Bringing Social Equity into Low-carbon Investment:

why it matters and emerging lessons.

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Abstract

This paper explores why social equity matters for a successful transition to a low-carbon energy economy. The paper first locates this discussion in the evolution of literature on environmental sustainability and energy which increasingly recognises the social, political and institutional dimensions of the concept. It then presents five arguments on why social equity should matter in strategies to accelerate and manage low-carbon development, ranging from moral arguments linked to quality of life and community, to the strategic and tactical imperatives of social equity for achieving carbon reductions. Finally, it offers three key strategies --- ownership, governance and distributed benefit --- for ensuring that low-carbon initiatives in general and community energy projects specifically, achieve social equity outcomes. The authors draw on three examples of how new forms of organisation and partnership can be structured to achieve both low-carbon and social goals: an enterprise supporting community-based wind farms in South Africa; an energy partnership between a community, local council and charity in Easterside, Middlesbrough, UK; and a community energy initiative in Portland, Oregon (USA). The paper concludes by drawing out principles for practice and policy.

Introduction

Policies and programmes that promote carbon reduction are laden with political choices and trade-offs that are not value neutral. Decisions on what is prioritised, subsidised, and

financed reflect implicit choices about who will benefit and who will carry the costs of transition. As a number of analysts have indicated (Blackwell, 2008; Thompson, forthcoming), given the relatively weak voice of low-income and marginalised communities, there is a danger, if not an inevitability, that the costs of transition will fall more heavily on these communities, while the benefits will be concentrated in wealthier groups.

The core argument of this paper is that lack of attention to social equity in low-carbon initiatives will lead to a political push-back that could slow down efforts to decarbonise, and reduce the potential for reaching scale. Conversely, integration of social equity into carbon reduction strategies can increase the quality and extent of impacts by building the societal engagement that is critical to building and maintaining a momentum for change.

Social equity in Sustainability Theory

The 1992 Rio Earth Summit marked a shift in the discourse on sustainability, which, since the 1987 Brundtland Report, had focused on an environmental agenda that emphasised balancing planetary and societal needs. Following the 1992 Rio Earth Summit, new notions of rights---social, economic, spatial, environmental and inter-species – emerged. There was also an increasing emphasis on the institutional context in which rights are secured and protected (Haughton,1999:233). According to the new advocates of these rights-based approaches, sustainability depended not just on sound resource management, but also on structural changes that address the "political and institutional context within which local communities and cities operate." (Allen&You,2002:3)

This concern for greater social equity in sustainability strategies became not just a moral imperative, but one of strategic importance. As Haughton proposed, "the unjust society is unlikely to be sustainable in environmental or economic terms; the social tensions that are created undermine the recognition of reciprocal rights and obligations, leading to environmental degradation and ultimately to political breakdown." (Haughton,1999: 234) Critical to overcoming the potential for social tensions was the inclusion of diverse

identities, and the importance of recognising the power differentials across different interest groups (Fainstein,1996).

Some similar concerns are raised in the energy literature. Research strands include considerations of how socio-technical structures interact to shape people's energy behaviours (Shove,2009), as well as the governance challenges in the transition to a low-carbon economy (Loorbach & Rotmans,2006; Smith, 2005). There is also a research strand on fuel poverty (Boardman,2010), with a more systemic focus on energy transitions and social justice beginning to emerge (NEF, 2008).

Concepts and strategies for integrating social equity[1] in low-carbon initiatives have been developed by practitioners on the front-line of low-carbon development. Equity is usefully defined by Policy Link, a US based policy group as:

"Equity … means just and fair inclusion. An equitable society is one in which all can participate and prosper. The goals of equity are to create conditions that allow all to reach their full potential." (Rubins,2009:4)

In the United States a growing number of groups (e.g. Emerald Cities Collaborative, Green for All) have developed the concept of "high road" strategies for low-carbon development, particularly in the context of "green jobs". The High Road concept argues that retrofitting initiatives should guarantee a living wage and health benefits to workers (in a context of privatised healthcare), target minority and excluded communities, provide local employment and contracting, and introduce benefit sharing agreements with local communities.

