

Can local value creation induce a sense of justice during green transitions?

A study of six rural areas in Denmark, Finland, and Norway

Hilma Salonen & Lumi Tomrén



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Executive summary

The accelerating impacts of climate change, the need to adapt to changing economic and political realities, and the recent energy crisis have made the green transition something that most Nordic citizens acknowledge. However, especially rural areas and their communities are at risk of being reduced to passive instruments of national green transition measures featuring heavy land-use. These conditions make it very difficult to create a sense of justness in green transitions, leading to growing sense of alienation and resentment and putting the national climate goals in danger. From this starting point, the case studies of the research project "Just Green Transition on Rural Areas: Local Benefits from Value Creation" set out to examine what kind of benefits would generate value from green transition measures in the direct impact zone of new energy projects. The case studies took place in three Nordic countries and six locations: in Northern Ostrobothnia and Northern Central Finland of Finland, involving wind power and land use planning; in Nord-Fron and Nord-Odal in Norway, involving both wind power and strategic sustainability work; and in Skive and Bornholm of Denmark, involving a hybrid mix of renewable energy sources in the context of industrial park development.

The results of the "A Just Green Transition in rural areas: local benefits from value creation" project focus on the challenges and strategies related to nurturing social acceptance and a sense of justice during green energy transitions in Nordic rural areas. Top-down decision-making that neglects local needs leads to a feeling of powerlessness and resistance against renewable energy projects. To avoid that, the engagement process among local stakeholders should start early and involve different platforms to generate interest and strive for open and transparent communication. This is crucial because overly optimistic claims about local economic benefits easily leads to resentment. Local or regional ownership in new energy projects increases trust and fosters a connection to the project, potentially increasing experienced justness or even shaping a new identity for the area. However, determining the best form of local ownership for maximizing local benefits is not simple. Monetary gains gain most attention as quantifiable benefits, but investing in compensation schemes alone creates division and other problems in communities. Community building and participatory negotiation methods are ways to overcome this and make compensation schemes more equal. Furthermore, other factors such as environmental and social improvements could lead to a more long-term increase in well-being and sense of justice. It would be beneficial to have more means to visualize and analyse them. Similarly, environmental benefits seem less tangible, so linking them to broader narratives and development goals example via image-building and branding activities can make them more concrete. Local or regional ownership fosters a connection to the project and the area's development. Overall, achieving a sense of justice during green transitions depends on realistic expectations and a project's integration into local goals and identities.



Photo: Hilma Salonen

Foreword

An increasingly vital concept in policy discourse surrounding carbon-reduction goals is that of a just transition. However, there is also a need for a deeper understanding of rural actors' agency in these processes. This publication is one of the outcomes of the project titled "A Just Green Transition in Rural Areas: Local Benefits from Value Creation." The project began by exploring the complexity of the concept of just green transitions in the (Nordic) rural context. The case studies conducted an in-depth examination at local level to understand how local-level needs and characteristics impact the area's capacity to extract benefits from a new energy installation and how this affects the social acceptance of these projects and the green transition in general. This report details the results of case studies conducted in three Nordic countries and six Nordic municipalities, with the aim of mapping the array of local benefits (and obstacles) related to green energy transition projects. This undertaking is part of a Nordic co-operation and has been implemented under the thematic group: Green and Inclusive Rural Development in the Nordics (2021–2024).

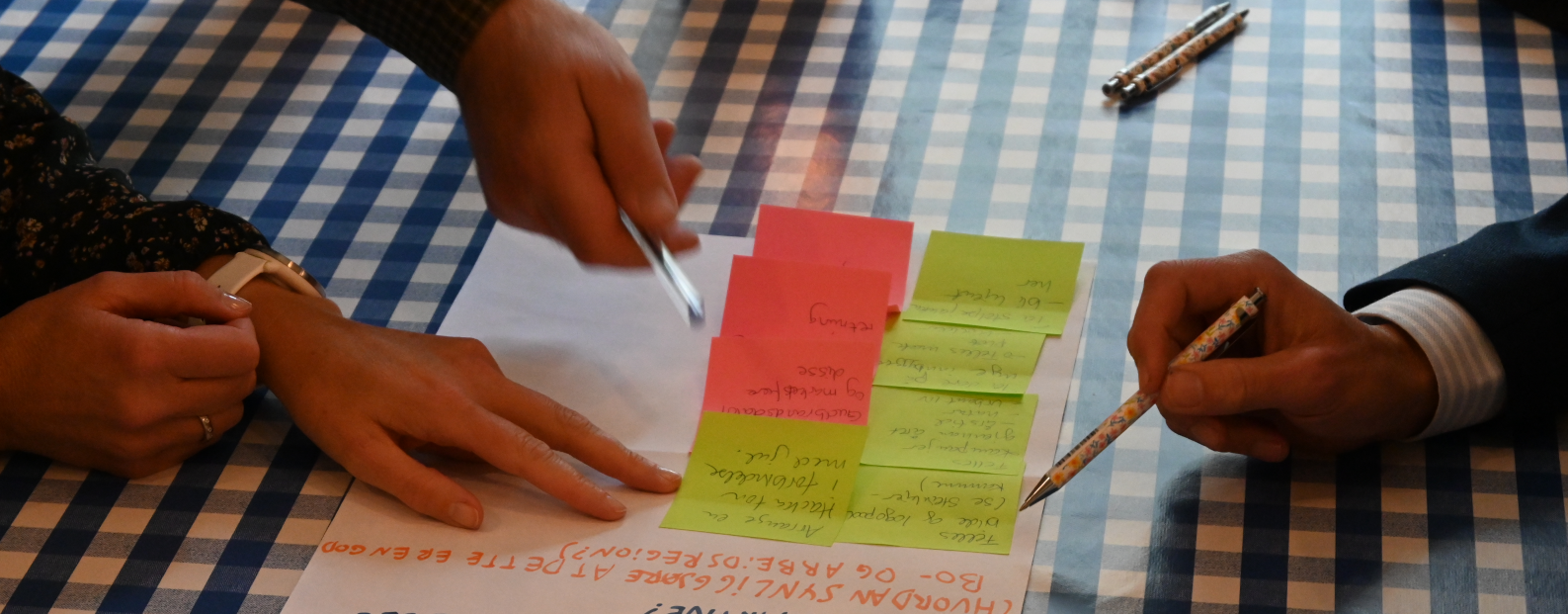


Photo: Krafttak for grøn vækst

1. Introduction

1.1. The Nordic context

Rural areas play a pivotal role in green transition processes as natural resource bases. Yet they are at risk of being reduced to instruments of larger national and international policy goals, creating a sense that their portion of the climate "bill" is disproportionately large. To counter this discrepancy between rural and urban areas, we must examine some of the Nordic rural regions' complexities in the context of the green transition. For example, the Nordic rural areas have a high level of open land use, raising issues related directly or indirectly to energy and food production, climate adaptation, biodiversity, wetlands, drinking water, infrastructure, zoning and planning, and ownership questions. In addition, a large number of relevant interest groups' needs must also be considered, encompassing actors such as citizens, farmers, local energy communities, investors, politicians at all administrative levels, and/or interest organisations (Høst et al. 2020; Nielsen 2022).

