NEW LOCAL GOVERNMENT NETWORK

Power and Money

How local economies can benefit from renewable energy

Luke Hildyard

www.nlgn.org.uk

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Luke Hildyard
February 2011

Executive summary

The UK is committed to a target of generating 15 per cent of all energy from renewable sources by 2020, as part of the wider EU target of achieving 20 per cent of its energy supply from renewables by the same date

To this end, the Government has adopted a **feed-in tariff (FIT)** 'cashback' mechanism for renewable electricity and proposed the **renewable heat incentive (RHI)**, operating on the same basis for heating.

Under the FIT and RHI, households, businesses and public sector or community bodies will receive payments for energy generated from renewable sources, on top of the savings they make on energy bills. The payments will continue for up to 25 years and are intended to make renewable energy economically preferable to conventional energy sources.

While long-term tariff details have not been finalised, **NLGN estimates that the schemes could represent an estimated £12 billion investment in renewable energy**. Local authorities will be able to access this money by installing renewable energy generators on their own estates and properties, including schools, council offices and social housing. The payments for the energy generated through these measures would be a significant source of revenue at a time of unprecedented budget cuts.

However the **upfront costs of installation remain a potential barrier to uptake**, both for local authorities and their wider communities. The Energy Saving Trust estimates that, for example, a single 2.5kw (kilowatt hour) solar photovoltaic (PV) electricity generator would cost nearly £13,000.[1] A biomass boiler would cost £9,200.[2]

Councils' trusted reputation and accountability means they could play a key part in encouraging uptake of the FIT and RHI beyond their own properties and estates. Their capacity to co-ordinate measures on an area-wide basis could also reduce costs through economies of scale.[3]

1 Energy Saving Trust, *Economics and Impact Model: Data and Assumptions*, 2010, p1
2 ibid
3 Sustainable Development Commission, *The Future is local,* 2010 p7

Historically, councils role in broadening access to lifeline utilities such as gas and water is well-documented. Joseph Chamberlain established his political reputation through the creation of municipal utility boards in late-19th Century Birmingham. **The challenge for today's local authorities is to play a similarly important role in expanding renewable energy and supporting the transition to a low-carbon economy.**

The roll-out of renewable technologies is the most obvious and directly beneficial means by which they can do so. This would significantly reduce the council's own carbon footprint. It would also **generate substantial revenue that could be used to limit the effect of cuts in grant from central government**. In itself, this should make the FIT and RHI a priority for council leaders and senior management teams.

Thus far however, the schemes have been hindered by uncertainty. After less than a year in operation, the Government announced a review of the FIT in February 2011. Only a small number of the FIT installations accredited to date have been recorded in the local government sector.[4] The launch of the RHI, originally scheduled for April 2011, has been postponed until an unspecified date later on in the year.

Local authorities are not only losing out on a significant revenue stream as a result. They are also missing an opportunity to stimulate their local economies and support local businesses and job creation. Council investment in renewable technologies will create openings for employment and growth in the relevant supply chains (from manufacturing and renewable energy products through to their retail and installation).

The Energy Saving Trust cite a multiplier of at least 1.93 for every £1 invested by local authorities in industries related to renewable energy, in terms of the benefit to the local economy.[5] However this figure can be effected by the degree to which investment 'leaks' out of the area to external contractors, or displaces existing business activity. Councils can take steps to minimise these factors, by consulting with local businesses to discuss their procurement plans, for example, or by supporting local

4 Ofgem, *Feed-in Tariff Installation Report Dec 2010*, via *http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=13&refer=Sustainability/Environment/fits* accessed 23 January 2011

5 EST, *Data and Assumptions*, p5-6

electricians and plumbers to access training courses that will qualify them to install renewable generators. In doing so, they can help to ensure that their initial investment continues to circulate in the community.

However, councils capacity to stimulate the renewable energy sector in their areas could be further strengthened by national policy measures. To this end we recommend that the Government should:

- **maintain the FIT as it is currently constituted, including planned timescales and access requirements**
- **consider the anticipated economic impacts of subsidies for particular technologies when reviewing the FIT in 2013 and planning the RHI**
- **review the feasibility of offering regional variation in the tariff levels for the FIT and RHI**
- **create a single 'eco-home provider' accreditation certificate covering the RHI, FIT and the Green Deal energy efficiency scheme**
- **enable households to pay for renewable energy installations under a Green Deal arrangement.**

For Councils themselves, we recommend the following step-by-step process, enabling them to access the FIT and RHI, and to maximise the benefits for their local areas:

1. **adopt a corporate approach to climate change, with clear objectives and definable outcomes accessible to all council departments**
2. **undertake a geographic audit of their area's suitability for particular renewable installations, as well as an economic audit of the capacity to support the relevant supply chains. Additionally, local authorities should seek to understand and inform the attitudes of the local community towards particular renewable technologies**
3. **councils should then seek to tailor training and support programmes for businesses and jobseekers towards the appropriate renewable energy products and services**

4. **following this, they should undertake an area-wide installation programme, fitting the appropriate renewable energy generators to their properties and estates**

5. **local authorities should also promote the FIT and RHI to their community, and offer them the opportunity to participate in a council-led, area-wide roll-out of renewable energy installations**

Though profitable in the long-term, these processes will incur significant upfront costs. Raising the necessary finance is likely to prove one of the major challenges facing councilss wishing to access the FIT and/or RHI, particularly as it will also add substantial debt levels to balance sheets. Although the guaranteed revenues through the schemes justify the investment, all financing options should be carefully considered. Our research identified a number of means by which the necessary funding could be raised:

- **Government funding** – through vehicles such as the Regional Growth Fund. Funding on this basis is likely to be limited and extremely competitive

- **Prudential borrowing** – This could be done in conventional fashion through the Public Works Loan Board, or from institutional investors, with repayment guaranteed through the FIT and RHI revenues. Equally Tax-increment Financing could be sought on the basis of the economic uplift achieved by the stimulus for the local renewable energy sector. Muncipal Bond issuance would be a third option. These are well-understood vehicles, but at the same time would increase debt levels and involve a substantial proportion of the investment leaking out of the area through interest payments

- **Raising funds from the community** – Encouraging investment from the local community would engage citizens in the effort to tackle climate change, as well as ensuring that any interest payments and profits from the FIT/RHI accrued locally. Means of doing so could include Green Retail Bonds or ISAs issued by the councils, or community mutuals established with council support to enable neighbourhoods to set up their own renewable installations. There are precedents for such initiatives, such as the war bonds issued to fund the Second World War effort but the long lead-in times required to promote the scheme and uncertainty over take-up would be potential obstacles.

