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What shapes municipalities' perceptions of fairness in windpower developments?

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ABSTRACT

Siting controversies have become familiar in windpower development. Process and outcome fairness in the form of economic benefits to local communities and inclusion in decision-making processes are recognised as important elements in local acceptance of windpower installations. To these, we add the concept of “relative fairness” influencing perceptions of overall fairness. In this article, we examine why Norwegian municipalities agree to host windpower, and the role of process, outcome and relative fairness in this decision. Municipalities are central in providing welfare services, and in ensuring a viable local economy and local workplaces. Process fairness is important, as is evident when municipalities have little influence in the detailed planning of the plants. Also, outcome fairness, in the form of economic compensation – particularly through property tax – is decisive for positive attitudes towards windfarms, as municipalities can strengthen their role as welfare providers and boost local economic activities. Less emphasised are the effects on global climate and national climate goals. However, effects on local landscape and nature are also important for municipalities, as became clear when the national government proposed withdrawing the municipalities' possibilities of levying property taxes. The municipalities argue that it is only fair to receive something in return for hosting windmills, and relative fairness is important to their argument for equal treatment regarding hydro- and wind-power electricity production in the form of a natural resource tax.

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Outcome fairness; procedural fairness; relative fairness; community benefits; windpower licensing

1. Introduction

In this article, we ask the question; what shapes *municipal* acceptance and their perception of fairness in relation to windpower development at the political and administrative level?

The municipality is an important albeit neglected study object in relation to windpower siting and acceptance (Inderberg et al. 2019; Fournis and Fortin 2017; Lindén, Rapeli, and Brutemark 2015). Significant emphasis has been directed to how “local communities” view and potentially oppose wind power projects (Wolsink 2007a, 2007b; Devine-Wright 2005). But who constitute the “local community” is often unclear in the literature (Cowell, Bristow, and Munday 2011), and often appears based on a vague notion of people in general. Authors have defined groups as those “living close” to wind turbines (Firestone et al. 2018; Liljenfeldt and Pettersson 2017), those “living with technology” (Cowell, Bristow, and Munday 2011), or even more vaguely “local resistance” without distinguishing among

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the generic types of local interest groups that may form among neighbours, local organisations, local officials and local businesses (Solli 2010).

At least three significant research gaps on the role of the municipality are addressed in this article. First, the municipality's crucial role in windpower licensing systems as a formal actor, second, the municipality's role of representing the diversity of values and interests in the local community, and third, the factors that shape these attitudes through to their expression as a formal municipal stand toward concrete windpower development in their territory. These all represent understudied areas warranting deeper investigation of municipality roles in windpower licensing (Cowell, Bristow, and Munday 2011; Liljenfeldt 2015; Bailey and Darkal 2017; Pettersson et al. 2010; Fournis and Fortin 2017).

In the literature on local acceptance, *fair treatment* of local interests has emerged as a main explanatory factor for acceptance (Jenkins et al. 2016). This emphasis on fairness is rooted in the fact that the negative environmental impact is experienced at the local level, while the benefits are often shown at a national or even global scale. These may conflict. Local opposition may be rooted in local landscape attachment (Wolsink 2007a), but the environmental benefits from developing wind power – the production of clean energy – are not necessarily linked to the local area where wind turbines are erected.

The municipality is placed in the middle of this conundrum and is forced to take an active role in relation to concrete windpower projects in its area. The municipality role and through inclusion mechanisms and distributions of benefits from windpower development is a key factor contributing to acceptance and perceptions of fairness (Aitken 2010; Cowell, Bristow, and Munday 2011; Munday, Bristow, and Cowell 2011; Kerr, Johnson, and Weir 2017; Armeni 2016). Even though licencing processes vary between jurisdictions,¹ the role of municipalities is important across national contexts. The local municipality is the potential windpower host, and the local political stance regarding the windpower installations usually has significant weight in the licensing decision, regardless of formal placement of the licensing authority in the administrative structure. Both when the municipality is the licensing authority and not, in practice it tends to negotiate with the various stakeholders, as one of the main actors in all known instances of windpower licensing systems (Pettersson et al. 2010; Bailey and Darkal 2017; Lindén, Rapeli, and Brutemark 2015). Moreover, the local municipality is a democratic arena tasked with balancing local considerations and the views of local stakeholders and residents. This makes the local municipality an important research object in windpower licensing, even if under-researched.

Participation and community benefits as means of creating acceptance further links in with the literature on justice and *outcome fairness* regarding the more or less absolute distribution of benefits and burdens, whether in an environmental justice (Schlosberg 2013) or energy justice framework (Jenkins 2018). Community benefit outcomes can serve as compensation for the costs and burdens inflicted on local communities from windpower development, and participation can be important for ensuring a fair decisionmaking process where all stakeholders are included, and their concerns are given a voice. These two elements reflect two aspects of fairness: *outcome fairness* and *procedural fairness* (Aitken 2010; Gross 2007). We will add a third: *relative fairness*. This refers to perceptions of fairness based on how other and comparable projects, technologies, groups, or individuals are treated. While its role should not be exaggerated, this dimension offers an important perspective for explaining perceived overall fairness.

