The case for community-based equity participation in Scottish on-shore wind energy production

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Why the title?

- A personal journey of encounters with developers of wind energy
- A realisation that there is a gap between possibility and actuality in engaging communities in renewable energy production
- A realisation that on places like Gigha it has helped lay the foundation for both a turnaround in the island's fortunes and a decarbonisation of their energy system
- A realisation that, looking back, that vision of development underpinned by renewables was promulgated by Tom Johnston and hydropower in the 1940s

What has community energy got to do with rural sustainability?

- Renewables more than anything else could alter the injection of income into rural Scotland and address THE principal global sustainability challenge of reducing carbon emissions
- Climate change is the greatest externality ever to confront mankind, according to Nick Stern
- If John McGrath were around today, he would probably have written the Cheviot, the Stag , the black, black oil and renewables
- As economic activities they all strip out value and compromise sustainable development in their dominant forms

Why we must be interested in on-shore wind

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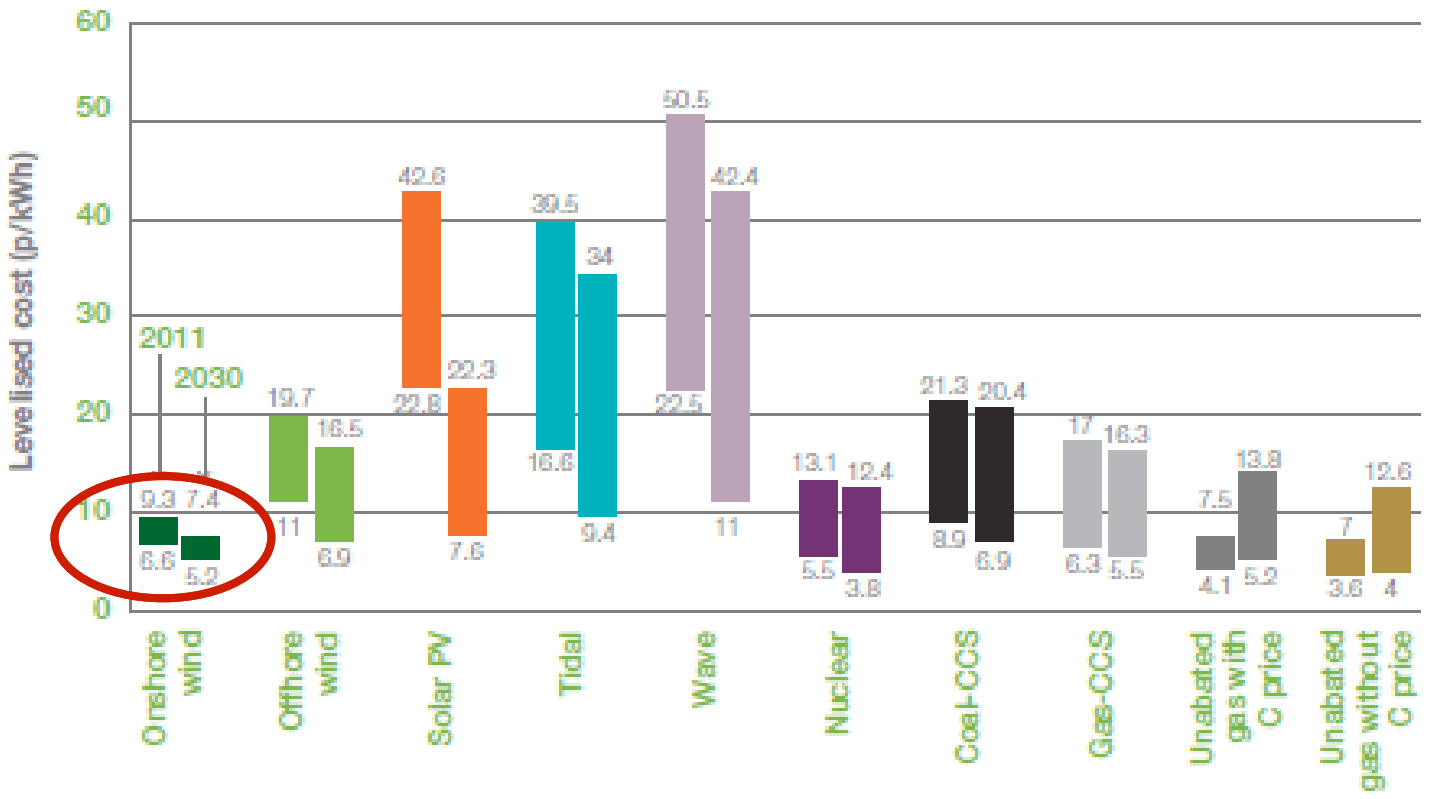
Figure 6. Levelised costs of energy for different sources in 2011 and 2030 (3.5 to 10 per cent discount rate) (p/kWh)



Note: The first column of each technology refers to 2011, the second to 2030

Source: Calculations based on CCC (2011b).