Introduction

The threat of dangerous climate change remains paramount. The 2007 United Nations Inter-Governmental Panel on Climate Change (IPCC) notes that 'warming of the climate system is unequivocal and can now be firmly attributed to human activity.'[6]

In order to limit global temperature rises to below the 2°C – 2.4°C above pre-industrial levels that the IPCC believes is both the minimum possible, and the maximum within which the risk to food and water sources, eco-systems, low-lying and coastal settlements, public health and the economy can be contained, governments must initiate a drastic reduction in greenhouse gas emissions – of which carbon is by far the largest source.[7]

The Climate Change Act (2008) commits the UK to reducing its greenhouse gas emissions by 34 per cent on 1990 levels by 2020, and 80 per cent by 2050.[8]

There is still considerable work to be done in this respect. The 34 per cent and 80 per cent reductions in carbon emissions on 1990 levels equate to 18 per cent and 75 per cent cuts on 2009 levels (the most recent year for which full data is available).[9]

Energy generated from fossil fuels accounts for the majority of carbon emissions in the UK, with power for homes, businesses and the public sector accounting for 66 per cent of the national total. [10]

In addition to the challenge of climate change, the depletion of North Sea oil and gas reserves means that we are likely to become increasingly reliant on

6 UN Inter-Governmental Panel on Climate Change, *Fourth Assessment Report*, 2007 via http://unfccc.int/press/fact_sheets/items/4987.php

7 Ibid

8 Department for Energy Climate Change (DECC), *Climate Change Act 2008* via *http://www.decc.gov.uk/en/content/cms/legislation/cc_act_08/cc_act_08.aspx* accessed October 5th 2010

9 DECC, *Annual statistics on Climate Change*, 2009 via http://www.decc.gov.uk/assets/decc/Statistics/climate_change/1215-2009-final-uk-ghg-emissions-data-tables.xls (table 1) accessed October 5th 2010

10 DECC, *Annual statistics on Climate Change*, 2008 via *http://www.decc.gov.uk/assets/decc/Statistics/climate_change/362-uk-greenhouse-gas-emissions.xls* (table 4) accessed October 5th 2010

dwindling fossil fuels and imports from volatile foreign sources.[11]

The 2010 UK Energy in Brief report records the UK relying on imports to meet 27 per cent from its energy needs in 2009.[12] This represents a rise from 14 per cent in 2005.[13] As recently as 2000 the UK was a net exporter of energy, meeting the equivalent of the national energy needs from domestic production, and exporting a further 17 per cent overseas.[14]

In the case of gas, for example, the majority of these imports come via pipeline from Belgium, Holland and Norway.[15] However an increasing volume is being imported in Liquefied Natural Gas form from countries such as Algeria, Qatar and Trinidad.[16]

Major suppliers of the UK's coal include Russia, Colombia and South Africa.[17] Coal still powers 15 per cent of UK energy overall, and 28% of our electricity.[18]

Suppliers of the UK's crude oil include Russia, and the Organization of Petroleum Exporting Countries (OPEC) comprising countries such Venezuela, Nigeria, Algeria and a number of states in the Middle East.[19]

Therefore, not only are these fossil fuels increasingly scarce and damaging to the environment, their ongoing provision is at the mercy of geopolitical volatility.

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11 DECC, *Renewable Energy Strategy*, 2009, p10

12 DECC, *UK Energy in brief 2010*, p11

13 ibid

14 ibid

15 Hansard, House of Commons written answers for 13 January 2010 via http://www.publications.parliament.uk/pa/cm200910/cmhansrd/cm100113/text/100113w0019.htm#10011377000757

16 Ibid and The Times, *Gas imports leave North Sea supplies in the cold*, December 22nd 2009 via *http://business.timesonline.co.uk/tol/business/industry_sectors/natural_resources/article6964542.ece* accessed 1 December 2010

17 DECC, *Energy Statistics: Coal* via *http://www.decc.gov.uk/assets/decc/statistics/source/coal/et2_4.xls* accessed 1 December 2010

18 DECC, *Coal*, via *http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/coal/coal.aspx* accessed 1 December 2010

19 DECC, *UK Energy Indicators 2010: Main indicators dataset* , chart 2.7 via *http://www.decc.gov.uk/assets/decc/Statistics/publications/ukenergysectorindicators/304-uk-energy-sector-indicators-2010-main.xls* accessed 1 December 2010

Why do we need renewable energy?

Energy from renewable sources is both secure and low-carbon.

The necessary infrastructure to roll out a renewable energy programme will be costly – estimated at £200 billion by 2020.[20] However this should be seen in the context of rising fossil fuel prices. DECC's estimates suggest that wholsesale gas prices could rise from 31 pence per therm in 2009 to as much as 121 pence by 2020, while oil prices could increase from $63 per barrel to $153 over the same timeframe.[21] Contrastingly, as the deployment of renewable technologies increases, costs are likely to fall through economies of scale, investment in research and development and increased competition – BP recently estimated that by the end of the decade, solar energy would be cheaper than fossil fuels.[22]

The Stern report also puts the cost of unabated climate change of at around 20 per cent of GDP, demonstrating the economic importance of reducing carbon emissions.[23]

Nuclear energy will form part of the UK's effort to meet the targets specified in the 2008 climate change Act. However, nuclear power presents challenges in terms of security and the long lead-in times and specialist knowledge required as part of the planning and construction process of the nuclear infrastructure. [24]

For these reasons, the Secretary of State for Energy and climate change has confirmed that both nuclear power and renewables will play a key role in making the transition to a sustainable, secure, low-carbon energy supply.[25]

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20 Guardian, *What exactly are Green Bonds,* 11 January 2011 via *http://www.guardian.co.uk/environment/cif-green/2011/jan/11/what-are-green-bonds?&CMP=EMCENVEML1631* accessed 24 January 2011

21 DECC, *Fossil Fuel and retail price assumptions*, June 2010 via *http://www.decc.gov.uk/en/content/cms/statistics/projections/projections.aspx* accessed 24 January 2010

22 Bloomberg, *Solar Power to equal cost of fossil fuels within decade, BP forecasts*, 24 November 2010 via *http://www.bloomberg.com/news/2010-11-24/solar-power-cost-to-equal-fossil-fuel-expense-in-decade-bp-says.html* accessed 24 January 2010

23 Sir Nicholas Stern, *Stern Review of the Economics of Climate Change*, 2006, pvi

24 HM Government, *2050 Pathways* Analysis, 2010, p167-173 via *http://www.decc.gov.uk/assets/decc/What%20we%20do/A%20low%20carbon%20UK/2050/216-2050-pathways-analysis-report.pdf* accessed 14 December 2010

25 Rt Hon Chris Huhne MP, *Green Deal will be a revolution: Speech to Liberal Democrat Party Conference*, 21 September 2010 via *http://www.libdems.org.uk/latest_news_detail.aspx?title=Chris_Huhne:_Green_Deal_will_be_a_revolution_&pPK=88186f4a-e1d5-4b34-9fc9-83cff3bf195d* accessed **24** January 2010

To this end, the UK has committed to generating 15 per cent of its energy from renewable sources by 2020.[26] This will require renewable energy sources to meet 30 per cent of the UK's electricity requirements and 12 per cent of the country's heating.[27] Currently, renewable energy accounts for little over 3 per cent of UK energy consumption.[28]

The role of small-scale renewable energy generators in meeting these targets will be important. The 2009 Renewable Energy Strategy estimates that around 10 per cent of renewable electricity will need to come from small-scale microgeneration. Small scale generators will also play a key role in meeting the 12 per cent target for renewable heat. It is anticipated that 22 per cent of renewable heat will be consumed by households, while small-scale renewable installations could also apply in the commercial or public sector.[29]

Local government and climate change

There is a growing recognition of local government's importance in meeting the national objectives on climate change. NLGN argued in 2007 that local authority policies alone could achieve a 65 per cent reduction in carbon emissions by 2025.[30] Since then, the government has established ten 'local low-carbon frameworks' to further investigate the potential of councils to combat climate change. Councils themselves have also acknowledged the part they have to play. Prior to the abolition of the National Indicator Set, nearly 150 local authorities had signed up to one of the four performance indicators relating to climate change as part of their local area agreement.[31] Over 90 per cent of councils in England have signed the Nottingham Declaration, pledging to 'systematically address the causes of climate change and to prepare their community for its impacts.'[32]

