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Why in my backyard (WIMBY): Forging the link to community futures when energy transition projects are met with indifference

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ABSTRACT

This paper analytically works towards foregrounding a new concept which can be useful to describe local reception and perceptions related to energy transition projects: *Why in my backyard* (WIMBY). We define this concept as local indifference to take part in changes in local energy landscapes at the community level. Based on the reception and data from two pilot and demonstration projects in Arctic Norway we show how locals passively accept, or reluctantly support green measures taken in fisheries (Lofoten) and energy systems (Senja). We suggest that these findings might be a symptom of a problem across sites: Even if local publics are in favor of green transitions and recognize the challenges of climate change, they don't necessarily see the relevance to their community. This has several implications besides potential foot-dragging, as pilot and demonstration projects struggle to anchor socio-technical measures in communities. On one hand, we suggest that if a project overlooks local community practices or does not adequately engage with the concerns of the local community, '*Why* in my backyard' (WIMBY) can easily turn into '*Not* in my backyard' (NIMBY). On the other hand, we suggest that a way forward is to consider stakeholders or involve local communities in solutions when developing new energy landscapes by focusing on how community futures can be sustained and potentially improved by being pilots of change. Building on our data by tying the spatial and material conditions to practices of change, we draw lessons from practices at a community level and show the potential uneven outcomes that socio-technical experimentation entails, drawing on interviews and participant observation in Lofoten and Senja. The paper concludes by reflecting on the theoretical implications of WIMBY and offers some suggestions for enhancing community engagement.

1. Introduction: addressing passive resistance and indifference in energy transitions

That novel technologies and projects, aimed at facilitating a green transition, sometimes meet local resistance should not come as a surprise. Even if resistance does not thwart a project, it is not unusual for resistance to lead to significant delays in energy transition processes at the local and national levels. In discussing potential renewable energy production, systems and infrastructures, and the conflict that often surrounds them, one often stumbles upon the debate surrounding "not in my backyard" (NIMBY) perspectives. A much cited definition of NIMBY is: "The protectionist attitudes of and oppositional tactics adopted by community groups facing an unwelcome development in their neighborhood" [1,p. 288]. In other words, people could be in favor of proposed land use in theory, and see the benefits, *just not in my backyard*. NIMBY is an active position against a development project. Yet, what if opposition is not active? This paper examines a situation where energy transitions are being delayed not by active resistance, but by a passive lack of engagement. This is the phenomenon that we have termed WIMBY – *Why in My Backyard*.

WIMBY describes local reception and perceptions related to energy transition projects in situations where the local community is seemingly indifferent to take part in changes in local energy landscapes. Passive resistance among community members who are vaguely supportive but also suspicious is not unique to energy transition endeavor [2]. Local publics see the relevance of the green transition but ask the question *why* it should happen in their back yard as exemplified in an interview with a local community member at Senja: "I think we are as green here on this island as we can be. For me as an individual, I don't think I pollute much in that sense [that I can make a difference]" (Interview Husøy, Senja, 2020). In the same vein, a more critical response by a fisherman from Lofoten, told the local newspaper that "the coastal fishing boats in

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Lofoten might pollute the same amount as two airplanes from Asia full of tourists coming to Lofoten". Consequently, the most important objective for politicians in Lofoten should be lowering [that kind of] emissions if they are serious about becoming 'green islands' [3]. As we will return to shortly, Lofoten and Senja are targeted as key sites for the implementation of green measures and technological innovations and are, as such, relevant when studying community responses to energy transition in the Arctic. When conceptualizing WIMBY, we are mindful of the critique posed against NIMBY for the past decades. NIMBY has been widely criticized in academic debates for oversimplifying people's motives [4] and the complexities of their interactions with social and political institutions [5,6]. As shown by Gross [7] resistance can also be a result of outcomes that are perceived to be unfair, particularly when decisions are made which benefit some sections of the community at the perceived expense of others. NIMBY is also often characterized by people being irrational or egocentric, but this is not always the case. On the contrary, opposition can be both informed [8] and rational [7]. As summarized by Bridge et al., protesters can have quite legitimate concerns about changes to where they live, and they are often concerned about wider issues and may be objecting just as much to *how* the decisions are being made as to the nature of the proposal itself [9,p. 191]. Whereas NIMBY says, "yes, but not here", WIMBY say "yes, but why here?". Whereas NIMBY is often seen as a variation of game theory with egocentric participants, WIMBY leaves space for negotiation where compromise and changing attitudes are possible. In WIMBY, there is not a focus on people's maximization of utility, or 'free rider' mentality, but rather their genuine bafflement as to why the proposed land use or technology is necessary *here*. Even though the two concepts are different they both relate to participation (or the lack thereof), with the challenge being on "how to devise ways to transform conflicts - or agreeing to disagree - into practices, policies and regulations that give voice and reflect everyone interested and affected and the way to move past the difficulties that follows" [4,p. 3]. This substantial challenge of moving past difficulties is taken up in this paper as we ask the following research questions: (1) *How can one understand local indifference when piloting energy transitions? (2) In which ways can a focus on changing energy practices increase engagement among local publics and practitioners?*

