Executive Summary Report

This executive report provides an abridged summary of the main outcomes of the Community Energy Projects 2012 Impact Survey.

Background

This study focuses on the social impacts of community owned renewable energy projects supported by Community Energy Scotland, and looks to use survey findings for reporting on the performance of this organisation with reference to their core values.

Community owned renewable energy projects are on the increase in Scotland, with the targets set in the Government's '2020 Routemap for Renewable Energy' for locally-owned renewable energy projects (Scottish Government, 2011), and the availability of funding and support networks throughout the country encouraging more communities to engage in renewable energy schemes.

Renewable energy schemes have been shown to have clear benefits for the communities they are based in, but whilst an increase in financial income for a community or reduced environmental damage as a result of cleaner energy technology being used can be straightforward to quantify and convey, social impacts are often harder to present in this manner.

Community Energy Scotland (CES) aim to support community based renewable energy developments through the provision of funding and practical help, and as such the capability to report on the environmental, economic and social impacts of their work is essential. The ability to show the benefits of community owned renewable energy projects is fundamental in getting more people involved in renewable energy, securing future provision of funding and support for the sector, and also demonstrating the organisation is delivering on core values.

It has become apparent that CES must look to report on the social impacts of the projects they have supported in a consistent and structured manner, with the report aiming to be a starting point for this framework, provide information on the social impacts so far seen by communities, and allow CES to report their performance on core values, which are as follows:

- Confidence
- Resilience
- Wealth
- Environmental Impact and Awareness

Methodology

Survey Design

Separate surveys were created for facility based projects (energy projects based in facilities such as community hall, leisure centres etc) and revenue based projects (energy projects designed to generate income for a community). This was due to the different data which could be gathered from each type of project, with the revenue generating projects offering a chance to collect different information about the use of the income generated. Respondents were asked to fill out the survey most suited to their project, or both surveys if their community group has been involved with revenue generating and facility based renewable energy projects.

Sample Selection

The survey used the online survey tool Survey Monkey, and was sent to 195 projects, with an opening date of 11th July 2012, and a closing date of 22nd July 2012, with a reminder sent on 19th July. In total for both types of surveys there were 77 responses started. For the facility based projects 56 out of 67 respondents completed the survey, and for the revenue based projects 7 out of the 10 respondents completed the survey, giving the total response rate for completed surveys as 63 or 32%. Incomplete survey responses were not included in the final results.

Where possible the covering letter and link to the surveys were distributed through the relevant regional development officers as this meant the community groups were receiving the survey from a familiar source, although there were some areas which required to be contacted directly.

Results

Through their work in supporting renewable energy projects, Community Energy Scotland aim to have a positive effect upon the confidence, resilience, wealth, and environmental impacts of communities. The results gathered by the survey have been used to inform the discuss below, which considers each core value in turn.

Confidence

A number of points which apply for both facility and revenue generating projects can be made using the information gathered for this section. Firstly, visiting similar project groups looks to be an important factor in increasing the confidence of the community. Being able to see firsthand what can be achieved by similar groups when an energy project is followed through to completion is influential in boosting the confidence of the group when starting out. Further to this, the opportunity to hear of any difficulties, receive advice, and ask questions of those who have done been involved in the process before will also contribute to a growth in confidence. The willingness of management groups to invest their time in visiting other projects appears to be beneficial to projects as a whole, and likely to increase the confidence of the group.

Secondly, for facility based projects, improvements in the facility and an increase in the range of users, number of users, choice of activities and general satisfaction with the facility is likely to positively impact upon community confidence. Those involved directly in the management group can experience an increase in confidence through the symbolic nature of physical improvements in a facility, confirming what they are capable of achieving. For the whole community an increase in confidence can stem from having a facility to be proud of, one which is potentially increasing the depth and breadth of cultural activity taking place through offering a wide range of activities for a range of people, with these changes being made possible through a community owned energy project. This point regarding facility changes is reinforced by the change in opening hours and facility user numbers experienced by many facility based projects.