The accelerating impact of climate change, the need to adapt to changing economic and political realities, and the recent energy crisis have ensured that the green transition is foremost in most Nordic people's minds. Yet the leap between acknowledging a fact and agreeing upon its policy implications can be vast, and a transition that only superficially addresses the existing system will not prove successful. Therefore, transition proposals and implemented projects aimed at increased sustainability inevitably result in social, cultural, economic, and/or environmental consequences, with both positive and negative impacts on the established systems. In this context, deploying a proactive approach to the goal of a "just transition" requires a focus on causes, preventive measures and the processes involved rather than merely evaluating outcomes or official plans. A just green transition requires a holistic interpretation of the concept, taking all

societal groups and spatial variations into consideration. In this situation, the implications of the upcoming policy shifts for urban-rural divisions are potentially so great that the Nordic Council of Ministers has suggested that geographical inequality should be one of the main focus areas for Nordic climate policies (Høst et al. 2020; Karlsdottir et al. 2022).

Thus far, research has placed an excessive emphasis on either urban areas or immediate stakeholders engaged in energy transition policies instead of examining the position of the regions or the spatial distribution of sustainability transitions. Such a narrow focus risks excluding local rural engagement and disregarding the needs and interests of the rural population, leading to social inequality and ultimately endangering efforts to reach the Agenda 2030 goals for a low-carbon economy. There are major differences in how people experience the transition, both between the Nordic countries and within them. For example, in a recent survey, 80% of Danes and over 70% of Swedes, Norwegians and Icelanders viewed climate change as a serious threat, but in Finland, this number was only 55%. The same study revealed that Finns believe current climate policies do not benefit their economies and that the negative effects involved will be unequally distributed across various regions and groups (Tapia et al., 2023). Another survey from 2020 notes that although 68% of Finns acknowledged the important role of rural regions in combatting climate change, only 13% believed that climate policies treat rural and urban regions equally (Ovaska & Vihinen 2020).

Evidently, the rural aspect of green transitions and related policies has been generally neglected in both research and practice. To contribute to a more comprehensive understanding of a just green transition from a rural viewpoint, this report's case studies have examined different forms of local benefits in six specific regions in Finland, Norway, and Denmark. In conclusion, we will outline some phenomena that might further explain the existing gap and suggest some forms of local-level action that might address these discrepancies.

1.2. Beyond a just 'just' transition: different viewpoints on social acceptance

Another gap in the research is the lack of studies that look at how climate adaptation policies consider the dimensions of justice (if at all) (Halonen et al. 2022; Juhola et al. 2022). The policy environment easily leans towards a goal of "having it all": economic growth, ecological integrity, and social justice. In the context of green transitions, this translates to assuming that after the transition is completed, all these benefits will automatically emerge. However, difficult prioritisations and other sharp political choices are also a part of the process and must be discussed to ensure that local communities experience benefits directly relevant to them, as well. Tensions arising from an unbalanced distribution of

benefits can relate to, for example, funding favouring large-scale projects, benefits accruing far from the local communities, or the lack of any local or regional ownership (Halonen et al. 2022). On the other hand, it can also be misleading to assume that the location of a renewable energy project automatically implies that it generates greater advantages to the local community than one managed by national or international actors. Local ownership of the *vision* of an energy project is thus more important in relation to its perceived justness than the shareholding structure of the company involved (Liljenfeldt 2022). Therefore, the location of a green transition project must address several separate ways of engaging communities, including benefits such as community building, job creation, diverse income sources and monetary compensation, municipal property tax, infrastructure investments, municipal attractiveness, etc., as well as on-going dialogue between all involved partners.

Justice in the context of just green transitions is commonly divided into three subcategories: **recognitional**, **distributive**, and **procedural**. Recognitional justice recognises past and current disadvantages in policy-making processes, while distributive justice refers to the distribution of environmental goods, costs and benefits, and the related vulnerabilities regarding resource access and affordability. Procedural justice focuses on the inclusiveness of the decision-making processes (planning, monitoring, implementation, evaluation) (McCauley & Heffron, 2019; Juhola et al. 2022). In addition to these, other categories are also possible, such as **cosmopolitan** justice (encompassing the ethical responsibilities of all human beings regardless of their geographic location) or **restorative** justice, concerning community involvement in the governance of green transitions with all the implied values. However, these divisions again run the risk of not considering **spatial** justice to an extent that undoubtedly would be pertinent. In the context of rural regions, taking spatial justice into account means considering the rural communities' vulnerabilities to (climate) impacts due to factors such as remoteness, resource-based economies, limited economic diversity, and ageing populations (Dikeç 2001; OECD 2021; Juhola et al. 2022; Tapia et al. 2022). Previous research has discovered that of these categories, procedural justice features most commonly, followed by distributive justice (especially in the form of assessing the geographical distributions of risks), while recognitional and restorative justice – aspects discussing more complex experiences of past inequalities – are the most seldom (Juhola et al. 2022).



Photo: Vihti, Finland. Hilma Salonen

2. Research approach and fieldwork methods

The case studies' aim was to generate contemporaneous knowledge of the practicalities and processes of just transitions. All case studies were conducted in the form of expert interviews. This core material was complemented by background material such as observing public events and analysing reading material produced by energy projects. In addition, the case studies used workshop discussions among the thematic group members and other Nordic stakeholders to broaden our understanding of the results and verify initial conclusions.

During the interviews, our main focus was on uncovering the variety of forms that local green transition benefits (may) take in Nordic rural contexts. What does justice look like to diverse groups living in these regions? How does it differ in the short-term, mid-term and long-term perspective? Land use, employment and questions relating to culture and identity are traditional areas of research when reviewing the justice aspect of a green transition (Sovacool et al. 2021). The case studies follow adopt this traditional starting point, as well as the groundwork laid by the Discussion Paper by Karlsdottir et al., (2022). During the interview process, local particularities helped develop the initial hypothesis further as it became clear that in certain regions, other questions were more pertinent than those related to land use and employment. As a result, we formulated the following research questions:

1. What kind of benefits ensure that people living in the direct impact zone of green energy projects gain value from imposed green transition measures?

2. How do these or other benefits affect the social acceptance of a green transition project in local communities?

3. What measures can policy-makers take to increase both local benefits and experienced justice in the Nordic rural areas?

The case studies took place in three Nordic countries and six locations: in Northern Ostrobothnia and Northern Central Finland, Finland, involving wind power and land use planning; in Nord-Fron and Nord-Odal in Norway, involving both wind power and strategic sustainability work; and in Skive and the island of Bornholm in Denmark, involving a hybrid mix of renewable energy sources in the context of industrial park development. The locations were selected following a round of suggestions gathered from thematic group members, complemented by previous knowledge obtained during the course of other research work. In total, 22 experts were interviewed (Denmark 7, Finland 8, Norway 7), of which most represented local stakeholders, with some national-level experts used as consultants (see Appendix 1 for details).