In this paper, we work towards linking the concept of energy landscape to the practices of the everyday. We conceptualize the "backyard" as such an energy landscape. Energy landscapes establish a link between a physics-based view of energy and its spatial footprints on the one hand, and how people think about geographic space on the other [10,p. 14]. Surroundings are important to people's sense-making as well as their decision-making processes. As such, making decisions about how to act includes becoming aware of a development, interpreting potential impacts on place, evaluating this impact, and then considering how to respond accordingly [9,p. 192]. By practices, we mean the situated and often repeated activities in the everyday which consist of bodily and mental activities, things, and the knowledge of how to use them. We bring practice theory into society-technology relations to explore the potential for making energy transitions more tangible at the local level, providing nuance and depth to participation dynamics. The role of practices is seen as constraints, opportunities or conditions for change in our analysis. We propose that, in order to overcome WIMBY, both practices and the energy landscape, and the co-creation process between them need to be actively engaged. This entails finding the combination of material, technological and social solutions which are natural extensions of already existing practices, and locally desired community development to make the way forward easier to grasp. We suggest that if a project does not consider local practices or does not adequately engage with the concerns of the local community, the 'why' in 'Why in my backyard' can easily turn into 'not'.

2. Navigating energy transitions in Arctic Norway: introducing the climate friendly fisheries and Smart Senja projects

Lofoten and Senja are situated in Arctic Norway, with Lofoten being an archipelago in Nordland County, and Senja an island in Troms and Finnmark County. They are known inter/nationally for their spectacular scenery and abundance of natural resources. While both regions have strong fishing industries and traditions, they are also increasingly popular tourist destinations. To support sustainable development, Lofoten and Senja have launched various projects aimed at transitioning towards a more electrified and sustainable society. This paper zooms in on the two first projects of their kind in Lofoten and Senja, focusing on stakeholder and community responses. The *Climate Friendly Fisheries project* (2018–2021) and *the Smart Senja project* (2019–2026)[1] have both sought to implement and integrate new technologies into the energy landscapes and we will therefore explore the perceived fairness, relevance, and utility of the proposed or already existing solutions in the projects. The solutions we examine are hybrid fishing boats and boat charging stations in Lofoten, and smart homes technologies and renewable energy on Senja. The two socio-technical projects we explore have a specific focus on local publics and practitioners: We emphasize potential temporal and spatial unevenness as we explore the social and material qualities of these fisheries-based communities when seeking to introduce and/or materialize energy solutions.

In short, Smart Senja received substantial funding (38 million NOK from the governmental funding agency ENOVA)[2] as part of a large-scale demonstration program on new energy systems, led by the regional and publicly owned grid company ARVA. In Smart Senja there are two pilot communities, Senjahopen and Husøy, on the northern end of the Senja island. They are relatively similar in size (about 300 people in each community) and function (fisheries based). The two communities experience frequent power outages due to heavy loads in specific periods when the landing and processing of fish takes place. This is especially prevalent during the winter cod fisheries. If the current grid is not optimized, upgrading the entire energy system will be necessary. The energy consumption on the grid is thus heavily affected by the activities of the island's major fishing industries [11]. The ongoing project has so far installed Norway's largest batteries in the grid (2022-), tested smart home technologies (2020-) and hot water tanks (2023-). A local energy market has been created around these measures where local industry contributes by shutting down machinery during peak load hours (2021-). It is still pending the realization of small-scale renewable energy production, an issue we will get back to in our analysis. If the project is successful, the grid company will gain knowledge to better understand whether building a larger, more intrusive, and expensive power line is necessary. Alternately, the grid company might postpone building to a more suitable time or forgo the building all together. The project includes involving local publics (biannual energy cafes) and businesses (meetings with key partners) in the process of navigating specific renewables and the various technological measures, besides the batteries, that were initiated by ARVA.

The Climate Friendly Fisheries project in Flakstad, Lofoten focused on various aspects of greening the fisheries, particularly through mapping emissions and the potential for reductions through electrification of the coastal fishing fleet. It was relatively modest in scale and funding (2 million NOK from the Norwegian Environmental Directorate)[3] and was managed by the Flakstad municipality (1000 inhabitants spread over four fishing villages). Local fishermen were important stakeholders as practitioners. Carbon footprints were mapped on their boats and various

[1] Both projects included a one-year pre-project that we have included in the timeline for the projects.

[2] Thirty eight million NOK equals about three hundred and eighty thousand USD.

[3] Two million NOK equals about two hundred thousand USD.

workshops took place aimed at informing and being informed through dialogue and exchange of knowledges and perspectives. In 2019 the first hybrid (diesel and battery) fishing boat *Angelsen Senior* came to Flakstad, Lofoten. This boat is an important reference point for the project and for the green regional political initiative '*Lofoten – the green islands*. The coastal fishing fleet are key transition objects in the green vision for the archipelago group Lofoten [12]. In the Lofoten Green Islands' 'Roadmap 2030' it is stated that a third of the fishing boats will be run on zero-emission motors by 2030 [13]. Fulfilling this ambition would require enormous changes in the everyday practices and infrastructures of the fishermen's energy landscape.