How renewable energy production capacity can be owned

- Through large privatised utility companies like SSE, and a mix of other energy production companies from green businesses like Ecotricity, to venture capitalists like Infinis; and often foreign owned (Vattenfall)
- By private landowners like Maitland Mackie and an increasing number of Scottish farmers
- By co-ops (Baywind in Cumbria and part of Boyndie)
- By communities (e.g. Udny, Gigha or in shared equity community schemes like Fintry, Stirlingshire or Neilston, Renfrewshire)

Some oversimplified economics

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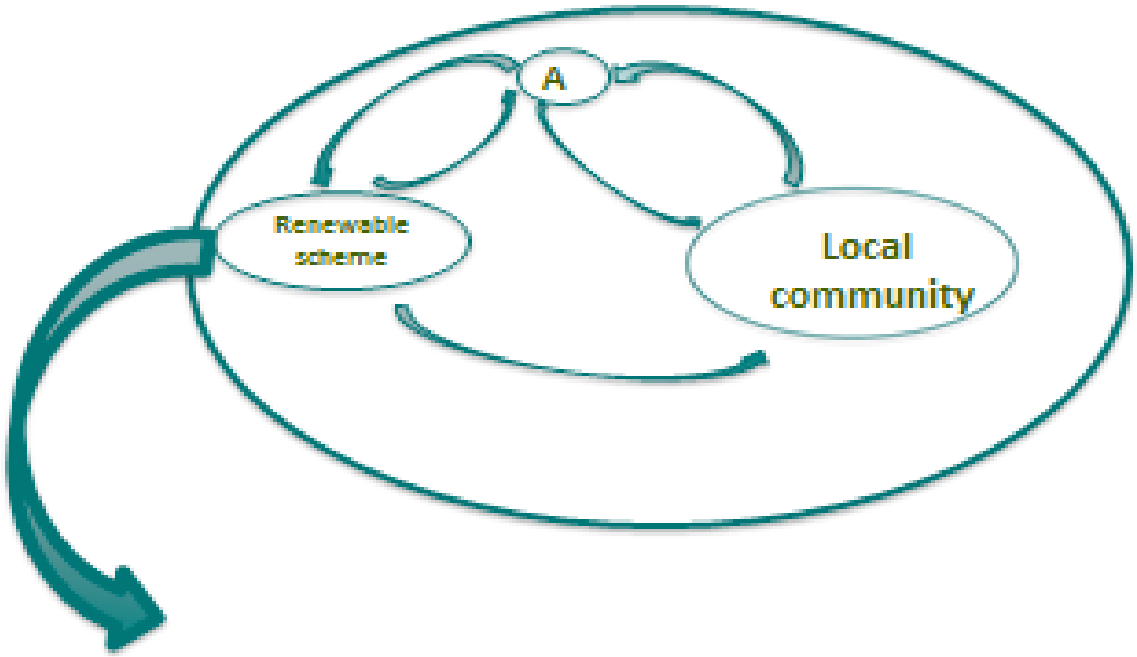
- Turbines cost c £1.2-1.5 million per MW installed capacity
- They generate c £150,-200,000 profit per year after interest
- They create very few local jobs when they are externally owned-computer controlled and with roving maintenance teams
- Ground rent to landowners is in the region of £10-12,000 per MW/year
- Companies pay up to £5,000 per MW per year into community trusts; mostly near £2K.
- So on a standard wind farm, less than 10% of the value of output stays in the rural economy; much less (say 2%) if an absentee landowner is involved. There is no local labour to speak of and minimal local spend.
- 3300 MW of existing wind energy capacity is generating very little economic benefit to rural Scotland

