues at the TNO Social Innovation group: Douwe, Annemarie, Margriet, Laurie, Melanie, Ruben, Simone, Evie, Geerte, Thomas, Koen, Batoul, Renee, Marjon, Linda and others. Thank you for providing such a supportive environment. I am glad to call this group my new home base and look forward to all our exciting projects together.

De Pepernotenclub: my dear Suzanne, Carien and Branda. Thank you for being so kind, supportive and understanding. Our klooster dinners always bring me so much joy, I hope we will continue this tradition for many more years to come! Kyra, thank you for being such a loyal, kind and caring friend over the years. Chantal, thank you for all our lovely conversations, you are a wonderful friend. Annemiek, thank you for being so caring and supportive. I am glad we became friends. Ariella, thank you for being there for me during challenging as well as happy times. Even though we are now on opposite sides of the globe, it still feels like you are close.

Joost, without you I would have probably never considering doing a PhD. You have been very supportive throughout the years: from sitting on my studio floor helping me figure out which MSc programme I wanted to apply to, to sparring about the propositions. Our friendship is very dear to me. Also thanks to the rest of the Vervoort family, for all the laughs, support and lovely times we spent together.

My Wijk city meiden: Inez, Roxanne, Diana, Elise, Anja, Eva and Yvon. How fortunate are we that fate (or the school administrator) grouped us together in the first years of high school. I feel lucky to have grown up with such an amazing group of women. Our friendship evolved over the years (ahum, decades) during which we have given each other space to grow. This has and always will be very precious to me. Thank you for always being just a call away. And Yvon, who else than you could be my paranymph? You always know the right things to say, whether I want to hear them or not. What started from a mutual love for the Spice Girls in seventh grade, has grown into a bond that means the world to me. You are my person, for life.

Papa, I imagine you would be very proud of me if you would still be with us today. But I'm guessing Mama is proud enough for you both :-) Mama, you and Papa have always supported and encouraged me in everything I do. Thank you for everything you have done for me. Maurits and Michiel, thank you for being supportive big brothers. And Michiel, a big thank you as well for turning my sketches into the awesome cover of this dissertation. Esther, thank you for your support and good advice. Throughout the years, you have been like a big sister to me. Gerard, thank you for always being so considerate and making my mom happy. Thank you Anke, my bonus mother(-in-law). From the start, both you and Cor have made me feel like part of the family. Thank you for all your support and understanding. Also a thank you to Marloes, Geerten and the two little ones for your always considerate inquiry about my PhD thesis.

Dirk, you can't read but thank you for all your support (non-cat people might find it peculiar I am thanking my cat but sometimes all you need to get yourself going again is to bury your face in the softest fur for a couple of minutes and listen to the sound of purr). Jasper, thank you for learning me how to set boundaries, and setting your own; for making me realize I am both a cat-and-dog-person. Thank you for the countless times you prepared breakfast, lunch and dinner (even now, as I am writing this). Thank you for your patience with this whole process and for making me cry with laughter. With you I feel free. I'm so happy we "found" each other ;-) and am really excited about our life together.

About the author

Elisabeth van de Grift (born November 17th, 1984 in Veenendaal, the Netherlands) has a BSc. in journalism which she obtained from the School of Journalism (Utrecht) and an MSc. in cultural anthropology which she obtained from Utrecht University. She conducted her PhD research at the Faculty of Technology, Policy and Management (TPM) at Delft University of Technology.

Her interest in the social aspects of the energy transition was sparked over the course of her MSc. Whilst conducting the ethnographic research for her thesis on a so-called Transition Town in the UK, she observed the challenges encountered by members of this local citizen initiative. Her curiosity about this friction between the renewable energy transition and society led her to this PhD on renewable energy controversies.

Whilst finishing her dissertation, Elisabeth has worked as a lecturer for the MSc. programme Governance of Sustainability at Leiden University. She is currently working as a researcher at the Energy & Materials Transition unit of applied research organization TNO (Amsterdam, the Netherlands). Here, Elisabeth conducts research on different themes related to social aspects of the energy transition, including public participation & community engagement, energy justice & inequality and, last but not least, RET actors.

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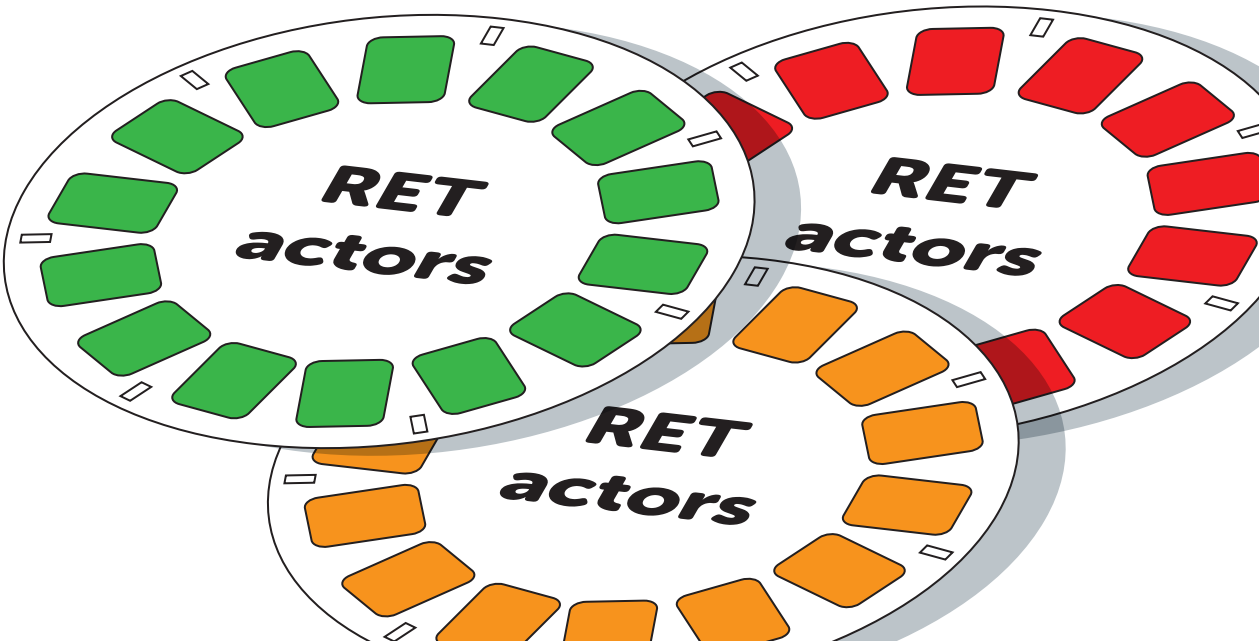
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