

The Role of Normative Barriers in Limiting Public Engagement in Energy Governance

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Table of Contents

Abstract	3
Introduction	4
Methodology	8
Procedure	8
Participants	10
Data Analysis	10
Results	13
Themes	13
1. <i>The Impact of Social Norms on PPEG</i>	13
1.1. Descriptive Social Norms	14
1.2. Injunctive Social Norms	15
2. <i>The Impact of Personal Norms on PPEG</i>	16
2.1. Tensions between Personal and Social Norms in PPEG	17
3. <i>Cognitive Dissonance and Institutional Challenges in PPEG</i>	18
Discussion	20
<i>Implications</i>	25
<i>Limitations</i>	26
Conclusion	27
References	28
Appendix	35

Abstract

To mitigate the current projection surrounding climate change, research has shown the critical need to transition to a de-centralised low-carbon energy system. Such a change in the energy system requires an increased level of involvement from the public such that the acceptance and implementation of renewable energy policies are more likely to occur and decentralised energy projects may be managed. This, however, remains a challenge, as public engagement in energy governance remains significantly low. Consequently, this thesis addresses the urgent need for public participation in energy governance and focuses on the role that social and personal norms play in this process.

By using semi-structured interviews and reflexive thematic analysis, this thesis explores descriptive social norms, injunctive social norms, and personal norms in the context of public participation in energy governance. The key themes identified include the normative impacts on (dis)engagement, and the effects of cognitive dissonance and institutional challenges on (dis)engagement. Ultimately, social norms seemed to encourage more private participation compared to public engagement, while personal norms appeared to be related to all forms of engagement but were most strongly experienced by those with prior active engagement. Moreover, the influence of other factors including cognitive dissonance and institutional barriers seemed to reinforce the process of disengagement.

While this study showed the impact of norms on disengagement in public energy governance, they do not account for all variability, necessitating further research into other factors such as cross-cultural variation to enhance our understanding and foster more active public participation.

Keywords: energy governance, public participation, social norms, personal norms

Introduction

The first major transition in global energy supply came with the shift to fossil fuel usage in the 18th century. Before this transition, relative stability was observed in greenhouse gas (GHG) emissions (Fouquet & Pearson, 2012). Consequently, however, the continued growth in fossil fuel consumption since this point has significantly disrupted this trend and continues to do so, causing increasingly notable and concerning environmental impacts (Allen, 2012). In the 21st century, the world is facing a climate crisis due to GHG, to which fossil fuels including coal, oil, and gas are the largest contributors, responsible for approximately 90% of all global carbon dioxide emissions (SEI et al., 2023). To prevent the detrimental effects of sustained global warming, the Intergovernmental Panel on Climate Change (IPCC) has declared the rapid promotion of renewable energy (RE) to be the most viable solution to reducing GHG emissions such that global warming is limited to 1.5°C above pre-industrial levels (2023).

Moreover, many researchers have posited that the traditional energy system in place now urgently needs re-evaluation given its unsustainability and advocate for opening a discussion on the purposes and practices of energy production and usage (Jonsson et al., 2011; Rutherford & Coutard, 2014; Perlaviciute, 2021; Ernst & Shamon, 2020; Goldthau & Sovacool, 2011). Moreover, Goldthau & Sovacool (2011) also illustrated how this system which relies upon fossil fuel plants is ill-equipped to combat the key energy challenges that we face today including energy security, energy justice, and a low carbon energy transition.

A fundamental divergence from this dominant energy model is needed to reduce human carbon footprint (Goldthau & Sovacool, 2011). Instead, energy governance could take the form of a decentralised, bottom-up approach, to allow for the interconnectivity of smaller, local, and renewable energy infrastructure (Goldthau, 2014). The related literature contains multiple

descriptions of energy governance, however, for this study, the definition selected is derived from Florini & Sovacool (2009). As follows, governance in this context relates to “any of the myriad processes through which a group of people set and enforce the rules needed to enable that group to achieve desired outcomes” (*Ibid.* p.5240). Moreover, public participation in energy governance (PPEG) has become a crucial requirement to facilitate this decentralised transition (Jonsson et al., 2011). As such, with the implementation of this system, there will be a direct impact on the public such that the development and decision-making processes related to energy policies and practices, local infrastructure and local energy products are directly tied to their livelihoods (Rutherford & Coutard, 2014). Furthermore, many instances have pointed out that public participation is the key to climate policy acceptance (IPCC, 2023; Perlaviciute, 2022). Most public resistance comes from the perception of exclusion from energy governance decisions (Perlaviciute, 2022). Consequently, incorporating public participation in the planning, development, and implementation of these processes would result in more democratic and more legitimate climate policies that ultimately lead to reaching climate goals (Perlaviciute, 2022; Verma, 2022).

Unfortunately, however, studies have routinely demonstrated that only a select few of the population actually engage in PPEG, specifically relating to those with access to financial resources, time availability, and previously established knowledge of the topic (Ernst & Shamon, 2020; IPCC, 2023; Pallet et al., 2019; Hanke & Lowitzsch, 2020). For instance, Ernst & Shamon (2020) found approximately only 2% of the German population engaged in decision-making processes related to PPEG. However, as highlighted by Goedkoop (2021), there is a need for a diverse array of actors to engage in the bottom-up management of energy including individuals, households, communities, and business organisations. Therefore, this study endeavours to explore the reasoning behind this lack of engagement through the use of social and personal norms. In

contrast to various other forms of sustainability-related behaviours, there remains a paucity of information about the influence of normative barriers to PPEG.