Across the United States, Europe and developing countries, communities have been building strategies for integrating social equity into local, municipal and national policies and programmes. The following sections of this paper draw out some of the lessons from these experiences.

[1] In this paper the authors use the term "social equity" to distinguish it from financial equity.

Five arguments for integrating social equity in low-carbon development

The following arguments for social equity in low-carbon development are summarised from a range of experiences and conversations by the authors.[2]

Moral imperative

As human society, we have an obligation to ensure that policies and institutions do not disadvantage or exclude weaker groups. In the transition to a low-carbon future this would imply ensuring that more vulnerable groups are able to benefit from new energy efficient technologies, and protecting them from rising fuel and transport costs that disproportionately affect them. Without such measures low income groups risk being economically disadvantaged over the longer run (Vanderburgh, 2008) which in turn will cement or exacerbate existing inequalities.

Reach and impact

Adopting an equitable approach can extend the reach of carbon reduction initiatives to greater numbers of individuals and households, and also arguably increase their overall impact on carbon emissions. There are some concerns that including low income households in energy efficiency programmes will reduce potential carbon savings because they have lower carbon emissions than wealthier households and are also more likely to use energy savings to increase household warmth (the 'direct rebound' effect). However, focussing energy efficient programmes solely on more prosperous households limits the numbers of households reached. It may also reduce the overall amount of carbon savings because poor housing standards in some OECD countries mean that low income and fuel poor households are relatively high carbon emitters (Pett, 2009; Grant, 2001). To the extent that including lower income groups in energy efficiency programmes does reduce potential carbon savings, we suggest this will be compensated

[2] The authors have participated in developing low-carbon initiatives in the UK, United States, Brazil, Nicaragua, South Africa.

for by the additional social and political benefits outlined in this paper, although this requires further research including an analysis of the social return on investment. [3]

Political Support

Transition will bring new costs and responsibilities to consumers, industry and regulators that will require political support. Low-income-communities are home to a range of social and political institutions --- trade unions, religious institutions, housing associations --- that have significant, organised political voice that can help drive through new policies and regulation. Conversely, low-income communities will resist change and/or push back electorally if they have not been part of defining the low-carbon agenda and see how benefits and burdens are being shared. The progress on "green jobs" creation in the United States demonstrates the potential for achieving policy change through alliance building with low-income groups.

Mobilising hidden assets

Low-income communities hold a range of economic assets and resources that are increasingly recognised but still largely under-utilised in low-carbon strategies. These may include the financial assets of large trade unions and institutions, community land rights, the capacity of low-income communities to access special funds, and the potential bulk purchasing power of communities. The low income communities mentioned in the case studies also have relatively high levels of social capital[4] which helps increase the reach and uptake of low carbon interventions. Communities may also be able to draw on a range of local technical skills and knowledge.

[3] In so far as fuel poor households use energy efficiency savings to increase household warmth we would argue this should also be seen and valued as an important additional benefit.

[4] Putnam (1995) defines social capital as "...features of social life - networks, norms, and trust - that enable participants to act together more effectively to pursue shared objectives... Social capital, in short, refers to social connections and the attendant norms and trust".

System impacts

Inclusive approaches to carbon reduction create wider impacts in communities that go beyond the immediate aim of the initiative. In addition to cutting carbon emissions, they can increase the efficiency of investment by generating wealth creating opportunities and social and economic benefits for deprived communities. These range from increased community assets and income flows, financial savings, new jobs and skills, and/or health benefits from warmer homes. Inclusive approaches are reported to retain resources within communities, creating wider impacts on the local economy (Blackwell, 2008). More broadly, arguments are made (albeit contested) that more equal societies boast higher social indicators and levels of overall wellbeing (Wilkinson & Pickett,2009).