The two projects share some commonalities. First, they are technology-oriented with government funding. The shared overall objective is to accelerate transitions through the implementation of new technologies that can be replicated across sites and scales and to put ideas and green measures to the test. Pilot and demonstration projects like these are seen as a key mode of innovation within contemporary energy and mobility transitions in Norway [14], or as 'instruments' to implement transitions in practice [15]. Second, they share a commitment to making pilot and demonstration projects more inclusive by finding ways to co-operate with local publics, businesses, and practitioners. This focus can enable the potential of sustainable innovations [16,17] acknowledging that developing energy systems through an evolutionary approach is a central feature of how technology becomes embedded in daily life [18]. In the social sciences literature, approaching transition in terms of upscaling technology is a relatively separate approach than focusing on transition as inclusive processes [19]. Swift and inclusive transitions are also a challenge for policy-makers to implement since it is often the case that participatory processes that enhances stakeholder engagement slow down the speed of action for green transitions [20]. Public consultation and participation exercises often run in parallel with formal decision-making processes and it is rarely specified how the former will impact the latter [21]. This makes socially responsive experimentation with co-creation processes a difficult task, especially for projects like those examined in this paper, whose foremost objective is to pilot and demonstrate technology in energy transitions.

A third common feature is that both locations have almost no local energy production. The island of Senja has some hydropower presence, but 80 % of the energy consumption is imported, meanwhile Lofoten only has 10 % self-production. A fourth common feature of Lofoten and Senja is that they are located in the same electricity price region. Indeed, Arctic Norway is in a favorable situation in terms of having its own market for producing and consuming energy. The electricity in the region has for a long time been the least expensive in Europe, and prices will probably continue to remain relatively low because of surplus in production and a limited transfer capacity between Norway's northern and southern power grids [22,23]. Given this competitive advantage there is increasing national and international interest in investing in new industrial projects, not least renewable energy, as well as other green measures, such as green and blue hydrogen, in Norway's Arctic region [23]. As such, Arctic Norway holds a great potential for realizing large scale greening of industry via hydrogen, electrification and testing new ways of organizing the energy system. On the flipside, the intensification and realization of green projects and new industry might push up energy prices. As such, the challenge of accelerating energy transitions while moving past difficulties to experiment with participatory processes is a timely one.

3. Analytical perspectives

To analyze local reception and perceptions in energy transition projects, we need a clear understanding of practices and energy landscapes and how they work together. In the following sections, we therefore discuss the role of practices and energy landscapes and the co-creation process between them. This allows for a structured analysis of the socio-technical innovations and perceptions of local communities in the Climate Friendly Fisheries and Smart Senja projects.

3.1. Shaping and being shaped: practices and their role in society's transformation

Individuals can with relative ease account for their actions, and why they act the way they do. Cooking, cleaning, and showering are all examples of practices, and why we do them is no great mystery. In a fishing village, the boats depart at early dawn, casting nets and setting lines and delivering their catch at the local landing site when they are done. The rationale and logic behind these actions and interactions seems perfectly clear to the individual and to the rhythm of a fishing village. On a societal level, the situation is a bit different. Norms and practices are learned, internalized, performed, and continuously reproduced in human actions. Giddens' theory of structuration is often cited as a starting point for theories of practice – the notion that the interactions between individual action and our collective norms occur as a function of practices [24,25]. Human activity is simultaneously shaping social structures and in turn being shaped by them – this is not a dualism, but a duality [25]. Thus, although practices are brought to life by the actors, the creation of practices often happens without the conscious reflected awareness of the doers.

When turning to defining practices we find Reckwitz's definition useful, as a "routinized type of behavior which consists of several elements, interconnected to one other: Forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" [26,p. 249]. In other words, practices are situated and often repeated activities in the everyday composed of a set of elements, both bodily and mental, that make the activity recognizable as its own entity. A single white queen does not make a game of chess. For that you need both the black and white pieces, a board, an opponent, and the knowledge of the rules of the game. From this we can gather that practices and their rationale are not solely individual. They are firmly anchored by multiple, overlapping ties to the social, technical, and cultural fabric of everyday life [27].

We are interested not only in the practices that already exist, but also in the potential for change that lies within the development of practices themselves [28,p. 140]. To understand the potential for change within practices we turn to Shove et al. [29], who explore the processes of transformation and stability within social practices and between them. They argue that understanding the emergence, persistence and disappearance of practices is of the essence when tapping into the potential for change that lies in the development of practices. Practices emerge, persist, shift, and disappear when *connections* between materials (things, technologies, tangible physical entities), competences (skill, knowhow and technique) and meanings (including symbolic meaning, ideas, and aspirations) are made, sustained or broken [29]. Acknowledging that practices are emergent and their development unpredictable, there is difficulty in setting exact targets for how practices should change. However, Shove et al. argue that some policy interventions might make some outcomes more likely than others, giving sustainable ways of life a better chance to persist and thrive [29]. In the case of climate change reduction, for instance, this can be done by identifying the elements that have the most negative impact upon carbon emissions across a whole group of practices and replacing those "bad" elements with new elements that would support practices with fewer emissions. In their view bringing about pro-environmental patterns of consumption does not depend upon educating or persuading individuals to make different choices, but instead on transforming practices to make them more sustainable [29].

