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## The Role of Social Enterprise in Renewable Energy Production

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# Working Notes

facts and analysis of  
social and economic issues

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# The Role of Social Enterprise in Renewable Energy Production

Gerard Doyle

## Introduction

Natural resources – water, energy and fertile soil – are fundamental to our life on earth. Many environmentalists – for example, Tim Jackson<sup>1</sup> – believe that at the heart of the environmental crisis we are experiencing, and which is manifesting itself in so many ways, lies over-consumption of the earth's resources. In 2009, for example, it was estimated that humans were extracting and using in excess of 50% more natural resources than was the case thirty years previously.<sup>2</sup>

This level of consumption is leading to deforestation, species extinction at an alarming rate, shrinking of our natural water resources and climate change. In order for people in both developed and developing countries to live fulfilled lives, there is need to reduce over-consumption wherever it occurs and, in essence, to live more sustainably. Failure to do so will lead to increased pressure being exerted on ecosystems and may ultimately result in large swathes of the earth becoming uninhabitable.<sup>3</sup>

In his encyclical letter, *Laudato Si': On Care for Our Common Home*, Pope Francis documents the relationship between environmental degradation and global inequality.<sup>4</sup> He speaks of the requirement to replace the culture of consumption with a more humane and ecological model of economic development which meets all of humanity's essential needs.

This article asserts that social enterprise can play an important role in addressing many aspects of the environmental crisis. The particular focus of the article is the contribution which social enterprise can make towards combating climate change through the development of renewable energy projects.

## Definition and Focus of Social Enterprise

'Social enterprise' has been defined in many different ways. However, a widely accepted definition is that a social enterprise is an independent, autonomous organisation that engages in economic activity to realise a social objective.<sup>5</sup>

Social enterprises are democratic in that they are controlled by their members. These enterprises express their commitment to their social goals by limiting the distribution of surplus income to members, and instead reinvesting this for future development. Social enterprises can take many forms including co-operatives, mutuals and foundations.<sup>6</sup>

John Pearce<sup>7</sup> suggests that social enterprises are more concerned about protecting the environment than are private enterprises, since the success of social enterprises is measured in terms of their economic, environmental and social impacts as opposed to the maximisation of profit for owners, which is the fundamental objective of conventional private enterprises. Furthermore, social enterprises have close connections with the communities in which they are based and are often controlled by local residents.

## Social Enterprises and Renewable Energy

The arguments for promoting renewable energy social enterprises (also referred to as 'community energy') include:

- Social enterprises can play an important role in increasing public acceptance of renewable energy, particularly wind energy,<sup>8</sup> because the benefits to communities are visible.<sup>9</sup> Danish research has found that people who have shares in wind turbines owned by social enterprises are more positively disposed to the construction of additional turbines than those who have not invested.
- Social enterprises can also play an active role in educating the public about renewable energy<sup>10</sup> and the importance of adhering to more sustainable lifestyles where households have a lower carbon footprint.
- Social enterprises provide ordinary citizens with the opportunity to develop renewable energy projects. Research into public attitudes towards renewable energy projects in the UK indicates that people would welcome the opportunity to have greater involvement in renewable energy development. However, it also reveals that people are conscious that in

order for communities to become involved there is need for appropriate structures and supports to facilitate this.<sup>11</sup>

- Social enterprise can contribute to EU Member States attaining their EU renewable energy targets.
- Social enterprise energy development is an effective mechanism for creating employment and for rural regeneration.<sup>12</sup>
- The provision of energy through social enterprises reduces the risks to communities of disruption of energy supply due to geo-political factors.<sup>13</sup>
- The provision of household heating through social enterprise communal heating schemes results in participating households being less at risk of experiencing fuel poverty.

### **Barriers to Establishing Renewable Energy Social Enterprises**

Research in the UK has identified a number of issues which can act as significant barriers to the establishment of renewable energy social enterprises. These include:

- Securing expertise in setting up an appropriate legal structure and testing feasibility; acquiring expertise in renewable energy technology.
- Securing appropriate finance, particularly for large-scale renewable energy projects.
- Difficulties in getting connected to the national electricity grid.
- Lack of state incentives to promote small-scale renewable energy production.
- A failure on the part of local authorities to promote community renewable energy projects and their reluctance to grant planning permission for such projects.<sup>14</sup>

Irish communities endeavouring to establish renewable energy social enterprises encounter similar barriers to those outlined above. The result is that, so far, a relatively low number of renewable energy social enterprises have been established in Ireland.

In 2011, there were only 30 renewable energy social enterprises at either operational or planning stage in Ireland.<sup>15</sup> One of these is the Camphill Community in Ballytobin, County Kilkenny, which generates all of the heating requirements of the community's buildings from waste organic matter

in a process called anaerobic digestion. Another is the Cloughjordan Ecovillage whose heating system is fuelled by wood chips.