Approaches to achieving social equity in low-carbon development

Achieving social equity in low-carbon initiatives will require new partnerships and policies to overcome the significant political, financial and institutional barriers that inhibit the involvement of low-income communities. Communities that have been excluded from the benefits of economic development and are now feeling the greatest pressure in terms of austerity and rising fuel prices will need to see their interests addressed. This means ensuring that low-income communities materially benefit from low-carbon initiatives (e.g. through cost savings, new income, improved quality of service), but also, as importantly, that they are represented and have a voice in decisions that impact on them.

Based on experiences across a range of communities, the following broad strategies for inclusion offer pointers on how social equity can be brought more centrally into energy efficiency and energy generation projects. These strategies are exemplified in the cases of Easterside, UK; Portland, Oregon (USA); and South Africa (see boxes).

Distributed Benefits

The most common form of inclusion is through the distribution of economic benefits. Direct benefits from low-carbon energy initiatives – whether energy efficiency, energy saving or energy generation -- typically accrue in the form of financial savings from

lower fuel bills, increased property valuation, new community assets and income, or job creation. There may also be indirect benefits from the reinvestment of savings or revenues in community assets or services. As the Easterside and Portland examples show, benefits can be extended to low-income and marginalised groups through innovative project structures, such as the Community Benefit Agreements in the US[5], or by partnership between local councils and community groups in disadvantaged areas.

There are, however, multiple barriers to extending the benefits of low-carbon initiatives to low-income communities. Cost can be a major problem. Low-income groups are less likely to be able to afford energy efficient technologies even though this disadvantages them economically in the long run. (Vandenbergh & Ackerly, 2008). Similarly, low-income communities may be less able to raise the start-up capital for energy generation projects, and hence forgo the potential direct and indirect financial benefits that these projects can generate. Other barriers may include lack of time, competing priorities, disruptive life events, and lack of agency/self-efficacy etc. (Grant, 2001; LCWO, 2011).

Underlying these immediate barriers to inclusion is a general tendency to invite participation by marginalised groups once projects have been defined. This typically reduces the likelihood that projects address the barriers to entry of low-income families, and diminishes the sense of common purpose in low-carbon efforts.

As the Easterside, Portland and South Africa cases show, local efforts to ensure distributed benefit through inclusion at the project outset do not diminish the importance of government action to addressing wider policy or structural barriers. In each of these examples, distributed benefit was in part facilitated by access to financial incentives such as Feed in Tariffs (FiT) and/or special funds and collaboration among government and non-governmental agencies.

Government action will also be needed to ensure a fair distribution of the costs of carbon mitigation, and hence a positive net benefit for poor communities. This may include

[5] Community Benefit Agreements in the US are contracts signed between communities and developers that establish specific investments and conditions within project plans, in exchange for community agreement and support. For more information on Community Benefit Agreements, see http://www.emeraldcities.org/images/resources/PFWF_developers.pdf

policy measures such as legal standards for landlords and suppliers and installers; as well as grant or loan schemes, banded energy tariffs etc.

Eco-Easterside

Eco-Easterside is a partnership between a local community group, the local council and a city-wide Environmental Charity located in one of the 20% most disadvantaged areas in England. Its objectives include reducing carbon emissions from domestic housing and public buildings; helping residents save energy and money on household bills; encouraging the use of active and sustainable transport; and promoting healthier living.

While the initial idea for the energy project came from the local Council, the community organisation has played a central role in the initiative's design and development from the outset. The partnership approach – whereby the community provides social capital/social networks and the city council and local charity provide technical support – has been central to their ability to deliver a complex pilot project and also their success in winning grant funding from the UK Government's Low-carbon Communities Challenge.

The partnership is providing significant direct benefits to local residents in energy and financial savings from: insulation of 280 households; equipping 20 local households with solar PVs, solar hot water and/or air-source heat pumps in exchange for residents becoming community champions; and supply of energy displays and energy advice to 600 households. The project also provides the community with indirect benefits through the FiTs income from the installation of two 15 metre wind turbines in local schools, and solar panels on the Easterside Community Resource Centre. The community will also benefit from an electric car club and other schemes.