3.2. Energy landscapes: understanding sociotechnical innovations in a local contexts

The concept of energy landscapes is, in this paper, applied to bring together the ways in which conventional or emerging practices are maintained, unfolded, or stabilized when energy pilot projects introduce sociotechnical innovations and developments in specific contexts. Energy landscapes also extend beyond the situated physical measures of technological change in a specific location, as they are both spatial and temporal and can be studied as the "constellation of activities and socio-technical linkages associated with energy capture, conversion, distribution and consumption" [30,p. 335]. This means that energy landscapes extend across spaces, and encompass more than an area of land with a certain use or function [10,p. 11]. It is also more than a space that serves as "infrastructure or background for our collective existence" [31, p. 88], [32]. When adding 'energy' to landscapes, the energy landscape can function as a descriptive device – for holding together the material practices associated with energy production and consumption – and their dynamic and geographically uneven evolution over time [9,p. 12].

This unevenness in time over energy developments is in turn shaped by cultural, social and economic factors and relations. This is also reflected in our perception of them. The energy practices of today rest on past transitions and the current 'technological' landscapes, such as electricity infrastructure. Once these are in place, people fold landscapes so completely into their psyches that those very landscapes become removed from consciousness [33,p. 4502], [34,p. 627]. During a decision-making process related to *new* energy infrastructure, production or consumption, locals' sense of place are triggered, as well as their desired futures, and when evaluating this impact, they consider how to respond accordingly [9,p. 192]. For example if a project is perceived to have positive economic impacts for a local community local residents are more likely to support a nearby large-scale construction [35]. Understanding social impacts are an important part of the local evaluation process both in terms of negotiations among different interests and groups [30] and in terms of evaluation of whether a socio-technical measure can even out, rather than reinforce social and economic differences [36]. Energy landscapes capture the dynamics of how the solutions proposed can be comprehended in relation to the form, functions and value of familiar landscapes [30]. A familiar landscape is recognized by locals and practitioners as having specific functions (for example natural, productive, residential, recreational, cultural) and how they are affected by energy development is thus of great significance in terms of how practices are maintained or challenged [37]. This is one way in which the energy landscape as a material-physical reality 'works' analytically to illustrate the continued interaction between natural processes and human activity and to the immaterial existential values and symbols of which the landscape is the signifier [10,p. 11].

3.3. Practice theory and energy landscapes: a path to sustainable energy solutions?

Practice theory emphasizes the importance of social practices in shaping human behavior and the reproduction of social structures. It focuses on the everyday routines, habits, and norms that guide our actions and shape our perceptions of the world [26]. Energy landscapes, on the other hand, highlight the physical, geographical, and environmental factors that shape energy production and consumption patterns [9]. It considers the spatial distribution of energy resources, infrastructure, and technologies, as well as the social and political dynamics that influence their development and use [30]. Merging these two approaches allows for a thorough examination of how energy practices are embedded within specific landscapes and how they are influenced by the physical, social, and cultural contexts in which they take place. Comprehending situated practices within the context of current and emerging energy landscapes enables a focus on both the social and material facets of energy transitions. By integrating practice theory and energy landscapes, we can gain a more holistic and nuanced understanding of the intricate factors that shape energy practices. This understanding of the interplay between energy landscape and practice may aid in the development of more efficient and sustainable energy solutions tailored to the unique needs and contexts of various communities. By situating practices within particular landscapes, we can identify obstacles and opportunities to create more sustainable energy systems, taking into account the broader social and physical contexts in which they arise. This approach allows for the utilization of local resources and infrastructures or the targeting of specific energy practices that facilitate a shift towards more sustainable alternatives.

We suggest that further research can empirically explore the specific mechanisms through which energy landscapes and practices interact, as well as studies that can provide insights into the dynamics of change over a longer timescale. These research efforts can contribute to a deeper understanding of the relationships between energy landscapes, social practices, and the potential for sustainable transitions over time, informing more effective and sustainable policies and interventions in the energy sector.

4. Methods

As transition processes are context-dependent, we are using two comparable sites, as presented in the introduction. The two cases can produce some lessons across sites. The data for this paper is twofold; the main data set consists of semi-structured interviews, conducted in northern Norway's Lofoten Islands and the nearby island of Senja. Additional interviews were conducted in Tromsø, northern Norway's administrative center (see Table 1).[4] These interviews were conducted within a two-year period after activities and technologies had been introduced. The interviews were recorded, transcribed and systematically analyzed identifying themes common across sites. For the interviews, the objectives were 1) to understand individual and community motivation and interest in engaging with sociotechnical measures and renewable energy technologies (i.e. hybrid vessels and smart homes), 2) to connect social and economic sustainability in terms of community developments in order to understand how they are linked to potential futures and practices and, last but not least, 3) to gather reflections on energy transitions and their relevance across scales, especially with regard to how local measures connect to inter/national mitigation efforts.

The second data set relates to project activities, such as energy cafes,[5] project meetings and local/regional conferences, and it thus consists of both participant and observational data. A motivation for setting up

Table 1
Table categories of interviewees.

