CHAPTER 3

Community Renewables: Balancing Optimism with Reality

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3.1 Introduction

Frequently lauded in the wider UK context, the evolving phenomenon of Scottish community energy is also increasingly receiving international attention, with the Scottish Government’s flagship community energy fund recently highlighted by the Organisation for Economic Cooperation and Development (OECD) as a ‘pioneering’ example of bottom-up policy approaches to renewable energy (OECD 2012). Starting from a few scattered projects in the 1990s and early 2000s, the rate of uptake of Scottish community energy—both in raw capacity (kW) terms and in terms of absolute number of projects—has been roughly exponential, equivalent to a growth rate of almost 30% per year. However, this needs to be balanced against the observation that community-owned energy still contributes less than 4% of Scottish onshore renewable energy generation. In this chapter, we explore the context in which community ownership has developed, the rhetoric of community in Scottish policy, the wider regulatory and policy context, the roots of community energy policy, the diversity of practice, the implications of

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increased devolution on community energy policy, the actual and potential benefits arising from community energy and the obstacles to increase its share of the renewable energy market in Scotland.

3.2 CONTEXT: HISTORY AND DISCOURSE

The evolving story of Scottish community energy cannot be seen in isolation from a widely articulated discourse about community empowerment that has evolved over the last 30 years and which has, although it extends beyond Scotland, taken a distinctly Scottish dimension. Although the dominant perspective of community empowerment in the latter half of twentieth-century Scotland related primarily to rural land in a challenge to Scotland’s distinctly concentrated pattern of land ownership (Wightman 1996), by the second decade of the new millennium, the reach of Scottish-branded community empowerment had been extended to embrace much wider arenas of policy. Community empowerment, which first found legislative expression in the Land Reform (Scotland) Act 2003, is reiterated as a framing concept in the land use strategy and now underpins the Community Empowerment (Scotland) Bill which, after a substantial period of consultation, was introduced to the Scottish Parliament in June 2014 and passed into law in 2015. The Act deepens the opportunities for community ownership, creates opportunities for community ownership in towns, recognises the benefits of moving some land from public sector to community ownership and expands the scope for community acquisition of neglected or abandoned land. Further legislation is pending.

The rhetoric of community permeates Scottish political discourse and can be seen as part of a wider UK ‘Big Society’ discourse, but it has a quintessentially Scottish character. In a sense, the emergence of community energy as a facet of Scottish energy production is but one part of the warp and weft of community empowerment rhetoric and practice in the social and political life of Scotland. According to Becker and Kunze (2014), the idea of community energy is a distinctly UK conception, which in the rest of Europe may be better encapsulated in the broader terms ‘collectively and politically motivated renewable energy’, a categorisation which includes the raft of local authority/municipal projects in many countries, all of which are essentially oppositional towards commercial corporate ownership of energy.
3.3 The Rhetoric of Community in Scottish Policy

At various times in the years after the Second World War, the use and purported misuse of rural land have been subjected to much critical scrutiny, although it is possible to trace the distant roots of community-based land reform back as far as the 1880s (Becker and Kunze 2014). In the last 30 years, the debate has intensified and resulted in significant government action. Issues relating to the use, misuse and underuse of land were debated in settings as diverse as government reviews, academic debate and radical theatre, the last most prominently in John McGrath’s 7:84 Theatre Company. However, it was not until the late 1990s and New Labour’s commitment to a Scottish Parliament, that community-based land reform was first actively discussed in government (Bryden and Geisler 2007), resulting in the formation of a Land Reform Policy Group in 1997, the report of which formed the basis of policies that were set in place in the 2003 Land Reform (Scotland) Act.

The core arguments for community-based land reform lay in the belief in creating a stronger voice for local community decision-making about land and the suggestion that some large landowners had failed to realise their land’s productive potential. Modest communal decision-making about some aspects of land management had been enshrined in the crofting system, which dates in its present form from 1880s legislation. This, coupled with the strong sense of injustice that remained after the so-called Clearances of the nineteenth century, along with the evidence of land management practices that ranged from active stewardship through benign neglect to active sterilisation of development opportunities, created the preconditions for policy change in Scotland at a time when much of Europe was going through active decollectivisation policies (Swain 2007). The formalisation of land reform in legislation was preceded by a number of often publicly assisted community purchases of estates which had a history of poor landlord–tenant relations in places such as Assynt, Eigg and Gigha and more amicable handovers in places such as Borve on Skye. From the late 1990s, these activities were supported by advice and finance from a newly formed Community Land Unit of Highlands and Islands Enterprise.

On the back of the findings of the Land Reform Policy Group, the first Scottish Parliament passed the Land Reform (Scotland) Act in 2003, which created the opportunity for a government-assisted community right to buy, with stronger powers created in the crofting counties of the
north and west which included the right to buy when a landowner had no wish to sell. Subsequently, the Forestry Commission responded to the wider debate about land ownership and a critique from bodies such as Reforesting Scotland of the Forestry Commission’s management and disposal practices, by creating opportunities for communities to acquire ownership or management of local forests. Indeed, some of the earliest community land purchases were of Forestry Commission disposal sites, such as Abriachan in Inverness-shire in 1998. These could conceivably be supporting sustainable community renewable energy in the form of wood heat systems. To date, there is little evidence of community woodland owners looking to exploit the Renewable Heat Incentive (RHI) for community heating or indeed for supplying wood fuel to private owners who have used RHI support.

