Report on the real case scenarios - testing measures from the WE Engage Toolkit

WISE Power project

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Reviewed by	Karageorgou Christina , Terna Energy S.A, Anne Murray, Comhairle nan Eilean Siar, Jennifer Ramsay, Local Energy Scotland, Aitor Madariaga, Acciona
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MAIN AUTHORS

Name	Organisation	E-mail
Mihaela Dragan	WindEurope	mihaela.dragan@windeurope.org
Dorina Iuga	WindEurope	dorina.iuga@windeurope.org

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Christina Karageorgou - Terna Energy, Madariaga Carrero, Aitor - Acciona SA, Lea Große Vorholt - 50Hertz Transmission GmbH, Kristof Debrabandere – Elia, Anne Murray - Comhairle nan Eilean Siar, Liz Montgomery - Lesmahagow Development Trust, Community representative, David Morrison - Community Engagement Co-Ordinator, Lewis Wind Power, Jennifer Ramsay - Local Energy Scotland.

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1. Introduction to real life project testing

The real life scenarios part consisted of engaging with 'real life' wind farm projects and other potential stakeholders (such as TSOs, local communities' owned projects) once the WE Engage Toolkit was finalised. The scope of this task was to see, to apply and test the measures provided in the WE Engage Toolkit either on real life wind farm projects or on projects already ended in order to do an ex- post evaluation.

Terna Energy and Acciona with the support of WindEurope, Dena, the Scottish Government and Comhairle nan Eilean Siar, Regional Authority for the Outer Hebrides in Scotland, and Fraunhofer are the main partners who accomplished this part.

2. Methodology

Five case studies have been chosen within this task: two case studies from the main project developers of the WISE Power project, Terna Energy and Acciona, one ex post evaluation of a grid project run by Elia and two community projects.

These projects have changed or evaluated their 'usual' engagement process as a result of the WE Engage tool, and in doing so they have looked at several aspects listed below through the means of an evaluation form set-up with the support of Fraunhofer:

- How the tool suggests and promotes additional 'measures' for use in a social engagement strategy,
- How these measures are used in a social engagement strategy and the effect this has upon the delivery of the full project,
- How this overall approach affects both the developer and how it affects public acceptance and opinion of the project,
- Evaluation of these case studies will include engagement with various stakeholders including community members (minutes).

All these features have been put in an evaluation form and are available for consultation.

3. Case studies

3.1 Case study 1 and 2: Terna Energy and Acciona

Terna Energy and Acciona, partners of WISE Power used the measures proposed by the WE Engage tool and applied some of these suggested measures at 2 selected wind farm clusters that covered different phases of a project, from planning, to construction and operation.

- Terna Energy SA : Dervenochoria wind farm project

The wind farms are located in the Municipal Unit of Dervenochoria, Municipality of Tanagra, Regional Unit of Viotia (Administrative Region of Central Greece). Two of the wind farms are located close to the community of Stefani (population of approx. 240 people), at a distance of 1, 2 to 5 km and the third is close to the community of Dafni (with a population of 101) at 0,7 km.

Other details: Cluster, consisting of 3 wind farms: Plagia Psiloma (15 MW), Mouggoulios (15 MW) and Mavroplagia- Kastro (17, 2 MW). The projects are adjacent to three operating wind farms (operated by the same developer).

Project phase (permits issued/ further permits required etc.): Installation licenses have been granted for the three projects since late 2015. In order for operation to begin, operation licenses are required, once construction and interconnection works have been completed. Construction works are underway (as of February 2016) and will be finalised by April 2017.

Development of project (time passed since project initiation /expected time till completion, difficulties/delays experienced/expected during permitting that can be attributed to lack of social acceptance of / poor social engagement in the project): In general the development of the projects has been smooth, within the time frame usually set for such projects by the Greek legal/licensing framework. No significant delays have been experienced, which can be demonstrated by the fact that within 1, 5 years form the first license (production license) in July 2014, the installation license had been acquired (late 2015).