Bornholm. Photo: Johannes Lidmo

3. Fieldwork: Denmark, Finland, Norway

3.1. Denmark: Skive and Bornholm

3.1.1. Case description

GreenLab is a green industrial park, a national research facility and a technology know-how hub located in Skive, Denmark. Work that eventually led to GreenLab's formation began in 2008 as a municipal project, the first aim of which was to redress a negative demographic by increasing investment in innovation and the green economy and eventually transforming the rural area into a sustainable energy hub. The closure of local furniture factories in the aftermath of the 2008 financial crisis was one of the catalysts for brainstorming new industrial projects (Interviews 1, 2). Concrete work involving GreenLab began as a municipal development project in 2014 as part of an EU-funded project centred on biogas and power-to-gas technology development. Before that, the municipality had already explored several pathways involving different energy forms (Interviews 1, 2, 3). The project was initiated by the municipal technical department, and, in 2015, a commercial climate fund, Klimafonden Skive (already established in 2010 by the municipality) was put in place to facilitate the commercial development of the project and encourage public-private partnerships to further the local green transition. To avoid the risk of a conflict of interests, the municipal board decided to let Klimafonden conduct the commercial development and initiation of the public-private partnership in GreenLab. Meanwhile, Skive municipality continued its role as a more traditional public authority, such as addressing environmental questions, planning regarding the future of wind turbines, etc., and fundraising for the project (Interviews 1, 2).

Today, the park is home to eight companies specialising in energy storage and

resource efficiency. A specific aspect of the park is its provision of internally sourced renewable energy, which serves as the primary energy supply for all resident companies engaged in the production of environmentally friendly goods, including electro fuels, heat, and other sustainable products. The system also allows companies to share their surplus resources within the park, thus decreasing the costs of production. The park is constructed around a circular economy framework that aims to foster innovation to benefit the resident companies and the surrounding region and evolve towards a future industrial symbiosis. For example, converting agricultural waste into resources such as biogas and biomass both reduces carbon emissions and engages local farmers' production. Stimulating regional growth by generating new employment opportunities and creating value-added products are the primary objectives. The Danish government has supported the project by designating GreenLab as an official regulatory energy test zone and by allocating c. DKK 9.m in smart adaptation financing. In addition, it has received over DKK 1.bn of funding from various (mainly private) sources. In figures, the project now covers 60 hectares of land and has raised over DKK 3.bn in investments from private and public sources (Interviews 1, 2, 3, 4, GreenLab 2023). As the project has developed and GreenLab's activities have evolved in more complex directions than mere energy production, Skive municipality's focus has also shifted from job creation to branding and storytelling, aspiring to embed the green transition as a more integral part of the Skive community (Interview 4).

The work achieved under the GreenLab project has fed into the Baltic energy island project underway on the island of Bornholm, Denmark. As Denmark is the clear frontrunner in offshore wind energy production in the Nordic countries with 2,308 MW, it has had considerably more time and experience in building links between local (rural) communities and energy production (Nordic Energy Research 2023). The Energy Island Bornholm project represents the "third generation" of wind energy production, where offshore wind is collected on an (artificial or natural) island and transported to other destinations. On completion of the project in 2030, Bornholm (20,000 households) will produce energy for 3–4 million households in all. A relatively small offshore wind turbine is already owned by the regional municipality and serves the needs of local residents, and two much larger turbines are linked to national goals to reduce emissions (Interview 5).

The current aim of the Bornholm project is to link municipal development goals related to industrial development and an increase in population with the potential offered by the offshore wind hub, in turn creating the type of industrial symbiosis ecosystem successfully established in Skive. The municipality has suffered from a long-term budget deficit and population decrease, raising worries over maintaining public services such as schools and kindergartens in the future. To generate a more lasting solution to these structural problems, Bornholm is seeking investments to create a new business ecosystem. The aim is

to move beyond merely being a subcontractor for large energy companies during the relatively short building periods of new installations and instead enhance its position on the new energy frontier to create long-term employment and a new type of industry. Other sustainability goals besides renewable energy production are also linked to the energy island initiative, such as reaching zero carbon emissions by 2040 and recycling or reusing all waste by 2032. Ultimately, the aim is to combine the energy hub with broader municipal development goals and to turn the tide on attracting new people and investments to the island because, without substantial support, it will be difficult to scale up from simple energy installations to establishing larger green industries (Interviews 5, 7). In June 2023, Denmark and Germany signed an agreement to develop a joint offshore wind power project by the early 2030s. The electricity generated by the park will be shared by the two countries (BMWK 2023; Bornholm info 2023).



Skive. Photo: GreenLab.

3.1.2. Direct and indirect local benefits

The GreenLab industrial park works closely with scientists and international companies. These partnerships utilise local resources and upgrade less-value resources (such as manure), generate new employment, add to the diversification of the economy, and have a positive impact on the local community. At present, the park has created 80 permanent jobs directly and generated more employment indirectly. Other economic benefits include an increase in demand for local services, including more hotel visitors and contracts for local building companies. A local farmer interviewed noted that it was relatively easy for farmers like her to get involved with the GreenLab project because, after the initial set-up, the process was straightforward for the provider of raw materials

(in this case, slurry from her pig farm). Despite the learning and rethinking still required, earnings from selling slurry have been significant, so the farmers see the project as a profitable investment. (Interview 6).

Although there is no direct impact on education, the park is in close dialogue with the local college and in the future, some activities may be relocated to Greenlab to encourage and continue this exchange. The project has also created research and education programs with several universities, while the state has provided financing for GreenLab to conduct more mission-driven research. Lastly, there has been significant media coverage of the various initiatives, which local stakeholders believe has contributed substantially to the municipality's revitalised image (Interviews 1, 2, 3, 4).

One clear benefit of the GreenLab project has been its ability to engage a wide network of people, resulting in close co-operation between the industrial park, the climate fund, the municipality, and local business development stakeholders. Their overall aim is to trigger systematic change via industrial symbiosis. After GreenLab was separated from the Climate Fund to become its own joint stock company, the fund and the municipality have been working together on connecting more resources and waste flows from businesses to solve new environmental problems, such as excess nutrients in fjords (Klimafonden). The climate fund is shifting towards biofarming, and a growth partnership has been established between the Greenlab Skive company, Klimafonden, Skive municipality, the local chamber of commerce Business Skive, and representatives of local educational institutions (Interview 4).

Bornholm has begun its work towards local benefit creation by identifying possible pathways to this goal. Two roadmaps have been drafted with this purpose in mind, one of which is of a technical nature and the other focussing on optimising the economic effects for the benefit of the local community. The Danish state is supporting long-term development by investing in the establishment of a business lighthouse, the Baltic Energy Island, which will focus on fostering knowledge production, education and innovative green solutions. This is a decisive step towards attracting new types of businesses, labour force, and residents to the island (Interviews 5, 7, Bornholm info 2023).



Skive. Photo: GreenLab.

3.1.3. Social acceptance and perceptions of justice

Skive's impressive history of renewable energy projects has helped the GreenLab project evolve, as the local community were already familiar with many of the themes involved. Staunch support for GreenLab also came from within the municipal administration, as its original drivers were "visionary and persistent public administrators" (Interviews 1, 2). The substantial commitment from the municipality acted as a kind of a double-edged sword: on the one hand, it led to doubts about whether investing major resources into a single project was a reasonable approach, while on the other, it has served as a legitimising element throughout the project's lifetime (Interviews 1, 2, 4).

"Lots and lots and lots of hard work - a lot of coffee drinking." (Interviews 1, 2).