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26 DECC, *Renewable Energy Strategy*, 2009, p10

27 ibid, p42, 45

28 DECC, *Digest of UK Energy Statistics*, 2010, p27

29 Ibid p66

30 James Macgregor, *Carbon Footprints, Local Steps: How local government can rise to the climate change challenge*, NLGN, 2007 p7

31 Graham Pearce and Stuart Cooper, *The governance and implementation of Climate Change policy at the sub-national level*, Political Studies Association, Annual Conference 2010, via *http://www.psa.ac.uk/journals/pdf/5/2010/681_619.pdf* accessed October 21st 2010

32 Energy Saving Trust, *The Nottingham Declaration on Climate Change* via *http://www.energysavingtrust.org.uk/nottingham/Nottingham-Declaration/The-Declaration/About-the-Declaration* accessed 14 February 2011

The Green Economy

The arguments for action on climate change are by now familiar. However there is a further rationale for investment in a new, decarbonised economy: the tremendous commercial opportunities which lie therein. The advantages of low carbon innovations, such as wind turbines or PV solar panels, mean there is likely to be strong market growth in the industries associated with these products.

Recent estimates suggest that the UK's emerging low carbon sector currently supports 445,600 jobs, with a value of about £56 billion.[33] Of this, renewable energy accounts for 236,600 jobs, and a market value of £33 billion.[34] The renewables market is expected to grow annually by around 5 per cent until 2015/16.[35] However, whether these projections can be fulfilled or even surpassed will depend on the take-up of the technologies and the capacity of the UK workforce and businesses to realise the opportunity afforded by the expanding market for renewable energy. Measures supporting the development of a skilled workforce capable of taking advantage of the growth in the green sectors will be vital. The Government's response to the 'Low Carbon Skills Challenge' consultation highlighted five key challenges in this respect:

- delivering significantly higher volumes of generic Science, Technology, Engineering and Mathematics skills at all levels;
- Developing and delivering rapidly the specialist skills solutions that will be needed for emerging sectors and technologies;
- Getting more young people and adults interested in low carbon careers, skills and qualifications;
- Stimulating employer demand for and investment in low carbon skills;
- Replicating good practice rapidly in each of the above, within and between emerging sectors.[36]

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33 Innovas, *Low Carbon and Environmental Goods and Services: An Industry Analysis – Update for 2008/09*, March 2010 p6, 8
34 ibid
35 Ibid p12
36 DECC, Meeting the Low Carbon Skills Challenge – a Government response, 2010 p4-6

The New Economics Foundation have argued that a £10 billion programme of government investment in low carbon goods and services could create an additional 60,000 new jobs and deliver savings of £4.5 billion in increased tax take and reduced benefit claims over 5 years, while also adding £15 billion to the earnings of low income households.[37] The Nobel prize-winning economist Joseph Stiglitz has also said that Government support for green industries should be increased in order to reinvigorate the global economy.[38]

It is clear from the techniques being developed by the Coalition Government, however, that this brand of state intervention and support is no longer likely. Nonetheless, the Coalition have acknowledged the potential of the low carbon sector, particularly in terms of the role it could play in regenerating former manufacturing communities and reducing the UK's dependency on the financial services industry. As the Chancellor of the Exchequer stated when presenting the 2010 Comprehensive Spending Review (CSR) 'long-term investment in the capacity of our transport, our science, our green energy will all help move Britain away from its decade-long dependence on one sector of the economy in one part of the country.'[39]

Though the previous Government's fiscal stimulus is now being withdrawn, the Coalition will maintain a framework of pump-priming and business support funding to encourage the private sector and enterprise to take new risks and innovate. A key part of this will be the Feed-in Tariff and the Renewable Heat Incentive subsidies for small-scale renewable energy generation, which were planned by the previous administration but have survived the Coalition's spending review.

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37 New Economics Foundation, *The Cuts Won't Work: Why spending on a Green New Deal will reduce the public debt, cut carbon emissions, increase energy security and reduce fuel poverty*, 2009, p3

38 Business Report, *Stiglitz: Green Policies offer life to Economies*, 18 January 2011

39 Rt Hon George Osborne MP, *Spending Review Statement*, 20 October 2010 via *http://www.direct.gov.uk/prod_consum_dg/groups/dg_digitalassets/@dg/@en/documents/digitalasset/dg_191699.pdf* accessed 18 January 2010

1 *Incentives for renewable energy*

In order to substantially boost the take-up of renewable energy, the previous Government introduced two new measures, the Feed-in Tariff (FIT) for electricity, and the Renewable Heat Incentive (RHI) for heating designed to encourage small scale renewable generators such as wind turbines and solar panels. It is hoped that by encouraging greater take-up of renewable energy, the schemes will bring more money into the sector, thereby improving the products and increasing competition to the point that renewables eventually achieve cost parity with more carbon intensive energy sources.

The Feed-in Tariff

The FIT pays users a sum of money for all the electricity they generate onsite, with a further payment for any exported to the national grid. Payment is covered by energy suppliers, who recover their costs from their wider customer base through increased fuel bills. Some critics have warned that because installing microgenerators is expensive, there is a danger that only wealthier households will take advantage of the scheme, and it will therefore amount to an effective subsidy from the poor (through their fuel bills) to the rich.[40] Advocates of Feed-in Tariffs have argued that it will accelerate parity between renewable energy and fossil fuels, and that the average annual increase in fuel bills will only amount to £10.[41]

The scheme covers the following methods for generation, up to 5 megawatts (5MW) of electricity:

- solar electricity (PV) (roof mounted or stand alone).
- wind turbine (building mounted or free standing).
- hydroelectricity.
- anaerobic digestion.

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40 Brenda Boardman, *Fixing Fuel Poverty*, Earthscan, 2009, p148

41 DECC, Impact Assessment of Feed-in Tariffs for Small-Scale, Low Carbon, Electricity Generation, 2009 via *http://www.decc.gov.uk/assets/decc/What%20we%20do/UK%20energy%20supply/Energy%20mix/Renewable%20energy/Renewable%20Energy%20Strategy/1_20090715120436_e_@@_UKRenewableEnergyStrategy2009IAforsmallscalerenewableelectricityurn09D687.pdf* accessed 31 January 2011

- micro combined heat and power (micro CHP) (limited to a pilot at this stage)[42]

The tariff levels vary, depending on when the microgenerators are installed, with the current window lasting from 15 July 2009 to 31 March 2012. Certain tariffs will be tapered from this point, on the basis that greater demand for the measures will increase competition for their supply and installation, thereby bringing costs down.