Social and environmental details (expected/experienced reactions to problems): The developer has had a long lasting presence in the area (with already three wind farms in operation). Therefore, its development strategy has been adapted, to an extent, to satisfy the local community's expectations. In the early development phase of the projects that are now in operation, as well as during their construction, the developer faced the opposition of community members, mainly due to the perceived aesthetic & environmental impact of the projects, with arguments including the noise emission of the turbines, their impact on human health and on the reproductive performance of animals, the elimination of pastures etc. These perceptions were hard to overcome given the small size & conservative nature of the community. Gradually, however, through personal, day to day contact between the company and community members and mostly, though the introduction of benefit sharing schemes and sponsoring activities this opposition has faded.

- Acciona SA: Poniec II wind farms, Gostyn, Poland

The capacity of the wind farm is of 30 MW, with a number of 10 wind turbines of 3 MW each. This is a new infrastructure. The wind farm is located in the Poniec Municipality. The closest settlements are Sarbinowo (258 inhabitants) and Szurkowo (333 inhabitants). Sarbinowo is situated at a distance of 450 m to de closest turbine, and Szurkowo 650 m to the closest turbine.

Other details: Krobia I and Poniec II wind farms are two twin wind farms featuring 21 wind turbines in total, able to produce enough clean energy from wind to power more than 80,000 homes, thus avoiding the emission of 154,000 metric tons of CO2 a year.

Project phase (permits issued/ further permits required etc.): The wind farm is in the operational phase. All the legal requirements needed during the construction and operational phase have been acquired. Currently, monitoring campaigns regarding noise, birds and bats are being developed.

Development of project (time passed since project initiation /expected time till completion, difficulties/delays experienced/expected during permitting that can be attributed to lack of social acceptance of/poor social engagement in the project):

The environmental consent decision was received in April 2014 and the construction permit in October 2014. The construction works started in December 2014 and the completion date and installation of the last wind turbine was September 2015. In general terms, the project has not faced any major delay nor any major difficulty.

Social and environmental details (expected/ experienced reactions to problems): There have not been reactions to problems, and for the moment there are not disturbances to be expected. As regards the social impact with regard to the construction and operational phases, below are the main aspects:

Construction phase: road damages, land occupation and traffic disturbances (all these impacts have been assessed, mitigated and compensated).

Operational phase: Noise and vibration, bats and birds (these impacts are currently being assessed and mitigation measures will be outlined and implemented).

Moreover, a socioeconomic study for the analysis of the social impacts has been developed at the beginning of 2016. A Stakeholder Engagement Plan was developed at the beginning of this year, 2016.

Comparison of measures used by the two companies Acciona and Terna Energy

Figure 3.1.1: Type of measures implemented at real project sites (% relative to the number of measures)