Stakeholder category	Number of interviewees	Smart Senja	Green fisheries
Community member	25	12	13
Of these: fishermen	10	2	8
Politicians	4	2	2
Energy/grid companies	6	6	0
Local businesses	7	5	4
Total interviewees	42		

[4] A majority of the interviews in Lofoten were conducted by research fellow Magnus E. Eilertsen at UiT.

[5] We helped design the energy café as two-hour workshops. The Smart Senja project partners would launch or present ideas that were subsequently discussed at various coffee tables through semi-structured thematic guides, and students and staff at UiT would facilitate and take notes of these discussion-like focus groups.

community events and contributing to project activities was to incorporate social and societal aspects into the green developments in both settings. As members of the project team, we set up workshops in Lofoten and annual energy cafes on Senja to harness input from practitioners. This methodology, where we were simultaneously organizing and analyzing community engagement, allowed us to follow the projects systematically in terms of the project's methods (what can enhance engagement) and interviews (practitioners and local publics). Inclusion and societal engagement were also a goal of the Flakstad municipality in Lofoten and the publicly owned grid company ARVA (the aforementioned project leaders). In summary, the data allows us to explore the everyday practices and sociotechnical factors that enable sustainable and locally successful energy transitions.

5. Analysis

In this section, we use empirical data to assess what constitutes local indifference, and what might be needed for communities and practitioners to overcome barriers and engage with the green measures. In our proceeding analysis we will examine the everyday practices of households in terms of motivation for changing consumption patterns (5.1), how integrating production of renewable energy is perceived in relation to existing practices with a particular focus on solar energy (5.2), how timing plays an important role when adapting new technologies in the coastal fishing fleet (5.3), and how infrastructural changes to the energy landscape such as fuels, ports and electric charging stations can lead to uneven outcomes (5.4). We conclude the section by drawing some lessons from the cases as a way of not only understanding WIMBY-dynamics but also how it can be countered in energy transition projects (5.5).

5.1. Beyond saving money: connecting everyday practices to energy landscapes and community futures

Our first case is the first sociotechnical measure introduced the Smart Senja project: The Jimmy Box, named after the first pilot customer to install it. The Jimmy Box is a home energy management system that functions to automatically shut down bathroom heated floors and the water boiler when the grid approaches maximum capacity. Innovations, and smart home systems constitute a key element of the physical domestic energy infrastructure of the smart grid [38]. The box comes with an app where the household can save their preferences and monitor their electricity use to contribute to avoiding consumption peaks. In addition to the Jimmy-box there was also a supplementary SMS-project where eleven households would get a notification one day in advance informing them what hour they needed to lower consumption. The lowering of consumption was done manually by the participants, and they got feedback afterwards from the project on their performance. The main objective with smart energy innovations is to synchronize the timing of supply and demand of electricity [39] and can be summarized in terms of streamlining people into becoming "a smart user of the smart grid" [40,p. 265].

Of the around fifty people that volunteered twelve local families got smart home equipment installed for free in 2020. That the smart home equipment and installation should be free was a conscious choice by the project so as not to reinforce existing social divisions [36] and so that economic concerns would not be a barrier for participation and engagement with the technology, as it is often the case [14]. We interviewed a handful of households participating in the smart home experiment. They expressed mixed feelings about engaging with the technology. One couple we interviewed constantly competed to see who could save the most electricity, monitoring their progress in the app that they had both downloaded, while on the other side of the spectrum we talked to someone who unplugged the Jimmy Box, as the family thought it interfered with the internet connection, (to the best of our knowledge it does not). However, our impression is that most of the families participating in the pilot study placed somewhere in the middle. It took the participants some time to learn and get used to the system. When the initial phase of trial and error was over most participants had found their preferred settings for inside temperature and the like and let the system do its work, only using the app occasionally and for special events.

What all the participants we interviewed agreed on, however, was that the money they could potentially save would not be enough to justify their efforts. Nevertheless, they were willing to proceed in order to help the foundational fish-processing businesses that anchor the community. This point is exemplified in a story from the Norwegian Fisheries newspaper, *Fiskeribladet Fiskaren*, entitled "Jimmy sacrifices the heat on his bathroom floor to provide electricity for the fish landing site" [41] (Fig. 1).

Although the title might be somewhat dramatic, since Jimmy (mostly) has the heat he desires in his bathroom floor, the story from the news service makes clear that this fisherman on Husøya does what he can to help the local cornerstone business Brødrene Karlsen by avoiding electricity use at home at the times of the day when the local business needs a lot of electricity. This is an acknowledgement of the business being at the heart of the community and Jimmy underscores this in a quotation from the newspaper article: "…I hope more people will join the project because we can ensure that the business [Brødrene Karlsen] have enough electricity to maintain production. If everyone can do their part, I think it can improve energy security in the grid out here" [41].