The FiTs from all the renewable installations – household and community - will be donated to a trading subsidiary of the community organisation (a charity) and used to fund further community projects, creating further community benefit.

Ownership

Increasingly, low-income communities are designing approaches to social equity through community enterprises that offer community members the possibility of becoming shareholders. In the UK legal forms range from cooperatives (for the benefit of members) to community interest societies (for the benefit of the community such as Industrial and Provident Societies), or community interest companies (whose assets are protected for the benefit of the community by an asset lock).

Benefits may accrue through dividends or interest paid to individuals, and/or surpluses may be directed to a community fund that then allocates revenues to community assets or services; or a combination of the two. These organisational forms may also involve diverse partnerships with local councils and/or companies. The latter may involve private equity investing in community energy schemes, or alternatively community members or their associations owning a stake in a commercial venture.

In energy initiatives, various models have emerged for securing community ownership of either the financial savings from energy efficiency measures, or from energy generation. The Just Energy model described in this paper is one model (see box). Another ownership approach is evident in the West Oxford model in which the community established an Industrial Provident Society to raise finance for community renewable energy projects from a mix of a share offer, grants and loans. The IPS then reinvests part of the surplus in further carbon-cutting projects in the community run by a local charity. This creates a double carbon cut and reduces the cost of carbon abatement. The IPS legal form is important as it allows more of the surplus to be reinvested in the community than would be the case with a company limited by shares, and also has a democratic membership structure based on one member one vote, rather than the size of shares. (WOCoRe & LCWO, 2011).

Although community enterprises often have an asset lock that protects their assets for the benefit of the community, the rules governing them are light touch in comparison to the public benefit regulations governing charities. This means that directors, members and shareholders face a continuing challenge to balancie private and community benefit.

Ownership approaches to inclusion also face high barriers to entry. Many communities are not able to access the necessary financial, technical and social capital to establish community enterprises on their own. In these cases, new forms of enterprise and partnerships may be required to bring together the resources of private investors, local councils and/or other organisations. Just Energy offers a model whereby early development costs on renewable energy projects are covered by the company on a non-profit basis, and are recouped at the point of sale for investment in new projects.

Ultimately, not all communities, or parts of communities, will want to set up community enterprises or partnerships. Nor is it possible to generate a commercial return for all elements of a low-carbon agenda without government subsidies e.g. for behaviour change programmes or community-to-community mentoring. And where a commercial return can be made, for example from energy generation or efficiency programmes, not everyone can afford to access them. There is therefore a crucial on-going role for government in ensuring a supportive policy environment and necessary financial incentives for the full range of needed carbon reduction measures, including support to low carbon community enterprises.

Just Energy wind farms, South Africa

Just Energy[6] is a not-for-profit social enterprise that jointly develops renewable energy projects with low-income communities in Africa in order to build their ownership stake in projects at an early stage. Just Energy was formed, initially with support from Oxfam, to overcome the barriers low-income communities face in negotiating a fair deal with major developers of renewable energy projects, and to turn these opportunities into a long-term source of revenue for communities. Just Energy has completed initial development on two wind energy projects in South Africa, with plans for expanding into other countries and other renewable energy sources in the future. In the case of major wind developments in South Africa, Just Energy has secured a 15-20% equity stake for low-income communities on projects valued at approximately E13 million.

By 2020, Just Energy aims to:

[6] For further information on Just Energy, see www.just-energy.org.

-Develop 5-10 renewable energy projects ranging in size from 5MW to 80MW
-Reduce carbon emissions by 20 million tonnes over the lifespan of these projects.
-Generate USD 130 million of income to local communities
-Create new jobs at community level and foster transfer of new business and technology skills.

Just Energy works with communities to analyse and develop their renewable energy generation capacity, and to structure project financing with a goal of securing a significant ownership stake within projects. Just Energy builds the negotiating power of communities by valuing non-monetary assets in communities (such as land, political support, Black Economic Empowerment criteria). It also commissions and funds on a non-profit basis the early project investments, such as environmental impact assessments and wind surveys. These tangible and intangible investments build the community stake in projects at the outset. Communities partnering with Just Energy also receive technical support in establishing a plan for managing revenues from projects. In some cases this will include individual dividends to community members, as well as structures for managing a proportion of the revenues in a community foundation governed by a community board.