By addressing the research question, we examine *municipal acceptance* at the political and administrative level, analysed through the lens of perceived procedural-, outcome-, and relative fairness in relation to windpower development.

Despite the formally weak inclusion of local municipalities in windpower siting decisions in Norway, there has not until more recently been significant municipal opposition to actual windpower development. Construction of windpower installations has, almost without exception, taken place in yes-municipalities.² To address the research question we use document studies and interviews with 34 interviews to map and analyse municipalities' perceptions of procedural, outcome and relative

fairness in the municipal decision-making process and how these three influence official and formalised attitudes towards hosting wind facilities.

In Section 2 we develop an analytical framework for studying perceived overall fairness, focusing on output, procedural and relative fairness in light of the roles and interests of the municipalities involved; and then present our methods and data. The Norwegian context for energy and windpower development in municipalities is introduced in Section 3, while the empirical findings are presented in Section 4. Section 5 discusses the findings in relation to the three aspects of fairness, and some concluding remarks are offered in Section 6.

2. Analytical framework

Windpower development may potentially involve a sense of unfairness at the local level, in the form of sacrificing their landscape and nature for the production of clean energy, and (un)fairness has shown to be one of the most important concepts for understanding windpower development (Jenkins et al. 2016; Jenkins 2018; Cowell, Bristow, and Munday 2011; Gross 2007; Bailey and Darkal 2017; Wolsink 2007b). In this article, we build on this theoretical and analytical tradition because of this usefulness as analytical tools for our empirical research on local municipalities (Jenkins 2018). In addition, our empirical findings allow us to discuss and expand on this concept in this tradition. Windpower development involves analytical concepts such as energy justice, fairness and acceptance. Energy justice can be understood as the fair distribution of burdens and benefits from energy production and consumption (Jenkins et al. 2016; Jenkins 2018). Achieving an equal distribution of burdens from windpower production in an absolute sense can be difficult or nigh-impossible in practice. Wind resources are not evenly distributed, and the effect on local environmental values may differ depending on the location, making some areas more likely to be more affected than others (Jenkins 2018). Consequently, various forms of compensation for local negative effects have been introduced in many countries. If justice is an absolute sense it is difficult to achieve in practice, compensation can at least help local actors to feel that they have been treated fairly (Jenkins et al. 2016; Bailey and Darkal 2017). When doing empirical work on factors that shape an actor's yes or no to wind power development, the research object is how the actor assess or perceive fairness by this particular actor. Perceived fairness is an empirical issue which depends on the norms and values of the actors involved.

Perception of fairness is closely related to acceptance, as fairness in process and in outcome have been found important for local acceptance (Aitken 2010; Wolsink 2007b; Gross 2007). While these two aspects can be conceptually different, they are also related: perceptions of procedural fairness may influence perceptions of distributive fairness and vice versa, resulting in perceived overall fairness (Ambrose and Arnaud 2005). Procedural fairness denotes the degree to which given actors, groups or individuals are included in the decision-making process, and given the opportunity to at least express their views. Knowing that the arguments have been heard, commented on and weighed against other arguments by the decision-maker makes it easier to accept the decision even if it is contrary to the participants' own views.

Outcome fairness reflects how the distribution of benefits and burdens of the windpower installation is perceived by the stakeholders, including whether the compensation received is deemed fair and appropriate, in view of the burdens or disadvantages entailed in the project (Gross 2007; Aitken 2010). This weighing of benefits and burdens is complicated by the fact that some of these emerge on different spatial levels, such as local effects on nature and landscape, and global effects on climate change – as well as the possibilities of mismatch between value-sets in the compensation offered and the harm inflicted. Studies of ecosystem services have identified three different value-sets related to ecosystems (Gomez-Baggethun et al. 2016). Firstly, ecological values refer to ecosystem quality, including elements such as rarity, diversity, and species richness. Secondly, socio-cultural values include symbolic, aesthetic and place values; thirdly, economic value is the direct or indirect monetary value from the use of the natural resource (Gomez-Baggethun et al. 2016). Ecological values,

including nature types and rare species, as well as socio-cultural values, like outdoor recreation, and visual effects, have been shown to be important elements in local resistance (Rygg 2012; Cowell, Bristow, and Munday 2011; Solli 2010). Such consequences for nature and landscape cannot be directly or completely remedied by various kinds of economic benefits or by inclusion mechanisms in decision-making. There is often a perceived mismatch between the problem of landscape and nature change, and the “solution” in the form of economic compensation, where socio-cultural and ecological values are traded for economic values (Cowell, Bristow, and Munday 2011). This can also help to explain why absolute energy justice is difficult to achieve in practice. As long as there are different value systems in addition to the spatial asymmetry, there cannot be a just distribution of burdens and benefits from windpower development in an absolute sense. It is more fruitful to speak of *perceived fairness*, which implies a more nuanced view that can include the differences in values, and the mismatch between the types of values harmed and the types of values received (Jenkins et al. 2016).

