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Chapter 6. Wind power development as a means to local economic development*

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Introduction

One of the most often cited arguments for large scale wind power development has to do with climate change mitigation – as opposed to many other conventional energy sources, wind power is a renewable, carbon free/low-carbon energy technology (Commission, 2001; Swedish Government, 2005). However, the closer the discussion comes to the local scale, and actual wind mill siting situations, the less emphasised the climate argument seems to be. Instead issues of fairness, of local connections in wind farm development and of economic impacts are more prominent (although both these issues and climate issues can be seen on all scales). That wind power projects can contribute to local economic development is something that is often emphasised by project developers and others in favour of the development, as well as requested by local communities in the vicinity of development areas. This paper seeks to understand which these opportunities may be.

Creating opportunities for local economic development in connection to wind power developments can be a way of enhancing the local connection and a sense of fairness in wind power projects – two components which are considered essential to attain a positive public attitude towards wind projects (Aitken, 2010). The relationship between wind power development and local economic development is, however, not necessarily an easy one. Recent research has shown that proposals of different kinds of community benefits by wind power developers often are interpreted as bribes 'to

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silence local opposition' (Cass, et al., 2010, p. 267; see also Cowell, et al., 2011 and Aitken 2010). Local job creation and contracting is seen here as less controversial than if developers suggest community funds or benefits in kind (Cass, et al., 2010). There are also concerns that these kinds of schemes can undermine formal planning systems since planning permissions in this way can be perceived to be bought and sold or that developers can 'be held to ransom by local authorities' (Department for Communities and Local Government, 2008, p. 15, quoted in Aitken, 2010). However, despite these suggestions of bribery and coercion in connection to community benefits from wind power projects, there are still many arguments voiced in favour of wind power developers providing opportunities for local economic development. These arguments are explored next.

The presence of negative environmental externalities (visual-, aural-, landscape quality impacts etc.) from wind power projects to the communities in their vicinity is a recurring argument for community benefit schemes (see e.g. Munday, et al., 2011). 'Paying compensation' in this way to an affected community is one of three reasons that community benefits are mentioned in the UK governmental toolkit for 'Delivering Community Benefits from Wind Energy Developments'; the other two reasons are 'Being a good neighbour' and 'Sharing the rewards' (Centre for Sustainable Energy, 2009). 'Being a good neighbour' is here connected to PR issues for wind power in general and for specific wind power developments in particular, as well as corporate social responsibility issues. The rational for 'Sharing the rewards' arises from the perception that "the wind is a 'common' which no one owns, local communities should share in the rewards reaped from farming the wind blowing across their locality" (Cass, et al., 2010, pp. 262). The promotion of "wind catchment areas" (*vindupptagningsområden*) in land rental negotiations in the Nordic countries fits well with this reasoning. The idea of wind catchment areas is that a wind mill restricts further activities (e.g. more wind mills or buildings) from within a distance from the base of the mill. For that reason many wind developers in Sweden and Finland not only pay rent for the land where the mill is placed, but also to landowners within the wind catchment area. A further point that could be added to the 'sharing the rewards'-argument is that wind power schemes in most cases are to some degree funded by governmental grants or subsidies, and as such there are grounds for distributing benefits from wind energy to more stakeholders than just the owner of the wind mill. In line with this the Department for Communities and Local

Government in the UK argues for a community infrastructure levy from construction projects on the grounds that "Almost all development has some impact on the need for infrastructure, services and amenities, or benefits from it, so it is only fair that such development pays a share of the cost" (Department of Communities and Local Government, 2008, p. 473 quoted in Aitken, 2010).