Rather than abating in the light of the combination of pioneering actions and ground-breaking legislation, the land reform movement has gained momentum, even if most of the exemplar sites and iconic examples date from the first flush of community acquisitions in the early 2000s. Since 2012, a new Land Reform Review Group (LRRG) has been working and it came up with substantive recommendations in 2014 (LRRG 2014). A consultation document in January 2015 sought views on extending the right to buy into urban communities and onto abandoned or mismanaged land (Scottish Government 2014). The Westminster Parliament’s Scottish Affairs Committee also undertook a report on land reform reporting in March 2014 (Scottish Affairs Committee 2014). New land reform legislation was tabled in July 2015 following on from the work of the Land Reform Review Group. Community engagement in land and renewable energy is also evident in the land use strategy, which has its origins in a clause inserted into the Climate Change (Scotland) Act 2009. Page 27 of the strategy notes that: ‘we are committed to maximising the opportunities for local ownership of energy as well as securing wider community benefits from renewables’ (Scottish Government 2011a). However, although the significant effort has been expended to increase the community benefit funds derived from commercial renewables, and in spite of some new policy means to support community energy, it would be hard to argue that other policies put in place have to date ‘maximised’ opportunities for local ownership of renewable energy developments.

A further arena in which community empowerment has been exercised has been in community planning. Community planning was
conceived more as a way of involving key agencies in ensuring joined-up delivery of public services and enabling a cascade of policy delivery from Scottish Government to councils to local communities. Community planning is intimately connected to the idea of partnership delivery of public services. The ministerial introduction of the discussion document relating to the bill asserts that community empowerment is at the core of a project ‘about communities taking their own decisions about their futures’ (Scottish Government 2013a). In 2013, the first minister promised a working group to explore greater devolution in the Scottish islands in the Lerwick Declaration, a promise that has now been broadened to include all Scotland’s communities according to the press release on the Community Empowerment Bill (Scottish Government 2013b).

Notwithstanding these major developments, and given the Scottish Government’s firm purpose statement, it is hard to see how a top-down ‘managerialist’ approach to policy delivery can be reconciled with the principles of more local ‘self-determination, subsidiarity and local decision-making’ (Scottish Government 2013a: 2). As is evident in service delivery in general and in community energy policy in particular (see below), proposals for new styles of governance create scope for tension and disagreement both within communities and between local communities, across scales and between councils and central government. Community energy as an idea has caught on, but its implementation remains locked into energy governance and regulation designed principally for large-scale commercial corporate developments.

The link between community-based land reform, community planning and renewable energy production can be seen as part opportunistic and part a firm and literal assertion of the principles of community empowerment. A number of communities that had acquired land either in advance of or after the Land Reform (Scotland) Act in 2003 realised that delivering positive socio-economic outcomes from traditional land use was deeply challenging in many situations on poor-quality land in remote locations. It was easy to create a warm glow from community ownership but much harder to realise significant socio-economic improvements. UK renewables policy offered an opportunistic lifeline. The rapid increase in support for renewables through government-run financial subsidy mechanisms including the Renewables Obligation (RO) and, subsequently, Feed-in Tariffs (FiTs) created potential for high rates of return on renewables investments. Many of the early land reform activists were located in island and remote communities where there was
often high technical potential for renewable energy production (even if grid connection was lacking). Revenue generated from renewables had the capacity to provide substantial injections into remote communities that were thereby able to insulate themselves from diminishing central government revenue streams. Local development could thus be shaped, to a greater degree, by local action and local income.

The scope for renewables developments on community-owned land can potentially be thwarted by an interposed lease. This is a legal arrangement put in place by a landowner prior to any community buyout to sell development rights of say, wind energy developments, to a third party in order to stop a successful community buyout gaining access to the renewables resource. This has happened in the case of Pairc estate on Lewis and deemed legal (Scottish Land Court 2007). Submissions to the most recent review of land reform have reflected on this issue.

### 3.4 The Wider Policy Environment

Policy to support community renewables is in a large part nested within wider energy policy, but also connects to a number of other areas of regulation and policy. In spite of strongly supporting policy rhetoric regarding community renewables, a case can be made that the policy architecture is rather less enabling than it might at first sight appear to be and, in some cases, might even be antagonistic to the development of community renewables. This argument stems from the observation that *ceteris paribus*, an individual community organisation, may be less able to plan, develop and deliver a given renewables project than a corporate energy company would be.

At issue is whether provision is being made for the fact that community projects differ from commercial ‘analogues’ in several important (and related) respects, including:

1. community projects typically take longer to develop;
2. community projects are often taken forward by non-specialist volunteers, rather than salaried professionals; and
3. community projects are often in a weaker position to secure debt finance.

Recent interventions by the Scottish Government have started to address the substantial handicaps in the realms of debt finance provision and a
lack of access to project management expertise. Current policy to support community ownership of renewable energy production does not, however, extend to how community ownership is treated by the planning system, distribution and other grid network operators, and market-based renewable energy incentives (e.g. RO, FiTs, RHI and Contracts for Difference).

3.5 Planning and Statutory Consultations

The major regulatory hurdles for all renewables development proposals include planning permission and compulsory statutory consultation, such as the right to use water in the case of hydroelectric schemes. Both fall within the power of Holyrood rather than Westminster, and in neither case does special provision exist for projects brought forward by the community (as opposed to commercial, industrial or domestic) sectors. More particularly, positive externalities or other substantial socio-economic benefits that are unique to the community sector do not in practice constitute a material consideration in planning decisions.