The barriers Irish communities encounter in developing renewable energy social enterprises as compared to their counterparts in other European countries is exemplified in the process for gaining connection to the national electricity grid in Ireland as compared to Denmark. A renewable energy social enterprise in Denmark can be connected to the national electricity grid within one week of submitting an application;<sup>16</sup> in Ireland, the process can sometimes take years to complete.<sup>17</sup>

### **How It Might be Done**

Ireland can learn a great deal from other countries about how communities can, through social enterprise development that is supported by national policies, embrace renewable energy and in doing so fortify their local economies and strengthen community self-reliance.

#### ***Denmark***

A high proportion of Denmark's wind power capacity is owned by 'local partnerships' and guilds (legal restrictions on ownership structures in Denmark mean that joint ownership of wind turbines takes the form of a general partnership/full liability company rather than of a 'co-operative'<sup>18</sup>). In 2002, these groups owned 5,600 wind turbines, the output of which represented 23% of Denmark's wind capacity in that year, and equated to 14% of the nation's electricity consumption.

A key factor in the growth of these local partnerships was the formation of the Danish Association of Wind Power Guilds (DV), a non-profit, independent association of local wind farm groups. DV has played an important role in advocating for a benign environment for the growth of the social enterprise sector in wind energy production and is responsible for representing the sector's interests in interactions with local authorities, utilities and wind-turbine manufacturers.

Wind energy social enterprises in Denmark developed from informal interactions amongst residents. The process for establishing wind farms has generally entailed the following steps:

- A local person has the idea of establishing a wind farm;

- She/he gets the assistance of a few other residents;
- They find a small number of farmers living in close proximity willing to erect turbines on their farms;
- They gain community support for the initiative at a series of public meetings;
- They join DV and it provides advice on legal issues and assists with the formation of the social enterprise.



*Wind Farm vs Power Station?*

*iStock Photo © stevotin*

In addition to the generation of wind power, social enterprise groups in Denmark play a central role in the operation of district heating systems in areas outside the country's major cities.<sup>19</sup> Denmark's Heat Supply Act of 1979 obliged local authorities to formulate heating plans.<sup>20</sup> This stimulated major investment in heating networks, and local authorities were mandated to require consumers to connect to new district heating systems. As a counterbalance to consumers being compelled to switch to district heating systems, social enterprises in the form of consumer co-operatives were formed to manage these schemes, thus ensuring consumer control. Since the co-operatives are not-for-profit operations, heating costs are kept to a minimum: prices are set on an annual basis and are calculated to cover costs only. Any surplus that accrues is re-invested in improving the district heating system or in reducing prices.

One analysis of the policy concluded that 94% of the heat sold by Danish district heating systems was cheaper to customers than alternative heating systems fuelled by oil or natural gas.<sup>21</sup> This analysis has also concluded that the fact that the heating schemes are provided by social enterprises ensures that a breakdown of the system is not as financially onerous for households as would be the breakdown of an individual, household-owned, heating system.

Furthermore, the democratic structure of these district heating systems means that members, who are also consumers, have an input into the governance and operation of schemes.

David Connolly, Associate Professor, Aalborg University, Denmark has co-ordinated an EU study which developed a heating strategy for Europe for the year 2050. During this study, his research team created the first ever pan-European heat atlas to identify where district heating is feasible in Europe. The results for Ireland indicate that approximately one-third of the heat demand in this country is in areas where overall demand is sufficiently high to allow for the development of district heating.<sup>22</sup> It has been estimated that if district heating were to be fully pursued in Ireland, this would save approximately €400–€500 million per year on the country's fossil fuel import bill.

### **Germany**

At a seminar organised by the Society for Co-operative Studies in Ireland in 2014, Andreas Wieg, Director of the Executive Staff Department at the German Cooperative and Raiffeisen Confederation, spoke about the role and development of energy co-operatives in Germany. The number of such co-operatives has increased dramatically since 2008: in that year, there were just 67 but by 2013 there were 717, with over 200,000 members.

A number of drivers have contributed to this growth. These include legislation and public policy which set in place incentives such as a feed-in tariff guaranteed for 20 years and an obligation on grid owners to purchase energy from renewable energy producers.<sup>23</sup> Furthermore, the growth of community energy in Germany has taken place against a background of a long tradition of co-operative enterprise.<sup>24</sup>

The German experience has highlighted some specific factors which contribute to the creation of a successful energy co-operative:

- A good organisational structure;
- The involvement of local people (as this reinforces the mutual benefit);
- Support for, and from, the local economy, including engagement with a range of different interests and stakeholders;
- Recognition that social justice is also a goal of this energy process – as there is a focus on members' needs;

- Ensuring stability and relatively low risk for members and potential members.

By the end of 2012, German citizens through renewable energy co-operatives owned an impressive 40% of total German renewable energy capacity.<sup>25</sup>

### **Scotland**

The Scottish Government has set a target of meeting 30% of the country's overall energy demand from renewable sources by 2020 and ensuring that, by then, '100% electricity demand equivalent' will be met from renewables. In the achievement of this goal, it sees an important role for social enterprise energy projects: it has announced that it intends to achieve 500 megawatts of community and locally-owned renewable energy by 2020.<sup>26</sup> Implicit in this approach is recognition that community-owned renewable energy can provide a range of benefits beyond securing a source of energy.