Opportunities for local economic development through wind farm development is in some countries, so to say, built into the system. For instance, "…in Denmark and parts of Germany, 'community benefits' arise mainly from cooperative and farmer ownership of turbines (Toke, 2002; Breukers & Wolsink, 2007); in France, from increased local tax revenues attendant on designating wind energy development zones (Nadaï, 2007); and in Spain from company agreements to invest in the regional economy (CSE, et al., 2007, Zografos and Martinez-Alier, 2009)" (Cowell, et al., 2011, pp. 540). However, in other countries – e.g. the UK – this is not the case and researchers like Munday, et al. (2011) question whether local communities have the capacity "to 'plug into' the complex, supra-local technical systems of energy provision, governed by corporate actors and policy arrangements that operate at broader spatial scales … and capture economic benefits for local areas" (p. 1). In these countries it is instead up to the developers to propose and negotiate opportunities for community benefits. The aim of this paper is to investigate how wind power developers handle issues of local economic development in the framework of their projects and which, if any, community benefits they offer and focus on in their communication with the public. The study is carried out with the help of case studies of two wind farm areas in the County of Västerbotten in northern Sweden.

1. Research methods

The case study areas that are examined in this article, Gabrielsberget and Holmön, were chosen for several reasons. In a larger context, northern Sweden (also known as Norrland) is interesting to explore because the area has a long history of natural resource exploitation in the form of mining, forestry and hydropower activities. The extraction of resources here has often been carried out by large, private or state owned companies which send the resources, with only a low degree of further processing, and sometimes also the revenues to other parts of the country and/or the world (Westin, 2006). Over the years this has led to a colonialist rhetoric where "the North" is being exploited by "the South" and demands for larger compensations to communities in the north have been raised (see e.g. Berkelder, 2012). In the case of

hydropower this request was also granted. Since the 1970s municipalities affected by hydropower developments are entitled by law to so called *bygdemedel* which is a form of community fund paid for by the hydropower operators and administered by the County Administrative Boards. Being familiar with these kinds of arrangements, communities in the north are now also in the case of wind power asking for and often expecting some form of *bygdemedel* as compensation for possible inconveniences from the wind mills (Gradén, 2011). In reference to the colonialist argument, and in the context that many municipalities in Norrland are experiencing negative socio-economic trends, more far-reaching regional development opportunities have often been demanded for large scale wind power exploitation to take place in Norrland (see e.g. Hildebrand & Örnfjäll, 2002).

The specific areas chosen for the study – Gabrielsberget and Holmön – are of interest for different reasons. Gabrielsberget was chosen because the area has been developed in three different phases. The first two phases, here called Gabrielsberget S/N (the project started in 2002 and finished in 2012) and Gabrielsberget W (in planning stage), have been/are being developed by Svevind AB. The third phase, here called Ava Vindpark (in planning stage in 2012), is developed by Ava Vindkraft. People living near Gabrielsberget have consequently been in contact with wind power projects several times. The idea in this article is that people here, as well as the developers working in the area, have developed over time a maturity concerning which issues may be of interest to local economic development. The other area studied, Holmön (developed by Slitevind; in planning stage in 2012), is of interest because of the fact that much of the debate in the press has been about the socio-economic impact that the project may have on the Island of Holmön, with proponents speaking of positive effects of infrastructure development, land rents and community funds (Burén, 2011; Karlsson, et al., 2011) and opponents speaking of negative effects on the tourism business (Smeds, 2011).

The focus of the case study was on project documents that were released by the wind power developers concerning the two areas. For Gabrielsberget this consisted of the formal environmental impact assessment[8] for the first part of the park (hence forth called Gabrielsberget S/N) that was handed in to the authorities in the permission process and the material released about the second (here called Gabrielsberget W)

[8] This includes the material that the developers disseminated in connection to the public hearing for the project.

and third (Ava Vindpark) part of the park in connection to the formal public hearing for these. The documents from Holmön also consist of public hearing material. In addition to this, material from observations by the author during the public hearings for Ava Vindpark and Holmön has also been used.

The review of the documents and the observational material from the public hearings focused on statements from the developers concerning how the communities can benefit from the wind power projects. Only direct references to economic development opportunities were noted. This means that even though the impacts of wind power development on, for instance, the local tourism or reindeer herding industries may have considerable effects on the local economic development, the indirect effects were left out of the analysis. Hopefully, this can be the focus for a later study.

2. Local economic development and wind power

When it comes to local economic development in connection to wind power there are two questions that need to be addressed initially, 1) Who is part of the "local"?, and 2) What kind of "economic development"? The discussion about community benefits from wind power schemes will be the base for this discussion.