The upshot is that at present, Scottish planning policy does not formally differentiate between a community-owned renewables scheme and a conventional commercial development application in how schemes are considered in the regulatory system. There exists some evidence, however, that community schemes enjoy a higher success rate in the planning system in practice (Haggett et al. 2013). Nevertheless, there is no functional mechanism within the planning system guidelines to obligate local authorities to assess trade-offs between local socio-economic benefit and environmental costs. And, given the complexities of local and global public goods and bads associated with renewables, expecting local councillors and officers to make well-informed judgements is a big ask. However, the town and country planning system is expected to make judgements based on the social, economic and environmental impacts of a proposal. With regard to renewable energy developments, guidelines are indicated in Scottish Planning Policy and are supplemented by online guidance sheets in relation to specific technologies (Scottish Government 2010). In practice, the treatment of social and economic impacts is rather stylised (into visual appraisal, noise assessment etc.), and socio-economic impact assessment is regarded by many planning experts as the weakest part of the environmental assessment process that routinely accompanies larger renewable energy proposals (Glasson and
Heaney 1993; Chadwick 2002; Slee 2013). All these have two crucial consequences. The first is that one of the major potential advantages—being able to deliver on local socio-economic benefit that community groups have over commercial players—is effectively muted. The second is that no formal incentives exist within the planning system to encourage commercial developers to partner with community groups.

In our view, it would be straightforward for the Scottish Government to make it easier for community energy to face reduced regulatory hurdles by asking planners to take stronger account of the widely acknowledged additional local economic benefits arising from community ownership. This is not an issue of taking ownership into account in the planning decision as some critics of such possible enabling powers suggest but an acknowledgement of the distinctive and much-enhanced beneficial impacts that community-owned renewables deliver locally.

3.6 GRID

A second area where community energy projects may face significant policy barriers is in grid connection. The policy surrounding grid connectivity is reviewed elsewhere in this volume (see the chapters by Toke and Wood). The grid regulator, OfGEM, is not directly accountable to Scottish Parliament, whilst UK policy has handed responsibility for grid management to the two main electricity producers in Scotland. UK practices have been described as ‘opaque, onerous and inflexible’ by industry bodies such as Renewable UK and Scottish Renewables. The community sector faces particular barriers relating to relatively small projects often in remote locations, and a recent report notes that: ‘more work is needed to improve the transparency and predictability of grid connection processes and charges, to improve consistency and the communication channels between the Distribution Network Operators (DNOs) and generators’ (Cornwall Energy 2013: 4). In both Germany and Denmark, community projects have enjoyed priority access to the grid.

3.7 MARKET-BASED RENEWABLES INCENTIVES

The nature of market-based incentives, such as FiTs, the RO and the RHI commonly set the ‘bottom-line’ that separates profitable projects from unbankable ones. As such, so-called degressions—periodic reductions in tariffs—represent hard deadlines by which a project must be
licensed, if it is to lock into the higher pre-degression rate. In the complex and expensive world of renewables development, this translates directly to amplified risk for community projects. These risks are dramatically increased by DECC’s ‘consultation’ in the summer of 2015 which signals the end of pre-accreditation, which means community groups would commit to construction with no knowledge of the tariff they would receive.

But there is another, more positive side. As off-the-shelf policy instruments, these incentive schemes also lend themselves well to enabling the uptake of community renewables. Examples of ways that they could be or have been employed to boost community energy sectors include premium rates for wholly and largely community-owned projects (e.g. Nova Scotia and Ontario), or the use of an elevated FiT cap as recently considered (but rejected) for the UK, or an extended pre-accreditation period specifically for community FiT registrations (accepted) (Department for Energy and Climate Change (DECC), 2014a).

### 3.8 EU State Aid Regulations and Tax Benefits

Many of the arguments we make in this chapter about regulatory barriers can also be brought to bear against the current EU legislative framework which, like key components of UK and Scottish policy, lacks explicit recognition and support for community renewables. A particularly serious and topical issue is the restrictive rules on State Aid, which constrain UK and other member states’ ability to offer grant or ‘soft loan’ support towards covering capital costs for community renewables projects (European Commission 2014).

### 3.9 Investment Incentives

Tax benefits, such as the ‘Enterprise Investment Scheme’ (EIS) and the ‘Seed Enterprise Investment Scheme’ (SEIS), have played an important role in energising community investment into renewables. These benefits which have been, and are, crucial in securing investment into a growing number of Scottish community energy projects are currently under significant threat from new registration rules proposed by the Financial Conduct Authority (Financial Conduct Authority 2014).

The barriers faced by community energy developments are acknowledged by the Scottish Government, and some specific policies have been
put in place now under the umbrella of the Community and Renewable Energy (CARES) scheme, which is considered in the next section after a brief historical overview.