Already at the early planning stages of the GreenLab project, the Skive municipality engaged in active, ongoing discussions at a local level in an effort to galvanise broad social acceptance for the initiative. In practice, this has included activities such as inviting people to view the future building site, co-create ideas, and identify ongoing concerns. With the same purpose in mind, Klimafonden set up a physical office to house GreenLab long before construction work on the site began in order to maintain a permanent meeting place promoting an open-door policy. Klimafond has also participated in a variety of more general communal activities by providing venues for hosting meetings, for example (Interviews 1, 2, Klimafonden). Informing people about the social, economic and environmental goals of the project has been another element of these social acceptance efforts, as well as keeping citizens up to date about changes as they occur. The emergence of new workplaces proved an important legitimisation step: as people noticed that others they knew were being employed by the GreenLab, the

previously abstract ideas and concepts became notably more tangible (Interviews 1, 2, Klimafonden). Overall, the process of engaging with local stakeholders and securing social acceptance has proven positive, although there have been complaints relating to certain side effects: smells emanating from protein plants and increased noise and traffic. Interestingly, some landscape-altering installations like wind turbines have evoked far less negative feedback compared to other Danish municipalities (Interviews 1, 2, 4, Klimafonden). According to a local farmer, general discussions of the importance of the green transition were the main motivation for finding out more and becoming involved in GreenLab co-operation. Another element that has generated trust in the project has been GreenLab's ability to make realistic promises and keep them (Interviews 4, 6).

In Bornholm, local concerns have primarily revolved around landscape changes, as well as possible damage that the new installations could cause to marine life. Some residents will have to relocate, and there are currently insufficient plans to ensure adequate compensation for neighbours to the coming installations. Other concerns relate to agricultural land use interests and a broader resistance to internationally owned energy installations. Since Bornholm already has its own small-scale wind energy plants, some residents would prefer to invest only in locally owned projects such as these, as benefits from a larger project may seem more abstract and top-down in nature. Connecting Bornholm's own grid with that of Energy Island is a technically challenging task that might nevertheless increase the social acceptance of the project if combined with the energy security of the island as a whole, allowing the municipality to make a full non-carbon transition (Interview 5).

Stakeholders expressed the view that larger energy companies interested in Bornholm should also invest in the broader surrounding area and help plan for its well-being in a longer perspective. However, investing in a form of direct compensation (such as building new sports facilities, which is one traditional route) is seen as controversial, as it may easily create an impression of 'charity' directed towards the local communities. If the companies arriving in the area fail to build a lasting relationship with the local community, the initial compensation can quickly seem insufficient compared to the ongoing impacts caused by the energy installations (Interview 5).



Bornholm. Photo: Ágúst Bogason.

3.1.4. Communities and future visions

Granting the GreenLab project status of a strategic priority and committing a great deal of their technical department resources was a risky undertaking for Skive municipality. This commitment allowed a process of co-creating, negotiations, knowledge exchange and networking facilitation between local businesses, all of which were essential to the success of the project (Interviews 1, 2, 4). As the project has flourished, Skive has continued to link the municipality as a whole to its narrative, creating the slogan "Pure Life" and significantly increasing the number of civil servants working with sustainability. After the slogan's introduction, private businesses have taken it up as well. It is undoubtedly possible that municipal branding activities have certain value in and of themselves by demonstrating that the municipality is actively doing *something*. Following a similar logic, when new activities and people create a synergy in an area, more jobs and businesses often follow (Interview 4, Klimafonden).

In Bornholm, the municipality is striving to create a link between green energy projects and the overall future direction of the community, namely, the goal of reaching 42,000 inhabitants to secure essential municipal services. Thus far, most measures to turn the demographic tide have proved unsuccessful, but according to expert estimations, the workforce needed to maintain the future energy installations would increase the population and hit this target. An example suggesting that the Energy Island plan is becoming a project grounded in its environs is that small local communities of volunteers have begun

promoting their regions to potential investors (Interviews 5, 7).

One essential way of considering the well-being of the whole community would be increased investment in nature-inclusive design (e.g., options that lessen the damage to ecosystems that new installations may cause) or landscaping activities (such as larger land purchases than absolutely necessary for the energy installations enabling the creation of new environments around the windmills). These types of initiatives would facilitate new topographic approaches and encourage other future goals like increasing biodiversity or creating recreation areas. Here, a willingness displayed by large energy companies to spearhead these initiatives operating in the area is key (Interview 5, Nordic Energy Research 2023).

Denmark has a long and chequered history of green energy transitions, primarily in the form of wind energy. Consequently, there is much less debate about the environmental concerns or benefits in relation to new energy installations. Nevertheless, there are various other environmental benefits that could further improve the social acceptance of new energy projects. Future legislation and market demand for more sustainable production methods will impact industries with relatively high CO₂ output per Added Value, such as agriculture, manufacturing and transport, all of which are present both in Bornholm and other rural areas. Approximately 14% of local jobs on the island are in industries dangerously exposed to climate change, underlining the need to accelerate green transition solutions. The Energy Island project has also proposed this argument in relation to its initiative (Interview 7).



Ilosjoki wind park. Photo: Helena Raatikainen.

3.2. Finland: Northern Ostrobothnia and Northern Central Finland

3.2.1. Case description

The development of wind energy in Finland is aligned first and foremost with the European Union's climate goals and at a regional level, with regional programmes and planning. These programmes usually consist primarily of qualitative rather than specific quantitative goals. A notable exception is Finland's national carbon neutrality 2035 roadmap, which proposes a rapid increase in electricity production, with a wind power share of 22 TWh (Majava et al. 2022). In regional strategies, the Vision for the 2025 programme for Northern Ostrobothnia includes the goal of utilising green transition opportunities. The associated climate and energy planning document designates a central role for wind energy. In Central Finland, the 2040 regional land use plan is in the process of being reformed to include, among other themes, a significant increase in wind energy construction. Similarly, the municipality of Pihtipudas has taken the initiative to feature wind power in its municipal strategy for 2021–2025 as a part of a larger vision for sustainable development (Keski-Suomen liitto 2023, Pihtipudas 2021).

The Finnish cases followed the setting up of new wind parks in Northern Ostrobothnia (Pohjois-Pohjanmaa) and Northern Central Finland (Pohjoinen

Keski-Suomi). Both regions have historically been important peat production locations, and as the state has decided to discontinue the use of peat in energy production, the green transition has become a highly prescient issue. However, both regions have very differing energy production histories. Wind parks are a relatively new phenomenon in Northern Central Finland (although now witnessing a rapid expansion). The region was previously unsuitable for wind energy production, but the increased height of current turbines (up to 300 metres) and reduced building costs have made exploring new sites feasible (Interview 8). There are currently 14 wind park projects in progress or completed, and another cluster of parks has been accepted for future planning.

In Northern Ostrobothnia, there is a more established tradition for wind power production, as the region is located on the coast of the Bothnia Bay. 42% of Finland's wind parks are situated here, amounting to over 550 windmills generating tax revenues of EUR 1.3 bn by the end of 2023 (Tuulivoimayhdistys 2023). The regional project 'TUULI' ("WIND") was active between 2020 –2023 and featured a plan for a wind park cluster whose production would be equivalent to two nuclear power plants (Interview 9; Fingrid 2022).