The target groups for community benefits are, according to UK government research, 'communities of localities' as opposed to 'communities of interest' (Centre for sustainable energy, 2009). The former are communities with a specific geographical position, e.g., that are close to a particular wind power scheme, while the latter are communities that, e.g., share a political view or have common ethnicity or interests (Centre for sustainable energy, 2009). This means that there can be just a select few individuals in a wider 'community of interest' that can receive benefits (Munday, et al., 2011) or that a 'community of locality' can include a range of different 'communities of interest' (Aitken, 2010; Cowell, et al., 2011). This can in turn create tensions and feelings of unfair treatment (Aitken, 2011; Gross, 2007). Another important point to consider is also that it is not just who actually receives the benefits that is significant, but also who is allowed to take part in decision-making processes and whose interests are considered (Cowell, et al., 2011).

When developing community benefit packages, developers often consult with the communities the packages are aimed at concerning the format of the benefits (Munday, et al., 2011; Cass, et al., 2010). An often provided community benefit by developers is a community fund (Munday, et al., 2010; Cass, et al., 2010). However,

according to Cass, et al., (2010) the most requested benefit by community members in their study was "that the energy produced by a RET [renewable energy technologies] installation will directly supply or benefit the local population as consumers" (p. 270). Other suggestions in the study were benefits in kind (a swimming pool was mentioned) and exemptions from local amenity taxes. The fact that there can be many different interests in the community can be a problem here. Aitken (2010), for example, writes that the developers and community members in her study "shared a common concern with generating meaningful, long-term benefits from the community fund, but this common concern did not translate into agreement about what would constitute a worth-while outcome or project" (2010, p. 6073). However, despite these results, Aitken still contends that "providing opportunities for local community members to influence and determine what form the community benefits should take is likely to have positive outcomes" (p. 6074).

Next, different opportunities for local economic development from wind power will be explored and assessed. Besides effects of direct investment from the project developer, such as employment opportunities in the projects, land rent and ownership revenues, these opportunities also originate from different kinds of positive externalities and spill-over effects.

3.1 Employment

Employment opportunities from wind power development can be divided into four different segments: 1) manufacturing, 2) development and installation, 3) maintenance and service, and 4) multiplier effects. Whether or not these jobs will mean employment opportunities for people living in communities where wind mills are being erected depends on the size of the communities and the existing industries and know-how in the area (Henningsson, et al., 2012; Pedden, 2006). Yet it can also depend on industry specific conditions, which Munday, et al. (2011, p. 6) point out: "warranty conditions mean that turbine makers tend to use their own staff for on-site maintenance and, with turbine management being largely automated, inspection needs are infrequent".

The first segment, manufacturing, includes both actual wind mill manufacturing as well as component manufacturing. According to Lantz and Tegen (2008) this is the segment that has the potential to contribute most to a long term local economic development. Two industry reports done in Sweden (Svensk vindenergi, 2009 and Ecoplan, 2012) support this claim. Both reports highlight the fact that Sweden has a

thriving manufacturing industry which could move into the windmill industry. A difference between the reports is, however, that whereas the first one (Svensk vindenergi, 2009) opens up for manufacturing of full scale windmills in Sweden, the second one (Ecoplan, 2012) is more focused on sub-contracting and manufacturing of components for windmills. Research on the subject indicates that the latter might be an easier niche to pursue, since the windmill manufacturers on the market already have strong positions and a decade's head start concerning experience and know-how (Munday, et al., 2012). For the manufacturing of components the Ecoplan report states that wind mill components will not make out an industry of its own, but be one of the several markets that the components manufacturer can target. From a local economic development perspective this might be an important factor since already existing industries might be able to seize this opportunity more easily than if the industry was built from scratch.