The normal external ownership model of renewables



Minimal use of local firms

Immediate outflow of profit and income from local economy

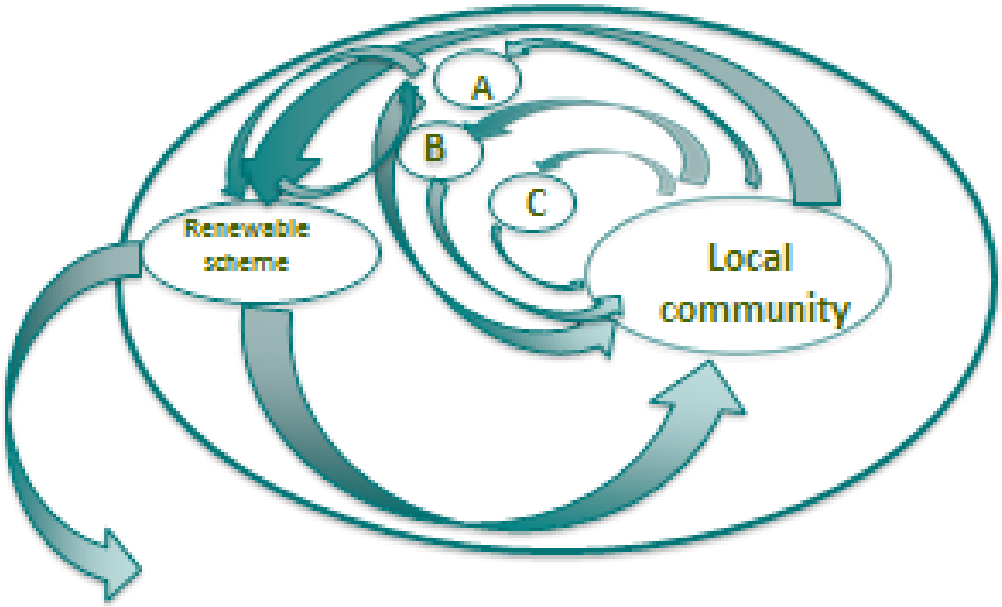
Modest payments form Community Trust Fund

An extractive model of rural economic development

There is an alternative

- Community ownership
- Supported by CES and the CARES scheme
- Government target of 500 MW of privately owned small scale + community renewables
- This model has taken off in the islands (Orkney, Shetland and the Western Isles) and is now moving elsewhere Neilston, Fintry in Central Scotland, Udny in Aberdeenshire.
- Several big schemes in pipeline: Rosneath Dunbartonshire 10 MW

The virtuous cycle in community energy



The renewables project sources some local inputs

The renewables project pays into a community fund

Local communities have more income and buy more from local firms

These flows establish a virtuous circle

Farmer owned or local co-op owned renewable energy may display very similar economic relationships

What is the difference?

- Udny can spend £150K on local development this year alone as income from a 800 kW turbine
- All of Gigha's housing stock has been insulated and improved making major carbon savings on the back of the three turbines' 100K a year income
- Neilston can put into effect a major regeneration plan for the community and finance it from a 50 % share on a 9.2 MW scheme
- Shapinsay can fund community busses and other local initiatives
- Fintry can fund energy advice and support, insulation support changes to green energy for homes

Why is there not more community energy?

- The overarching structures of energy production systems in the UK
- High transaction costs of getting a scheme approved (but CARES scheme will cover this)
- Planning
  - No real recognition of social and economic development as a planning concern(parked by planners because of contributions to trust funds)

    NB Social and economic development is a material consideration in planning
  - A failure of planning committees to distinguish between different effects of different models of ownership
- Energy policy trumping rural development policy?
- Getting the leadership together to promote a scheme
- Getting the last bit of finance (Co-op bank is good for about 90%)

Other benefits of community schemes

- Social and environmental justice
- Building social capital- getting local folk to work together pool skills etc.
- Funding low carbon improvements and low carbon lifestyles, esp in places like Fintry and Gigha
- Local people can decide what they want to do with the proceeds
- Providing a stepping stone to tackling difficult problems like fuel poverty
- But can be divisive and fracture social capital- it is not all necessarily beneficial

A brief reflection on rural income

- Total Income from Farming (TIFF) is about £550 million per year (2011)
- Net output of wind renewables in Scotland c £580 million

  (@160K per MW/yr; 2012 installed capacity)
- One key issue in rural development is better understanding the financial flows: the direct, indirect and induced impacts of competing rural development options
- Both energy and farm sectors are heavily subsidised, but at present energy planning and policy is almost completely disconnected from rural development

And what sort of social science is needed?

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- Robust economics tools to allow estimates of local benefit from alternative strategies
- A political economy of energy: why are the UK institutional forms so different from say Denmark?
- A sociology of local action: how (and why) do groups come together and build local partnerships to engage communities in energy production
- An exploration of conflict and conflict resolution
- An better understanding of policy formation and an ability to critique policy

Conclusions

- **Renewables are a 'game changer' for rural Scotland** if, and only if, the ownership structures are right, otherwise 90% of the benefits will leach straight out of rural Scotland.
- The 500 MW target, which is a mere 250 large turbines, could produce nearly 20% of the current income of Scottish farming.
- We cannot afford not to get the policies, the support structures and the planning system right to contribute to sustainability in rural areas.
- The post carbon economy poses some challenges for rural areas: high footprint, high fuel poverty, high travel, poor insulation; high land use emissions. Renewables could be more of a corrective force.
- We must do more to address the post carbon challenge in rural areas


Thank you