Figure 1 Full list of Feed-in Tariffs

Technology	Scale	Tariff level for new installations in period (p/kWh) [NB tariffs will be inflated annually]			Tariff lifetime (years)
		Year 1: 1/4/10 – 31/3/11	Year 2: 1/4/11 – 31/3/12	Year 3: 1/4/12 – 31/3/13	
Anaerobic digestion	≤ 500 kW	11.5	11.5	11.5	20
Anaerobic digestion	> 500 kW	9.0	9.0	9.0	20
Hydro	≤ 15 kW	19.0	19.9	19.9	20
Hydro	> 15 - 100 kW	17.8	17.8	17.8	20
Hydro	> 100 kW - 2 MW	11.0	11.0	11.0	20
Hydro	> 2 MW - 5 MW	4.5	4.5	4.5	20
MicroCHP pilot	≤ 2 kW	10	10	10	10
PV	≤ 4 kW (new build)	36.1	36.1	33.0	25
PV	≤ 4 kW (retrofit)	41.3	41.3	37.8	25
PV	> 4 - 10 kW	36.1	36.1	33.0	25
PV	> 10 - 100 kW	31.4	31.4	28.7	25
PV	> 100 kW - 5MW	29.3	29.3	26.8	25
PV	Stand alone system	29.3	9.3	26.8	25
Wind	≤ 1.5 kW	34.5	34.5	32.6	20
Wind	> 1.5 - 15 kW	26.7	26.7	25.5	20
Wind	> 15 -100 kW	24.1	24.1	23.0	20
Wind	> 100 - 500 kW	18.8	18.8	18.8	20
Wind	> 500 kW - 1.5 MW	9.4	9.4	9.4	20
Wind	> 1.5 MW - 5MW	4.5	4.5	4.5	20
Existing microgenerators transferred from the RO		9.0	9.0	9.0	to 2027

42 DECC, *Feed-in Tariffs* via *http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/feedin_tariff/feedin_tariff.aspx* accessed 14 January 2011

The scheme is open to households, businesses and public bodies such as schools and hospitals. As a result of lobbying by NLGN and others for a change to regulations that had previously prevented councils from selling electricity back to the grid, local authorities will now be able to access the FIT export tariff (and could also consider establishing larger scale renewable energy plants as a full-scale energy supplier).[43]

The scheme escaped the 2010 CSR largely intact, but with two key changes. Firstly, it was announced that if uptake is significantly higher than anticipated, the Government will bring forward a review of the scheme scheduled to begin in 2012 and potentially bring forward the 31st March deadline to ensure that the cost of the scheme does not escalate.[44] Secondly, when the scheduled review takes place in 2012, the tariffs will be 're-focused on the most cost-effective technologies' for new subscribers to the scheme. These changes will come into effect for 2014-15, when the subsidy levels will be capped at £360 million per year, 10 per cent less than had been previously estimated.[45]

In February 2011, the Secretary of State for Energy and Climate Change announced that the FIT review would indeed begin immediately, citing concern that 'the prospect of large scale solar PV projects under FITs, which was not fully anticipated in the original scheme and could, if left unchecked, take a disproportionate amount of available funding or even break the cap on total funding.'[46]

The review will include 'fast-track consideration of large scale solar projects (over 50kw) with a view to making any resulting changes to tariffs as soon as practical.'[47] This reflects previous suggestions from Coalition Ministers that the FIT was intended to support small, property-based installations, not larger field arrays.[48]

43 DECC, *Huhne to overturn ban on councils selling green electricity*, 7 July 2010 via *http://www.decc.gov.uk/en/content/cms/news/pn10_078/pn10_078.aspx* accessed 6 December 2010

44 Guardian, *How does the Spending Review effect Feed-in Tariffs?* via *http://www.guardian.co.uk/environment/2010/oct/20/feed-in-tariffs-renewableenergy* accessed 2 December 2010

45 HM Treasury, *Spending Review 2010*, p62

46 DECC, *Feed-in Tariffs: Written Ministerial Statement by Chris Huhne, Secretary of State for Energy and Climate Change,* 7 February 2011 via *http://www.decc.gov.uk/en/content/cms/news/fits_rev_wms/fits_rev_wms.aspx* accessed 7 February 2011

47 Ibid

48 Greg Barker, *Speech to the Micropower Council: Energising the Big Society - the role of industry in the local energy revolution*, 23 November 2010 via *http://www.decc.gov.uk/en/content/cms/news/micro_council/micro_council.aspx* accessed 7 December 2010

A reduction in the 5MW size limit could be of relevance to local government, because council-owned properties and land could provide sites for larger installations on a scale that would enable local authorities to access significant revenue through the FIT. These hints that there may be changes to the scheme making larger projects inadmissible could deter local government from undertaking the costly and time consuming process of planning and funding their installation.

However the Secretary of State's specific reference to field arrays does not cover projects relating to smaller-scale generators rolled out on an area-wide basis. local authority schemes installing microgeneration facilities on council-owned properties, schools or council-managed social housing would not be affected.

Renewable Heat Incentive

Unlike the FIT, the RHI is not yet underway, so its potential impact, and benefits for councils, are more difficult to quantify. The scheme was originally intended to begin from April 2011, but this has been postponed until a later, unspecified start date.[49] The tariff levels and the technologies supported have not yet been announced. However it will operate on a similar basis to the FIT, with subsidies provided for households, businesses and public/community sector bodies that generate heat from renewable sources. The principle difference is that the RHI will be funded by the Government, from Annual Managed Expenditure, rather than by energy suppliers.[50]

The October 2010 CSR confirmed that from its introduction in 2011, it will be allocated £850 million worth of public funding for renewable heat generation up until the end of the Spending Review period in 2015, however the RHI will operate on a longer-term basis.[51] The consultation published in February 2010 by the previous Government proposed that 'the scheme would continue to pay out for many years after 2020'. This is necessary to the economics of the renewable heat installations – i.e making them more

49 Guardian, *Green Industry hits out at renewable heat incentive delay*, 21 January 2011 via *http://www.guardian.co.uk/environment/2011/jan/21/renewable-heat-incentive-delay* accessed 31 January 2011

50 HM Treasury, *Spending Review 2010*, p62

51 DECC, *Renewable Heat Incentive (RHI)* via *http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/policy/renewable_heat/incentive/incentive.aspx* accessed 2 December 2010

cost effective than fossil fuel heating – and it can be safely assumed that by maintaining it, the Coalition will also maintain the long-term time-frame.[52] Therefore the £850 million figure will only represent a proportion of the lifetime funding provided by the RHI.

Sums of money available

FIT - In 2009, DECC's estimated that the 'subsidy cost' of the FIT would be £7.9 billion up until 2030.[53] However, with annual payments now capped at £360 million in 2014/15, this may be reduced. If the £360 million figure is taken to be the annual payment ceiling until 2030, this equates to £5.4 billion over 15 years. The payments from 2010-2014 can be added to this figure – if an equal increase in annual uptake is assumed, this will add a further £720 million worth of payments, bringing a **total value for the FIT of £6.12 billion from 2010-2030.**

We have made the following assumptions in calculating this figure:

- The £360 million cap on payments implemented from 2014/15 will represent a ceiling on annual payments from that date.
- An equal annual increase in payments of £72 million from the scheme's commencement in April 2010 up until reaching the £360 million ceiling in 2014/15.
- The figure includes money already paid out to accredited installations – so in fact a proportion of the £6.12 billion has already been accounted for.

RHI – The RHI has been allocated £850 million from 2011- 2015. If the scheme operates on the same basis as the FIT, with annual payments to participants, and payments increase annually by an equal amount (£85 million), then the annual sum of money available will reach £340 million by 2014/15. If this is maintained until 2030, then, combined with £850 million up until 2015, then **the value of the RHI up until 2030 will be £5.95 billion.**

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52 DECC, *Renewable Heat Incentive: Consultation on the proposed RHI financial support scheme*, 2010, p59
53 Impact Assessment of Feed-in Tariffs, p2

Assumptions in calculating figure:

- An annual increase in payments of £85 million per year from 201/12 – 2014/15, which would use up all the £850 million budget over the spending review period.
- The £340 million figure that this would equate to for the year 2014/15 being the ceiling for annual RHI payments until 2030.
- The RHI operating on the same basis as the FIT (with accredited installations guaranteeing payments on a long-term basis).