This leads us to another element in perceived overall fairness – *relative fairness*. As economics studies of relative deprivation have found (Duclos and Grégoire 2002), relative fairness may be significant. Although there is a relative aspect to most or all kinds of perceived fairness, explicitly including this focus is necessary for understanding the local perceptions of fairness – for individuals as much as for municipalities and other organisations. The level of compensation and the perception of being heard *relative to* other stakeholders – in the current development project, in similar projects, and in different but comparable developments and technologies – strongly influence perceptions of fairness. Therefore, we expect perceptions of overall fairness to be influenced by knowledge of and comparison with other relevant processes, and the outcomes and procedural fairness of these.

2.1. Materials and methods

This study builds on qualitative methods as the aim is to understand each particular municipality’s motivation for the position taken towards wind power development in the specific context. We draw on official documents, secondary literature and media reports, and as important parts of this information lacks documentation in official documents, we rest on information collected through 19 semi-structured interviews with 34 key actors in the licensing process at national, regional and local level, including representatives of the political and administrative management in five Norwegian municipalities that are positive to windpower projects and host them. Project developers, NGOs and central authorities were also interviewed. The interviews were conducted during 2018, and were targeted and recruited because they represented either national authorities and project developers, or regional and local actors in two of the highest pressure areas for windpower development in Norway: Fosen in mid-Norway, Trøndelag County and Dalane in the southwest, Rogaland County. In all five municipalities, windpower projects were operational or under construction at the time of interview, and they were chosen because of the high number of windpower projects in the area. Windpower host municipalities in Norway are often sparsely populated, with a small and still-declining population and with little local industry (interview with state authorities). We selected two municipalities with just under 1000 residents and a declining population, two municipalities with around 3000 inhabitants (the population declining in one and growing in the other); and one expanding municipality with around 14,000 residents. They can be regarded as fairly representative of windpower host municipalities in Norway. (See [Appendix](#) for an anonymised interview overview.) All of the interviews were conducted by three interviewers, where one was particularly tasked with writing the interview, and a second researcher also took notes. Afterward, all three researchers went through the written text to ensure its completeness and accurateness. The presence of three interviewers both during the interview (misunderstandings was sometimes picked up and cleared by the different researchers) would contribute to establish conceptual validity and reliability for the research. Later the material was qualitatively coded according to the analytical categories,

preceding the full development of the analytical framework, before it was processed through an iterative process in relation to this framework.

3. Municipalities and energy production in Norway

Norwegian municipalities are expected to play a number of roles: as a democratic arena – a *commons* – tasked with a formal role to represent the views of the local inhabitants in the licensing process, but they also have an important entrepreneurial role in ensuring a viable economic base for the local population (Inderberg et al. 2019). Moreover, they are important providers of crucial welfare benefits for their residents – primary schools, kindergartens, primary health services and care of elderly, as well as local technical and cultural services. All this requires a sound financial basis – and hosting windpower facilities can contribute here. Norwegian municipalities also have a role in taking care of local environmental values, whereas regional and nation environmental interests are the task of regional and national authorities. The decision-making situation of the municipality may be highly complex, where local environmental and aesthetic landscape values as well as economy and financial benefits can be expected to be important (Solli 2010). The possibilities for economic compensation may be important for municipalities with abundant wind resources – particularly in municipalities that are small and/or struggle with budgetary constraints (see Lindén, Rapeli, and Brutemark 2015).

Municipalities or regional authorities in Norway lost their formal decisionmaking power in the windpower licensing processes in 2008 as a result of the amended Planning and Building Act, which exempts energy installations from the regular land-use planning procedures (Fauchald 2018). Prior to these changes, municipalities were responsible for approving land-use plans and building permission for windpower installations, whereas the Norwegian Water Resources and Energy Directorate (NVE), a directorate under the Ministry of Petroleum and Energy (OED), was in charge of granting rights to power production and grid connection. With the new Act in 2009, however, the authority to grant all necessary permission for windpower development was gathered in the NVE, with the OED as the appeal body. With these changes, the formal role of the municipality in the licensing process became that of a consultative party on a par with other public and private interests.

One might expect this loss of competence to undermine the municipalities' sense of procedural fairness, making them less favourable to hosting windpower installations. However, research has shown (see Inderberg et al. 2019) that Norwegian municipalities have, at least up recently, had a sort of informal veto power in windpower licensing processes. High value is attached to local self-government, in the government's document on future energy policy (OED 2016, 193) as well as in public administration more generally (Public Administration Act §34). In interviews for this study, windpower developers, the licensing authority NVE and the OED confirmed that a negative response from the would-be host municipality acts as a "red flag" for any windpower project. The developers confirmed that they in several cases have mothballed or terminated projects due to municipal opposition. They explain this practice by reference to the desire to avoid conflict with the local municipalities in the development and operational phases of a windpower park, but also to comply with the well-established principle of autonomous local government (see Gjerald 2012; Rygg 2012). Moreover, in practice, the number of pro-windpower municipalities has been sufficient to enable the projects necessary to meet national political goals concerning wind power, as can be seen from the number of realised projects. Regardless, this informal veto practice is an element that is dependent on the affected actors being aware of this – which has not always been the case (Inderberg et al., 2019).