Towards achieving its aim of having community groups play a significant role in achieving the country's renewable energy goals, the Scottish Government established, in 2011, the Community and Renewable Energy Scheme (CARES) to provide loan finance to communities intending to establish community-owned renewable energy projects. This scheme aims to provide loans towards the high-risk, pre-planning consent stages of renewable energy projects. The scheme is managed on behalf of Scottish Ministers by Community Energy Scotland Ltd. A key feature of the loan finance is that security is not required. Another important element in the support for renewable energy social enterprise in Scotland is the information, advice and expertise provided to enterprises by the NGO, Community Energy Scotland.<sup>27</sup>

### **Conclusion**

Compared to Denmark and Germany, Ireland has an under-developed renewable energy social enterprise sector. In different ways, the State, community and voluntary organisations, third-level institutions and religious bodies can and should support the development of this sector.

If this support is forthcoming, then a range of economic and social benefits will accrue to households, communities and to the State itself – benefits which will not be realised if the private sector is afforded, either by design or default,

the primary responsibility for reducing Ireland's dependence on fossil fuels.

For the necessary change to come about, the Irish State will need to place a greater value than it has heretofore on the additional impacts that renewable energy social enterprises can generate compared to conventional private enterprises. The White Paper on Energy due to be published before the end of 2015 will indicate the role the State sees social enterprises performing in reducing Ireland's dependence of fossil fuels.<sup>28</sup>

The State should prepare a strategy for developing a vibrant renewable energy social enterprise sector; this should include:

- A national target for the level of energy output to be generated by social enterprises.
- A policy framework to mandate local authorities to draft robust energy plans that would place social enterprise at the centre of Ireland's transformation to a low carbon society.
- A policy on public procurement that would enable and encourage State agencies to procure renewable energy from social enterprises.
- Proposals to streamline the bureaucratic process associated with getting a connection to the national electricity grid.
- Funding to resource a third sector intermediary body that would provide expertise to communities committed to establishing renewable energy projects.

It is incumbent on civil society organisations, including community groups and religious organisations, to campaign for a more enhanced role for social enterprises in Ireland's transition to becoming less dependent on fossil fuels and also to provide leadership to their members to collectively strive to initiate renewable energy social enterprises. In his encyclical letter, *Laudato Si'*, Pope Francis highlighted how, in many places, co-operatives are producing renewable energy,<sup>29</sup> thus meeting the energy needs of their communities and at the same time demonstrating that there is an alternative to the model of economic development that currently prevails.

New models of finance are required for social enterprises to secure the necessary capital to establish a renewable energy initiative. Community organisations, co-operatives, the credit union

movement, trade unions, philanthropic bodies and religious groups can play a role in the design of these new models and in providing necessary seed capital.

With regard to research, third-level institutions should undertake rigorous action-based research on social enterprise and sustainability, including renewable energy. This research would provide the bedrock for lobbying the State for policies and supports that are essential for enhancing the vibrancy of renewable energy social enterprises.

If the above recommendations were to be implemented then social enterprises in Ireland would be in a position to emulate what has occurred in Denmark and Germany where social enterprises have been central to the transition away from fossil fuel dependence.

## Notes

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2. Friends of the Earth Europe, Global 2000 and Sustainable Europe Research Institute (SERI), *Overconsumption? Our Use of the World's Natural Resources*, 2009. ([https://www.foeeurope.org/sites/default/files/publications/FoEE\\_Overconsumption\\_0909.pdf](https://www.foeeurope.org/sites/default/files/publications/FoEE_Overconsumption_0909.pdf))
3. *Ibid.*
4. Pope Francis, *Laudato Si': On Care for Our Common Home*, Encyclical Letter, Vatican City, 24 May 2015. ([http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html))
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16. Erik Christiansen, Chairman of Middelgrundens wind energy co-operative made this point at a seminar in Dublin hosted by the Society for Co-operative Studies in Ireland in 2014.
17. This point was made in a submission by number of NGOs (including Feasta, Comharchumann Fuinneamh Oileáin Árann, and Tipperary Energy Agency) in relation to the Green Paper on Energy Policy in Ireland.
18. Mark Bolinger, *Community Wind Power Ownership Schemes in Europe and their Relevance to the United States*, Berkeley, CA: Lawrence Berkeley National Laboratory, 2001.
19. A district heating system works like a domestic central heating system only on a larger scale. Water is heated using a boiler located in a central heating plant. The heat is distributed to the customer via an underground network of insulated pipes. The water in the network is continuously circulating and therefore heating is always available to the householder.
20. The Heat Supply Act of 1979 stipulated there would be municipal heat supply planning in each municipality, a new natural gas infrastructure, a substantial increase in district heating, and that district heating should move from fossil fuel boilers to combined heat and power plants and renewable energy.
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29. *Laudato Si', On Care for Our Common Home*, § 179.

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