Our main finding from this section is that the smart home system and the SMS-test provided new meanings to the familiar everyday practices surrounding electricity use, forging a new connection between electricity use and future development of the fishery. It was no longer about just keeping the house warm, or showering to get ready for the day, but doing these things at a time more beneficial to the landing site and the community as-a-whole. To phrase Shove et al.'s [29] words – the "bad" element in the group of domestic practices can be seen as electricity use that lead to peaks in consumption that can potentially give short blackouts, but by being more flexible and willing to move activities, and making use of smart home systems, the new emerging practices support a future that is both greener and would allow the landing site to thrive. These findings coincide with the social science literature that emphasizes that smart home system providers should not solely focus on technological development. Rather, smart home systems should focus on relevant energy consumption through the lens of everyday activities [42], where social practices are put at the center of attention rather than merely developing technologies in isolation from the realities of everyday life [43]. Going further, we would argue that when aiming for change, social practices should be seen not only at an individual/household level, but also as part of situated energy landscapes and in connection to the desired future of the practitioners and local publics.

5.2. Small-scale renewables and the challenge of integration: lessons from Smart Senja

An important objective for Smart Senja from the very beginning was to include small-scale local renewable energy in the project, but that has not yet been realized. The community and industry were positive to solar energy and assessments and project proposals have also been made for small-scale wind energy (below 1 MW). Solar energy was seen as a good supplement locally. This was evident at energy cafés, initial surveys and newspaper articles - the project leader in 2019 even stated that the combination of a smart grid and prosumers could be a way forward for "coastal communities to be at the forefront of the green transition in Norway" [41]. However, it did not take long before ownership of local renewable energy installations became a conundrum, and it continues to be an important issue for the project to resolve over the remaining three years of the project.

On one hand, owning small scale local energy (wind and solar) was not seen as worthwhile for the energy companies taking part in the Smart Senja project because of the scale. For the local industry it wasn't

HJELPER TIL: Fisker Jimmy Tøllefsen på Husøya har installert løsninger hjemme med nedstøpte varmekabler og varmtvannstanker som kan reguleres for å unngå strømbruk på de tidspunkt på dagen når behovet hos Brødrene Karlsen er størst. Foto: Arkivfoto Terje Jensen

Jimmy ofrer varmen på badegulvet for å gi fiskebruket strøm

Fig. 1. Facsimile from Fiskeribladet 27th of September 2019.

having solar panels on their facilities or a potential wind turbine nearby that was the problem - it was owning them. On the technological side, there are no difficulties. On the practice-oriented side, however, there is a challenge, as connections between technologies, competence and meanings were not sufficiently made [29]. This sentiment was prevalent in several meetings we attended, both explicit and implied, and was exemplified by a representative of one of the businesses we talked to during an interview: "Let people work with what they know. […] I don't think … [ARVA] will do so well if they started messing around in the fishing industry, and I don't think we will do well messing with the power industry" (Interview, 2021). Assurances that all maintenance caused by heavy snowfall and other weather-related incidents would be taken care of made no difference: "We do fish, not power production" was the clear message, both in the interviews and in the meetings we observed with several businesses.

In other words, renewable energy production is seen as being outside of the interest and competency of local businesses. Long term, local small-scale energy production was meant to be an opportunity for building new infrastructure with charging stations for hybrid/electric fishing vessels, laying the groundwork for a future energy landscape with a more versatile energy mix. However, the project did not manage to convey the idea that roof-top solar panels would give new possibilities for the future. The processes of technology adoption reflect stakeholders' perceptions of the technology, the services provided by the technology, and how people imagine the role this technology might have on their lives [44]. Renewable energy was viewed solely as a means of fixing existing problems with the grid and thus was seen as an unnecessary risk for local business to take on. Although grid companies can, in theory, halt new business developments if the grid is coming close to maximum capacity, grid companies are obliged by law to always provide necessary infrastructure for electricity.

Many of the islanders at Senja, including the businesses, prefer the option of a new and improved electricity grid, as they fear that they will lose the possibility of establishing new businesses or not being able to expand current activities if they lack a sufficient energy infrastructure [45]. Providing a new grid to the communities may require up to eight years, and in the meantime the local businesses fear that they won't be able to take part in the green transition, i.e. if fishing boats requires large amount of energy for charging batteries. As expressed by the managing director of the biggest business at Senjahopen, "actors may end up choosing to build in central areas if we do not have enough electricity out here in the peripheries" [45]. For the time being, it is difficult for the community to provide power when the boats are ashore at Senjahopen. The three-megawatt storage capacity installed through the batteries in the two communities, Senjahopen and Husøy, will possibly enable the development plans currently sketched out.

Being coastal communities at the forefront of the green transition in Norway as was the ambition in 2019 is a precarious state and is conditioned by the successful implementation and adoption of new technology in Smart Senja and potential development project in the communities, as well as the development of new energy practices within the fisheries over the next few years. Seen in this way, the potential lack of engagement with the project and project solutions can possibly be viewed as an action, a sort of taking action through inaction. As it stands, the technology proposed was neither perceived to be tailored to existing practices, nor did they seem have the adequate new practices created around them [44].

To summarize: If a local community is to be successfully involved in the process of integrating new technologies in the energy landscape, locals need at a minimum to understand the technological innovations and their usefulness. If an innovation can be a natural extension of already existing practices – or open for experimentation – it will have a greater impact and possibility of succeeding. By examining this case through the lenses of practice theory and energy landscapes, we gain insights into the complex interplay of technologies, competencies, and meanings that shape the adoption of new energy solutions in local communities. As it stands, the locals de facto asked themselves WIMBY – Why in *my* backyard?