Another important aspect is Norway's energy situation and the effect of increased production of renewable energy. As a member of the European Economic Area (EEA), Norway is obliged to increase the percentage of renewable energy by 2020, as per the EU Renewable Energy Directive; and national energy policy targets for wind-energy production have been set. However, electricity production in

Norway is already almost 100% fully renewables-based, thanks to the country's massive hydropower resources (IEA 2017), so the reasons for producing even more renewable electricity may not seem obvious to all Norwegians. Possible environmental advantages from increased renewables production will depend on electrifying sectors such as transport or petroleum extraction or supplanting non-renewable plants in other countries (Blindheim 2015). This, in turn, will require interconnectors to abroad, as well as market mechanisms in the wider European context.

Furthermore, responsibility for ensuring sufficient energy supply rests with the national government, and the task of following up increased wind-energy production lies with energy authorities (OED 2016, 193). Theirs is a dual role: to ensure increased energy production, but with as little local environmental damage as possible. Municipal responsibility is limited to local environmental concerns (Falleth and Hovik 2009; Aall 2000); ensuring clean energy or protecting species of national concern may in cases legitimately be placed lower on the agenda.

The taxation scheme for energy production is an important factor in creating local benefits, including general income tax and the option for the municipalities to levy property tax on energy-producing facilities (MoF 2015). However, they further indicated that hydropower production generates more tax revenues for the host municipality, as it includes ground-rent tax paid to the central government as well as the natural resource tax, which is generally paid to the host municipality. There is a strong underlying norm with regard to public ownership of natural resources. In the mandate for a recently appointed expert committee to assess the taxation scheme on hydropower, the current conservative coalition government stated: "Nature resources belong to the whole of society" (MoF 2015).

Some hydropower municipalities are indeed rich and can provide welfare services far above the average (MoF 2019). This firmly established scheme of taxation and the underlying norms are well known and form an important background when Norwegian municipalities embark on the complex process of deciding whether or not to host windpower facilities.

These existing norms and values are important in creating a sense of *relative fairness*, or relative unfairness as we shall see, between municipalities in receiving local benefits from different local energy resources. As wind power is a relatively new (and less profitable) form of energy production, the taxation scheme differs from hydro-electric power. This sense of relative (un)fairness is connected to questions of ownership to natural resources and fair distribution of revenues, and thus differs from the discussion on the uneven distribution of benefits and burdens between different geographical scales.

4. Municipal experiences with windpower construction

4.1. Including municipalities in windpower development

Despite the reduction in formal influence in the windpower licensing process, the municipality representatives contacted for this study were to a certain extent satisfied with the new procedures following the new PBA from 2008, not least because of the informal procedures, particularly in the early phases. The developer usually contacted the municipality at an early stage, to ascertain whether it was worthwhile to pursue the project. If the municipality signalled negative attitudes, the developers would generally abandon the project, as they usually had several potential other sites. Planning would then proceed in municipalities more favourable to windpower development.

Several municipal interviewees noted that, in principle, the changes had deprived them of important autonomy regarding land-use decisions on their territory – but that in practice they were relieved to be spared the management workload that windpower projects would otherwise entail for the municipal administration.

Further, municipalities were generally satisfied with their degree of involvement in the process. Several commended the work of the NVE in informing the local council and municipal administration about the licensing process, as well as the general public through open meetings. However, not all interviewees were aware of the full extent of their actual influence of their municipalities on the

outcome of the licensing process. Some stated that they believed the projects would go through even if the municipality had voted against it.

These views on their decisive influence on the licensing process also to some extent coloured the view of what community benefits could be obtained from windpower developers. Some municipal interviewees were aware that a yes from the municipality was in practice a prerequisite for both developers and the licensing authority, and used this as leverage in negotiating community agreements and ripple-effects from windpower development.

Although most municipal representatives interviewed were satisfied with their involvement in the licensing process, several felt that they had been ignored when it came to on-site project implementation. According to the licensing conditions, the project developer must obtain NVE approval of the project's Environment, Transport and Construction site plan (MTA plan). The MTA plan includes details about the exact location of each wind turbine, along with the placement of access roads, mass fillings, and attention to environmental aspects during construction. While the license provides developers with a general site for windpower deployment, the detail planning allows for adjustments to this. Such adjustments might concern the type of wind turbines erected, as well as turbine size, number of turbines, and placement. In one case, the wind turbines were changed from 150 metres total in the licensing application, to 200 metres in the MTA plan. Unlike the license documents, the MTA plan is subject to only limited consultation: several municipalities were critical to this element. When municipalities received MTA documents for comment, the deadlines tended to be short, and municipalities often had limited capacity to perform a proper assessment in time – moreover, they often felt their impact on the outcome would be limited.

However, some municipal representatives were aware of the potential changes to the projects that could come with the MTA, and had, therefore, placed additional requirements as to the details that the NVE should include in the license terms and conditions. This included requirements that the municipal authorities should be included in the MTA detailing process.