Social norms have consistently demonstrated great interdisciplinary relevance in behavioural sciences, especially in environmental psychology, as drivers of various conservation and sustainability-related behaviour (Cialdini & Jacobson, 2021). Examples of such research include the investigation into promoting sustainable eating behaviour (Salmivaara & Lankoski, 2021), examining the relationship between norms and household recycling (Huber et al., 2020), the role of norms in discouraging littering (Chaudhary et al., 2023), and investigating the influence of norms on promoting sustainable travel options (Hiselius & Rosqvist, 2016).

Ultimately, social norms can be expressed as unwritten, deeply internalised standards, expectations, and rules held by a social group that convey appropriate thoughts, feelings, and behaviours for its members (Stok & de Ridder, 2019). Social norms are most appropriately distinguished into two categories: descriptive social norms (DSNs) and injunctive social norms (ISNs) (Niemic et al., 2020). DSNs are perceptions of a behaviour's prevalence among a group, *i.e.* what is the typical thing to do within a social group (Cialdini, 2003). Behaviour is motivated through this norm by providing information about what the most adaptive solution is in a given scenario (Chan et al., 2022). As such, when activities or behaviours are perceived as ambiguous, people are more likely to respond to descriptive norm appeals (White & Simpson, 2013). In regards to PPEG, an example of a perceived DSN could be the belief that most households in the neighbourhood participate in decision-making processes by providing feedback on proposed renewable energy projects. Here, it can be seen that the underlying influence of the DSN relates to what behaviour most others exhibit. ISNs on the other hand, refer to the perceptions of social group approval or disapproval of a certain behaviour, *i.e.* what other group members think should be

done (Cialdini, 2003). This norm works to influence behaviour by highlighting potential rewards or sanctions from other people (Chan et al., 2022). An example of the influence of an ISN on PPEG is the belief that everyone should attend the upcoming energy policy meeting. In this case, the emphasis is placed on what energy governance behaviour people ought to be doing.

Furthermore, when it comes to considering the motivations behind pro-environmental behaviour, one must also acknowledge the influence of personal norms (PNs) (Jackson, 2005). This type of norm differs from social norms such that they instead “signify the self-expectations for specific action in particular situations that are constructed by the individual. Activated PN are experienced as feelings of moral obligation, not as intentions” (Schwartz, 1977, p. 227). Behaviour incited through PNs is influenced by both awareness of the consequences of one’s actions on valued outcomes and the ascription of responsibility for the negative consequences of not acting (De Groot & Steg, 2009). While much of the literature posits PNs to have an independent influence, it may also be the case that ISNs are mediated by PNs such that people use ISN information to determine whether a given behaviour is morally correct which is then internalised as a personal belief (Zhang et al., 2017; Niemiec et al., 2020; Cialdini & Jacobson, 2021). Therefore, this investigation will examine both eventualities. With respect to PPEG, the influence of PNs could be observed in the following example: “I must participate in the next community energy project because I care about the environment and know it is important to transition more locally”. In this instance, the person expressed their moral principles on the matter and personal obligation to act in accordance with their beliefs about community engagement in energy governance.

Overall, this study seeks to better understand the precise nature of both personal and social norms related to PPEG and how they may serve to limit more widespread engagement. Moreover,

the findings from this research hope to generate important contributions to the existing body of literature on PPEG and provide a new perspective so that the successful implementation of decentralised energy governance is more attainable. Consequently, this study was guided by the following central research question:

RQ 1: What role do normative barriers play in limiting public engagement in energy governance?

To investigate this question in greater detail, four sub-questions were introduced, each highlighting a relevant dimension within the research process.

RQ 1.1: How do descriptive social norms influence (dis)engagement in PPEG?

RQ 1.2: How do injunctive social norms influence (dis)engagement in PPEG?

RQ 1.3: How do personal norms influence (dis)engagement in PPEG?

RQ 1.4: How do norms relate to each other within the context of (dis)engagement in PPEG?

Methodology

Procedure

Given the explorative nature of the research questions outlined earlier, a qualitative methodology for data collection and analysis was deemed the most appropriate approach. This decision was guided by the recognition that the literature in this domain presents largely contradictory results. Thus, by adopting a qualitative approach, it is possible to delve deeper into the complex relationships between PPEG and the different norm types from a more exploratory perspective.

As such, a convenience sample was used to interview citizens living in a small city in the Netherlands. The interviews targeted the participants' current (dis)engagement in public participation related to energy governance issues and processes. Given the variations between the researchers' investigations, it was necessary to target participants from different populations, including energy communities and people currently engaged in climate activism. Concomitantly, we aimed to recruit a sample with maximal diversity so that various perspectives on the topic were taken into account.

The research procedure entailed collecting participant answers through semi-structured interviews, following a protocol of 10 questions, which were collected in the field by conducting interviews in person. Interviews are seen as a "shortcut" (Robson & McCartan 2016) that help to reach people's opinions and thoughts through direct human contact without any form of intermediaries.

The interviews aimed to collect insights into participants' feelings, impressions, opinions, and (dis)engagement in decision-making on energy. The interview protocol (see Appendix A) was designed to facilitate open-ended conversations, allowing participants to share detailed insights into their interests and involvement in energy governance. While the protocol offered a framework with specific questions to ask, these questions were designed to be open to ensure that the interviews were conducted in an explorative manner to discover people's interest in energy decision-making. As such, the interview protocol comprised five central open questions, each followed by a series of sub-questions and prompts to address potential cases of misunderstanding of the main questions. These questions were structured in three key themes; the first being to gain an understanding of the participant's personal level of understanding of PPEG, then to uncover

their contextual level of understanding and experiences of PPEG, and last to see how the participant wants to engage in PPEG in the future.