Combined, this equates to funding of £12.07 billion available over the next 20 years to local authorities who are able to access the FIT and/or RHI. This represents a reduction on previous estimates, as a result of measures undertaken in the 2010 CSR. As has been shown, the FIT was originally envisaged to represent £7.9 billion worth of subsidy for renewable energy. Nonetheless, this represents a substantial pot of funding through which entrepreneurial Councils can generate significant carbon reductions and new revenue streams.

Figure 2 Table detailing estimated funding levels for FIT/RHI

Estimated funding per annum for the FIT and RHI (million £)						
	2010/11	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015-30**
Feed-in Tariff	72	144	216	288	360	360
Renewable Heat Incentive	n/a	85	170	255	340	340

Estimated cumulative funding to 2030 (billion £)	
Feed-in Tariff	6.12
Renewable Heat Incentive	5.95

2 *The opportunity for councils*

Direct financial benefit

The sums of money allocated to the FIT and the RHI respectively are substantial. With some council's facing significant reductions in revenue as a result of public spending cuts, the schemes are a potentially valuable resource for local government. They offer a new long-term revenue stream, as well as enabling councils to achieve more ambitious reductions in local domestic carbon emissions.

The financial benefits are borne out by specific projections carried out by Wrexham and Birmingham councils, two of the first local authorities planning to participate in the FIT. Both Birmingham and Wrexham have undertaken research detailing the extent to which they could profit from installing renewable technologies across council-managed properties and social housing stock (see case studies).

Case Study

Wrexham Borough Council

A survey of social housing in Wrexham found that approximately 3,000 homes were suitable for photovoltaic installation. The total cost of this process was expected to amount to £24.9 million.

However, over the 25 year lifetime of the project, the revenue from the FIT is expected to recover these costs and generate a further £25.7 million net income. For non-domestic council properties, the revenue from the scheme again substantially outweighs the upfront costs. PV installation on the 13 suitable properties will require an outlay of around £3.4 million, but will eventually generate a net income of just over £3 million over 25 years.

These projected revenues do not include the estimated saving on energy bills that the PV installations will bring about, providing *reductions in residents energy bills of up to 40 per cent. It would also eliminate approximately one tonne of annual carbon emissions per property, thereby delivering a significant benefit to the environment.*

Case Study

Birmingham Energy Savers

The 'Birmingham Energy Savers' programme has produced similarly positive findings from the initial phases of the project. Phase I involved the installation of PV panels on 32 households, 20 businesses and 3 social enterprises. This required an upfront cost of £500k, but will generate savings of £11-£14k per annum from reduced energy bills and £40k pa from in payments from the FIT, covering the cost of the programme within 5 years.

Phase II, involving 1,620 households and 435 businesses, will cost £13 million. As this was funded through prudential borrowing, approximately £17 million in interest will accrue over the 25 year lifetime of the scheme. The measures are expected to achieve £212k per year in savings on energy bills and £1.3 million in FIT payments. Even when taking the interest into account and allowing for the fact that the savings on energy bills will not be returned to the council, the scheme does cover its costs with a small profit over the course of the 25 years.

Kirklees Council, in partnership with the Kirklees Neighbourhood Homes social landlord, have also undertaken an £6 million project installing FIT-ready installations on 1,000 social homes across the area.[54] 60 per cent of the annual income will go towards repaying upfront costs (funded internally from the Kirklees Housing Revenue Account) and ongoing maintenance, with the remainder being dedicated to supporting further energy efficiency and fuel poverty alleviation work across Kirklees.

54 Kirklees Council, *Solar PV Investment Programme – Kirklees Council and KNH Joint Proposal: Cabinet Meeting – 7th December 2010* via *http://www.kirklees.gov.uk/Secure/meetings/pdfs/1210/CABINET07121041392D.pdf* accessed 31 January 2011

Remaining funding available

Ofgem statistics show that as of December 2010, just under 20,000 renewable installations qualifying for the FIT have been accredited and are receiving payments under the scheme.[55] At the end of the second quarter (September 2010) around £2.7 million had been paid out.[56] Because the accreditation process is ongoing and new installations are joining the scheme all the time, annual payments for the first year will be more than double the £2.7m allocated in the first two quarters.

Nonetheless, with the total pot eventually expected to provide £360 million worth of annual subsidy for small-scale renewable energy generation, there is still a substantial amount of FIT money available for local authorities whose installations are accredited by 31 March 2012 to benefit beyond those that have done so thus far. Of nearly 20,000 accredited installations, only 275 are categorised as being 'community' projects and 320 as 'commercial' (as opposed to, industrial or domestic).[57] As the installer is responsible for noting which category an installation falls into, it is possible that both descriptions could cover local authority projects. At the same time, they will also include a number that are operated by private or voluntary sector bodies.

Therefore the total number of local authority installations accessing the FIT is likely to be substantially lower than the community/commercial sector total of 575.

While this figure does not encompass any installations built on social housing, it does suggest that local authorities are not maximising the possibilities afforded by schools, offices and other facilities.

The RHI is not yet underway, and thus all the £850 million earmarked for the scheme until 2015 is also still available.

55 Ofgem, *Feed in Tariff installation report: February 2011* via http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=15&refer=Sustainability/Environment/fits accessed 8 February 2011

56 Ofgem, *Feed-on Tariff update*, issue 2, December 2010 via *http://www.ofgem.gov.uk/Sustainability/Environment/fits/Newsletter/Documents1/FIT%20Update%20Issue%202.pdf* accessed 7 January 2011

57 Ofgem, *Feed-in Tariff Installation Report Feb 2011*

Indirect economic benefits resulting from investment in renewables

Increased investment in microgeneration – either by the council directly, or by households with encouragement from the council – could also provide jobs and economic growth across the area, as well as the revenues made available by the subsidy schemes.

Rising demand for products such as wind turbines, solar panels, biomass boilers and ground/air source heat pumps will create commercial opportunities along the relevant supply chains. The Local Government Association have estimated that for the UK to meet its renewable energy targets, the number of jobs in the renewables sector will need to increase from 16,000 in 2009 to 133,000.[58] For Solar PV alone, research from PricewaterhouseCoopers shows that in the first year of Feed-in Tariffs in other European countries, the market grew by about 300 per cent, providing evidence for the growth that could take place in similar industries across the UK if the scheme is implemented correctly.[59]

There are strong incentives for councils to utilise the RHI and FIT to support growth of local jobs and businesses, as well as a direct revenue stream. The Coalition Government has confirmed that councils should be able to keep the uplift in their income from business rates for six years. In the Local Growth White Paper, the Government even suggested it is hoping to localise the business rates entirely, thus connecting councils with their local economic fortunes in a manner not seen for decades. [60] This is likely to impel a shift within councils from public service providers towards a much wider role in economic generation.