Landowners, usually local farmers, were a central actor group in the early stages. The developers would contact them in order to make an agreement. According to interviewees, project developers would sign a contract that provided landowners with a lump sum when construction works started and a yearly sum during the operational life of the windpower installation. Another landowner benefit that was mentioned was better access to the property due to new roads in connection with the installations. This could also mean that new areas for grazing became made accessible. Although such agreements were private and not formally a matter of interest for the municipality, they were mentioned as part of the justification for agreeing to windpower installations. Landowners were also represented on the local council. In one case, there were difficulties in getting a qualified quorum, because so many local council members also were landowners in connection with a proposed windpower facility.

4.2. Local benefits from wind power

When asked why they had agreed to host windpower facilities, all municipality representatives mentioned the property tax, but some also noted the economic benefits for property owners and the general increase in local economic activity. The property tax – of varying scale, restricted upwards to 0.7 per cent of the installation's predicted value – has in the period of analysis been the clearest municipal benefit from windpower projects, and represents a welcome addition to the annual municipal budget. For one municipality with around 1000 inhabitants and several large windpower facilities, this meant the equivalent of about €2 million per year. That enabled the municipality to build a new nursing home and facilities for the elderly, as well as improving road security, particularly the school bus route, where land-slides and rock-slides had long been a worrying issue. Until then, all that they could afford was to strengthen the roof of the school bus. Most of the municipality representatives highlighted the municipal role as service providers in education, health and infrastructure, and new investments in these sectors enabled by the property tax, as the major justification for

welcoming windpower projects. Otherwise, they explained, these investments would not have been possible, due to the municipality's strained budgetary situation. Many municipalities saw the property tax as a minimum requirement: they saw giving up land for energy production to the national grid as something for which the municipalities should receive compensation.

The importance of the property tax as a local benefit became evident when the Ministry of Finance in 2015 proposed scrapping the provision that allowed municipalities to apply the property tax to industrial installations such as windpower sites (MoF 2015). This bought an outcry from windpower-hosting municipalities: it was seen as a breach of the social contract between state and local authorities, as the municipality had surrendered local natural values in order for national energy goals to be achieved. Take, for instance, the statement to the hearing process given by Snillfjord municipality in Fosen:

The municipality of Snillfjord will strongly oppose the Government's proposal for changes to the property tax. The proposal violates the social contract entered into between the state as the licensing authority and the individual host municipality, which has agreed to abandon its natural values, in confident expectation of property tax revenues. The proposal further changes the basis for the weighing of interests made for the individual license assessment; the windpower licenses have been granted on the basis of incorrect assumptions. This must be regarded as breach of social contract by the state. (Snillfjord Kommune 2015). (Authors' translation)

The statement is representative of the statements given by host municipalities. The Ministry's suggestion was finally withdrawn but left considerable uncertainty among municipalities about the predictability of income from windpower installations. Representatives of several municipalities said that if the tax would cease to apply, they would feel cheated, having given away land for nothing. For them, the economic compensation was a prerequisite for providing areas for windpower development – areas that could have been used for other income-generating activities like other types of industry or tourism or preserved as a value in itself.

In addition to property tax, further local benefits may also be settled by compensation agreements between the municipality and the project developer. Interviewees mentioned examples of community compensation measures such as local development funds, new or improved roads and tunnels, the obligation to use local entrepreneurs for construction work, as well as developing hiking trails, ski trails and tourist huts in the grounds of the wind park. However, in recent years, developers and municipalities have become more reluctant, with many questioning the moral and legal status of these agreements. Critics deem it unethical to enter into such agreements before the municipality has issued an official statement on its stance, or before a license has been granted. In such cases, positive attitudes from the municipality can be interpreted as being "bought" by developers. Moreover, several municipal representatives said that they had been reluctant to enter into such agreements, for fear of being accused of corruption. However, several later regretted not making greater initial demands, as they felt they had lost their bargaining position when trying to negotiate compensatory measures after a licence had been granted.

Such community benefits agreements became problematic for many municipalities when project developers changed in the course of the windpower project. In several cases, the new developer (and its lawyers) came to question the agreements and failed to comply entirely, leaving the municipalities with a feeling of being fooled and badly treated.

The developers, however, said in interviewees that many municipalities had unrealistic ideas about compensation, perhaps augmented by implicit comparisons with hydropower arrangements. To the extent that developers enter into such municipal agreements today, it has been restricted to compensation measures that could be clearly seen in relation to the windpower park – for example, improvement of roads and tunnels necessary for site access. Also, in municipalities where property tax has not been adopted, agreements to compensate the municipality with a yearly sum corresponding to the tax level are not uncommon.

Municipal representatives also saw the potential for new jobs and greater activity for local business and industry as an important local benefit. As one explained, tax revenues and the new

business opportunities related to windpower development could serve as a way of trying to turn the trend of a declining population. During the construction period, windpower projects generate jobs in the building and construction sector, and the economic ripple effects may be significant for local companies. For example, in the Fosen area, a local company from Åfjord municipality won a tender worth NOK 600 million (approximately €60 million) for the necessary infrastructure for three of the windpower parks in the district (Fosna-Folket 2018). However, in municipalities where there were no companies capable of taking on these types of projects, the economic effects would usually shift to the dominant regional or national companies, leaving few jobs to local contractors. Some municipalities were disappointed with the economic activity created by local windpower projects, noting that the jobs and ripple effects envisioned by the project developers had not materialised.