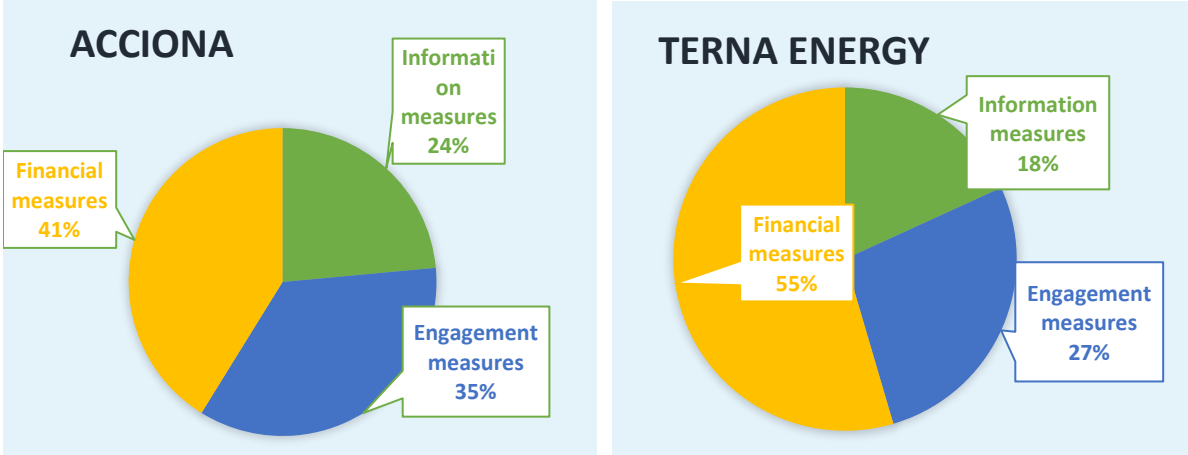


Figure 1 shows the proportion of each type of measure utilized by the two companies as declared in their evaluation forms. One can see that ACCIONA has a more balanced approach in the split of type of measures that were used, with 24% information measures, 35 % of engagement measures and 41 % of financial measures implemented. TERNA ENERGY, on the other side applied 18% and 27 % of information and engagement measures and as high as 55% of financial measures. The split above shows that every social acceptance strategy is unique and that there are differences in the country approach.

A concrete example of information measures that both Acciona and Terna Energy implemented is the creation of a **dedicated website** and blog that offers targeted information about the wind farms to all interested stakeholders.

Guided visits or open day visits to the wind farms are also ways of informing the citizens about future projects and their benefits. On one of these visits organised by Terna Energy, a group of students of the Technological Education Institute of Piraeus visited the W/F cluster of Dervenochoria. The students were guided around the operating wind farms and the respective substation by the company's site technicians, they were informed on the benefits of wind power and on technical aspects, namely on the principles of wind turbine operation, electricity production and distribution through the electric power transmission network. Such educational activities contribute to increasing awareness and acceptance of wind farms in general, especially among the young people, while at the same time they give people the opportunity to firmly express their views with regard to the specific projects. Given the success of this activity similar school visits, open days and exchange of views between the experts working at the wind farm and the students and citizens are envisaged in the near future.

Photo 1 and 2: Open days at the Poniec wind farm in Poland

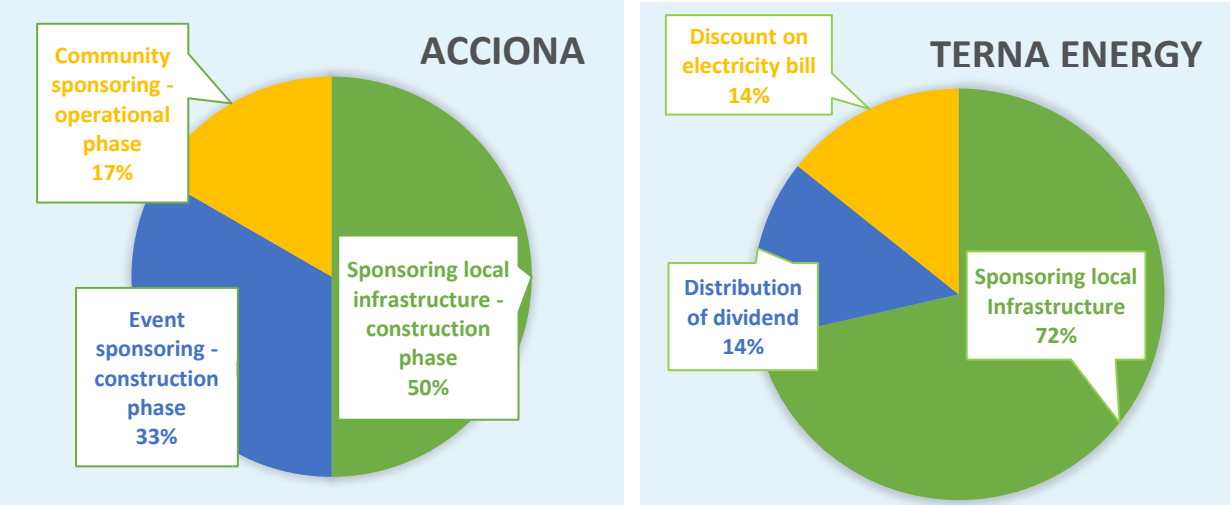

Photo courtesy Acciona

Photo 3 and 4: Open days visit/student visit at the Dervenochoria wind farm in Greece