3.10 THE ROOTS OF COMMUNITY ENERGY POLICY IN SCOTLAND

In some ways, practice has preceded policy in the recent development of community energy in Scotland. However, it is important to recall a longer history of communitarian energy policy in Scotland and the legacy of rural community empowerment that began much earlier. Tom Johnston, a radical Clydeside MP, who rose to become Secretary of State in the Second World War Coalition Government, pushed the development of hydroelectric power firstly in a 1943 Act establishing the North of Scotland Hydro Board and, after production passed into public ownership, expanded hydroelectricity production in one of the most sparsely populated and then impoverished rural communities in Britain. Hydroelectric developments not only provided a key service to rural areas but also, at the same time, the development and maintenance of the infrastructure created secure jobs. The privatisation of electricity production in the neoliberal sell-off of state-owned industry in the early 1990s supplanted the socio-economic logic that drove Tom Johnston with a much narrower market-driven logic. The re-engagement of communities at a more local level in the last decade represents a reincarnation of those communitarian principles which drove Tom Johnston in the post-war years, as acknowledged by the First Minister, Alex Salmond, when he spoke to the Community Land Scotland Conference in 2013 (Community Land Scotland 2013).

Recognition of the potential for community-owned renewable energy systems to support rural communities led to the formation of a unit within the Highlands and Islands Enterprise to support community renewables in 2004. The Highlands and Islands Community Energy Company (HICEC) provided advice and technical support to communities engaging in energy production from very small-scale installations in village halls to much larger schemes. In 2007, HICEC was offloaded from the public sector into a Scotland-wide company limited by guarantee called Community Energy Scotland, which remains active to the present.

As the public subsidy for renewables has grown in total volume (though not per MW of power produced) in pursuit of national and
international targets for emissions reduction, so community groups have used renewables as a dual opportunity for generating community income, contributing to climate change mitigation and delivering wider community development aspirations. Indeed, a backward glance at many community land purchases reveals that, especially on the Inner and Outer Hebrides, the pursuit of renewable energy production has provided perhaps the most reliable and potentially lucrative financial return of any investment in their newly acquired landholdings. Where community buyouts are associated with community energy, the income stream was almost always diverted into additional local development activity, normally as a requirement of the trust established to manage the project. By such means, it was possible to break the negative cycle of what the New Economics Foundations describe as ‘leaky bucket’ economies in which the benefits of many natural resource-based economic activities pass quickly out of local areas to external shareholders (Entwistle et al. 2014; Phimister and Roberts 2012). Community-owned developments comprise a manifestation of the principle of community power for wider community empowerment.

The Scottish Government has consistently given support to community renewables. In its most recent statement in September 2015 (Scottish Government 2015a: 3), it notes Scotland’s ‘ambition to see community energy mainstreamed within a whole systems approach, with opportunity for community ownership and control across the full range of components in the system: generating low carbon energy, improving energy efficiency, distributing energy and even storing energy’. It now has in place two support schemes for community renewables: CARES and the Renewable Energy Investment fund (REIF). The CARES scheme was launched in 2011 and is a financial support package primarily to help overcome the high transaction costs and risks associated with negotiating a renewable energy project, repayable with interest if and when a scheme is approved, but not repayable should a project not get through the planning stage. It was initially managed by Community Energy Scotland, but following an open tendering procedure, management of the contract passed to a consortium of NGOs managed by the Energy Saving Trust (EST), who operate the scheme and provide other support services for community renewables as Local Energy Scotland. In 2013–2014, a separate stream of CARES funding was devoted to the Local Energy Challenge Fund, to support innovation in the sector, not exclusively with community-based enterprises. This led to 17 schemes receiving support.
The CARES monies are now distributed through a family of funds. The £103 million REIF scheme was launched in 2012, in part to help meet the gap in the availability of debt finance for smaller (< £3m capital cost) projects. It was also set up to help address finance gaps encountered by private or community developers looking to put forward newer renewables technologies, focussing on marine and community heating schemes. It is managed by the Scottish Investment Bank and has proved a flexible and instrumental tool in providing finance to a variety of community projects. Examples include a 2013 loan of £49,000 to Gigha Green Energy Ltd, a subsidiary of the Gigha Development Trust, to help meet a funding shortfall on an additional turbine added to three existing community turbines; a loan towards a 9 MW 100% community-owned wind farm developed by the Point and Sandwick Development Trust on Lewis; and a loan to support a 25% stake in a 3-turbine wind farm in South Lanarkshire. The majority of REIF funds, however, have been directed to private sector offshore renewables developments.

Either through intent or otherwise, the Scottish Government has rather fudged the furtherance of community renewables. This has happened in at least two ways. First, the term ‘community benefit’ has been used in Scotland to describe payments made by commercial operators to communities as well as the benefits to communities arising from their own investment in renewables or co-investment by communities and private operators. The gulf in community receipts between a community-owned renewable energy scheme, which might be expected to generate between £130,000 and £200,000 of income per MW/year net of borrowing, and a community benefit scheme paying typically £3000 per MW/year is immense. It is difficult not to get the impression that the fudging between full community participation in renewable energy and what one community activist has termed the colonialist ‘beads and necklaces’ approach of large-scale corporate investors paying off the local population is intentional and comprises a pragmatic response by government to ensure major developers feel unthreatened by the rhetoric of community used in debate about energy production and more widely.

A further fudging of the notion of community is evident in the conflation of community- and locally owned renewables within the Scottish Government’s target of 500 MW of community- and locally owned capacity by 2020. Indeed, in early October 2015, the Scottish Government announced that it had achieved its community energy target 5 years early (Scottish Government 2015b), when in practice, only
about 70 MW of community energy capacity exists in Scotland. The target of 500 MW is commonly referred to as a ‘community renewables target’, but includes the crucial term ‘locally owned’, thus diluting the target through incorporation of a much larger project portfolio developed by for-profit rural businesses. In consequence, the community component actually represents a minority of the current community- and locally owned category. Why this might matter is that with community ownership, there is a virtual certainty that the proceeds will be reinvested locally, but with private ownership, there is absolutely no such guarantee nor indeed a solid evidence base to suggest that high levels of local reinvestment do occur from private owners, although circumstantial evidence reveals some farmers recapitalising farms on the back of renewable energy income streams (Mackie 2015).