Increased income as a result of the energy project can also impact upon community confidence. Additional income for a facility due to a renewable energy installation represents results of the work put in, with many communities indicating that they would be looking to invest this money back into their community. Sensible reinvestment of this money can lead to the more facilities within the community enjoying similar benefits to those outlined above, potentially with the same positive impact on confidence following. The ability of a community to generate enough income to reinvest in itself can, as demonstrated by those surveyed, clearly have a sizeable impact upon confidence.

For both project types, the increase highlighted in the external engagement undertaken by community groups also impacts upon confidence. Around two thirds of facility based projects and about 85% of revenue based projects reported an increase in external engagement with a variety of organisations and bodies. The experience offered in dealing with external decision makers to communities through involvement in a CES supported renewable energy project can greatly contribute to community confidence for similar situations.

Levels of interaction between residents generated by the energy project can also have an impact on community confidence. The survey results show that half the groups involved with facility projects and all of the respondents in the revenue generating survey had experienced increased interaction levels due to their renewable energy project. Often this displays a sufficient increase in confidence levels in the community's ambitions and ability to deliver on the project that leads to an individual considering it worthwhile investing personally in the development.

Similarly levels of involvement can also influence community confidence with almost half of facility based projects reporting an increase in this aspect. Again this highlights an increase in levels of personal engagement in the community and personal investment in the project on the part of community members which can be indicative of a positive impact upon community confidence.

Overall the results suggest that community owned renewable energy projects supported by CES can have a major part to play in the confidence of a community. Indeed 46 of the 77 respondents indicated that they felt there had been an increase in their community's confidence with regards to undertaking large scale tasks as a result of their involvement in an energy project. When considering personal engagement and investment, local participation, inward investment, external engagement, and the breadth of cultural activity being supported by a community, the results from this section can be taken in a very positive light.

Resilience

This section looks at the impacts of CES supported renewable energy projects on a community's resilience.

Consideration of the employment and volunteering opportunities available within a community can be very important when considering the overall resilience of a community. An increase in the number of these positions available within an area can lead to a strengthening of the economic base of that area, potentially allowing a community to retain it's population, improve the spending power of it's inhabitants, and even attract new business into the area. This can lead to increased investment and the development of new resources locally. With this in mind the overall increase indicated in positions available throughout the communities surveyed with both facility and revenue generating projects is very positive, especially as the majority of these positions are paid. The number of volunteer positions also increased overall, which suggests more opportunities for people to develop skills and capabilities in roles within the community.

Training opportunities were created for both facility and revenue generating projects. This increase impacts positively on the development options for the community through a widening of capacities of residents. Uptake of these opportunities should have the effect of increasing the skills and capabilities of the community population, leading to more employable individuals. Over time this should increase community resilience if people are able to apply the skills to new enterprises, take up a wider range of employment options, or even to attract other investment into the area due to the availability of these capabilities.

Within the project management groups specifically, skills and capabilities have been reported to have increased in over half of groups surveyed. As mentioned above this increase in community capacity hopefully points to a more self reliant and resilient community, a transformation which has come as a result of involvement in the community energy project.

The resilience of a community can often be measured, or at least indicated, by looking at the skills and capabilities of the residents, the breadth of the economic base, and the opportunities available. With this in mind the survey results highlight that community owned renewable energy projects can have an important positive impact in this area.

Wealth

This section will discuss the impacts renewable energy projects have had upon community wealth. Tracking the flow of money saved and/or generated by a project can be a large undertaking, and complicated, potentially requiring a lot of time and input, but in the time allowed for this study it was still possible to gather valuable information surrounding the manner in which additional income was utilised.