Photo courtesy Terna Energy

Engagement measures: a good example of interaction with the local community is the set-up of a grievance mechanism, which is an instrument established to enable the local inhabitants raising concerns linked to the operation or construction of the wind project under development. In the same category of measures it is worthwhile mentioning the organisation of several meetings by Acciona with the local administrative bodies such as municipalities to decide together the best areas for social investments.

Figure 3.1.2: Financial measures applied by Acciona and Terna Energy (split per category, % relative to the number of measures described in the evaluation forms)



Concerning the financial measures adopted by each project developer, figure 3.1.2 above show us that in both cases more than 50% of the financial measures constitute resources allocated to the construction, consolidation or renovation of local infrastructure, such as schools, children playgrounds, roads, pedestrians' sidewalks or even churches. Money are also going to sponsoring social and cultural local event, for example in Poland musical activities for children and the young people.

In the case of TERNA ENERGY, compared to ACCIONA, there is also a discount on the electricity bill, which is imposed by law and applied during the operation phase of the project, but it does not appear to be the case in Poland. Other country difference can be observed, for instance the fact that ACCIONA offers a certain percentage of its annual wind farm net profits: 0.2 %, to the community, while TERNA offers 1, 7% of the selling price of the electricity, in a share of 80% to the local authority within the administrative boundaries of which RES stations are installed and 20% to the local authorities through which grid connection lines transcends. Again, these measures very much depend on the legal framework of each countries and the developers' practices.

3.2 Case Study 3: Grid project led by a TSO

An in-depth structured interview was held with a TSO, namely Elia/50 Hertz to examine a completed development of a grid project and see how and whether the WE Engage tool measures have been used throughout the process and where it could have added value, and ultimately increased acceptance.

The interview was structured around the types of measures used in the WE Engage tool: information, engagement and financial ones in all the planning phases, and focused primarily on the Stevin project.

The Stevin project[1] is run by Elia (TSO) and they expect to start the project end of 2017. The project consists of 380kV AC line/cable, length: 47km (12km new overhead line, 10km underground cable, 25km upgrade of existing 220kV line). The project also formed a pilot activity within the BestGrid

[1] http://www.stevin.be/stevin-in-het-kort/waarom-is-stevin-belangrijk/

project[2] . The environmental NGO BBL and Elia have retrospectively evaluated the stakeholder engagement and communication activities that Elia conducted between 2010 and 2015.

As regards the planning phases, as discussed and mentioned in the evaluation forms, TSOs might have an additional stage which is not listed in the planning phases of the WE Engage tool, which is actually the "**Needs assessment"**. This phase looks at

- Whether a lines needs to be built or not, given the amount of electricity that needs or not to be injected in the grid,
- The trajectory of the lines.

The type of lines to be used: high or low voltage, buried or overhead line.

The discussions held showed that most of the information measures were used by Elia in the site selection, planning and operation of the project. Measures foreseen by the WE Engage tool such as letter notifications, creation of the website, social media, mail drops and contact persons in place for each project were used for the Stevin project and are considered very useful. They are positively evaluated by TSOs and they should be part of a stakeholder engagement strategy.

In terms of engagement measures, both Elia and 50 Hertz apply the measures from the WE engage tool: public meetings, town halls, street walls, mobile exhibitions where they bring along experts to provide necessary information for the communities to understand the project and its possible challenges. Another type of measure used by Elia and 50 Hertz are '*world café'* meetings, meaning a group of people that would work and meet around round tables on several aspects of concerns for the citizens). In some of the meetings, depending on the topic to be tackled - one example could be the electro-magnetic field and their potential impact, etc. - 50 Hertz works with specialists from universities and research institutes, neutral to the project and independent, with a well-researched view. 50 Hertz involves local authorities and communities as well as NGOs and other interested parties. Again, these measures are applied case by case, depending on the type of project.