Community shareholding has been seen in the rest of the UK as a potential mechanism to engender more local support for renewables developments. Indeed, it has been argued that public sentiment recognises the need for social justice in renewables developments (Cowell et al. 2011). Recent policy developments in the 2015 Infrastructure Act in England and Wales will create a time-lagged backstop measure to oblige developers to offer community shareholdings in renewables projects of above 5 MW, unless there is compelling evidence that the utility companies are already delivering community co-ownership voluntarily. Furthermore, the UK strategy paper on community energy reinforces the case for community shareholding (DECC 2014b).

Energy co-operatives have also recently gained momentum in Scotland; examples of projects completed or under construction include Dingwall Wind Co-operative, Garmony Hydro, Harlaw Hydro, Islay Energy (Wind) and Wester Derry (Wind), with several others in the pipeline. More widely in its policy documentation on renewables, the Scottish Government reiterates the case for community ownership. Pledge No 1 of the Climate Change Delivery Plan (Scottish Government 2009a: 8) asserts: ‘we will support and accelerate the implementation of renewable energy, through our Renewable Energy Action Plan, in a way which promotes large-scale, community based, decentralised and sustainable generation’. Part of the vision of the Renewables Action Plan (Scottish Government 2009b: 48) is ‘to maximise the benefits for rural communities from renewable energy, not only in terms of access to locally produced low carbon energy but in terms of social cohesion and economic development’. The Scottish Government’s Routemap for Renewable Energy in
Scotland (Scottish Government 2011b) asserts that ‘we wish to maximise the benefits for communities from renewables and to transform the level of opportunity for local ownership of energy. Our ambition is for all Scottish communities to share in the rich rewards of our next energy revolution’. This policy is reiterated in the Electricity Generation Policy Statement of 2012 and in the Scottish Government’s Report on Policies and Proposals 2 (Scottish Government 2013c: para 4.2.1).

In summary, although the rhetoric of community empowerment is especially strong in Scotland, in relation to renewable energy, there is arguably less support for differentiating community renewables from renewable energy developments more widely than there is in the rest of the UK. Having set a target of 500 MW of community renewables output by 2020, the Scottish Government later adjusted this target to 500 MW of community- and locally owned renewables. It has also conflated the benefits which a community receives from private companies under what are essentially planning gain arrangements (which typically range from £2000 to £5000 per MW per year). The greater adoption of community renewables may be more a function of exploitation of opportunities by communities energised by community-based land reform. Additionally, such an approach might help overcome the antagonism of many rural residents to wind turbines, the predominant, but by no means only technology used to date.

However, post-2015 UK election moves to reduce support for renewables at the UK level represent a sea change in policy which will have devastating consequences on renewables generally and community energy in particular. Realistically, the recent Westminster policy changes signal the death knell of new community renewables projects in Scotland, unless additional Scotland-specific support measures are put in place. What was written as a manifesto by the Scottish Government as recently as September 2015 is, in reality, more an epitaph, with the Scottish Government currently seeking ways to salvage what it can from the wreckage of the UK renewables support architecture.

3.11 THE DIVERSITY OF COMMUNITY ENERGY PRACTICES IN SCOTLAND

There are currently reputedly 360 community renewable energy projects in Scotland with a capacity of just over 30 MW of installed operational capacity (Haggett et al. 2013). An attempt was made to map these for DECC in 2012 and more recently by an international consortium
of research and practitioner organisations under the project name of ‘Energy Archipelago’ (see Fig. 3.1).

We are not aware of any other country in the world where such a wide diversity of business models and legal structures are used for community energy.\(^2\) In other words, there is a myriad of different ways in which...
Scottish communities can have a stake in renewable energy production. Table 3.1 shows an attempt to summarise them.

One model—that of a community-based local development organisation—usually taking the legal form of a development trust—has dominated Scottish developments to date. In both the European and UK context, the dominance of this particular model is a uniquely Scottish phenomenon. Its preponderance may be more a consequence of the institutional support for such approaches rather than any intrinsic merit (Toke and Harnmeijer, forthcoming). A second approach is to use a co-operative business model which is much more common in many other European countries.

The development trust model has been widely used in local development projects in Scotland, especially in the Highlands and Islands region which can be seen as the cradle of community energy projects, largely on account of a superior renewables resource base, as well as the supporting actions of Community Energy Scotland, which had in an earlier form, as HICEC, supported community energy only in the Highlands and Islands Enterprise (HIE) area. Arguably, the explicit social remit of HIE created a sharper focus on community business models suited to the needs of the region. This model is highly suited to place-based local development where a group of informed local citizens provide the leadership and manage the disbursement of funds in accordance with the specification of the local trust articles.