In Northern Central Finland, the initial planning stage for the wind park projects was financed with funding from the Ministry of Environment and EU regional development funds. As part of the contracts with the industrial sector, wind energy companies agreed to cover the costs of further planning and survey work, while land-use planning was conducted separately in each municipality (Interview 10). In Northern Ostrobothnia, there have been several projects supporting wind construction in recent years. The 'TUULI' ("WIND") project was financed through the EU Structural Funds programme and supported by all 30 municipalities of the region and the Council of Oulu region (Interview 9). A related project, estimating the expected regional economic and employment effects of industrial-scale wind power, was funded by the Ministry of Economic Affairs and Employment, and the survey work was conducted by the region itself (Interview 11).

3.2.2. Direct and indirect local benefits

The most direct and tangible local benefit in both regions has been the property tax that wind power companies pay to each municipality, consisting of EUR 30,000 m per year. This income can have a potential lifespan of over 30 years and will play a significant role in the economy of small municipalities that often encounter difficulties maintaining their public services as independent constituents. The focus of discussion has typically revolved around this question, relegating other possible benefits to the margins (Interviews 10, 12). In addition, there are other direct monetary benefits and compensation for landowners who live close to a wind park or are impacted by one, which in turn also generate a certain amount of tax revenue. In some municipalities, wind power companies

have entered individual agreements with residents or set up "village voucher" schemes, whereby a percentage of the overall profits (ranging from 3.5 to 5%) are ringfenced for use for the common benefit of the entire community. The owners of the land where the wind turbines are situated agree on the specific use of these funds jointly as a group (Interviews 10, 13).

Monetary benefits and compensations bring long-term local benefits during the lifetime of the wind park, facilitating more ambitious long-term development plans as well. However, in Northern Ostrobothnia, which has considerably more experience of these types of financial structures, some experts have noted that property tax is sometimes overplayed as a benefit. For example, stakeholders may overlook the possibility that some of the benefits may "leak" outside the region or municipality (Interview 9).

Many of the indirect benefits are relatively short-term as they mostly span the construction period of the wind park, most often constituting an increase in the use of local services or workforce during this time. During the one to two years spent constructing a wind park of average size, the impact on the regional economy can reach up to EUR 6,9 m. Once the wind park is constructed, the regional economic impact decreases to c. EUR 1 m per annum during the installation's thirty-year life span (Käännekohta 2023). Wind farms also require maintenance work after construction has been completed, which may employ several specialists (Interview 9). In Ostrobothnia, wind power has thus far employed workers for 23,700 labour unit person-years, and those working in maintenance may have contracts of up to 25 years (Tuulivoimayhdistys 2019). Despite the strong trend for building more wind power, only 11% of the economic impact of construction remained in the Ostrobothnian region in 2022, pointing to the fact that most of the workforce and equipment is imported from abroad (Käännekohta 2023). This is despite the fact that some wind energy companies claim to favour local service providers, e.g., cement companies. In Northern Central Finland, however, the impact on employment has been somewhat greater than initially expected (Interview 10, 14). New energy projects may also help ensure that certain private services remain in the municipality. Other minor indirect benefits include the possibility of improved road maintenance around the park or expanding the establishment of broadband services during construction (Interviews 8, 9).

Wind power-related services and activities represent the greatest potential to have a significant positive impact on the regional economy, with estimations varying from one to EUR 63 m. However, whether this potential actually materialises is subject to many other issues, so the most optimistic estimations should be viewed with caution. Much depends on actions taken to increase the availability of local labour and the skillsets necessary for providing wind power services. New work opportunities will not bring benefits if there is a lack of skilled technical workers, a problem faced by all the Nordic rural regions (Käännekohta 2023; Slätmo et al. 2023).

Ostrobothnia, which has had more time to identify and address this specific problem, has launched several initiatives to directly address the current skill gap by establishing educational programmes in regional vocational schools, e.g., for electricians and mechanics. More resources could conceivably be set aside for this by establishing a regional skills centre or an online platform to map regional skills for wind energy companies, for example (Interviews 9, 12, 14). Municipalities hope that establishing education programmes to promote these types of jobs will also encourage young people to remain in the region by diversifying the range of opportunities available to them (Interview 14). Municipalities can also invest in attract maintenance companies to the region to increase the diversity of skills available (Käännekohta 2023).

Finally, the most long-term yet least tangible benefit is an increased attractiveness and positive branding image for the region. While it is difficult to measure this impact in concrete terms, it has the potential to set a region or a municipality apart from its neighbours at a time when most are struggling to adapt to population decline and, as a result, are forced to come up with new ideas for the future. Joining a network of carbon-neutral municipalities ("HINKU-kunnat"), as Pihtipudas plans to do on completion of its first wind park, is one way of creating a new narrative for the municipality and hopefully attracting new initiatives, residents and tourists. The green transition work to date featuring wind energy has also motivated the municipality to explore other funding possibilities within the field, such as the European Just Transition Fund (Interview 10).

Environmental benefits were not a feature in any of the interviews conducted: they are seen as too abstract to suggest a specifically local benefit. Although the younger generation undoubtedly experiences climate issues as a specific and urgent topic, their voice is insufficiently heard in discussions (Interview 13). However, due to the war in Ukraine, energy self-sufficiency has rapidly transformed from an abstract question to a definitive local one. The ability to produce more electricity than is needed within the municipality (as has happened) is clearly seen as a local benefit, even as the wind park is linked to global energy markets and fluctuations. Transforming the local energy landscape with the help of local renewable energy would require significant legal and planning reforms. Nevertheless, establishing energy islands would be extremely beneficial from the viewpoint of the future security of energy supply. A decentralised energy supply could also help alleviate some of the electricity transmission problems, as there would be less need to transport it back and forth (Interview 12).



Ilosjoki wind park. Photo: Martti Junikka.

3.2.3. Social acceptance and perceptions of justice

To inform citizens about upcoming energy projects and collect their feedback, municipalities often approach people living close to the proposed site by post and by organising open meetings. Recently, some regions have experimented with new methods to include other important stakeholders, such as external experts. One method of creating a more inclusive social discourse is the setting up of a citizen panel on an online platform. A wider net of engagement may highlight issues that national regulatory bodies may be unaware of, such as compensation packages not reaching certain groups due to outdated regulations (e.g. in the case of granting only nominal compensations to people owning land in the area's transmission lines) or failing to address all possible impacts. The first phase of the citizen panel process identifies potential problems, and the second analyses these to find solutions (Interview 15).

A major challenge for social acceptance is that some benefits that are substantial to the municipality, namely the property tax, may appear abstract to an ordinary citizen and do not inspire a sense of justice. For this reason, more long-term work must be put into uncovering the possible benefits that have more enduring, positive effects (Interview 11). Profits confined to municipal control may provoke even more criticism by incurring the belief that decision-makers may discard balanced estimations of negative impacts in favour of future profits (Interviews 8, 15). In any case, people who are opposed to wind parks on principle are unlikely to change their viewpoint no matter the counterarguments provided (Interviews 8, 13).

Other ways to improve social acceptance of a wind power project relate to how the processes are planned and conducted in general. For example, centralised projects are more likely to gain acceptance than those that scatter new installations across the region (Interview 9). Local ownership is a factor that increases social acceptance, even if its actual impact on the regional electricity market is small. In general, people trust companies that remain in place and maintain the energy parks instead of selling it to a new operator (Interview 8). Active local operators would also encourage industrial co-operation, by utilising wind park electricity to support local industries, and perhaps even looking into hydrocarbon use. Without active participation, however, municipalities have little agency beyond offering the plot of land. To date, Finnish regional energy companies have not been actively interested in the green transition (Interview 12).