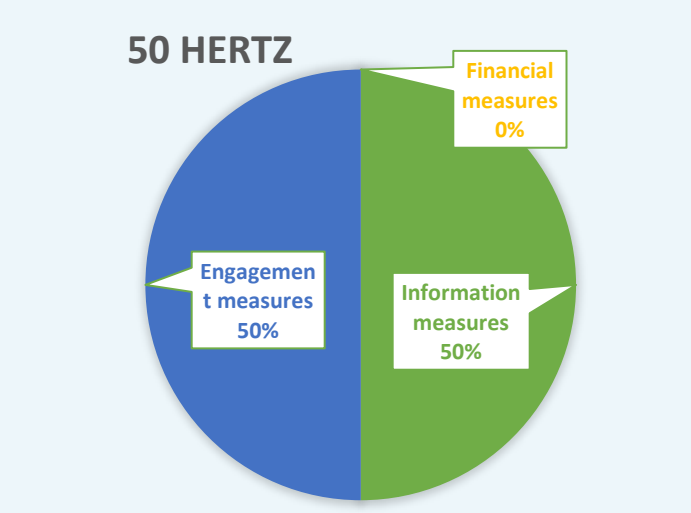
Some of the measures suggested in the tool are not used yet, namely

- the online consultations : they prefer instead public consultations so that all stakeholders have access to the documentation,
- and the house visits, the last ones being considered too time consuming and has a limited impact, on just one person versus a group of people.

[2] Launched in April 2013, BESTGRID was made up of five pilot projects located in Belgium, Germany and the UK. During the project, TSOs and NGOs worked together to improve local and public acceptance for grid development processes. Objectives of the project were to enhance transparency and public participation, to speed up permitting procedures by proactively addressing or even surpassing environmental protection standards, and to encourage the implementation of constructive public engagement in permitting procedures for European energy infrastructure "projects of common interest." Additional information can be found at http://www.bestgrid.eu/project.html.

As shown above, the vast majority of information and engagement measures are applied and considered standard measures by Elia and 50 Hertz. Both the information and engagement measures have an impact on the permitting procedure, however, in the case of the Stevin project it did not translate into shorter permitting procedures.

Figure 3.1.3: Type of measures implemented by TSO (Elia/50 Hertz)



In terms of **innovative financing measures,** such as community ownership, TSOs are different from renewable energy suppliers/utilities in the sense that TSOs do not sell a consumer product or service. Hence, it may not be entirely obvious with to define a financial tool that allows for financial involvement and thus engagement of locals. The amount of money involved also tends to be significantly higher than that of 'decentralised' renewable energy projects. TSOs do not have to be state owned.e.g. Elia group is stock market listed (with Belgian cities & towns owning about half of Elia's shares), as is for example National Grid.

However, in recent years, some TSOs have started to experiment and use new type of measures such as "green bonds", as an illustration of their role in the energy transition. This may signal a new type of financial involvement, but it does remain far from community ownership.

In theory, one could envisage potential co-investments from communities in TSOs infrastructure projects. For this to happen, there should be a more concrete answer to local communities to the "what's in it for me?" question (beyond a simple financial investment) and a more progressive approach from the TSO' s side regarding their interaction and relationship with local communities.

As innovative financial measures such as shared ownership as mentioned by the tool are not used by 50 Hertz and Elia, it cannot be assessed whether there is or not an impact on permitting procedures or social acceptance. Only the future will tell us whether going this route will be possible and will contribute to a shorter lead time.

3.3 Case Study 4 and 5: Projects with communities as full owner or shared ownership

This case study focused on projects either fully owned by the community or projects where the community has the potential to share the ownership by becoming a financial partner/investor.

The first project Stewart Energy Ltd, is a joint venture formed by Andrew Stewart (farmer and land owner) and Lesmahagow Development Trust (LDT) and has developed a three turbine wind farm near the village of Lesmahagow with support from the Scottish Investment Bank's Renewable Energy Investment Fund[3] (REIF). The 2.3MW wind project is 75% owned by Stewart Energy as a rural business and 25% owned by LDT as the local community.