Participants

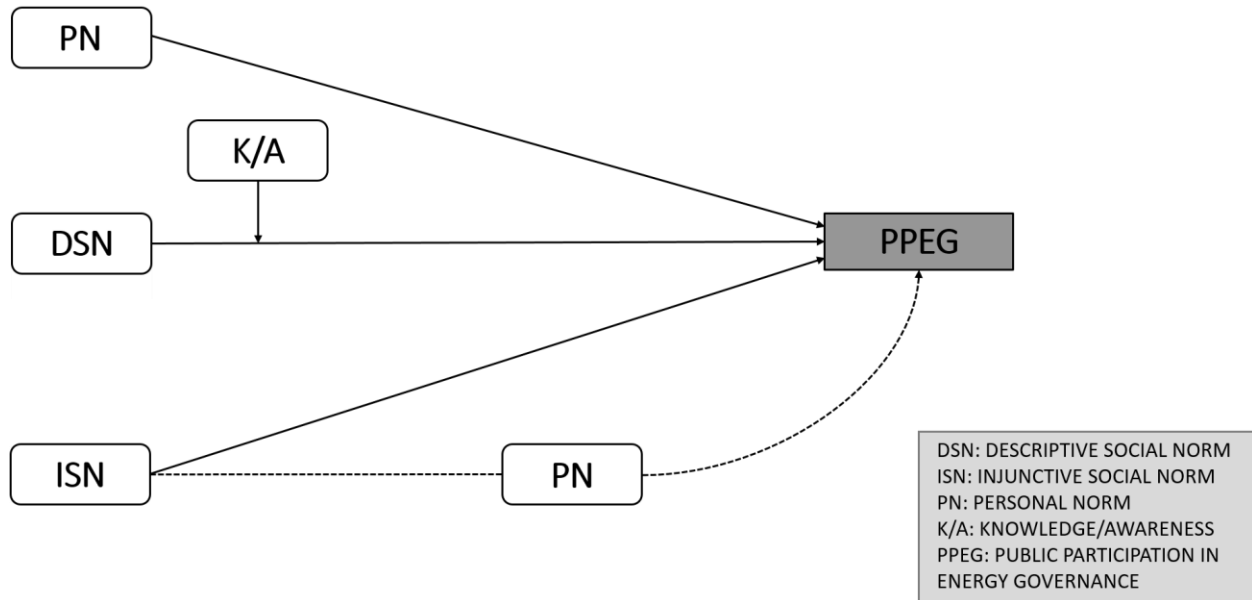
In total 8 interviews were conducted with participants living in Groningen, the Netherlands. Overall, participants were aged between 20 and 40 years old, with a mean age of 27 years ($SD = 5.95$). The sample included 4 female-identifying participants and three male-identifying participants, as well as 1 participant using she/they pronouns.

Data Analysis

Interviews were held between ~22 and ~60 minutes with an average of ~38 minutes ($SD = 11.83$).

The participants were assured confidentiality protections; therefore, all identifying information has been excluded, and all referenced quotes from participant responses have been pseudonymised.

The interviews were transcribed and translated manually and analysed using Atlas.ti through reflexive thematic analysis (RTA) using both deductive and inductive coding according to the principles of Braun and Clarke (2020; 2019; 2022). The analysis method was chosen because of its flexibility which allows the researcher to approach the data with a theoretical framework whilst also being able to explore other avenues of importance. This process was guided by the following conceptual framework:

Figure 1*Conceptual framework*

The above model provides a visual representation of the hypothesised conceptual framework which was formulated by drawing on the existing literature relating to the fields of norms and energy governance. The proposed model comprises the following components: PN, DSN, and ISN. As seen above, each norm has a directional relationship towards PPEG. For DSNs, there is the moderator variable of Knowledge/Awareness (K/A), which was theorised to impact the salience of DSNs depending on the amount of information known about energy governance (White & Simpson, 2013). As such, when there is less knowledge available to the participant about PPEG, DSNs should be more activated (White & Simpson, 2013). While the model includes the directional influence of PNs on PPEG, it is also included as a mediator variable to ISNs to account for the variability within the literature regarding the boundaries of its influence (Niemi et al., 2020; Cialdini & Jacobson, 2021).

In a neutral setting, there was the risk that the correct norm would not be identified because the researcher was unaware of the source of the influence (Catola et al., 2021). Therefore, it was crucial to include pre-selected priming words related to specific norms to get an accurate gauge of the norm that the researcher intended to measure. For instance, to ensure that DSNs were activated, it was necessary to include priming words such as “typical”, “widespread” and “common” (Jacobson et al., 2011; Cialdini & Reno, 1990). However, to specifically target ISNs, the participant had to be primed with terms like “duty” and “ought to” (Jacobson et al., 2011; Cialdini & Reno, 1990). To activate PNs during the interview, it was necessary to ask questions that primed both the awareness of consequences for one’s actions and the ascription of personal responsibility for those actions (Harland et al., 1999). Once these two conditions were met, the participant should have responded with information directly related to behaviours guided by feelings of personal obligation (Harland et al., 1999).