The degree to which municipalities proactively take initiatives to create local business opportunities in the wake of a windpower project has varied. The most proactive municipalities have, for example, set about establishing local windpower innovation centers, and have offered technical windpower training at the local secondary school. However, municipalities have also ended up competing with each other in trying to attract new windpower-related business opportunities. In Fosen, for example, two neighbouring municipalities made considerable investments to facilitate the access of wind turbines to the planned wind-parks in the local harbour area, and thus collect harbour duties. In the end, the project developers opted to use only one harbour, leaving the other municipality with a considerable deficit.

On the other hand, several municipal interviewees stressed how the wind-parks had contributed to greater accessibility, not least for outdoor activities. Host municipalities often have large areas of relatively untouched nature, and roads and trails in the windpower areas made outdoor life more available for a larger share of the public. In Fosen, a tourist hut was built in connection with one of the wind-parks: in a few years, it had become the most-visited tourist attraction in the district due to the spectacular views.

The positive effect of new windpower projects on global environmental concerns has also been among the justifications for hosting windpower parks, although it has not been heavily emphasised and possibly an ulterior motive. Also mentioned were the EU's Renewable Energy Directive and Norway's commitment to produce renewable energy, and that helping to combat climate change was also seen as positive for the municipalities' reputation. One interviewee said that the municipality was proud of being recognised as one of the locations with the best conditions for establishing wind power in Norway. In another municipality, the importance of a "green image" went beyond the windpower projects: that municipality was electrifying its car fleet, for example.

Despite the many potential benefits of establishing a windpower park, the municipalities also acknowledged the possible negative impacts. According to our interviewees, residents in host municipalities were particularly concerned about the consequences of the wind park on the landscape. They were also worried about noise and shadow-flickering issues, as well as consequences for outdoor activity, but were less concerned about issues such as wildlife and endangered species. Several municipal interviewees said that they did not see it as their role to be concerned primarily about the impacts on nature and biodiversity – a point that they justified by reference to the lack of local in-house competence and knowledge about endangered species. These matters were often regarded as a national responsibility. Further, the municipalities trusted that the licensing process and the EIA would ensure the expertise needed to take necessary precautions. In addition, the regional and national environmental authorities had been heavily involved in the planning process, allowing the municipality to leave the role of protecting particularly vulnerable flora and fauna to them.

Landscape and nature values were important among opposition groups. These were often national/regional conservation organisations supported by some local people; there were also local initiatives, like "Protect our heritage", concerned with issues like valuable ecosystems and rare species as well as socio-cultural values such as outdoor recreation and untouched natural

surroundings. However, these groups were not strong enough to influence the position taken by local politicians in municipalities that welcomed windpower plants.

5. Discussion: how procedural, outcome and relative fairness shape overall perceptions of fairness

5.1. Procedural fairness

In the municipalities studied here, the licensing process was largely perceived as having been fair. Although our selection included pro-windpower municipalities, the finding was contrary to expectations, as recent changes in land-use legislation had reduced the formal influence of municipalities, transferring decisionmaking power to the national energy authorities. However, emphasis on local autonomy remains a well-established underlying norm in national decisionmaking in Norway, and this is known to most developers (Gjerald 2012). This has led to early contact between developers and municipalities, ensuring a strong role for the latter in their almost de facto ability to terminate unwanted energy projects in the crucial planning stages (see also Inderberg et al. 2019).

A further important factor is the uneven distribution of administrative resources between the national and municipal levels. Yes-municipalities in Norway are often small with limited administrative resources, leading to perceptions of weakness compared to developers and central government with far more resources, something that corresponds with findings in other jurisdictions (Lindén, Rapeli, and Brutemark 2015). However, as long as they got the windpower facilities, municipalities were relieved to be spared the administrative costs of running the planning process. They were generally satisfied with their degree of involvement and the information received from the NVE and project developers, particularly before license was granted.

However, as noted, a windpower license permits adjustments to project plans after the licence has been granted. Project developers may make significant changes to the location or height of individual turbines, modify access roads, etc. Such changes can have a considerable impact on visibility and on the natural surroundings, and several municipalities regretted not having had more influence on this stage of the process. Thus, we can say that procedural fairness was perceived as fairly strong throughout the licensing process, but far weaker after a license had been granted.

Nevertheless, the municipalities' feeling of fairness in the *outcome* was decisive, and the chief motivation for hosting windpower projects has been the revenues generated from property tax. The municipalities have had many roles. The yes-municipalities emphasise their role as service and welfare providers, backed by the revenues generated from windpower projects. That is not to say that they did have ignored the negative consequences of windpower development on nature and landscape. Such concerns are important for the municipalities, but other concerns are more important in the complex weighing of pros and cons, including weighing of different value-sets. The negative consequences on local landscape and nature are considered "tolerable" when the economic compensation is "right". The property tax as a form of local benefit seems to have a very strong effect in creating acceptability and perceived fairness for municipality hosting windpower plants. Also, the agreements negotiated with developers have been important for municipal perceptions of fairness – but have also caused worries due to accusations of unethical practice, a concern also seen in other countries (Aitken 2010). In addition, the actual fulfilment of the agreement does not always meet local expectations.