The second model that of an energy producers’ co-operative has also been widely used as a business model in community energy globally, in

Table 3.1 Community ownership in context

| B. Investment source for community stake | Whole | Partial |
|----------------------------------------|-------|---------|
| Community body includes local development organisations such as development trusts | Community-led projects | Revenue-sharing arrangements with local developments organisations joint ventures |
| Individuals includes co-operatives of all kinds | Wholly co-operatively-owned projects | Revenue-sharing arrangements with co-operatives |
| | Wholly crowd-funded projects | |

| A. Project ownership | Whole | Partial |
|----------------------|-------|---------|
|                        |       |         |

...
Europe and in the rest of the UK, but has been sparingly used to date in Scotland. In a co-operative model, the enterprise is owned collectively by the membership, but whereas in a private company the number of shares shapes the power of an investor, a co-operative is based on each member having equal voting rights regardless of their investment. The membership can come from a geographically defined area, from a group of interested membership not defined geographically or most typically from a hybrid between the two. The Baywind Co-operative in Cumbria pioneered co-operative ownership of renewable energy in the UK in 1996, building on a business model widely used in Scandinavia and now promoted actively by Energy4All, an offshoot of Baywind. There are four Energy4All supported projects in Scotland and other co-operative renewables enterprises, including Dingwall Wind Co-operative and a number of hydroelectric projects.

The commercial-community partnership model of ownership, which was being actively promoted by DECC and in the UK Infrastructure Act and by the Scottish Government in its recent Community Energy Policy Statement Draft, has been developed in a number of cases where mainstream commercial developers have entered into some form of revenue sharing arrangement with a community. Many models exist. The initial development risk may have been carried by a commercial developer, which subsequently transferred ownership of a shareholding in a development vehicle to a community entity, or a community may have promoted a local scheme and drawn in a commercial renewables company as a partner, as at Neilston in East Renfrewshire. The Fintry model in Stirlingshire is perhaps the best known Scottish example, where a handful of members of an engaged small community contemplating a stand-alone renewables development instead worked with a commercial developer to obtain a shareholding in a bigger commercial development in 2007. Neilston Development Trust (based near Glasgow) has also developed a joint venture model between a commercial developer and the local community. The commercial-community partnership model also operates with a number of community co-operatives in Golspie in the Highland region and at Boyndie in Aberdeenshire.

The increased use of crowd sourcing of funds has been used in many arenas, including in renewables, as by Abundance Generation and Ecotricity. Although it potentially democratises ownership of renewable energy production, it is a democratisation for those with free resources to invest and unlikely to engage the fuel or energy poor.
As well as considering ownership structures and business models, it is also important to recognise that community groups may need to find novel ways to circumvent some of the obstacles they face. This may create new and beneficial forms of linkage between community energy and local communities. Many community groups face major grid connection issues. One way around this is to consider energy storage or off-grid local sales of energy. Some CARES-funded initiatives are exploring such issues. Two community hydroelectric schemes, at Kingussie and Applecross, are looking to sell electricity to a local source of demand in an off-grid sale in one case and to connect into a community heating scheme in the other.

3.12 THE IMPLICATIONS OF INCREASED DEVOLUTION ON COMMUNITY RENEWABLES IN SCOTLAND

We argue above that the biggest current constraint on the expansion of community renewables in Scotland, until the recent change in FiTs and pre-accreditation, was the planning system’s unwillingness to consider properly the widely acknowledged local socio-economic benefits arising from community ownership (in contrast to ‘traditional’ commercial ownership) in planning decisions and guidance. To change this is entirely within the Scottish Government’s control, as planning is a fully devolved matter. More recently, the new constraints of lower FiTs and loss of pre-accreditation will undoubtedly reduce the scope for community engagement. Furthermore, if renewables production is pushed offshore, it is more difficult to argue a social justice case for community engagement with underwater or offshore wind turbines as there is often no obviously adversely impacted community, although community benefit funds are mooted. We note, however, that the offshore Middelgrunden wind farm in Denmark, 3.5 km from Copenhagen, has a significant component of community ownership, so an obligation on offshore renewables developers to offer coastal (or wider) communities a shareholding might capture some of the benefits for such places.

It is challenging to speculate on the impact of increased devolution on community renewable energy production. Scotland has a synergistic relationship with the rest of the UK, in that it has high potential for renewables and can draw on a UK-wide consumer subsidy to develop the Scottish renewables industry. If the link with UK energy markets
and the associated UK-wide consumer subsidy of renewables were lost, energy bills would rise markedly in Scotland, as approximately 90% of the renewables subsidy to Scottish renewables comes from outwith Scotland and this subsidy would most likely have to come from Scottish consumers if Scotland decoupled from UK support systems.

Scottish renewables developments are highly dependent on rates of financial support and long-term political support for different renewables technologies (and scales) again determined outwith Scotland, albeit in consultation with Scottish authorities. The reductions in FiTs for onshore wind, hydro and solar, announced on the 27 August 2015 are already having a strong deterrent effect on developments in Scotland. As stronger anti-renewables sentiments have prevailed at UK level, the impact on Scottish renewables developments will almost certainly be negative. On the other hand, had English resistance to onshore wind been countered by a policy of forcing commercial developers to offer shareholdings to local communities, imitative policies in Scotland which forced developers’ hands could have had a beneficial effect on community shareholding in the renewables sector.

Scottish community renewables developments are also contingent on grid connection. In a post-referendum paper, Scottish Renewables argue the case for stronger support for grid connectivity to major islands where so much of the community renewable activity has been based (Scottish Renewables 2014). Greater devolution of the management of the grid connection and giving greater weight to grid connections for community projects would be enormously beneficial for the development of community renewables, so too would be additional support for community-based local grid projects or linked district heating schemes.