5.3. Navigating the tides of change: fishermen's perspectives on electrification and green technology

"Fishermen are genuinely interested in new technology, everyone wants to try something new - that is not the problem, [the problem] is in timing and engineers finding solutions that [the fishermen] understand easily. […] It needs to be relevant. I do not know a single fisherman that does not want the latest fashion." (Interview with local business, Lofoten, 2021).

The hybrid boat *Angelsen Senior* entered Lofoten waters in 2019 as the largest vessel of its kind in the world. Even though the boat was met with standing ovation at its arrival, and still draws a lot of attention, the interest of other fishermen to make the step and invest in similar technology themselves has been less evident. The captain of the boat, Øystein Angelsen, who owns it with his brothers, addressed the lack of

interest surrounding the technology during a conference during "Green Energy Week" in 2020: "We have not met so much skepticism, but also not so much enthusiasm, but there are some who are considering retrofitting their boats to battery operation". We have identified two potential explanations for this lack of engagement in the electrification of the fishing fleet in general in our material: getting the timing right for new technologies and the potentially uneven socio-economic consequences when designing a charging infrastructure.

Many fishermen questioned whether the *Angelsen Senior* would stand the test of time as "electrification of the smallest fishing fleet is [too] far into the future" an older fisherman who attended several workshops stated when asked if the technology was relevant for him (Interview, Lofoten, 2022). Although the fishermen of Lofoten are generally interested and knowledgeable about technology, as the introductory quote underscores, they also often attain a wait-and-see attitude towards what they consider novelties. It is all about timing: "Timing is important for people's economies. When you are deciding [how] to spend hundreds of thousands, that's when you need to be there," (Interview with fisherman in Lofoten, 2021). In this case timing reflects the perceived maturity of the technology at the point in time when a fisherman is getting ready to invest in a new boat. The lifespan of a boat, its functionality and the potential added (dis)advantage of going hybrid all factor into the decision. It is not unusual to have a boat for thirty years, so the investments made need to be sound.

The machinery itself can potentially make transitioning more difficult. Fishermen place much pride in their fishing boats; they are almost considered to be family members. They might not know how to conduct major repairs on their own boats, but they rely on their mechanical expertise to perform everyday vessel maintenance. Electric/hybrid fishing vessels might be limited to the people with the economic means to buy them and the expertise to maintain/operate them. This degree of competency is still relatively scarce, a point that was also brought up by a fisherman in his fifties who pointed to a generational gap: When a new technology was intrusive to fishermen's everyday routines, many of the older fishermen avoided it (Interview, Lofoten, 2021). This is underlining the "close-coupled relation between materiality and competence and the possibility that access to these equally essential elements is unequally and unevenly distributed," [29,p. 28]. Fishermen are thus questioning the technology, as the hybrid/electric fishing vessels are at present seen more as a curiosity and as a niche product for those with economic means and interest.

For some, there is value is to be found in the test phase itself – being the first to try something new, and the symbolic value of the green future it represents as the introductory quote underscores. In this setting some of the startup problems that inevitably follow new innovations can be tolerated, but when put in the frame as "the act of fishing" any complication related to technology is encountered as a nuisance. Novelty is no longer enough. Economy and functionality of the day-to-day practices and seasonal variations are more important. The WIMBY-perspective of fishermen in Lofoten is then reflected in how they passively accept, or reluctantly support, the focus on how to green the coastal fishing boats.

5.4. Charged with spatial unevenness: addressing distributional concerns in Lofoten's green transition

As Lofoten is composed of many small fishing villages, cautious attitudes towards electrification complicate efforts to develop new green infrastructure. Having local access to refueling or recharging boats with energy is a key component to the practice of fishing and the local energy landscape. If electrification is an objective for the green transition, the perceived lack of available charging stations is a potential contributor to lack of engagement. In general, the fishermen in Lofoten have some reservations about the socio-technical viability and distributional effects of green solutions, especially when it comes to *where* the charging stations for boats will be placed: "You can tell by where we live [peripheral fishing village], it will be the three main fishing ports in Lofoten that will get electric charging stations. The chargers will not be installed here. So, I am against that [they build charging station in the main ports] as it means that we will have to move [our boats] from here" (Interview, Lofoten, 2021). As mentioned, there are four fishing villages on the island of Flakstad where the Climate Friendly Fisheries project took place. The fisherman quoted here fears that only the most populated fishing village will get a charging station, as their location is already mapped out by the Climate Friendly Fisheries project to be the most beneficial. The hesitancy towards electric/hybrid fishing vessels is not an inherent opposition towards electrification, or not wishing to take part in the green transition, but rather a worry that not everyone will have equal access to electric boats and charging opportunities in the (near) future.

In the Lofoten municipalities, several of which have multiple harbors, it is unlikely that all will have charging stations for fishermen who buy hybrid or electric boats. In this case electrification of the fishing fleet might reinforce rather than even out social and economic differences between fishermen and between communities if the current strategy is retained. A creative refashioning of charging infrastructure that would ensure a geographically and temporally even process is possible, but probably politically and economically unrealistic for now. It then becomes a question of the haves and the have-nots. It is therefore likely that some of the hesitancy stems from a fear of investing in the electric future, and by so doing, taking part in the centralization process and consequently the wilting of the local community as they know it. In this setting passive acceptance of new innovations is on track for turning into active resistance if the emerging energy landscape is charged with spatial unevenness.