3.2.4. Communities and future visions

Regional identity plays a key role in both Northern Central Finland and Northern Ostrobothnia. For Northern Ostrobothnia, wind power is already an established direction to move towards in terms of increasing municipal attractiveness and identity building. For Northern Central Finland, there is an urgent need to find alternative industries after the phase-out of peat production, which makes wind parks attractive in the eyes of peat landowners and municipal directors. (Interview 8). Using the energy produced within a municipality for local benefit to a greater extent than hitherto is an important emerging theme. This would require establishing more decentralised solutions: by exploring various ways of developing electricity processing possibilities within a region through the setting up of small-scale hydrogen production (although this is still largely at a theoretic stage) or by supporting nearby energy industries, resulting in more efficient use of the multiplier effect (Interviews 11, 12, 14). Furthermore, decentralised renewable energy production could be linked to circular economy initiatives by exploiting the heat generated during the electricity production process. Local wind park shareholders paying less for their electricity would be another obvious way to gain more acceptance (Interviews 9, 15).



Gudbrandsdal. Photo: Krafttak for grønn vekst

3.3. Norway

3.3.1. Case description

The Norwegian cases compare developments in two neighbouring municipalities, those of Nord-Fron and Nord-Odal, both located in the region of Innlandet. The first one encompasses new wind energy construction, and the other consists of a hybrid project aiming to commit both local businesses and municipalities in Nord-Fron and the surrounding area to green transition plans.

In Nord-Odal, the Odal wind farm project began development in 2010–2011, but due to economic fluctuations and a period of strong local opposition, it was not completed until 2021. The work began under the aegis of Swedish company Eon, which was then acquired by a German wind company during the project, with the municipality playing only a very minor role. In 2014, the municipality voted against the project amidst strong local resistance, but in 2016, the new municipal council decided to greenlight the project after compensatory measures were increased. Nonetheless, despite the positive decision, Eon stalled its investment. In 2020, a smaller Norwegian energy company Akershus Energi, owned by the neighbouring county, assumed responsibility for the project. Currently, the project is co-owned by two public funds, and Akershus Energi has operational responsibility (Interviews 16, 17, 18).

The Nord-Fron municipality has a long history of renewable energy in the form of hydropower plants, which date back to the 1950s, and there are also various

other minor projects related to the green transition. The municipality is working on climate accounting (klimaregnskap) by focusing on sustainable procurement and investments, solar cell systems on municipal buildings, and supporting a hydroelectric powerplant (Interviews 19, 20). Most notably, Nord-Fron is located in Gudbrandsdal valley, where the project Krafttak for Grønn Vekst ("Power take-off for green growth") was established. The project formally began in 2019 and concludes in 2023, with plans already in motion to continue in another form. Its primary concept is to combine the growth and interests of local businesses, industries and communities while maintaining an environmental consciousness in regard to all operations. To date, 12 municipalities and 900 individual members have been involved in the project (Interview 21).

The guiding motivation for the Krafttak project is that a green transition – with all its related regulations – is likely to happen regardless of local-level action, and therefore, local businesses should prepare for the coming demands in advance. Instead of municipal actors, the project encouraged and challenged industries to evaluate their carbon footprint. After recruiting leaders representing large industries, the project continued outreach activities among municipalities and other local businesses on a voluntary basis. As the project has evolved, it has also turned to other other goals, such as solving problems surrounding population decreases and the challenge of increasing regional attractiveness. The sectors currently involved are the recreation economy sector (the tourism and cabin-building industry, representing the largest industry in the region), as well as farming, green energy, IT, and the production industry. The project envisaged an investment fund from the beginning to combine the use of both public and private financing and make a significant impact on green transition efforts within companies. The main goal of the project is to generate new jobs via green transition, with environmental benefits on a lesser level of priority and support new green business models in the region. These activities have spurred companies that initially were mainly interested in "a box-ticking exercise" of corporate sustainability to also engage in more strategic sustainability planning (Interviews 21, 22).

3.3.2. Direct and indirect local benefits

Nord-Odal negotiated a specific property tax of 7% for the wind park compared to the 6% municipal rate for other businesses. A neighbouring municipality had previously succeeded in negotiating a higher revenue and was used as inspiration. After a Norwegian operator took control of the Nord-Odal wind power project, the municipality further negotiated the inclusion of local service providers and other businesses during the wind park's construction phase. The wind park currently employs 10 people in the municipality, of which half are employed by the local energy company and half by Siemens, who manufacture the turbines. Several subcontractors working during the construction period came from the region, and local services such as restaurants and service stations also gained

additional revenues. It is also possible that the construction phase helped some service providers sustain activities throughout the pandemic, suggesting a more long-term impact (Interviews 16, 17, 18). In addition to direct benefits, converging interests have included increased road construction, resulting in improved forest access for landowners. The surrounding business community also believes that the wind park will generate overall positive opportunities in the future even though these have yet to materialise (Interviews 16, 22).

In Norway, municipalities are not necessarily informed about new energy projects even as they reach the phase where contracts are being negotiated with landowners. This can result in situations where a lack of information during the initial project phases diminishes the municipality's leverage over the energy company to engage more substantially in local industrial growth. In the case of Nord Odal, neither local industries nor the new industrial park under development could avail of locally produced power. Moreover, wind power's potential to create more highly specialised jobs could have been explored in more depth. Despite these obstacles, the recent energy crisis cast locally produced energy in a significantly more positive light, according to local opinion (Interviews 16, 17, 18).

The benefits of the Krafttak project are expected to combine economic growth and green transition. The stakeholders involved acknowledge the potential controversial elements of the project's objectives but strongly maintain that the future value of continuing on the path chosen would represent a significantly beneficial paradigm shift for the whole region. 'Green growth' in the sense of generating new types of jobs, ensuring the vitality of local industries and tourism via smart specialisation, reducing emissions, and creating a new regional image would result in the indirect benefits increasing to a whole other level. For the time being, however, no precise calculations regarding the effects of the project are available (Interviews 21, 22).



Photo: Krafttak for grønn vekst

3.3.3. Social acceptance and perceptions of justice

Initially, Nord-Odal cited the positive impact in the form of profits, greater national awareness and jobs that a wind power project could bring to the small municipality. In recent years, however, the public debate surrounding wind energy has grown more heated and divided. Nord-Odal alone has seen personal threats to politicians and one act of suicide in the wind farm area, which became a tragic symbol of resistance to the project (Interviews 17, 18). Under such circumstances, opposition groups quickly seized the discussion and formed organised action groups, such as the Let the Forest Live (La skogen leve) group. When the German company bought Eon, the population's sense of alienation towards the project increased. As the on-site representatives consisted largely of external consultants, the relationship between the local community and the energy company's decision-makers further diminished. Some came to view the project as an example of local priorities being overruled by the EU. The major sore point pertaining to the project throughout its gestation was the use of pristine forests in the pursuit of profit. Advocacy groups such as hunters and cabin owners have

been especially concerned about disruption to the surrounding landscape, including increased light pollution. Efforts to increase outreach and external public-orientated communication, including setting up an office to inform people about the coming installation, fell short due to general public apathy. Other means of providing relevant information, such as guided tours around the turbine park, public lectures and a project website, have attracted more attention. (Interviews 16, 17, 18).