It seems likely that an in-depth stocktaking will be required, building on the experience of policy turmoil and trying to map a way forward. Genuine community energy proposals may find funding from other sources, such as European structural funds, and farm level schemes could be funded from the Scotland Rural Development Programme (RDF). Perhaps the best that can be hoped for is initiatives such as the Local Energy Challenge Fund that funds innovative initiatives that are finding ways to overcome the present problems, for example, through local grid, CHP schemes and hydrogen production.
3.13 The Benefits Arising from Community Energy in Scotland

Slee (2015) identified seven main benefits attributable to community ownership of renewables, namely reduced opposition, increased local economic impacts, environmental justice, wider energy emissions reductions, reduced fuel poverty, filling the gap caused by local authority funding cuts and overall enhanced resilience of communities.

Co-ownership could reduce the opposition of some people within the recipient community to renewables, especially onshore wind, even if it is unlikely to appeal to those critics fuelled by an almost visceral opposition to wind power. If this were the case, it would help inculcate a wider ‘pro-renewables’ culture, thereby reduce development risk for community and commercial projects alike and, at the same time, assist the Scottish Government meet its statutory targets. Where there is clear evidence of positive income streams entering rural communities of potential reinvestment of these in energy-saving measures, local amenity and community capacity building, it is likely that at least some people who are ‘sitting on the fence’ may be persuaded of the merits of onshore wind (Haggett 2004).

It has been argued that ‘local investment also provides an opportunity to strengthen and diversify local economies, particularly in rural areas, and can lead to new projects through the sharing of information and relevant experiences’ (Sawin 2004). The disparity between the injection into local economies from community and corporately owned wind farms is enormous. These benefits can be explored in terms of direct financial returns or in terms of wider economic benefits including multiplier effects. Co-ownership or shared equity has been initiated in a number of places in Scotland. Economic modelling work by Strathclyde University’s Fraser of Allander Institute on Shetland has shown how co-ownership of a major onshore wind farm would have significant beneficial effects on the local economy, whereas external ownership would leach most of the benefits out of the rural community (Allen et al. 2011). Their findings are supported by recent studies in rural Wales which report very modest beneficial impacts on rural economies of large-scale externally owned wind farms due to the size and nature of community benefits received and how these are being utilised (Munday et al. 2011). The impact on local incomes can be very significantly enhanced by co-ownership, but the aggregate effect of enhanced local incomes depends both on what
any income is spent on and where it is spent (Phimister and Roberts 2012).

The people most adversely affected by the amenity intrusion of an onshore wind development are the adjacent local communities and may consider that they merit environmental justice. In environmental planning, there has long been the principle of an environmentally compensating project, such that, for example, if a bypass destroys some ancient woodland, the developer agrees to new native woodland planting somewhere else locally. It has been argued that ‘providing benefits to communities affected by wind-farm development is a matter of justice: a means of redressing the impacts on communities adversely affected by wind farms’ (Cowell et al. 2011: 1). Where the adversely affected party is the local community, the enhancement of village amenities and green space through enhanced local spending comprises a de facto community-compensating project for the visual intrusion of wind energy installations. One energy company operating in Scotland offers reduced bills to households adjacent to developments. However, there is a tension between communities feeling that they are ‘bribed’ to accept wind energy developments and a strong feeling that local people should benefit from such developments (Cass et al. 2010). It is, however, apparent that the income streams arising through ownership or co-ownership are up to tenfold over what commercial developers are currently offering in contributions to community funds.

A community that is empowered (literally) by co-ownership of an onshore wind (or other renewable energy technology) may engage more fully with the need to reduce other emissions and to keep Scotland as a leader in the struggle against the adverse global impacts of human-induced climate change. Further research is needed on whether communities that are engaged on energy issues and have built capacity to collaborate are likely to be at the forefront of post-carbon communities. The Transition Towns movement (Hopkins 2008) provides an illustration of multifaceted responses to climate change, though robust analysis may still be lacking.

Full or partial community ownership provides communities with funds which can be redeployed to address energy or other social and economic issues in local communities. To date, there have been no attempts to formally hypothecate revenue streams to deal with, for example, fuel poverty. However, there are examples of strategic expenditure by some community energy projects to address fuel poverty, for example, in the
investments in insulation and home improvements on Gigha, an island off the west coast of Scotland where the community has invested significantly in onshore wind energy.

As a result of the very tight financial situation globally, the Scottish Government has found it necessary to reduce local authority budgets. The result is that services have been cut. If significant income is made available to communities through outright ownership or equity in renewables installations, such funds can help to plug the gap arising from reduced public expenditure. It is thus clearly in the government’s interest to nurture the development of alternative funding streams for local projects. This availability of funding provides a platform for the actions of empowered communities, which also resonates strongly with Scottish Government policies.

Finally, Harnmeijer et al. (2012) also argue that local ownership delivers greater resilience and that communities can be a source of investment capital, though the latter is more likely under co-operative models rather than the community development trust model. Many rural economies are relatively undiversified economies, and collaborative effort in energy production can strengthen community resilience and economic resilience simultaneously.

3.14 The Obstacles to the Further Development of Community Renewables in Scotland

There are many obstacles to the further development of community renewables (see Fig. 3.2). These include the lack of skills and local capacity for specialist tasks such as project management, the weak degree of subsidiarity in Scottish and UK local government, the strong negativity arising from the recent changes in the Westminster-driven renewables policy agenda and the failure to ensure ready access to grid and the failure of the regulatory system to give due recognition to the added value of community ownership. Scottish Government policy is addressing the skills gap through CARES and Local Energy Scotland who are assisting inter alia by setting up framework contracts through which project management, legal and financial services can readily be procured.