The second and third segment may provide local employment opportunities, such as regional consultants for feasibility studies and planning, engineering work or construction (Munday, et al., 2012). In the case of the development and installation segment, these are, however, only short term jobs during the development phase of a wind power scheme and, for both segments, jobs are contingent on what knowledge is sought after and found in the region. Smaller communities with fewer industries may of course have a harder time providing requested goods and services than larger communities (Henningsson, et al., 2012, Pedden, 2006). Distance to other communities and ownership structures may also affect how many goods and services for wind power schemes are purchased in the local community. If daily commuting from other communities is an option for workers, a greater loss of resources will occur than if they live near the work site (Henningsson, et al., 2012). Concerning ownership, it is said that local ownership will generate more locally bought goods and services then external ownership (Phimister and Roberts, 2012). Nevertheless, Lantz and Tegen (2008) found that, next to manufacturing, the maintenance and service segment has the best chance of providing economic development opportunities from wind power to local communities.

The last segment, multiplier effects, refers to secondary employment opportunities created for instance in the trade and service sector. According to Henningsson, et al., (2012) many studies indicate significant effects on this sector and that this effect is of great importance on the local level. This effect may not only come from a short term

influx of workers to a community, but it may also have a more long term effect if the wind park can be made into a tourist attraction.

3.2 Taxes

According to research by Brannstrom, et al. (2011) an important factor affecting people's views on wind power schemes in the state of Texas in the USA is how the tax system is formed. Not only is this view formed by opinions surrounding tax abatements for wind power, but also by how the establishment of wind power parks can, in this case, increase the tax base in the community. Tax policy differs of course from country to country which means that the local economic effect of tax systems also changes. Munday, et al. (2011 p. 6) writes in in connection to this issue that "unlike the cases of selected European countries [i.e. Denmark and Germany] where CSE, et al.. (2007a,b, 7) show that local benefits are closely linked into the fabric of schemes in the form of local tax payments, business rates are not returned directly to local authorities in the Welsh case". This is also the case with the Swedish tax system where business taxes go into the national budget as opposed to the municipal budget. However, the municipal tax in Sweden is based on local incomes, so any extra income as a consequence of a wind power project – e.g. through local employment opportunities or land rental incomes - will contribute to the municipality's tax base.

3.3 Land rent

Besides boosting the municipal tax base, having wind power placed on one's property also means a significant extra income on a household level. According to calculations from Sweden the land rental income normally corresponds to about four percent of the electricity generated (Henningsson, et al., 2012). Calculations from the US (Lantz & Tegen, 2008, 2009) and the UK (Munday, et al., 2011) set the sum at US $ 2700-2900/MW and around £10,000 per turbine respectively. Lantz and Tegen (2008, 2009) highlight that these kinds of property returns are higher than if the land were farmed instead. Several other studies make connections between farming and wind power indicating a symbiosis where wind power not only can contribute to the business income (see e.g. Henningsson, et al., 2012, Munday, et al., 2011, Pedden, 2006), but also mean the difference between being able to continue farming or quitting (Sower, 2006).

3.4 Ownership model

Local ownership is an important factor for economic development from wind power (Henningsson, et al., 2012). According to Lantz and Tegen (2008, 2009, referenced by Henningsson, et al., 2012) "locally owned wind parks (51-100 % local ownership) can generate 79 % and 164 % respectively greater local economic benefit, compared to external ownership" (p. 74, author's own translation). According to Lantz and Tegen this is both because revenues to a larger extent stay in the region, and because local owners are more prone to buying products and services within the region. The effect on employment opportunities by local ownership is said to be three times greater than by external ownership. Phimister and Roberts (2012) also highlight the importance of local ownership of wind turbines for local economic development opportunities. While their study shows that external ownership increases regional GDP, their calculations show that this increase has "practically no wider effects and, in particular, no effect on household incomes" (Phimister and Roberts, 2012, p. 351). Their results further indicate that community ownership has more significant spill-over effects and leads to greater increases in local household incomes and welfare at a community level, than in the case of local ownership, e.g., farm household ownership (Phimister and Roberts, 2012). This is due to the fact that local ownership mainly increases the income of the owner's household, with most of the extra money spent leaking out of the regional economy (Phimister and Roberts, 2012).

In achieving local ownership one can, however, encounter some difficulties. Phimister and Roberts highlight for instance that there can be "difficulties accessing sufficient finance and the nature and complexity of the planning process are likely to continue to inhibit the growth of community-led schemes" (2012, p. 351). Lantz and Tegen mention here a "threshold" when it comes to finding funds for wind power schemes for locals (quoted in Henningsson et al., 2012). Munday, et al., (2011) agree with these statements and add that there are risks involved for communities and investors "should the wind farm not perform as expected" (p. 9).