There are already examples emerging of how local authorities are using renewable energy to stimulate growth across their areas. In addition to the reduction in carbon emissions that the 'Birmingham Energy Savers' scheme will bring about, the council estimate that phases I and II of the scheme

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58 Local Government Assocation, *Creating Green Jobs: Developing local low-carbon economies*, 2009, p1

59 PricewaterhouseCoopers*, On the brink of a bright future? Insights on the UK solar photovoltaic market, May 2010*, p2 via *http://www.ukmediacentre.pwc.com/imagelibrary/downloadMedia.ashx?MediaDetailsID=1748* accessed 13 December 2010

60 Department for Business, Innovation and Skills, *Local growth: realising every place's potential*, October 2010, p3 will create 68 jobs, plus training for 145 people.[61] Kirklees Council have also achieved significant local economic benefits through investment in energy efficiency, in a way that could provide a template for microgeneration (see case study below). These examples demonstrate the wider value of the FIT and RHI revenue streams to local areas, particularly at a time when the need to re-balance the economy and provide skilled jobs in former manufacturing areas is of heightened importance.

Case Study

Kirklees Council: Warm Zone

The Warm Zone scheme operated by Kirklees Council in West Yorkshire demonstrates the economic potential of large area based insulation schemes to support carbon reductions. The scheme provided free loft and cavity wall insulation for every home in the area, funded jointly from local authority capital funds and money from energy suppliers as part of their obligation under the Carbon Emissions Reduction Target (CERT). While measures cost around £20.5 million in total, it is estimated that the Kirklees Warm Zone has been worth more than £80 million to the local economy. This has accrued through a combination of direct funding, job creation, householder fuel savings and increased benefits uptake. Warm Zone visited all 171,000 houses across the Kirklees district. Over 50,000 homes have received free loft and/or cavity insulation measures (over 64,000 measures installed). Saving the average household £200 per year on their fuel bills and reduced their CO_2 emissions by just under one tonne per year.

As a result of the energy efficiency measures, around £10 million is saved annually in household energy bills. More than 16,000 homes requested further benefits/money advice, with 259 confirmed claims worth £2,552 on average. 100 jobs per year have been created directly through the scheme with Miller Pattison, the installation company, Yorkshire Energy Services, the managing agent and at the Council or partner bodies. The additional money brought into the local economy

61 Birmingham City Council, *Birmingham Energy Savers* via *http://www.housing.org.uk/Uploads/File/BSHP/Birmingham%20Energy%20Savers.pdf* accessed 10 January 2011

from fuel bill reductions is estimated to be worth a further 29 jobs in Kirklees every year

While the Warm Zone deals with energy efficiency, rather than microgeneration, the principle of the local authority co-ordinating and supporting domestic carbon reduction efforts remains the same. The technologies supported by the FIT and RHI would bring substantial revenue streams into the local economy via the payment mechanisms. Area-wide installation projects would support local job opportunities, particularly if more extensive supply chains were sustained across the area.

The Energy Saving Trust (EST) estimate that a multiplier of at least 1.93 should be added to the value of the employment and sales created by investment in renewables, to give a picture of the indirect benefit of the investment to the wider local economy.[62] The EST also calculate that a multiplier of 1.47 can be added to the estimated savings on energy bills, to reflect the fact that this money will now circulate locally, rather than exit the area in bill payments to national energy suppliers.[63]

Neither of these multipliers takes into account the benefit of FIT/RHI payments, and how they might be used within the local economy, so when this additional value is also factored in, the two schemes' potential as economic stimuli is clear. However the local economic benefit is offset by the dangers of:

- leakage (the value of the initial local government investment leaving the area, for example by contracting external companies to carry out the works)
- displacement (the investment having a negative impact on businesses that do not benefit)
- deadweight (where the economic benefits would have occurred without any intervention).[64]

In the case of the latter, it is doubtful whether the growth in the market for

62 Energy Saving Trust, *Economic Impacts Model: Data and Assumptions*, 2010, p4
63 Ibid
64 Ibid p5-6

renewable energy products and services would be so strong without an area-wide investment by the council. However both leakage and displacement could diminish the knock-on benefits of the FIT/RHI, and therefore this is something that councils will need to consider when accessing the schemes.

Local authorities have a number of means at their disposal through which they can stimulate demand for renewable energy and embed as much of the supply chain for technologies supported by the FIT/RHI as possible within their area:

- They possess the local intelligence and links into employers, skills-providers.
- They possess democratic legitimacy and can act as a trusted voice to engage householders, landowners and others to persuade them to invest.
- They can mobilise investment through several Government-led sources but also by raising municipal bonds.
- They have an active interest in the local economy.
- They spend £40bn collectively through procurement and can influence significantly how new schemes are procured and where employment and skills emerges.

3 *Maximising the opportunity*

Taking a corporate approach to renewable energy

If councils are to manage the roll-out of renewable energy installations across their estate, they will need to take a joined-up approach that crosses departmental boundaries and manage tensions between different policy areas.

For example, generators installed on schools, council offices and social housing properties would impact on the education, facilities and housing teams respectively. The number of stakeholders involved only increases the likelihood of conflicting departmental interests or logistical and communication difficulties hindering delivery.

There may also be a tension between the local green jobs agenda and the council's local development framework (LDF). The LDF sets out the overarching planning structure for an individual local authority, which would include any major renewable energy initiatives.

Any green skills strategy would have to contribute to the goals of the council's LDF. At the same time, the LDF would have to acknowledge the realistic capacity of the local skills base. This ambiguity could create uncertainty around the relationship between the two documents, making it harder to authorise the necessary policies to develop a workforce and business community capable of benefitting from council investment in renewables.

Once councils have overcome these potential barriers, they need to ensure that their work on FIT/RHI dovetails with other schemes – such as the green deal - for maximum impact.

The green deal and energy company obligation

The Green Deal will enable households to improve the energy efficiency of their property at no upfront cost, with repayment attached to the property rather than the individual. The 'golden rule' of the scheme dictates that the repayments will be less than the savings on energy bills made as a result of the energy efficiency measures

The energy supplier obligations require large-scale energy suppliers to deliver specified reductions in household carbon emissions. From 2013, a new Energy Company Obligation will be refocused on households in fuel poverty and 'hard-to-treat homes' that are unable to fulfil the golden rule, because the characteristics of their property make the energy efficiency measures more expensive than the expected reductions in their energy bill.

The Green Deal is initially concerned with the most cost-effective means of carbon reduction such as such as loft or cavity wall insulation. These cost less than £500 and achieve a payback through savings on fuel bills within 3 – 5 years, making them much cheaper than renewable energy installations, with a considerably quicker payback. Therefore it is important that these refurbishments are prioritised over microgeneration in the 'carbon reduction hierarchy'. However the household carbon reductions achieved through energy efficiency alone will not be enough to match the demanding national targets.

NLGN has previously argued that the Green Deal providers and energy suppliers should partner with local authorities, in order to utilise their local knowledge and channels of communication in delivering the schemes. A number of authorities already have considerable experience in this respect.

It makes sense to join up the Green Deal process with the roll-out of renewables. This could apply to councils carrying out renewable installations and Green Deal improvements across their own estates and services – in many cases they will be able to purchase energy efficiency measures and microgeneration products from the same companies. Equally, any councils involved in signposting and delivering the Green Deal to private homes and businesses should also highlight the FIT and RHI as part of their marketing efforts.

This would enable their communities to make more substantial carbon reductions at greater convenience and at lower cost – for instance, by undertaking a 'whole-house' eco-refurbishment in one go, rather than having to carry out energy efficiency improvements, and then installing renewables separately at a later date.