A structured interview was conducted with the community representative of LTD who filled in a detailed evaluation form looking at the measures suggested by the WE Engage tool, at their utility and applicability. Since this is a small size project run on a volunteer basis, it was difficult to get the project started. However, LDT tried to see it as an opportunity to get involved in shaping the future of its community.

The income coming from the sales of electricity was the main selling point to the community whose aim is to become self-sufficient in terms of financial resources. So the driving force behind the project was to generate income for LDT objectives and accomplish number of concrete projects for the benefit of the wider community.

The area where the project was developed is known for its wind resources and the already existing wind farms, therefore there were not too many environmental concerns raised by the community as these aspects have been previously addressed in public consultations done during similar projects.

Opposition to the project was experienced from just 3 individuals and the discussions were linked mostly to property value.

The other project is the **Stornoway Wind farm**, owned by Lewis Wind Power (LWP), a joint venture between AMEC Project Investments and EDF Energy Renewables. The development was taken forward in partnership with The Stornoway Trust, who is the landowner. The Stornoway Trust is a community landowner, with trustees elected from residents within the area. The project consists of 36 wind turbines generating up to a total of 180MW.

The project is fully consented, nevertheless the connection to the National Grid is a matter of concern affecting presently the development of the project more than social or community acceptance issues. The project can only progress with the construction of 450MW HVDC link from Lewis to mainland Scotland. A decision on this is expected towards the end of 2016.

The consenting process included extensive negotiations with Scottish Natural Heritage (SNH) and RSPB over environmental concerns on two vulnerable bird species, the golden eagles and red throated divers having their habitat on a European protected site located close to the wind farm. Dialogue will continue through the construction and operation of the wind farm to avoid any adverse effects on these species.

[3] Additional information on the Scottish Renewable Energy Investment Fund is available at http://www.scottish-enterprise.com/services/attract-investment/renewable-energy-investment-fund/overview

Figure 3.1.4: Type of measures implemented at real project sites

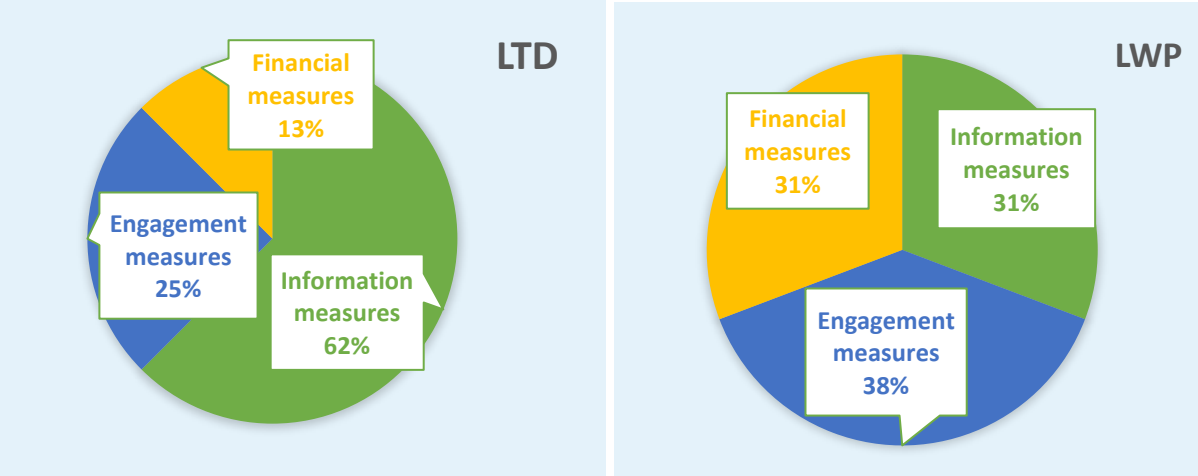
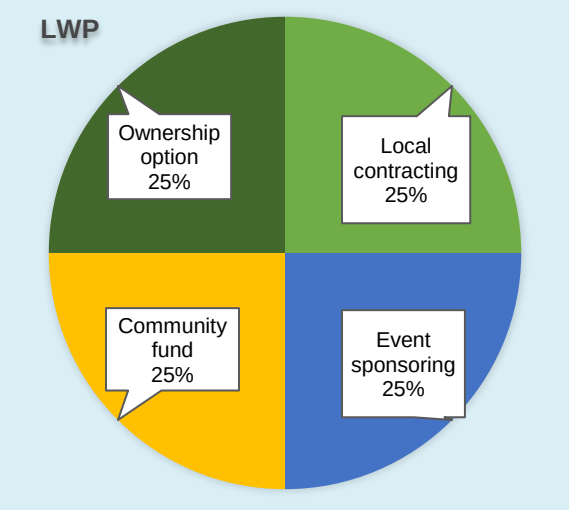