In conclusion, the energy landscapes and practice perspectives reveal the intricate factors influencing the adoption of electric/hybrid fishing vessels and electrification and green infrastructure in Lofoten. The timing of technology adoption and the potential uneven socio-economic consequences play critical roles in shaping fishermen's attitudes and decisions. To encourage broader engagement and ensure a successful green transition, it is crucial to ensure that the technology aligns with the existing practices and competencies of the fishing community, address fishermen's concerns about the potential uneven distribution of resources and infrastructure, and work towards a more inclusive and equitable energy landscape.

6. Insights from WIMBY: overcoming indifference

While the well-known NIMBY (Not in My Backyard) response represents active opposition to development projects, we have introduced WIMBY (Why in My Backyard) to capture the more subtle dynamics when local communities appear indifferent or choose not to engage in proposed changes to their energy landscapes. WIMBY enriches the existing literature by providing a more nuanced understanding of local community dynamics in response to energy transition projects, exploring the interplay between technological, social, and cultural factors that shape public attitudes and engagement. This ensures that energy transition projects are more likely to be well-received and sustainable in the long term. WIMBY's theoretical-analytical contribution aids the development of more comprehensive and inclusive approaches to energy transitions, considering diverse needs, values, and concerns of local stakeholders.

Our findings, summarized in Table 2, highlight the challenges of engaging people and communities in energy transition projects, emphasizing the need to consider local practices and energy landscapes early in the planning process. This enables project developers and policymakers to design projects that better align with existing practices. Identifying specific local practices, values, sense of place, and other factors affecting people's attitudes and willingness to participate offers insights into potential concerns. Overcoming WIMBY involves understanding the reasons behind community indifference or reluctance to engage, enabling stakeholders to address these concerns effectively.

Table 2
Summary findings.

Insights for overcoming WIMBY for engagement and policies	
Identifying underlying concerns:	Understanding the reasons behind community indifference or reluctance to engage, enabling stakeholders to address these concerns more effectively.
Fostering meaningful engagement:	Genuine dialogue, collaboration, and trust-building between local communities, developers, and policymakers. This helps create an environment conducive to co-creation and active participation.
Context-specific strategies:	The significance of tailoring projects and policies to local contexts, values, and practices to increase community engagement and support.
Inclusive decision-making:	Encourage the involvement of local communities in the decision-making process, ensuring that their perspectives and needs are considered.
Balancing technological innovation and social factors:	Promote the integration of technological advancements with social and cultural contexts, ensuring that energy transition projects are more likely to be well-received and successful.

Tailoring projects for specific contexts and considering potential concerns may increase community engagement, as stakeholders and community members find their concerns and practices acknowledged.

To overcoming WIMBY, fostering meaningful societal engagement is essential, encouraging genuine dialogue, collaboration, and trust-building between local communities, developers, and policymakers. It highlights the importance of developing methods and strategies to better understand why, how, and to what extent communities want to be included and engaged in energy transition projects, particularly when dealing with complex energy system changes and ongoing decision-making processes. As such, overcoming WIMBY requires supporting communities' involvement in the decision-making process, ensuring their perspectives and needs are considered. This contrasts with one-way communication [21] or instrumentally driven engagement as a 'tick box' by project developers [46]. Incorporating WIMBY insights allows policymakers and project developers to design more effective and inclusive energy transition strategies that address both the material and social dimensions of renewable energy adoption. Failing to engage could prevent projects from realizing their full potential, resulting in missed opportunities.

7. Conclusion

The analysis of the projects at Senja and Lofoten emphasize the significance of aligning new technologies with existing practices and competencies while addressing concerns about potential uneven distribution of resources and infrastructure. The timing of technology adoption and potential social consequences are critical in shaping attitudes and decisions. A more inclusive and equitable energy landscape must consider the diverse needs and perspectives of local communities for successful adoption and diffusion of renewable energy solutions. This necessitates not only technological innovation but also a deep understanding of the social and cultural context in which they are implemented. The complex interplay of energy landscapes, practices, and socio-technical factors that shape the adoption and diffusion of renewable energy solutions in local communities is demonstrated in the case studies. It is therefore essential to focus on both technological progress and the social relations underpinning these developments in energy transitions. Attention must be given to the potential uneven social and economic consequences of green measures. As we move away from a "one-size-fits-all" approach, it is also crucial to strike the right balance between accelerated and inclusive/democratic transitions, requiring new concepts and strategies to capture nuances in participation dynamics. To aid this effort, we introduced the concept of "Why in my backyard" (WIMBY) that can help explain and explore dynamics in local communities when energy development projects and socio-technical measures are met with indifference. We suggest that rather than trying to move people from outright rejection (NIMBY) [which in fact they don't really seem to have] to enthusiastic adoption [which in fact they'll probably never have], we should explore the more modest goal of moving people from "Why in my backyard" (WIMBY) to "Why *not* in my backyard", acknowledging the reasonable reluctance that local publics may have towards adapting new innovations.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors do not have permission to share data.

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