With 30 of the respondents from facility projects reporting that they had made savings of various sizes, it is clear that a community's involvement in their own renewable energy project can increase their wealth. With over half of all the respondents being based in small rural areas with populations under 3000, the savings made through their renewable energy projects will likely have a substantial

impact. Further to this 22 of the respondents indicated that they would be investing the savings made internally. The internal investment indicated is important as it leads to consolidation of both the impact of this increased wealth, and the contribution of the community's renewable energy projects to the wealth of the community, through encouragement of local investment leading to the multiplier impact discussed previously and spend retention, which prevents money generated locally leaking back out of the area. Instead the money has been spent on further facility improvement, staff salary costs, and the creation of additional part time jobs for example. Money being spent in this manner is far more beneficial to the community and is facilitated due to the income they have generated belonging to the community.

A similar effect can be seen for revenue generating projects with the majority indicating that they expect a substantial net profit (the only uncertainty being 1 project indicating an expected profit of between £0-24 999). All the respondents indicated having established priority areas for reinvestment of this income within their community. As with the facility projects discussed previously, it becomes clear that local investment, spend retention, and multiplier impacts can be prominent features of community owned renewable energy projects. A carefully planned priority investment strategy, possible as the project and therefore the income is community owned, can continue these multiplier impacts beyond the time period of any initial income.

Further to this, the impacts on community wealth of renewable energy projects can be seen with consideration of the utilisation of local businesses and local materials. With the majority of respondents for both project types indicating they had used local services, local spend and investment and multiplier impacts can again be considered relevant outcomes. Utilisation of local services and materials saves the need to spend money externally, potentially increasing the spending power of local businesses and workers, as well as increase the sense of community ownership of the project. Use of local materials can also have added positive impacts on the cost to the project group in that transports costs can be reduced. In the case of some island based projects costs may actually be inflated through buying locally (for example higher fuel costs), but the group that mentioned this were willing to cover these extra costs if it benefitted their local area.

Increased leverage as a result of the project was reported by 61% of facility groups and 71% of revenue generating groups. This highlights the potential of community energy projects to be a starting point in attracting greater investment into the area. It is possible that the presence of a successful project and the increase in the capabilities and confidence considered earlier has helped with the process of acquiring these funds, and has had a positive impact on the overall wealth of the community.

In summary, the CES core value of wealth looks to strengthen the economic position of a community through development of a renewable energy project. For revenue generating installations this is a clear aim of the project, but this improvement in finances can also be seen for a large number of facility projects. Careful reinvestment of the additional income, demonstrated by CES supported communities in the development of priority investment lists and reinvestment in their facility, and use of local services and materials can lead to knock on effects through retaining spend in the local economy and the multiplier impacts this brings. The study results indicate that project groups appear conscious of this, and as such it can be suggested that CES delivers on the core value of increasing community wealth through support of community owned renewable energy projects.

Environmental Impacts

There is clear potential for community owned renewable energy projects to reduce environmental damage, with fossil fuels being replaced by 'cleaner' technology, or insulation projects reducing energy consumption for example. Of those surveyed 62% of facility projects and 57% of revenue generating projects indicated there had been a reduction in their carbon dioxide emissions levels, highlighting the benefit of this substitution. Just over half of facility project respondents and over a quarter of revenue project respondents indicated that the installation of their renewable energy project had led to their energy use being reduced, displaying that projects assisted by CES can clearly be shown to have a positive environmental impact for communities.

The increase in awareness surrounding a number of environmental issues for communities involved with both project types may also work to reduce future energy use and CO2 emissions, with renewable energy options and alternatives in the home being given greater consideration by those exposed to them through the community renewable energy project. Any future developments in the community, not just those related to renewable energy, may also be taken forward with a view to reducing environmental impacts as a result of the community's involvement with this project.

A number of positive environmental impacts can be seen to be happening as a consequence of an increase in community renewable energy projects; indeed this is one of the easier areas to quantify. Through supporting the substitution of fossil fuels with renewable energy technology, there are clear signs that the projects CES have been assisting have had positive environmental impacts, reducing both CO2 emissions, and energy use.