Participatory governance and agenda setting

Securing the voice and participation of low-income communities in the design, development and implementation of low-carbon initiatives is a key strategy for inclusion, but perhaps one of the least practiced. Inclusive approaches to governance range from securing diversity within management committees, shareholders and members, to engagement through coalitions with social movements and organisations with diverse membership bases. The Portland coalition built a strong representative steering group at the outset, allowing the programme to be co-defined by those who would be targeted as participants. The Emerald Cities Collaborative, of which Portland is a member, has

brought together minority communities with trade unions and municipalities to set joint goals for low-carbon investments.

It is tempting for low-carbon initiatives to focus on the highest emitters and the "quick wins" among neighbourhoods and institutions that are already relatively convinced and engaged. In such cases, local committees, plans and programmes will tend to respond to the priorities, ideas and concerns of that group. While this strategy may be an efficient way of cutting carbon in the short-term, long-term it may reduce and even block uptake of carbon mitigation initiatives by allowing them to be typecast as only relevant to certain people. The Portland experience is one of several examples where new approaches to coalition building have brought social inclusion into the mainstream of low-carbon efforts.

There are multiple challenges to building participation in low-carbon initiatives across diverse communities. Such initiatives, and the communities themselves, will always face challenges of representation---what groups to include, what individuals represent various constituencies, how to balance the voices of more and less powerful players. Building diverse coalitions can be helped or hindered by the policy environment. In South Africa, Black Economic Empowerment (BEE) legislation requires a percentage of black ownership, and hence voice in governance. This has helped increase the levels of political influence of the black majority in the South African economy. Similarly, federal funding for energy efficiency initiatives in the US economic stimulus programme created specific funding for disadvantaged regions and communities which in turn forced developers to engage with communities that might have been considered more risky or difficult. In some cases, for example where communities have experience a history of exclusion, a deeper challenge may be motivating low-income communities to become involved in the first place.

Clean Energy Works, Portland, Oregon

Clean Energy Works Portland (CEWP)[7] was a pilot energy efficiency programme initiated by the City of Portland that retrofitted 500 homes. The programme established a revolving loan fund that offered low-interest financing for energy efficiency upgrades to homeowners, with an on-bill repayment scheme set at favorable terms. In addition to the energy efficiency and carbon reduction goals of the initiative, the programme aimed to create high quality jobs for marginalised groups, and to boost local enterprise. To this end, a central feature of CEWP was the development of a Community Benefit Agreement that include criteria for the approval of contractors to be hired for retrofits. The agreement gave weighting to a series of social criteria that included payment of a "living wage" and provision of health insurance, hiring from disadvantaged groups (e.g. minority communities, women, unemployed youth, formerly incarcerated), minority business ownership, and local sourcing.

The CEWP was governed by a steering group made up of the City of Portland, the Energy Trust of Oregon, the Conservation Services Group, and a Stakeholder Committee representing trade unions, minority community organisations, minority business associations and trade associations. The programme, and the criteria for contractors, was designed by this group, and the group continues to play a key governance role in the programme.

Upon completion of the pilot period, CEWP had provided an average of 7,675 kwH of electricity savings to 500 households, created 381 new high quality jobs, attracted $6 million in investment, and had surpassed all its social and diversity targets. The scheme is now being extended to 6000 households across the State.

Conclusions

[7] Information for this case drawn from Ho and Hays (2011). For further information on CEWP scheme see the Clean Energy Works Oregon at http://www.cleanenergyworksoregon.org/.

There are many lessons emerging from practitioners on how to increase the equity outcomes of low-carbon energy initiatives. From the experiences noted in this paper, there are several key insights on policy and practice that are worth highlighting.