3.5 Community funds

Community funds are another, and increasingly more common, way of distributing benefits to communities hosting wind farms. The size of the fund is something that is negotiated between developers, property owners and the community/communities. According to Munday, et al., (2011) the money to the fund is usually "based on a fixed amount related to the installed capacity as opposed to actual generation capacity achieved" (p. 7). Swedish rural lobby group, *Hela Sverige ska leva*, recommends that

a yearly amount of at least 1 % of the gross value of produced electricity should be paid to community funds (Andersson, 2011). Although, research suggests that the amount paid today in Sweden usually lies between 0,2 to 0,5 % of the gross revenue (Wizelius, 2010). This percentage should be compared to the 4 % usually paid to property owners (Lantbrukarnas Riksförbund, 2011). The comparison with property owners is interesting since land rent can be said to benefit fewer people than community funds (Gradén, 2011), and because developers have said that they make a trade-off between money for property owners and for community funds: "the higher the amount to community funds, the lower the rent and vice versa" (Gradén, 2011, p. 90, author's own translation).

How the community fund should be administered and who can be eligible to take part in the fund and to what purpose are all things that are negotiated between local stakeholders. Cass, et al. (2010) writes in their study that respondents "generally expected that trusted local representative groups are approached to administer and disburse the funds, for example, through grants to local initiatives" (p. 265). In the study, a point is also made about avoiding the local authorities' handling the fund since that could mean that the money would get "squirreled away" in authorities' own costs (p. 265). Examples of local groups that could instead manage the funds are parish community councillors or area partnerships (Cass, et al., 2010), village interest organisations (Gradén, 2011), town councils or special committees (Munday, et al., 2011). When it comes to the next step, who can take part in the fund, the same problem occurs as with community benefits in general, namely, how is a community defined (Gradén, 2011). According to Munday, et al. (2011) most funds have some kind of spatial restriction here, e.g., the containing residents of councils or within view of wind parks (or power lines and access roads). Grant applications from residents or organisations in these areas are then further judged against specific criteria. In Sweden Wizelius (2010) suggests that registered societies and organisations' wind farm areas should be able to apply for grants from the fund and that the money should be used to further projects or community facilities. This fits well with the beneficiaries of community funds that were described by Munday, et al.: "sports clubs, churches, play and primary schools, community facilities (halls), local shows and events organisations. … Education and training is a recurring theme. … sustainable energy projects, especially energy conservation measures…" (2011, p. 7).

3.6 Other

In addition to the more conventional forms of local economic development opportunities described above, wind power developers also sometimes offer "contributions in kind" to local communities (Cass, et al., 2010). Contributions, or benefits in kind are goods or services provided for free or at greatly reduced costs by developers to a community. These kinds of measures may include anything from infrastructure or environmental improvements to tourism and recreational provisions (Centre for Sustainable Energy, 2009). Important to note is that these measures should be clearly separated from actions that developers are obliged to undertake to be able to get building permissions, e.g. mitigation of environmental impacts or road improvements needed for the actual wind power development (Centre for Sustainable Energy, 2009).

3. Opportunities for regional development of wind power projects

In studying the opportunities for regional development of selected wind power projects, the focus has first and foremost been on opportunities for the communities near proposed wind parks, second for the municipalities, and third for the counties.

4.1 Employment

Local employment opportunities are something that is mentioned in all projects except Gabrielsberget W. In the Environmental Impact Assessment (EIA) for Gabrielsberget S/N it is estimated that around 50 full time equivalent jobs will be created in the building phase. In the document it is said that there will be around 35 full time equivalent employment opportunities in the municipality (for building roads, foundations, and electrical wiring, etc.) and that two external experts have to be brought in to work with the project, but how the rest of the proposed full time equivalent jobs will be filled is unclear. For the operation and maintenance of the wind mills the company estimates that around four employees (electricians, etc.) will be required. Secondary effects can also include an increase in business in the service sector in the area. The developers of the Ava project do not announce any numbers for employment for the project, but they say that as far as possible they will contract local businesses. This is not, however, expressed as a way of benefiting the local community necessarily, but as a way of decreasing environmental pollution from vehicles. The Holmön developers on the other hand are very clear with the number of employees that the project might bring. Based on experiences from other wind power projects that have been carried out in the north of Sweden recently (i.e. Havsnäs and