Elected local politicians are to represent "the will of people" in their constituency. In the municipalities studied here, there was not sufficient local opposition to windpower development for local politicians to feel that they were acting against the will of a large share of the population.

The importance of the property tax for a sense of fairness became particularly evident when the government proposed scrapping the possibility to apply property tax on windpower installations. Reactions from the municipalities clearly showed that, without the property tax, they might have concluded differently about hosting windpower projects. This should be seen in the context of other

benefits that failed to materialise. In retrospect, several municipalities were disappointed at the community benefits resulting from windpower development. In some cases, the projects had not provided as many jobs as expected, and community benefits agreements with developers were altered or not adhered to, deepening the sense of disappointment. The results did not correspond to what the municipalities had perceived and expected as a fair outcome: what they ended up with was not what they had signed up for. Several interviewees mentioned the relative imbalance between compensation for windpower and for hydropower projects, where the latter had secured stable local incomes to a great degree – in contrast to windpower projects.

However, it could be argued that also the municipalities play a role in creating outcome fairness for themselves. There are considerable differences in municipal pro-activeness for achieving local benefits. Some municipalities had the expertise and resources to enable opportunities for local business and economic development; others had a more wait-and-see approach, expecting to receive their fair share of tax revenues and ripple effects without doing much themselves.

Today, the only benefit guaranteed to municipalities is ultimately the property tax. Although this seems to have been retained, the uncertainty created in the wake of the government's proposal is genuine. It has given rise to a specific discussion regarding fairness: *relative fairness*. Theoretically, the *relative* mechanism includes comparisons with other groups or individuals, other windpower projects in other locations, or with municipalities hosting hydropower facilities. The most frequent reference was to other municipalities, particularly those hosting hydropower facilities. These municipalities receive significantly greater economic benefits than windpower municipalities. This is central to the narrative and represents a policy drive caused by perceptions of relative fairness. The municipalities, with their interest organisations such as the Organisation for Norwegian Wind Power Municipalities (LNVK), uses this perceived skewedness and relative unfairness to advocate for a tax regime comparable to the tax on hydro-electric power production, which would generate greater revenues to the municipality. "Today's tax regime means that the municipalities do not receive their fair share of value creation from the production of wind power, argues LNKV leader Tislevoll" (LNVK 2018). Although the procedurally based relative fairness perspective might have been expected, we did not find this in our material – probably due to the substantial weight accorded to the municipalities in granting windpower licenses.

With local benefits from wind power, a further question emerges: *benefits for whom?* For local defenders of landscape and locally anchored values, economic benefits can scarcely compensate the damage to ecological and socio-cultural features as also found by Cowell, Bristow, and Munday 2011. However, for the multi-tasked municipalities, the economic benefits have been in line with their role of provider of welfare services – and the need for financing.

These findings from Norwegian municipalities underline that the economic compensation *can directly* match the interests of some local actors, This is nuancing the picture that economic compensation is often at odds with the harm inflicted; the loss of a highly valued landscape (Cowell, Bristow, and Munday 2011). Even if a landscape is highly valued, there is at the same time also a genuine economic interest in the development of the energy producing facilities, using the municipalities' nature resources (Rygg 2012). This finding underline the complexities of assessing the benefits and harm inflicted by wind power development by local actors, and that actor groups and individuals may be differently affected (Gross 2007). For the actor studied here, the municipality, has a role in securing a viable tax base as well as jobs and local economic development. Wind power development is one way of securing this. These findings also underline that the attentions need to be made to how decisions about wind power development are made and the concrete (albeit temporal) conditions and contexts when these decisions are made (Fournis and Fortin 2017).

6. Conclusions

Our study shows the importance of understanding fairness in relation to the norms and values of the actors concerned. Several contributions in the international literature have focused on local

resistance to windpower development (Wolsink 2007a, 2007b; Devine-Wright 2005): we have asked why such an important local actor as the municipality accepts, even welcomes, local windpower farms. What creates “fairness” for Norwegian municipalities, given the asymmetry of local environmental burdens on the landscape and nature, and the global environmental benefits in combating climate change in a country where almost all electricity comes from renewable resources? The international literature has noted procedural and outcome as important elements in shaping local acceptance (e.g. Aitken 2010; Cowell, Bristow, and Munday 2011; Roddis et al. 2018), and we have used these concepts as a framework in the analysis. Additionally, we found the concept of relative fairness useful for explaining municipal perceptions of overall fairness.

Our findings show that *outcome* fairness is central for Norwegian municipalities, with economic compensation in the form of property tax as the most pertinent example. The government proposal to remove the option of applying property tax to wind generators triggered an outcry from windpower host municipalities that clearly showed their expectations and demands for economic compensation when they made valuable landscapes available for windpower development and electricity generation to the national grid.

The concept of *relative fairness* is crucial for explaining municipal perceptions of fairness. However, municipalities also compare their situation to that of hydropower host municipalities, and fairness in relation to these. Given the discrepancy between windpower and hydropower municipalities, the property tax is not enough in itself to create outcome fairness for the former.