Therefore, with the previous knowledge in mind, the interrelationships between the different norms and PPEG were examined by investigating the following dimensions. For DSNs, (dis)engagement in energy governance was thought to be more likely when individuals perceived other people to be commonly (dis)engaged in related behaviours. Thus, it was necessary to identify the perceived prevalence of PPEG behaviours and actual (dis)engagement. As for the K/A moderator, when individuals demonstrated a lack of sufficient knowledge of energy governance, there should have been more instances of (dis)engagement that were perceived as typical. To measure this, it was crucial to examine the level of participant knowledge and awareness on the topic, perceived behaviour prevalence, as well as actual (dis)engagement behaviours. For ISNs, individual (dis)engagement in energy governance was posited to relate to the approval and/or disapproval of energy governance behaviours from a participant's group affiliation. This involved

identifying the perceived group expectations and conformity to said expectations. Finally, PNs were thought to present in participant answers when it is expressed that individual (dis)engagement hinges on personal/moral convictions about energy governance. As such, the variables related to this concept were the strength of participant morals and the level of actual (dis)engagement. It was also theorised that participants might have shown the mediating effect of a PN on ISNs by expressing a connection between the perceived social approval or disapproval of a certain PPEG behaviour and a similar personal belief about the same behaviour. An example of such a response could include: “My friends all say that we should switch to solar panels, and I think it’s really important so I’m switching too”.

With the combined information from the previous passages in hand, the theoretical and conceptual frameworks have been firmly established. Subsequently, this thesis shall now present the findings of the data analysis in the following results section.

Results

Themes

This section presents the main themes identified during the analysis process using the methods of reflexive thematic analysis. The purpose of the section is to provide key insights into the participant perspectives on PPEG and the related influences of the different norm types. The main themes are ‘The impact of Social Norms on PPEG’, ‘The impact of Personal Norms on PPEG’, and ‘Cognitive Dissonance and Institutional Challenges in PPEG’.

1. The Impact of Social Norms on PPEG

Overall, DSNs were more apparent in participant responses compared to ISNs. When participants talked about their lack of engagement there were clear ties to both social norms.

1.1. Descriptive Social Norms

During the interviews, there were numerous instances where participants directly expressed the need for active energy governance behaviours to be more commonly and visibly enacted by members of the public so that they might also adopt these behaviours. This illustrates how a descriptive social norm needs to develop to influence the behaviour of others. Overall, this norm type was most prevalent across the eight interviews as evidenced in 37 instances of various codes used to indicate negative DSNs related to PPEG. While there were some instances of active PPEG, most behaviours related to DSNs remained passive and were often seen in accompaniment to a lack of K/A on the topic. As such, participants reported the most typical interactions with energy governance occur within the confines of people's homes in the form of energy-saving measures. Another relates to the absence of discussion about PPEG in everyday life.

For instance, A2 discussed their lack of engagement and how it was tied to a lack of community engagement, such that: "Well, as I already said because there is nothing in my neighbourhood, I'm also not doing anything. So I think the more active people are around you, the more active I will also participate or engage in it".

From this quote, A2 seems to recognise that their lack of engagement stems from the general lack of perceived participation in their community. As such, this participant appears to act in accordance with what is believed to be the most adaptive solution in their environment, letting the lack of community participation inform their behaviours. Furthermore, another example demonstrating the presence of DSNs can be seen in the following comment made by C2:

"We're all trying at home...but it's not like we're having active like- conversations about it uhh and about the topic- but umm otherwise I don't really- we don't really

talk about it...I think it's also not talked about a lot in general, I feel like just people don't really talk about it that often so we kinda also don't."

This comment seems to indicate that C2 does not perceive PPEG to be a common point of discussion in both their social setting and society in general. Further, C2 seems to convey a recognition that their behaviours and those around them are influenced by the wider public. Thus, this seemingly ambiguous situation appears to foster DSNs that dissuade conversational topics away from PPEG.

1.2. Injunctive Social Norms

This theme presents the influence of ISNs on PPEG which also had a high prevalence among the participants. It entails how the participants encountered approval and disapproval of certain types of energy governance behaviours. ISNs were present in participant responses when explaining how their social circle may approve PPEG measures with minimal effort, but more intensive actions would most likely be disapproved. Codes relating to instances such as these occurred 18 times. One such example can be seen in the following, where B1 explained how the standard within their social group is to stay within their comfort zone:

"There's the bigger group that I experience directly or indirectly that are just essentially enforcing the status quo, whether it is fossil fuels or renewable energy or whatever kind of energy, we need that amount or more. So that the very idea of lowering or perhaps having a different level of comfort is not considered a realistic option".

In this instance, B1 conveys the perceived pressure to comply with their group's standards regarding what energy measures are considered permissible. It can be seen that there is no apparent preference towards which energy governance behaviours the group should be engaging in, but rather disapproval of actions that require effortful participation. Thus, PPEG may be perceived as

socially unacceptable, discouraging B1 from participating further to avoid potential social sanctions.

Furthermore, while there was a high prevalence of participant responses that described having like-minded social groups regarding matters on PPEG, it was unclear whether these connections could be labelled as a PN mediator to ISNs. One example of this can be seen in the following response from C1 that entails the shared values and beliefs they had with their social circle about PPEG: “It’s a nice feeling also to be surrounded by people who share common opinions or are informed, well-informed”. From this, C1 also hints at the notion that a person’s social/cultural capital may contribute to their perceived legitimacy in debates surrounding PPEG. In this case, it would seem that a perceived high educational level on the subject could positively encourage engagement in PPEG.