Stor-Rotliden), this project is expected to generate four to six employment opportunities. It is of course unclear whether these people will live on the island or not, but the developers think that it would be a good idea if they could do so. It should be mentioned here that the island of Holmön only has about 60 residents, of which many are close to or above retirement age.

The windmills that have so far been erected on Gabrielsberget S/N are produced by a German company called Enercon. Which company will be the wind mill supplier for the other wind parks is unclear, but since there are no wind mill suppliers in Sweden, the companies will likely be situated outside of the country. Furthermore, in Västerbotten County there is no component manufacturing for wind mills either.

4.2 Taxes

The first part of the development in the Gabrielsberget area (Gabrielsberget S/N and W) was developed by a company that was registered in Umeå (Svevind AB). For the development in Ava and on Holmön, the developers are registered in counties outside of Västerbotten. The Ava development is run by a company called Ava Vind AB, which is registered in Stockholm County, and the developers on Holmön are called Slitevind AB which is registered in Gotland County. This indicates that Svevind AB has more of its activities, and in extension possibly more of its employees, in the municipality where the company is developing its projects, than the other two companies do. Since local staff will pay income tax to their home municipalities this company may contribute more to the tax base for the municipalities where the wind turbines will be built than the other companies.

4.3 Land rent

Land rent has, of course, been negotiated in all four projects. For Gabrielsberget S/N 24 property owners were affected by the park. With lots of small property owners on Holmön the situation for dividing land rent looks a bit different there than on the mainland where the properties are generally bigger. Slitevind has here signed leasing contracts with a broad amount of property owners, using the Swedish model for a wind influence area (*vindupptagningsmodell*), to easily be able to move the wind mills around during the planning stage.

4.4 Ownership model

Svevind promoted local ownership in their EIA, saying that the windmills would have a low production cost and therefore would be attractive as investment objects, and

that windmill ownership would help to give people better control of and lower energy prices. The project developers for Holmön also opened up for local ownership during the public hearing for the project and one of the project developers for Ava Vindpark pointed out that Örnsköldsvik municipality said in its wind power policy that the ambition should be to have local ownership in wind power projects in the municipality[9].

4.5 Community funds

All of the projects under development except Gabrielsberget W have announced that they will set aside money from the revenues for community funds (*bygdemedel*) that can be used by the people and organisations that are active in the communities surrounding the wind mill parks. For Gabrielsberget S/N there is already such a fund in existence - Ava *bygdemedel ekonomiska förening* - since October 2011 (six board members, two females, between 43 and 66 years old). For Gabrielsberget S/N it was said in the EIA that 0,3 % of the value of the yearly production from each windmill would go to the community fund. Furthermore, it was said that regardless of electricity production, a minimum amount of a fourth of the base value (alternatively 10 000 SEK/ wind mill/year) would each year go to the fund. The money in the fund was meant to be used "to further the economy or service in the area" (Svevind AB, 2006, p. 16). The main beneficiaries of the fund were to be people living in the villages nearby the park, but the developers also pointed out that the community concept was to be interpreted in a wide sense of the word. The fund was to be led by a board consisting of representatives of the wind mill park, the municipality of Nordmaling, and the villages and organisations in the area. The developers for the Ava project have not yet announced their thoughts on a community fund, but during the public hearing they said that the company in general uses community funds in their projects and that discussions on the subject are taking place in the negotiations with land owners.