The degree of local decision-making in both Scotland and the UK more widely is markedly less than in a French commune (village) or a United States (US) or Canadian small town. For all the rhetoric of local empowerment, there is not much of it in either Scotland or the UK
more widely. It is most strongly expressed where active communities with strong social capital and wider skills have been instrumental with agency and Scottish Government support in community land buyouts. Many successful renewables projects have been developed by such communities. It takes skills, grit and major effort to deliver a significant community renewables project. Furthermore, if grid connection (and wider relocalisation thinking) makes it incumbent on communities to devise more elaborate schemes (such as linked district heating schemes or local grids), the technical, financial and project management needs will escalate accordingly.

It is likely that the shift of support away from onshore wind at the UK level will deter community schemes, for onshore wind remains the most cost-effective technology for most communities. Uncertainty can have a corrosive effect on confidence and the current UK Government’s deep antagonism to onshore wind does little to encourage project development. A community-specific FiT would be a potential way forward, but the UK government showed more inclination for a co-ownership model and then proposed neither. However, as the UK government opts for supporting higher cost renewables, this itself will raise prices and may further diminish public enthusiasm for the renewables project.

The grid connection issue is critical. When FiTs are falling over time, delay in getting a project up and running can entail a substantial cost
to the project developer and provide a disincentive to proceed. The Press and Journal (2014: 1) reported the chief executive of Scottish Renewables as saying that ‘if there is one obvious failure of the current regulation of our industry it is the lack of grid connections to Shetland, Orkney and the Western Isles—home to the country’s best wind resources and key to the development of wave and tidal power’. Grid connection is not just an issue on the islands; it affects many rural communities.

The final constraint that is much more controllable by the Scottish Government is how the planning system regulates community renewables compared to ‘normal’ commercial renewables schemes. The Scottish Government could revise planning guidelines and give greater weight to community schemes on account of their hugely different local socio-economic impacts. The issue is not one of ownership but of differential beneficial impact.

However, it may be possible to remove one constraint—the planning system—which is in the hands of the Scottish Government and then be faced with other constraints that are at present almost wholly outwith the Scottish Government’s power to control, because they are Westminster decisions, albeit made in consultation with the devolved governments. Nevertheless, although the SNP achieved a landslide victory in the May 2015 general election, winning 56 seats (out of 59), it faces opposition from a majority Conservative government on almost all of its policy objectives, and so whether it will exercise its powers to support community renewables developments remains a moot point.

### 3.15 Conclusion

To conclude, we would recommend that Scottish policy for renewables be recalibrated to provide a much more explicit legal basis for consideration of the additional benefits of community energy over other ownership types. Such reform would represent recognition of the unique and currently undervalued benefits that community energy delivers, and thereby ensure that the design of Scottish policy more fully realises the pathway to energy decarbonisation and emissions reduction objectives. Some of the more important purported benefits associated with community ownership take time to materialise (see fig. 3.3). It is worth positing that there thus exists less of an incentive for policymakers to capitalise on benefits that will only materialise in future election cycles—a ‘democratic premium’ that famously afflicts many facets of climate change policy.
Individual community renewables projects tend to take longer to complete and are typically of smaller scale, than commercial analogues (Harnmeijer et al. 2015). This may provide a disincentive to promote the sector: for instance, governments with ambitious and highly politicised decarbonisation, and emissions reductions targets may be tempted to opt for a ‘big bang’ large-scale commercial roll-out approach, at the cost of bottom-up grassroots-focused policy. Arguably, this is exactly what happened with the fraught tendering process for renewables development rights on Scottish Forestry Commission land, which saw development rights apportioned to a small group of very large companies.

Some policy developments which have taken place have provided greater incentives and support, and these are to be applauded. However, the post-referendum settlement which retains the Scottish Government’s capacity to support community renewables may fail to realise its promise because of the failure to explicitly recognise in the regulatory system the considerable benefits that community ownership or co-ownership creates. The devolved nature of planning does create scope for the Scottish Government to prioritise community renewables and back the rhetoric
with policy means. But it has yet to provide the full suite of policy means to deliver the extraordinary promise.

The called for recalibration would need to take place in a UK policy environment which has become much more negative since May 2015. Arguably, it will no longer be possible to tweak the current policy architecture in favour of community energy, for the support of the onshore renewables industry is being dismantled at such a pace as to limit any capacity for renewables developments. There may in the future be scope for off-grid community energy developments where local markets exist and transmission and production costs are low, but the fracturing and dismemberment of the UK policy support are so all-embracing as to sound a death knell for community renewables for the foreseeable future. The one small residual opportunity for communities in terms of policy support is the use of the RHI in association with community land ownership where forests are transferred to local ownership. The opportunities here remain considerable, but the actual developments to date are very limited. In the event of a turnaround of policy, communities need to be prepared, but borrowing from Robert Burns, ‘an’ forward, tho’ we canna see, (we) guess an’ fear!’

NOTES

1. An equivalent English scheme the Local Energy Assessment Fund launched in 2011 did deal exclusively with community groups.
2. For an international review, see Haggett et al. (2014).
3. Legal structures similar to ‘Development Trusts’ are used in community energy project further afield, such as in South Africa.
4. For a good discussion, see Gardiner (2013), A Perfect Moral Storm: The ethical tragedy of climate change. Oxford University Press

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