The best way to ensure that to ensure that this integration of the FIT, RHI and Green Deal occurs, and that the potential difficulties in expanding renewable energy are minimised, is for the renewables agenda to be clearly driven by the council's leadership. The strategy should be articulated as a key objective within wider local goals such as carbon reduction, diversification of revenue streams and job creation. It should contain a clear project management structure, clearly defined outcomes and a route map for how to achieve them.

Particular risks identified by officers and departments, such as the cost of maintaining installations, or the vulnerability of council assets to review or sale, thereby jeopardising their capacity to generate long-term profits via the FIT/RHI, should be identified, and contingency plans should be set out. Aspects of the strategy relating to green skills and economic growth should reference the LDF. In reciprocation, any updating of the LDF should acknowledge the green skills strategy to ensure their continuing compatibility.

Market intelligence: Auditing the local geographic potential of renewable energy

Once the objectives of the investment in renewable energy have been clearly outlined, councils will need to audit their own estates to ascertain their suitability for particular types of microgeneration. In Wrexham, for instance, the 3,000 homes capable of supporting PV installations constitute about 36 per cent of the local social housing stock.[65]

65 Wrexham Borough Council, *Report to Executive Board: Agenda No. 6, 16 November 2010*, p2

This survey of local authority estates should identify suitable sites for particular types of renewable installations, including the costs involved, the capacity of the installations and the likely revenues generated for the council. It could also be expanded to include the capacity of the entire local area - beyond local authority properties and land - to support renewable installations, enabling the wider roll-out of FIT/RHI eligible technologies. This would bring benefits to households and businesses as well as the council, and would expand the local low-carbon economy.

Skills and workforce capacity audit

If local authorities are to maximise the full benefit of their investment, by ensuring that it leads not just to revenue through the FIT/RHI but opportunities for local businesses and jobseekers, then it will also be necessary to audit the capacity of the local business community/workforce in relation to renewable energy. This should examine areas such as the ability to support supply chains for particular technologies; the skills of the local workforce; what training provisions are necessary to bridge any gaps in the supply chain; and how readily jobseekers and the existing workforce can be upskilled to benefit from the low-carbon economy and the growth in the market for renewable technologies. Kirklees Council's *Skills for Climate Change* programme offers a model for how this exercise might be carried out (see case study).

Case Study

Kirklees Council: Skills for Climate Change Programme

Kirklees Council has taken a lead in securing European Social funding from the Government Office to deliver activity within the 'Skills for Climate Change – Low Carbon Living and Working' programme for the district. The aim of the Low Carbon Living and Working project is to introduce a strategic programme of flexible training and education, to be delivered by a network of organisations that meet local employer demands and help the transition to a local low carbon economy. The target groups are:

- *Areas of Kirklees with lowest academic achievement, high levels of unemployment, literacy, numeracy and language needs*

- *Existing workforce & its trainers/mentors*
- *Trainees at higher levels in environmental and sustainable technologies, to meet employer demands*

Part of the project was to carry out research with employers and training providers. Working with a brief to identify 'how we might make low carbon training, skills and employment opportunities available across Kirklees', the research involved in-depth discussions with 12 stakeholders in the low-carbon economy. These were:

- *a large manufacturer and employer*
- *an architect*
- *a local insulation provider*
- *an unemployed, low-skilled person*
- *a new business start-up with aspirations to become a large employer*
- *an organisation that supports the voluntary sector*
- *a large manufacturing employer with an ageing workforce currently addressing their workforce plan for the future and looking at emerging markets in the area of low carbon technologies*
- *a student, who had just done their GCSEs and making a decision as to which path to take*
- *a utility/asset manager of a large company with complex issues relating to energy, waste and water*
- *a centre, which is engaging new business start-ups and enabling innovation*
- *a career advisor of a university/college*
- *a career support organisation for young people*

The key messages from each of the 12 interviews were collated individually after each interview. Cross-cutting themes were then extracted. These included the insights that local manufacturers had worked with Universities outside Kirklees but had no links with local colleges or Universities; and that though jobs branded as 'low carbon' or 'sustainable' had added value with businesses and potential employees, there had been little attempt to exploit this. Responses are being developed to the issues raised as part of the programme.

In terms of mainstreaming, the project aims to streamline the provision of low carbon training across all levels locally and to work in a more joined-up way with partners. Not only will new qualifications be created, but also low carbon focused modules will be integrated into existing qualifications, to broaden understanding and knowledge of climate change issues.

Auditing local attitudes to renewable energy

It will also be important to gauge local attitudes towards any potential renewable installations. Difficulties gaining planning permission could increase the costs of certain renewable energy projects, or even cause them to be abandoned altogether.

Although research from DECC indicates that 81 per cent of people support the extension of wind power in Britain, and that 62 per cent of the general public would be happy to live within five kilometres of a wind power project, there are around 230 anti-wind farm campaign groups across the UK.[66] RenewableUK have claimed that only one in 18 projects actually move forward because of either feasibility or planning difficulties, while the average timescale for a wind farm planning application is around 18 months.[67] The costs of planning applications are significant, and could well affect the financial viability of a project.

Planning considerations would be a factor for some household installations, including solar, microwind and wood-fired generators beyond specified size limits. On historical/heritage buildings, smaller measures would also be subject to planning procedures. However planning restrictions would mainly affect larger, field-based projects such as wind farms and solar field arrays. As discussed in Chapter 1, these are currently under review, and may well be ruled out of the FIT. Nonetheless, they remain in the scheme for the moment, and may provide a financially attractive option for a number of ouncils. The Low Carbon Innovation Network have also noted that these installations could offer a potential revenue stream for farmers at a difficult time for the agricultural industry.[68]

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66 DECC, *Renewable Energy Awareness and Attitudes Research 2009 Management Summary*, 2009, p7, 10 and Business Green, *Fierce opposition drives wind farm approvals to all time low*, 29 October 2010 via *http://www.businessgreen.com/bg/news/1870086/fierce-opposition-drives-wind-farm-approvals-low* accessed 20 January 2011

67 ibid

68 *http://www.fitforfarming.com/* accessed 20 January 2011

By maintaining tariffs for installations of up to 5MW in size, the Government could create a pool of money that could be used to overcome planning difficulties. For instance, the revenue generated through the FIT could be used to fund neighbourhood projects in the areas that host renewable installations. There are already precedents for this. The Hadyard Hill Wind Farm in South Ayrshire, the largest in the UK when it was completed in 2006 (prior to the FIT), is operated by Scottish and Southern Energy, who donate £120,000 annually to the surrounding community.[69] A similar principle could be adopted by councils seeking to develop their own wind turbines or solar field array.

The Coalition has already introduced a 'new homes bonus' providing match funds for the council tax generated from new housing developments.[70] This incentivises councils and communities to permit local house-building projects to go ahead, as they will benefit financially as a result. Using the FIT as a similar incentive for planning approval would therefore be in the spirit of the existing direction of travel on planning policy.

Stimulating the market: Realising the local potential of renewable energy

Once councils are armed with information on the suitability of certain renewable technologies to the geographic and economic characteristics of the area, and are aware of any potential challenges in terms of obtaining planning consent, they can use this knowledge to maximise the benefit from the FIT and RHI.

Where a strong local base for industries relating to particular sources of renewable energy exists, it makes sense for local authorities to identify and then prioritise these sources when considering how to access the FIT/RHI. There are already some positive examples of local authorities co-ordinating the roll-out of renewables in a way that also supports the local green economy.