The developers of the Holmön project have a somewhat clearer idea about a community fund. During the public hearing there was an exhibition which said that 1 million SEK/year should go to a community fund and that the money could be used to increase the attraction of the area through "cultural or tourism activities, attractive

[9] Of interest here may be that in other wind power projects in the area there has been examples where the municipality (e.g. Dorotea municipality) or the local energy company (e.g. Umeå Energi owned by Umeå municipality) has bought shares in the projects.

living conditions etc.". A slightly different figure (1 SEK/MWh/year) was used by the developers during their presentation. If the yearly production would amount to what the developers hope for (200 million kWh/year according to the documents in the public hearing) the community fund would receive 200 000 SEK/year. How the money would be distributed was not decided on at the time of the meeting, but it was stated by the developers that forming an local organisation to handle the money (a term referred to as *ekonomisk förening*) was a better alternative than having the County Administrative Board in charge of the money (which is common in the case of community funds related to hydro power). One of the developers also suggested during the hearing that the money from the fund should be combined with money from the EU to be able to get a larger regional development project going.

4.6 Other

When it comes to infrastructure it is mostly construction of new roads or improvements of the same and new connections to the power grid that are mentioned in the EIAs and public hearings. However, in the case of Holmön, an important piece of infrastructure that is being discussed in connection to the project is the ferry between the island and the mainland. According to the information in the public hearing exhibition, the project may lead to "improved conditions for the ferry". This, in turn, will increase the possibility for tourism activities, with more tourists and a longer season for commerce, logging etc., on the island because of improved ferry connections to the island. The developers aren't, however, ready to contribute with any funding for maintaining the ferry connection, but instead say that they have been in contact with the Swedish Transport Administration (who owns and runs the ferry) about the ferry connection and that they will continue raising and putting pressure on the issue. Something that the developers will, however, contribute to the island are roads that will be built to the wind mills. These are said not only to increase access for tourists to different parts of the island, especially the shoreline, but they are also to improve the conditions for forestry activities on the island. In connection to tourism and to the fact that city of Umeå will be the European Cultural Capital in 2014, the developers are also considering a special project in the wind farm called The Seven Wonders. In the project seven artists will have access to one wind mill each to make it into a "wonder".

4. Discussion

This study shows that wind power developments have, through direct investment or different kinds of positive externalities and spill-over effects, the potential to bring opportunities for economic development to host communities. However, how extensive the effect of these opportunities is depends largely on the project developer's willingness and knowledge of how to contribute to the local economy, but also on national policy and legislative systems and on the communities' efforts to request such opportunities. In the cases studied here project developers show initiatives to contribute to the local economy by opening up for local contracting and employment, offering community funds and the chance to co-own windmills, as well as proposing benefits-in-kind, such as tourist attractions and the possibility for locals to use the project's infrastructure for their own needs. Still, the conditions for realising some of these propositions seem vague – e.g. as in the case with the improved ferry connection – and sometimes they can even be misleading. An example of misleading propositions can be the employment opportunities that are said to be generated by the projects; the jobs may be there, but they might not be filled by local workers. Beyond this, project developers should also remember to include the local community in developing ideas for how wind power projects can contribute to the local community. This is especially true for the formation of community funds, but there might also be some opportunities for benefits-in-kind that the developer might overlook without the involvement of the local community. The system for dividing rents for land leasing might also be something that developers can discuss with locals.

The host community can also extend their chances of getting the most out of a wind power project. Demands on these kinds of projects does not only have to be formal planning rules, but can also consider requests concerning ownership models, as in the case with Örnsköldsvik municipality, or community funds. It might not be legally binding, but at least the developers will have to consider this request then. Another issue that host communities need to consider in order to make the most out of wind power projects is also how community funds are handled. Scaling up the amount of money in the fund with, for instance, resources from EU funds or the like might be a good way of making the most out of the money, as well as investing in something that might bring in further economic opportunities to the region. How host communities can further their own economic opportunities from wind power, both concerning

demands that can be made and how the effects of economic opportunities can be maximized, is something that should be further researched.

At a national level, state policy can also contribute to further local economic development opportunities. A tax system that exists so that the host communities will benefit from windmill installations might be something to consider, not just to split costs and benefits more evenly but also to help promote wind power policy on a broader scale (if that is the policy that the state endorse). A planning system that is favourable for local ownership of wind turbines might also be of value since this has shown not only to be of higher local value than external ownership, but also because approval rates of wind power schemes are higher with local ownership (again, if this is something that the state tries to obtain).

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