2. The Impact of Personal Norms on PPEG

Another major theme related to engaging in energy governance was having a particular PN that encouraged related behaviours. This often involved perceptions of self-prescribed responsibility to engage. Ultimately, while some behaviours were more actively related to PPEG, most PNs about engagement were passive, relating to the importance of performing energy-saving measures within the home. However, the PNs themselves were predominantly positive in that the participants expressed that they knew energy governance was an important topic such as in the following example from A2:

“That's the ideology again... all the things that I do... I want it to be... good, in my opinion, for the environment and for energy. I think the environment in total is way more than the energy, but the energy, especially right now, is a really big part of that so actually I think in all parts it's important”.

Here, A2 seems to express a strong sense of personal obligation to behave in such a manner that is beneficial towards the environment and sustainable energy practices. Moreover, this seems to stem from their desire to act in accordance with their beliefs and knowledge about the environment and sustainable energy practices which encourages the continuation of these behaviours.

2.1. Tensions between Personal and Social Norms in PPEG

This sub-theme highlights the tensions that were observed between PNs and each respective social norm. For instance, there were notable times during the interviews where participants highlighted how their PN was threatened by the presence of a DSN that was in direct opposition to the behaviour belonging to the PN. For example, B1 described how the lack of general public engagement was a driving factor in their own engagement:

“I think seeing that there's not so much change happening or that there's not momentum for a change to happen I think it surely contributes to me wanting to do more. Yeah, I think it's always a kind of resistance [from others] that causes to do something.”

It appears that in this instance, the lack of public engagement stirred feelings of discontent with current public relationship with PPEG and simultaneously activated feelings of personal responsibility in B1 to engage in it themselves. Furthermore, there were several instances in which participants explained how they encountered situations where their behaviour that was driven by a PN was challenged by the presence of an opposing ISN. For example, A2 shared their experiences of social group disapproval upon raising awareness for PPEG:

“I think then if I look at it from that way, then it would be more that they would want an option that's effective and low cost, while for me I would be like yeah I also want low cost

but I think we should look at what is the best for the climate. So, I think that would give some friction.”

Here, A2 signifies a defiance to an imposed ISN from their social group. Thus, for this participant, it appears that the personal feelings of obligation out way the potential negative threats of social disapproval. While this concludes the main findings relating to the normative influences on PPEG, the following section highlights the additional influences of more personal and contextual factors.

3. Cognitive Dissonance and Institutional Challenges in PPEG

Overall, this theme highlights the complexity of (dis)engagement in PPEG that stems from the interconnected nature of personal conflicts and systemic barriers. This theme presents a collection of more nuanced findings that address the various issues the participants encountered with energy governance that were not anticipated in the original theoretical framework. One significant element relates to cognitive dissonance. This psychological concept refers to the mental discomfort one feels when their actions are incongruent with their beliefs (Cooper & Carlsmith, 2001). This discomfort often causes people to alter their beliefs and behaviours to reduce this disturbance (J. Cooper & Carlsmith, 2001). In the context of PPEG, a negative influence of cognitive dissonance is likely to play a role in shaping public beliefs and behaviour. During the interviews, there were often times when participants shared their positive energy governance beliefs but would then discuss their own behaviours that did not align with such beliefs. The following excerpt reflects this occurrence where B2 explained that while they acknowledge their behaviour is morally flawed, they continue to behave in the same manner:

“So as a university student I really don't think I have much to say but also a lot of my time goes into my studies. So when it comes to other things I've noticed I become very selfish

on it. So, I would say an obstacle is just tunnel vision. So, I know about it and I do my things and it works well in my house based on what I did at home but when it comes to a larger scale, I'd say it's also the fear of it. Like, what happens if I push myself out of this and you start thinking. The second you start thinking about stuff you kind of go down the rabbit hole of realising how bad everything is. So, I think it's also a little safety net.”

With this quote, it can be seen that cognitive dissonance appears to function as a protection mechanism that safeguards the individual against the perceived negative reality of their actions in contrast to how they should behave. Since the participant expressed a perceived difficulty to produce these behaviours, they take steps towards disengagement to alleviate the dissonance they feel and improve their wellbeing.

Moreover, other key elements related to institutional challenges include financial and time constraints, knowledge barriers, and the notion of imposed responsibility placement. The quote below from B4 demonstrates the beliefs held by many participants, that the public does not often have the available resources necessary to participate more actively which hinders further engagement:

“I just don't think that people have the resources to be involved in all of these big global problems. So, ideally, it would be great if everyone would have the time and money and energy on all levels, emotional capacities and all that, to be involved in this.”

Additionally, a notable reoccurrence within the analysis pointed to the disparity participants felt between citizen and government responsibility placement. This involves the conflict participants held regarding what behaviours they can produce to enact change versus the responsibilities of institutional powers. B1 stated the following which summarises this conflict:

“I think it needs to have some kind of connection. And that cannot be done on an individual level. So I think on an individual level there is not that much one can do. I think that's a myth. And an extremely sad myth. Because it just makes the problem bigger and enforces it further and further. ... So there, I think you can do all these small things and they matter somewhere but that is not what solves anything, in the end of the day. It's a much bigger systemic change and it's a much bigger shift towards community and communal thinking, thinking of commons rather than, you know, like my little house”.