Recommendations

- The need for an ongoing monitoring process to be integrated at an early stage of contact with applicants. This will involve the identification of key areas related to social impacts from the discussion above, and ask groups to be aware of these areas, reporting information back to CES from the beginning of their project. This will likely necessitate changes to the application forms.
- A structured and consistent process for updating this information over the course of a projects lifespan. This could involve contact with project groups at 6/12 month intervals after construction of the renewable energy technology is complete in order to gain a greater understanding of the social impacts of their project, as well as increase the ability of CES to build a database of social impacts across a large number of the projects they have supported. This process could become a requirement for groups when submitting claims, and as part of the aftercare.
- The above recommendations will lead to a greater ability to report on social impacts which may be common to almost all projects. Beyond this there is scope for more in depth case studies into selected projects. This could allow for a far greater understanding of one specific case, and would potentially mean that what, for example, causes the increases in community interaction, or the further effects of offering new activities at a facility, could be investigated. However this would be very time intensive and may be better suited as an academic study unless there was a specific organisational need for it to be undertaken.

Conclusions

The report aimed to assess the social impacts of community owned renewable energy projects. Having looked at different areas of social impact, the results were used to report back on the deliverance on core values of Community Energy Scotland. Beyond ascertaining whether CES had delivered on core values, the results can also be used to highlight the importance and benefits to the communities of the projects supported by CES, which can provide valuable input when looking to secure the future provision of funding and support in this sector.

Overall the results of the study have been very positive. On the whole the community groups contacted were very positive about their project and their involvement with CES.

Regarding the specific core values of CES of increasing the confidence, resilience and wealth of communities, as well as having a positive impact on the environment through renewable energy projects, the organisation is delivering. Confidence of communities has clearly improved. In a number of cases boosted by contact with other similar project groups, communities have become more confident through the delivery of their project, with facilities being improved and used by a greater number and wider range of people. Savings for facilities have also been increased by CES supported projects, with money reinvested in facilities and the community often leading to further improvements. Interaction and involvement within these community groups was consistently reported to have improved due to the energy project, and crucially well over half of groups said that their confidence in dealing with projects of this nature had increased.

Resilience of communities also looks to have been increased through energy projects being developed. A number of communities reported increases in the voluntary and paid employment positions available in the area as a result of their project, as well as new training opportunities. Skills and capabilities often improved, with this being especially prominent in the case of those involved in the project management groups, leading to the conclusion that communities can develop stronger economic bases and a greater range of development options through involvement in these kinds of projects.

Community wealth also appears to benefit from community owned renewable energy projects. Savings were reported by many of the facility based projects, whilst the revenue generating projects were expected to return a healthy profit for their communities. Often the quantities of savings likely to be made were substantial , especially when considered in relation to the size of populations they were serving, and it was common for the income being generated to be reinvested locally potentially leading to longer lasting benefits. This idea of retaining spend was also relevant to the use of services and materials, with many project groups looking to source these locally, meaning the benefits of their energy project was not just confined to a directly attached facility, or the segment of the community directly involved in the project. Overall, communities looked to be in a stronger financial position due to their energy project.

Finally, the change in impact on the environment of the projects surveyed was positive. Although the reductions in energy use and CO2 emissions are an expected outcome of a renewable energy project, it is encouraging to also see projects reporting that awareness of the potential uses of renewable energy technologies and renewable energy in general has increased within their

community. Longer term benefits may also arise in areas where the energy project has encouraged others within the community to reduce to environmental impact of their homes.

The projects surveyed highlight that Community Energy Scotland is indeed delivering on it's core values. As discussed above, longer term studies would be of further value with communities being made more aware of, and therefore more capable of monitoring, the social impacts from the outset of their projects. This will help deliver a more extensive reporting framework on social impacts for the organisation, further highlighting the important work done by CES in the area.