Process fairness is important, but municipal experiences have varied. Municipalities appreciate being included in the process up to the licensing decision. Formally, they are only a hearing party, but, given the emphasis on local autonomy in public administration as well as the high number of applications, they are not only included in the process, but also have considerable influence on the decision. Here they are less satisfied with the later, detailing (MTA) phase, where they feel left out. This shows how important participation and inclusion in decisions are for host municipalities’ sense of fairness, apparent when such mechanisms are weakened. It also shows how perceptions of fairness may change over time in the lengthy development process.

Municipalities must balance many complex interests. Economic compensation can serve to lessen the environmental burdens experienced. Although economic compensation used for welfare services cannot be said to compensate directly the damage to nature and the landscape, it is a way of supporting the municipality’s primary roles. Nature protection is not seen as a key task of the municipalities in our study: far more dominant were their roles in welfare provision and in sustaining a stable local economy. Local politicians are expected to represent the will of their electorate. There was opposition among local residents, but local politicians described this as not very strong. That allowed them to represent what they perceived as the majority voice and in the best interests of their municipality when agreeing to the windpower project.

For opposition groups and defenders of ecological or socio-cultural values, there is clearly a mismatch between the values that are harmed and the economic value of the compensation. However, for a major actor like the municipality, heavily involved in the early stages, there is a clear match in the value-sets between economic compensation and their need to finance welfare services and develop the local economy.

Municipal perceptions of overall fairness show the interplay between outcome and procedural fairness. Although municipalities were largely satisfied with outcome fairness, this was overridden by their varying assessments of procedural fairness. Perceptions of fairness are closely connected to tax regimes and the “social contract” between state and municipality in energy provision. The tax regime for wind power appears unfair compared to other types of energy production. Here the concept of *relative fairness* emerges as useful, indeed necessary, in explaining the degree to which host municipalities feel that they have received fair treatment in national energy and tax policies and processes.

Notes

1. The municipality is the licensing body in some countries, as in Finland (Liljenfeldt 2015), Sweden (Pettersson et al. 2010), the UK (Roddiss et al. 2018) and New Zealand (Stephenson and Ioannou 2010). In other countries, the licensing body is at the national level, as in Norway and Denmark (Pettersson et al. 2010) or the regional/federal level, as in the USA, Germany, Australia, Switzerland and Spain (Iglesias, del Río, and Dopico 2011; Walter 2014). In Norway, the municipality is a hearing party in the windpower licensing process, representing the local community through the local political majority in the municipal council.
2. In a document study of applications in the national database, we found 71 cases where a final decision was made. Of the 45 cases where licence was granted, 43 were in pro-windpower municipalities, and only 2 in negative municipalities. In 26 cases, licence was denied: 17 in pro-windpower municipalities and 9 in negative municipalities. Thus, there are reasons to believe that community benefits are an important motivation for Norwegian municipalities when welcoming wind power to their area.

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Appendix

List of interviewees

No.	Date*	Place	Title	Organisation type
1	09 Jan	Oslo	Chair	NGO
2	09 Jan	Oslo	Policy Advisor	NGO
3	19 Jan	Oslo	Project Manager	Developer
4	24 Jan	Fosen	Deputy Mayor	Municipality
5	24 Jan	Fosen	Head of administration	Municipality
6	24 Jan	Fosen	Head of Spatial Planning and Buildings	Municipality
7	24 Jan	Fosen	Head of Administration	Municipality
8	25 Jan	Trondheim	Director	Regional authority
9	25 Jan	Trondheim	Assistant Head of Section	Regional authority
10	26 Jan	Fosen	Mayor	Municipality
11	26 Jan	Fosen	Director of Spatial Planning and Buildings	Municipality
12	26 Jan	Fosen	Chair	Local NGO
13	26 Jan	Fosen	Member	Local NGO
14	26 Jan	Fosen	Member	Local NGO
15	26 Jan	Fosen	Former Chair	Regional NGO
16	6 Feb	Oslo	Senior Advisor	State authority
17	6 Feb	Oslo	Senior Advisor	State authority
18	7 Feb	Oslo	Senior Advisor	State authority
19	7 Feb	Oslo	Head of section	State authority
20	19 Feb	Stavanger	Founder and Head of Sustainability	Developer
21	19 Feb	Stavanger	Assistant Project Manager	Developer
22	19 Feb	Stavanger	Manager	Regional NGO
23	19 Feb	Stavanger	Chair	Regional NGO
24	20 Feb	Rogaland	Mayor	Municipality
25	20 Feb	Rogaland	Director of Spatial Planning and Buildings	Municipality
26	20 Feb	Rogaland	Deputy Mayor	Municipality
27	21 Feb	Rogaland	Head of Section	Regional authority
28	21 Feb	Rogaland	Assistant Head of Section	Regional authority
29	22 Feb	Rogaland	Special Advisor, regional planning	Regional authority
30	22 Feb	Rogaland	Advisor	Regional authority
31	22 Feb	Rogaland	Project Manager	Developer
32	12 Apr	Oslo	Senior Advisor	State authority
33	12 Apr	Oslo	Department Director	State authority
34	12 Apr	Oslo	Assistant Director	State authority

*All interviews conducted in 2018.