After the wind farm was acquired by a Norwegian company, anchoring its goals in local interests has proven easier because it connected in a more transparent and visible way to people's everyday lives. There are possibly three reasons for this change in attitude. Firstly, the local population were open to the targeted property tax agreement to maximise municipal income, as well as the agreement to add some additional compensations. Secondly, knowing that profits were now directed towards a Norwegian public stakeholder made the overall reception of the project more positive. Finally, the Norwegian operator demonstrated significantly more attention to local needs, e.g. by holding a meeting with local hunters' associations and compensating for the impact of construction work by building a new extensive road network to address their criticisms. The eventual agreement reached also included a commitment to construct a new ski facility at a cost of NOK 9 m to compensate for the ski trails rendered unusable. However, while this last benefit is very directly bound up in the local context, it is unclear whether it has noticeably added to local acceptance of the project, as the additional running costs of the facility will have to be met by the municipality. (Interviews 17, 18). Furthermore, public ownership has also complicated both the decision-making process and social acceptance of the project, as it means that the wind power project's priorities are subjected to political shifts occurring within the election cycle. Committing to potentially controversial goals, such as green transition, poses certain risks for politicians, making them less eager to take risks as project managers (Interview 16). Despite these challenges, the Nord-Odal municipality remains committed to the wind park project, and based on the feedback the project has received, 70% of residents currently feel either positive or, at the very least, curious about the wind farm. The recent energy crisis also played a significant role in generating a positive shift in public discourse (Interviews 16, 17).

Similarly, in Nord-Fron, the most conflict-triggering situations emerged due to a lack of public involvement and interest, especially beyond the key stakeholders. While linking the benefits of the green transition to wider social and economic goals is pertinent, this can conceptually appear somewhat 'fuzzy' to the ordinary citizen, making it more difficult to connect the several simultaneous developments under the same project. Nonetheless, the multidimensional nature of the Krafttak project has allowed it to address local communities from several different directions at once, increasing the chances of gaining the sought-after impact and local engagement (Interviews 20, 21, 22). Since Nord-Fron produces

six times more electricity than it needs and has already moved far ahead in the green transition through hydropower use, themes of energy security or discarding fossil fuels may seem less urgent (Interview 19). For the most part, the local population first became aware of a project when it was already in full swing, resulting in a sense that their voices were left unheard. Another problem that the project has in common with wind energy development is that the vocalicity of resistance makes the opposition seem more wide-spread than it actually is. (Interviews 20, 21, 22).

"You build trust around communication, presence and accessibility." (Interview 16).

3.3.4. Communities and future visions

In Norway, green energy has been such a traditional part of local energyscapes, in the form of hydropower that for many it is all but invisible. Hydropower production in Nord-Fron, for example, is such an established part of local industry and the landscape that it has ceased to influence local inhabitant's views on renewable energy's potentially wider benefits. This may go some way to explaining Norwegian municipalities' somewhat passive approach regarding the green transition and new energy projects. As a Nord-Fron municipality representative summarised, "it's not the municipality that builds power, the power companies do" (Interview 20). However, under Norwegian regulations, the municipality is nonetheless directly involved in the process by owning a small share in the project, and on a more abstract plane, Nord-Fron envisages a dynamic relationship with the power plant, where in return for relinquishing land areas, they secure added value which can be put to use for the entire community (Interview 19)

Representatives of both municipalities agree on the overall need to reduce emissions. Nord-Fron has experienced the impacts of climate change in the form of floods and landslides, and substantial national and municipal funds have already been allocated to floodproofing, leading to a sense that reducing consumption and lessening temperature increases is essential. Overall, however, the general debate has remained muted and many within the public administration believe that, in essence, a small municipality has limited opportunities to position itself at the forefront of addressing climate change challenges (Interviews 19, 20). The Krafttak project has noted that the most promising path towards a holistic future vision is to first involve businesses, then gradually narrow down to individual municipalities and eventually citizens. By 2022, the project had succeeded in engaging all 12 municipalities to create an emissions reduction climate plan (Interview 21).

"The most important thing is that when someone wants to do something, we're ready to help them because it's now, not next year" (Interview 21).

The Krafttak project links several future development goals with the green transition agenda, including smart specialisation and addressing population decreases in rural municipalities, by including these themes in municipal climate plans. Traditionally, municipal development issues have been discussed separately from climate concerns in official strategies, but in the coming municipal plan of 2023, they may be brought together (Interviews 19, 20, 21). This may well encourage the inclusion of a more holistic green-transition approach to these objectives.



Bornholm. Photo: Ágúst Bogason

4. Analysis of the results

4.1 Different types of justness in the Nordic context

Analysing the results of the case studies in the Nordic context, this study operationalises the concepts of just transition theories (see 1.2.) in the following way. Recognitional justice refers to measures featuring co-creation and participatory methods that allow societal groups to define their needs for themselves, an especially pertinent question when considering Indigenous rights in green transitions. The case studies included examples of new participatory methods being first trialled and then introduced, such as the online citizen panel in Finland. Still, it remains unclear whether citizen involvement begins early enough, that is, at a stage where local people can articulate their own needs. Similarly, failures regarding recognitional justice are often linked to debates about Indigenous rights. Distributive justice includes discussing (monetary) compensations and legal and regulative matters, and procedural justice encompasses the entire process of stakeholder engagement, impact reviews and feedback rounds taking place during a project. Previous literature has discovered that these are often the most adequately addressed, and the same applies to the case study results presented here. These are the aspects of the just transition that are, to a considerable extent, embedded and systematised into the existing process and, therefore, are usually formally addressed at the very least.

Restorative justice can be understood as involving rural communities in a long-term perspective to redress past inequalities and to compile future visions. The case studies here present several examples where this element is included as a transition process goal, but often, it seems to depend on singular actors or a benevolent coincidence, not a systematic approach. Cosmopolitan justice considers the difficult dilemma of bridging the global environmental benefits or

green transitions between the more precise needs and concerns of local stakeholders. This aspect of justice is tricky since it may be pivotal for some stakeholders, such as younger generations and yet of minor importance to others. Making indirect and invisible benefits more clearly legible in the local setting could also help entrench aspects of cosmopolitan justice in rural regions. Finally, spatial justice is relevant to all of these aspects, especially in the context of whether specific rural interests and needs are considered during a green transition process and in the importance conferred on rural actors' agency. While there are positive examples of this actually happening, ensuring this approach seems to mainly fall back on the proactivity of the local population themselves.

4.2. Gaps to overcome and possible ways forward

4.2.1. Sense of powerlessness

Heavily centralised, top-down decisions that neglect local needs and qualities evoke a sense of powerlessness. This sense of alienation easily leads to stiff resistance towards the specific energy project or the whole green transition agenda in general. A sense of justness is further corroded if the local population feels that the project's social participation element serves mainly as an obligatory component that is rushed through, giving little thought to the final outcome. Nor should it be taken for granted that permission for one project applies to all similar projects in the future: for example, Danish municipalities are accustomed to the wind parks currently in place, but the scale of new installations, which may be up to 200 meters higher, raises new concerns. Similarly, in Pihtipudas, the municipality faces increased resistance to wind power now that the number of planned wind park areas has increased to five (Interview 10).