In the above quote, the participant expresses the conflict they perceive between the feasibility of what they can accomplish as an individual compared to the influence of community action and the power of institutional actors in invoking large-scale change. This lack of connection between the individual and collective influences seems to be a large factor preventing B1 from engaging in more active PPEG.

In summary, this study produced three key themes: *The Impact of Social Norms on PPEG*, *The Impact of Personal Norms on PPEG*, and *Cognitive Dissonance and Institutional Challenges in PPEG*. Such findings highlight the broad array of influences that the various norm types have on PPEG, including the unexpected influence of internal conflict and systemic challenges. Subsequently, the following section of this thesis provides an in-depth interpretation of the findings outlined above whilst also exploring their implications and relation to the existing bodies of literature on the related topics and norms and PPEG.

Discussion

To the researchers' knowledge, this study set out to explore a potential cause of disengagement in PPEG that has received seldom attention in the literature thus far. This involved

examining both the individual and collective normative influences on PPEG (dis)engagement. To explore these complex relationships, the research was guided by one central research question: *What role do normative barriers play in limiting public engagement in energy governance?* In order to answer this, the four sub-questions shall be discussed, each highlighting a relevant dimension within the main research question to gain a comprehensive understanding of its nuances.

Regarding the first sub-question, this research wanted to understand how DSNs influence (dis)engagement in PPEG. Ultimately, the participant responses demonstrated the significance of DSN preventing more active and widespread PPEG. Overall, multiple PPEG behaviours were perceived as a DSN. However, there are two in particular that appear most crucial in the process of disengagement. The first relates to energy governance within the household. Interestingly, participant responses showed compliance with these norms, such that many only engage minimally within their homes and do not participate in conversations about energy governance. From the previous literature on DNS, it has been shown that people will rely on DSNs in ambiguous situations when they lack sufficient knowledge on the topic. Therefore, in the context of PPEG, because people do not discuss energy governance, as it is not the typical thing to do, it is less likely for people to become more informed on the matter, and remain without a sufficient knowledge base. It can then be said that the most adaptive solution is to rely on the DSN and continue to engage only within the home, preventing more public involvement. Thus, the overarching influence of DSNs is that PPEG does not extend beyond the individual.

The second sub-question that this research sought to answer is how ISNs influence (dis)engagement in PPEG. Ultimately, it appears that the predominant ISN that discourages more active PPEG relates to maintaining the status quo, in that people should be engaging in the easiest

and most convenient forms of energy governance. While the results did point out that the social connections of the participants would accept the adoption of some forms of renewable energy measures, they would not be willing to actively pursue these changes. A related ISN highlighted a significant amount of social disapproval regarding the implementation of renewable energy measures and the adoption of PPEG behaviours that would disrupt the comfort of everyday life. An interesting finding highlighted how some participants were also met with group disapproval when attempting to initiate more behaviours related to PPEG. Ultimately, this finding aligns with the literature included in this study relating to the influence of ISNs. As seen in these instances, ISNs appear to maintain the enactment of passive energy governance behaviours to secure social group approval, while discouraging the pursuit of more active PPEG through the threat of social punishment.

With regard to the third sub-question, the researcher endeavoured to understand how PNs influences (dis)engagement in PPEG. Overall, PNs were present in all participant responses but were expressed most intensely by participants who were already more actively engaged in PPEG compared to the participants who were not. This disparity in the salience of PNs ties in well with the previously established literature (Harland et al., 1999; Schwartz, 1977, p. 227; De Groot & Steg, 2009), such that the degree of PPEG engagement can depend on the intensity of the PN experienced by the participants. For those who only showed passive energy governance within the home, moral obligations and norm compliance were still exhibited in the same manner as the more active participants who took classes on energy governance for instance. Both groups demonstrated an awareness of the consequences of their energy governance behaviours and showcased the ascription of responsibility for the negative consequences that would occur if they did not perform those behaviours. The only difference is related to the degree of PPEG involvement. Thus, it can

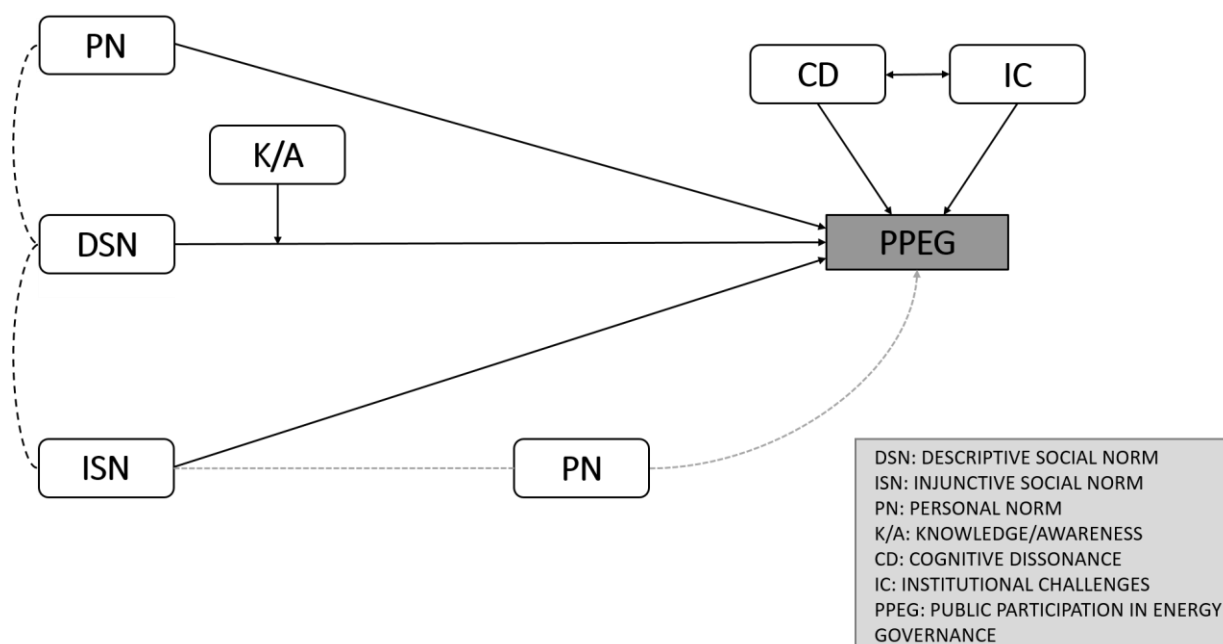
be concluded that PNs are present among individuals regardless of the level of engagement. Further, reinforcing PNs related to more active PPEG in the individuals who engage more passively within the home may subsequently lead to the adoption of more active PPEG behaviours by those individuals.