Figure 3.1.4 represents the types of measures implemented by LTD and Lewis Wind Power at the two projects. Taking into account the very different size and ownership scheme of the project, the pie charts above show two different approaches of social acceptance strategies for the two projects.

LWP has a balanced approach when it comes to the WE Engage toolkit measures: 69% information and engagement measures and 31% financial measures. The information measures relate to the creation of a dedicated project website and newsletter, press releases and mail drops. The engagement measures mostly refer to the organisation of public meetings or events, such as school visits or targeted workshops with the community to discuss the needs of the community and where the Community Fund money should go.

Figure 3.1.5 below shows that the financial measures include sponsoring activities and local contracting, but also the creation of a Community Fund with payments of approximately £5,000 per installed megawatt each year amounting to about £650,000 per year. A Community Trust is going to be established which will determine how these funds are distributed. Additional financial benefits will be distributed from the rental income (still under negotiation) but the rent will be dependent on generation output. There is also scope for the Community to take part ownership of 25% of the scheme, with the mechanism for this currently being explored.

Figure 3.1.5: Financial measures - split of measures per category (% relative to the number of measures)



LTD, is managing a project of just 2.3 MW that is fully owned by the community, thus no major opposition was registered from the community. The financial and human resources available for this project are limited and therefore the measures applied refer primarily to information and engagement, the creation of a dedicated website, social media campaigns and press articles. Regarding the financial measures, the profit gained from the electricity sales would be reinvested in other community projects.

4. Conclusions

The case studies showed that an efficient social acceptance strategy must be tailored for each project and flexible to adapt to each community specific needs. It must be inclusive and apply both information and engagement measures and last but not least, it must be willing to share financial benefits with the local community.

Both wind project developers involved in the Wise Power project Acciona and Terna stated that they would recommend the WE ENGAGE electronic toolkit to other developers and public authorities, so that they are fully aware of the measures that can be applied to raise awareness and increase social acceptance for wind farms.

The community owned project admitted that for a smaller scale project a tool such as WE Engage and its measures might be too extensive. In some case there were limits as regards the measures which could be used. They acknowledged that it would be helpful right at the start to see a list of possible measures, and to pick out those of relevance. It would be also helpful in the early stages to see the list of suggested options to ensure plans incorporate all suitable measures.

Generally speaking, local authorities are the link between the project developers and the community, therefore they play a very important role in the social acceptance strategy adopted. They are the ones that can help to adapt the information and measures to the real context, make suggestions to the developers and provide answers to the community, serving as a potential facilitator for a good engagement amongst key players: developers, communities, other parties with a possible interest at stake.

The measures proposed by the WE ENGAGE toolkit do contribute to raising social acceptance of wind farms. One can conclude as well that if well applied and thought they can contribute to shorter and smoother permitting procedures.

5. Annex I

The evaluation forms completed by each project described above are attached to this report (six in total).

The evaluations forms are only available for the Executive Agency for Innovation and Competitiveness (EASME).