In relation to practice,

- Equity is a starting point. A strategy based on social equity considerations will look very different from a strategy that brings equity in at a later stage. It is not impossible to add equity measures into low-carbon initiatives at a later stage, but it is much harder to do so.
- There is no single formula for achieving social equity. Every community has a distinct ethnic, social, economic and political make-up that will be critical to determining the path forward. Understanding and mapping a community's socio-economic profile and its social, technical and financial capital is an important first step.
- Governance and structure is key to inclusion. The representation of excluded communities in the structures of decision-making and agenda-setting, and through new forms of partnership, is critical to securing engagement.
- Inclusion takes time. Engagement requires understanding the barriers to participation such as costs, time, skills, agency, identity etc. and developing strategies in collaboration with distinct groups that address their particular needs.

In relation to policy,

- An equitable approach to carbon mitigation will help democratic governments' secure public support for the transition to a low carbon economy. Governments need to integrate equity goals into climate change policy.
- Government action is needed to ensure a fair distribution of the costs and benefits of carbon mitigation. This could involve, among other things:
    - making available an appropriate and differentiated range of financial incentives and complementary policies for different socio-economic groups and

communities including grant funding and/or low cost loans for disadvantaged communities. (Boardman, B, 2010)

- where possible ensuring that the cost of carbon reduction measures, such as Feed in Tariffs, or the Carbon Emissions Reduction target (CERT) in the UK, are placed on above-average users of electricity or gas so that the lowest users (which includes many low income groups and the fuel poor) do not pay anything towards these policies.
- ensuring legally binding energy efficiency standards for the housing sector, including the private and social rented sector.
- placing social equity requirements for public investments in low-carbon infrastructure such as community benefit, ownership, living wages, hiring from disadvantaged groups, local sourcing etc.

- Government action is also needed to address the structural inequalities that inhibit low-income groups from taking up and benefitting from low-carbon energy initiatives such as minimum wage policies, health benefits, training and apprenticeship programmes, etc.

Practitioners and policy makers should assess low-carbon energy initiatives in relation to both efficiency and equity criteria. Below we suggest a framework that could be used to assess project design and impact:

Efficiency	**Equity**

• Aggregate carbon reduction in tonnes
• Unit cost of carbon reductions (i.e. tonnes of carbon saved per £ of investment)
	• Aggregate social and economic benefits (type, quantity and value)
	• Who benefits - financially, economically and socially from the initiative
	  o e.g. from increased assets/wealth, dividends/interest, income, financial savings, jobs, training, energy security, health (eg from warmer homes)
	• Who pays - financially, economically and socially
	  o e.g. through government grants/loans or private equity/loans; higher energy bills, regressive or progressive taxes, higher priced goods and services
	• Who decides - and who is involved in the decision

	making process[8]

As this paper has argued, bringing together the low-carbon and social equity agendas creates mutually reinforcing momentum behind both goals. In South Africa, the social criteria for the bidding process for energy generation projects and Black Economic Empowerment requirements, facilitate the development of community shareholding in large-scale wind farms that will both accelerate the development of clean energy sources for the country, and bring millions of Euro in new revenues into poor communities. In Easterside, UK, a partnership approach between the local council and a community group, incentivised by a Feed in Tariff and a government grant, is reducing carbon emissions, enabling financial savings by low-income households, and creating community assets and a self-sustaining source of income for the community into the future. In Portland, US, the City's decision to disburse Federal funding by establishing contracting criteria through an innovative coalition is raising the bar on employment standards, bringing vulnerable groups into the workforce, and extending the benefits of energy efficiency to thousands of households. These and many other experiences show that equity in low-carbon initiatives can be achieved through a combination of supportive policies, innovative coalitions, and a practice of community organising that secures inclusion from the outset. These and many other experiences show that greater social equity extends scale, impact and sustainability of low-carbon initiatives, and that linking low-carbon initiatives into low-income communities brings possibilities for new resource and asset creation.

[8] The framework is adapted from Policy Link which was initially developed in relation to Federal transportation policy in the United States. See Rubin, 2009.

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