Finally, the last sub-question sought to discover how the different norm types related to each other within the context of PPEG (dis)engagement. While it was theorised that PNs may act as a mediator to ISNs, this effect was not necessarily observed in the data. This does not mean that this influence does not exist but rather the method of examination needs revision such as including a larger sample size. One interesting finding relates to the tensions between collective and individual norms. Responses from this study highlighted the conflicts that can arise between personal and social norm salience. As such, the participants demonstrated how they were faced with opposing influences from either DSN or ISN, yet in each case, the PN appeared to be most salient, and in many cases was seen to drive more active engagement. This ultimately implies that PNs play a crucial role in driving increased energy governance engagement, especially when faced with conflicting pressures from social norms.

While this study primarily sought to investigate the influence of normative barriers on PPEG, during the analytic process the unexpected influence of two other factors were observed. These relate to cognitive dissonance and institutional challenges, and the intricate dynamic that exists between them. Cognitive dissonance was witnessed through participant preferences to not obtain more knowledge of PPEG in order to maintain their current levels of passive engagement, knowing they would be compelled to engage more actively if they did so. Barriers related to institutional challenges also related to knowledge barriers preventing PPEG as well as limited resources such as time and finance. As such, a relationship between the two factors can be observed

whereby participants acknowledge the need for participation but displace the responsibility onto institutional actors as a defence mechanism so that they are not morally obliged to engage. By incorporating the results from participant responses, notable adjustments have been made to the conceptual framework.

Figure 2



Revised Conceptual framework

Firstly, the model now demonstrates the tensions that are experienced between the social and personal norms during the process of norm salience establishment. Further, the previous link between ISN and PN has been made less apparent to demonstrate the possibility of such an influence despite a lack of identification within this study. Lastly, the updated model now includes the influence of both cognitive dissonance and institutional challenges on PPEG and the relationship that exists between them.

Implications

Taken together, the practical implications of the present research provide key insights into how PPEG can be more widely adopted. A reasonable approach to intervention would require an increase in the public visibility of behaviours related to PPEG. Such behaviours should ideally be paired with messages that suggest these types of behaviours to be commonly adopted and approved of by most people. Such a strategy should effectively activate both DSNs and ISNs and foster more active PPEG as a consequence. It is also possible that these messages could serve to inform and instil PNs through the ISN mediating process. However, this element would have to be investigated further as this research did not find sufficient evidence to adequately identify this process. Furthermore, a complementary approach to this strategy should include promoting accessible workshops and educational outreach programmes that reinforce personal responsibilities to engage. This would serve multiple purposes, including making the public feel more included in energy governance processes, providing them with a sufficient knowledge base to make more informed decisions about their role within PPEG, and fostering a sense of moral obligation to initiate such engagement.

A natural progression of this work could be the investigation into cross-cultural comparisons. Since this study was conducted in a Western societal setting, having an individualistic culture (van den Bos et al., 2014), much benefit could be gained from exploring such normative influences in more collectivist cultures (McAuliffe et al., 2003). This is especially the case given that many participants deemed the most common and well-accepted energy governance behaviours to exist privately within the home.

Limitations

In general, when investigating a given phenomenon, researcher subjectivity is an inevitable factor, regardless of the methodological approach to examination. In the case of qualitative research, it is important for the reader to acknowledge the influence of this on the interpretation processes, which may have yielded different results if conducted by another researcher. While RTA aims to remain strictly objective during this process, the qualitative nature of these processes makes this challenging. As such, potential issues arise regarding researcher bias, threats to validity, confirmation bias, interpretive consistency, and the risk of misinterpretation of the participants' perspectives. For instance, a researcher may unintentionally bring their own beliefs and values into the equation causing researcher bias in the research design and data collection process.

Furthermore, given the limited sample size of 8 participants, there are significant risks related to decreased representation and potential missed variability in responses. Such a small sample can result in biased conclusions on the impact of norms. Moreover, since RTA methods were implemented in this study, concerns regarding the ecological validity of the findings become apparent as they tend to be context-specific. In this case, it is possible that the findings were skewed by the environmental influences of the interview format and may not accurately reflect participant perceptions and engagement in real life.

On a final note, it is necessary to stress that while the researcher assumed RTA to be the most optimal form of investigation for this study, there is also the possibility that other methods, such as content analysis, could provide additional insights, complementary to those found in this research.