To avoid this situation, beginning the engagement process as early as possible and via different platforms is vital. If the project's presentation fails to spark some interest in the surrounding community, the likelihood of the community focusing solely on negative impacts increases dramatically. That communication should be open and transparent is a given. National and regional politicians or business sector representatives may be tempted to tout overly optimistic calculations regarding expected economic benefits in the surrounding region or even base their decisions on these inaccurate figures. This type of behaviour easily generates feelings of resentment and scepticism towards green transitions in general (Interview 12). Even though opposition to green energy projects, especially very tall turbines, is sometimes rooted in personal principles and therefore unlikely to be won over by any argument, it does not necessarily follow that attempts to increase a sense of justice are useless. If discussions with local people begin at the early project stages and maintain an open attitude to the

expected outcome, they may well appreciate the transparency of the process even if they remain dissatisfied with the final decision.

4.2.2. Visible and invisible benefits

Common to all cases is that local or, at the very least, regional ownership increases trust and improves a sense of justness. This may contribute to new area identity (such as that of an "energy island", "carbon neutral municipality", or "pure life") or assure people that the energy company is committed to the overall well-being of the surrounding area. However, what form of local ownership best ensures local benefits in practice remains unclear. For example, investing in a wind park may represent a too severe level of risk for a small municipality. Instead, strengthening local ownership ties by encouraging regional energy companies to take an active part in green energy projects could prove a more profitable and feasible path in the longer term.

Monetary benefits are typically in focus because they are quantifiable. But regions also use other assessment criteria to calculate benefits as well, e.g. when regional development plans are prepared where employment rates, social well-being, the vitality of the municipality, and development of skills in the region before and after the implementation of a project are taken into account (Interview 8). Visualising, analysing and comparing these alternative factors could help make a wider range of local benefits more tangible. Furthermore, rural municipalities often cover vast geographic areas, so the impacts and benefits of green transitions should also be considered at a nuanced micro level (e.g. the effect on villages).

Environmental benefits often appear as "fuzzy" compared to industrial development, financial profit, energy security or attracting more residents to an area. Nonetheless, as we noted in the Krafttak and GreenLab projects, some actors succeed in drawing more attention to environmental benefits by combining these under the common umbrella of new narrative creation. Image building and branding are benefits that may at first appear superfluous. However, in our research, they featured prominently in most expert interviews, suggesting that their role may be more substantial. All case studies advanced the concept's vitality aspect, believing that it is important that a municipality is actively doing *something* so as not to fall behind. Proactively working with the green transition is one way of projecting a future-oriented image to the world. It is also important to note that attitudes regarding priorities and concrete benefits may also change, as was demonstrated by the recent energy crisis and the war in Ukraine altering people's perceptions of the importance of locally produced energy in Finland and Norway. Finally, if the current plans for even more decentralised energy production and new energy islands (in a literal or figurative sense) materialise, they could further cement the connection between global climate goals and local benefits. These new opportunities would, in turn,

encourage municipalities to strive for even broader carbon neutrality goals.

4.2.3. Community building, compensation mechanisms and experienced justness

During the interview process, we formed a hypothesis that direct monetary compensations for landowners and other local people represent a problematic approach to gaining social acceptance, and the interviewed experts generally agreed. Direct compensation schemes are insufficient at best and divisive at worst: since they usually only address a section of those impacted and only a small share of the impact, they risk provoking more dissatisfaction than alleviating it. In addition, they may feed into the view that wind energy companies are looking for easy get-outs to silence genuine concerns, which erodes a sense of community in a municipality and increases the polarisation around new green energy projects. In such a situation, even an initiative such as offering a share of the profits to the village association (e.g. EUR 500 m per annum, to be used to help underprivileged children, for example) may easily become controversial, especially in areas where the newer very-tall turbines are novel (Interview 10).

Community building and genuinely participatory negotiation methods can make direct monetary compensations a solution that increases the sense of justice rather than erodes it. For example, in Northern Central Finland, landowner advisory boards reviewed the proposed agreements (even before they knew where exactly the turbines would be built) and determined a profit-sharing solution where 85% of the profits go to people living in the vicinity of the wind park, while the remaining 15% are reserved for landowners renting land to the wind park. Until recently, this allocation was, in fact, the opposite.

Centralised, top-down rural policies risk seeing rural municipalities as mere passive entities than is actually the case: small, rural municipalities can use their small size to their own advantage. For example, they may have more direct and flexible connections between different public authorities, enabling a more straightforward planning process. In addition, because small municipalities are involved in fewer contracts than larger urban areas, the negotiation process is often quicker, and focused administrative energy can be brought into play. Thus, they can allocate sufficient resources to the negotiations with the wind energy companies, for example, when pushing for compensation for everyone impacted or establishing shared transmission lines to decrease land use impacts (Interview 10). Other avenues open to the public sector to further just transitions include own investments (both money or staff resources), promoting innovative decisions to ensure adequate compensation for impacts, connecting policy goals previously assigned to different areas (such as smart adaptation and the green transition), and acting as a negotiator between the local population and energy companies. To achieve a more positive outcome, the complicated processes involving new

energy installations should be better designed to decrease mistrust so that the weight of national ambitions is not solely borne by municipal resources.



5. Conclusion

In sum, if an area succeeds in creating a new sense of identity or a common vision that links its broader development goals with a planned energy project, it is also likely to succeed in making the more intangible benefit its relevant from a local perspective. For example, a decreasing population and external demands for implementing the green transition are issues in most rural municipalities, so it would be of benefit to both policy areas to combine efforts. Some of the mechanisms listed above, from storytelling to drafting broader strategic goals, are useful in themselves, but something as simple as local (or regional) ownership can also greatly increase the local population's sense of connection to the project while furthering the development goals of the surrounding region. An energy project managed by a larger national or international company may succeed in building some form of connection to the area's inhabitants by demonstrating a genuine presence from the initial stages of the project. It is important to remember that public ownership is not in itself a shortcut to people experiencing justice in a green transition, as can be seen in the scepticism and open opposition that all municipal actors have had to face. Here, the importance of maintaining a realistic outlook regarding expected benefits comes up again. Instead of relying on justice arriving as a side dish of the green transition, it essentially lies in the project's ability to feed into community building and long-term goals directly rooted in local lived realities.

Appendix 1. Interviews

1. Representative of Klimafonden Skive
2. Representative of Klimafonden Skive
3. Representative of GreenLab Skive
4. Representative of the Skive municipality
5. Representative of the Bornholm municipality
6. Local farmer
7. Researcher working on Bornholm tourism and policy development sector
8. Representative of the council of Oulu region
9. Representative of the regional council of Central Finland
10. Regional architect working in Central Finland
11. Representative of the council of Oulu region
12. Researcher focusing on regional impacts of wind power projects
13. Regional architect working in Central Finland
14. Representative of business development in Central Finland
15. Representatives of a company conducting online citizen panels
16. Representative of regional energy company
17. Representative of Nord-Odal municipality
18. Experienced municipal politician from Nord-Odal
19. Representative of business development in Nord-Fron
20. Representative of Nord-Fron municipality
21. Representative of the Krafttak project
22. Representative of the Krafttak project

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Authors: Hilma Salonen & Lumi Tomrén

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