Conclusion

This investigation was driven with the central aim to better understand the roles normative barriers play in limiting PPEG. The insights gained from this study aim to inform future research and broaden current understandings within the literature, thereby helping guide intervention strategies towards increased public engagement. This study's key findings indicate that social and personal norms are likely to play a significant role in influencing the disengagement process in PPEG. While this study predominately set out to examine these normative influences, two additional factors were found to elucidate the complex processes surrounding disengagement, including cognitive dissonance and institutional challenges. Since previous research attempts within this field have not extensively explored the relationships between norms and PPEG, this study offers a novel perspective of investigation. In the future, research in this field should built on the insights found here, by implementing larger and more diverse samplings, using various different research methods to deepen our current understanding. The continued pursuit of such information will be paramount for combating the normative barriers limiting PPEG.

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Appendix

Appendix A - Interview Protocol

Introduction

Icebreaker

Informal greetings (consent and confidentiality, structure of the interview)

Context of the study

After you have signed the consent form, we are getting started with the interview. The interview consists of open questions, so feel free to elaborate on your answers. However, you do not have to give an answer to a question if you don't want to or don't know. Before I give you some context on this study, do you have any questions?

The purpose of the present research is to learn more about your views on the current and future situation of citizens' participation in the governance of the energy system.

Energy plays a crucial role in most aspects of our lives. Given the development of anthropogenic/human-made climate change, the usual way we produce and use energy is being challenged such that the demand rises while fossil fuel-based energy sources are contributing to climate change. Moving towards renewable sources of energy is crucial to tackling both intertwined climate and energy crises. This study investigates the involvement of the general public in the governance of energy. As opposed to a top-down approach, we emphasise the importance of citizens' engagement in decision-making processes for energy-related issues. More specifically, we seek to explore how people are relating to energy governance, identifying potential obstacles as well as giving a voice to their preferred ways of (dis-) engagement and visions of ideal energy governance.

Some questions are targeting different aspects of the topic: community energy and activism.

Personal context

Franka: In the context of energy governance, community energy is one way of engaging, which is what this study is focusing on. It is specifically focusing on gender diversity in this field and what role it may play for people's participation. In this interview, I would like to get to know more about your relationship with community energy.

Fanny: Within the context of energy governance, this study is looking at the role of the broader environmental movement and, more specifically, recent trends of subgroups employing more disruptive forms of action and protest based on civil disobedience. This type of activism arises when citizens concerned about climate change including energy issues seek to challenge existing political and economic structures that underlie and perpetuate these issues. Dissent is often expressed through non-violent direct action disruptive in nature, and may include occupations, blockades, sabotages, or sit-ins. In this interview, I would like to know more about your relationship to/opinion on disruptive climate activism as described just now as well as to energy governance, how you wish to participate (or not).

Questions

0. Can you briefly introduce yourself?

Personal level of understanding of the topic PPEG (Public Participation in Energy Governance)

1. What is your opinion on the importance of transitioning towards renewable energy sources compared to traditional fossil fuels?
 - a. Fanny: What role does the approach of challenging underlying economic and political structures to combat the climate and energy crises play in how you identify yourself?
 - i. Prompt: Would you say it is a central part of how you see yourself/your identity? (implicit measure of centrality as a component of social identity)

2. What is your connection to energy governance? How do you, in your current life situation, relate to energy governance?

Prompt 1: Defined here as public participation in energy decision-making; concerning issues about the production, distribution, and use of energy?

Prompt 2: This can be on an individual level, a community/neighbourhood level, on an institutional level or a global scale.

Prompt 3: What about, for instance, your energy consumption, energy-saving measures, community energy, environmental movements?

 - a. Franka: How did you initially become involved in these initiatives?

What motivates or inspires your participation in community energy projects?

- b. Fanny: How do you usually receive information about collective action addressing climate change and energy issues? (prompts: through the media, personal conversations, radio, TV)

Contextual level of understanding of the topic (PPEG)

3. How do you typically see others around you engaging in discussions or decision-making processes related to energy governance issues? And how does it affect you?
 - a. Franka: How do you perceive the attitudes towards women among your colleagues/peers? And how do you perceive their attitude towards you?
 - b. Fanny: How connected and in solidarity (or not) do you feel to the climate activist community employing non-normative tactics?

4. Have you encountered any challenges or obstacles in your involvement? Specific moments? /What are the reasons that lead you (or the public) to (not) be willing to get more involved in energy governance?

Prompt: e.g. personal or structural obstacles (e.g. time or money)

- a. Franka: (Has there been any obstacles that might have had to do with you being a woman?) Have you noticed any specific policies or practices that promote or hinder gender diversity within energy governance structures?
- b. Fanny: How legitimate do you perceive non-normative climate activism as a response to the energy crisis and how effective do you consider it in putting forward solutions?
- c. Meg: When it comes to engaging with local energy governance, what do you believe is generally approved or disapproved of by people in your social group?

How do you want to engage through PPEG

5. Reflecting on your own experiences, what role do you personally believe individual citizens should play in shaping (local) energy governance, and how does that belief influence your own actions and participation?
 - a. Franka: How would community energy evolve in the future?

Are there any examples of successful initiatives that improve community energy?
(Initiatives that foster gender diversity within your community or institution?)

Closure

Is there anything you feel like we haven't touched upon in this interview but that you consider important?

Thank you (...)