RE4D, established by Devon County Council to promote the local renewable energy industry, identified the county's heavily-wooded areas as a potentially

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69 The Scottish Government, *Guidance to Local Authorities on Fuel Poverty: Case Studies*, May 2009 via *http://www.scotland.gov.uk/Publications/2009/05/28154437/2* accessed 7 February 2010

70 DCLG, *New Homes Bonus*, 12 November 2010 via *http://www.communities.gov.uk/housing/housingsupply/newhomesbonus/* accessed 25 January 2011 valuable resource in developing a local supply chain for biomass installations (see case study)

Case Study

Renewable Energy 4 Devon

RE4D was established in 2006 by Devon County Council to develop 'sustainable growth of green businesses linked to the county's natural assets.' In Devon, a large rural county with 10 per cent wooded cover, biomass industry was an obvious priority for support. The RE4D scheme has provided advice and support for local small woodland owners to maintain supplies of locally sourced wood chip. They have also helped established a wood-fuel producers co-operative on Dartmoor. The market for wood-fuel has been driven by an increasing network of biomass boiler installations.

With the advent of the RHI, the demand for these products is likely to increase further.

In addition to the benefits in terms of carbon reduction and the local economy, this has also ensured better management and productivity of the local woodland.

RE4D has also provided skills training for electricians and plumbers working with photovoltaic panels and solar water heating, meaning they will be equipped to take advantage of the rise in demand for these services created by the FIT/RHI. Overall, the training, advice and resources provided by RE4D created 55 jobs in the renewable energy sector in Devon, and safeguarded another 16. The scheme has now closed but the council and its partners continue to support the local renewable energy industry.

In the North East, for example, where the infrastructure from the region's manufacturing heyday remains alongside a skilled local workforce, there are plans to develop a major hub for the wind turbine industry (see case study).[71]

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71 The Times, *Teesside shows it has other irons in the fire*, 19 February 2010 via *http://business.timesonline.co.uk/tol/business/industry_sectors/public_sector/article7032778.ece* accessed 12 January 2011

Case Study

Tees Valley Unlimited

Tees Valley Unlimited has developed a statement of ambition on a low carbon economy in the area. This establishes the linkages between the transition to a high value, low carbon economy, behavioural change and economic opportunities and the number of jobs that could be created.

A key focus has been an in-depth dialogue with businesses about the likely business development opportunities and the implications for supply chains. Information direct from business has been key in shaping the strategy. TVU has been clear that the story is not one of simply building an entirely new industry but building on the strengths and the natural advantages possessed by the area. This involves identifying the existing skills base, and how it can be developed from its current levels.

Specific projects include:

- *Feasibility work to understand the potential for district heating networks across Tees Valley*
- *Developing an evidence base to support the development of the integrated petro-chemical complex in the North South Tees area, in partnership with the private sector*
- *Assessing opportunities associated with the off-shore wind manufacturing industry, including jobs throughout the supply chain*

There is also a potential role for central government in furthering the opportunity for local authorities to stimulate their economies through the FIT and RHI by considering the incentive that tariff levels provide to support local businesses and job creation.

The FIT has already been criticised for not sufficiently supporting industries in which Britain already contains a strong manufacturing base, and therefore failing to promote domestic jobs and economic growth.[72] UK manufacturers currently produce four-fifths of the country's small turbines, 3,500 of which were installed in the UK in 2008.[73] In contrast, the vast majority of solar panels are manufactured abroad. Ernst & Young's *Renewable Energy Country Attractiveness Indices* issued in November 2010 ranks the UK as the World's second best destination for companies operating in the wind energy industry.[74] By contrast, the UK is down in 16th place for the solar sector.[75] Despite this, however, solar panels receive a larger tariff through the FIT than small-wind turbines. As a result, of over 17,568 accreditations issued for the FIT scheme before December 2010, 16,378 were for solar PV.[76]

This raises two important questions about the implementation of the FIT and RHI.

Firstly, whether or not the subsidies are intended to strengthen existing markets, or create new ones in sectors where the UK industry is less developed? Evidently a more generous tariff for microwind would aid existing UK businesses. However support for the solar industry could help to encourage UK companies to take a more active role in a sector that is likely to grow exponentially on a global basis over the coming years.

Councils should therefore also think about how they can develop local jobseekers, employees and the business community to take advantage of growth in the green sector, as well as supporting existing industry bases that are already equipped to profit from rising demand for certain technologies. .

By helping jobseekers across their area access the necessary training courses and qualifications to find employment in low-carbon industries, they can ensure that their outlay on renewable energy not only generates revenue through the FIT/RHI, but simultaneously helps to address the wider social issues caused by worklessness. Support, advice and training for businesses

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72 Guardian, *Feed-in tariff 'killing off' burgeoning UK small turbine industry*, 10 March 2010 via *http://www.guardian.co.uk/environment/2010/mar/10/feed-in-tariffs-turbine-solar* accessed 20 January 2011

73 ibid

74 Ernst & Young, *Renewable Energy Attractiveness Indices*, November 2010, p20 via *http://www.ey.com/Publication/vwLUAssets/Renewable_energy_country_attractiveness_indices_-_Issue_27/$FILE/EY_RECAI_issue_27.pdf* accessed 12 January 2011

75 ibid

76 Ofgem, *Feed-in Tariff Installation Report, December 2010*, via *http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=13&refer=Sustainability/Environment/fits* accessed 12 January 2011 will better position local private companies to win the contracts arising from councils' investment in renewable energy, again helping to create local jobs and economic growth. This support should extend to businesses further along the renewable energy supply chain, as well as potential installers, so that their initial investment continues to circulate in the local economy, rather than leaking out to external organisations.

As previous NLGN research has highlighted, central government could facilitate this approach by empowering local authorities to join up skills and economic policy, giving them greater steer over their local economy.[77] By enabling local skills commissioners to 'nudge' learners towards training programmes of a high local economic priority – such as the renewable energy sector – local government's capacity to equip areas for growth would be significantly enhanced.

Secondly, there is the question of the correct spatial level at which to set tariffs. They are currently decided on a uniform national basis, despite the fact that differing natural or economic characteristics suggest that some technologies are better suited to some areas than others. For example, wind turbines are a far more efficient source of energy in isolated rural areas than in a built environment.[78] Hydro-electricity depends on obvious geographical characteristics. As our previous case studies highlight, the strong manufacturing base in the north east is well-suited to the wind industry, while the high levels of woodland cover in Devon means they are well-placed to benefit from a thriving biomass market.

By offering regional variation in the payment levels, the Government would be able to steer uptake towards the most advantageous technologies for that locality. Therefore, the desired industrial-economic outcomes of subsidies for particular forms of renewable energy should be a consideration when setting tariffs for the RHI and during the review of the FIT. Following on from this, the possibility of varying tariff levels by region should also be examined. The advantages of being able to steer renewable energy uptake towards the installations most suitable for that area would have to be considered against the increased bureaucracy that this might entail and the potential confusion

77 Nick Hope and Anna Turley, *We Can Work it Out: Local employment and skills for economic recovery*, NLGN, 2010, p50-52

78 Energy Saving Trust, *Location, Location, Location: Domestic small scale wind field trial report*, 2009, p5

created by the need to draw arbitrary boundaries between tariff areas. The review should decide whether these difficulties are surmountable or justifiable.

The Demonstration Effect

As has been shown, local authorities can stimulate low-carbon economic growth through investment in renewable energy installations across their own estate. They can develop the supply chains for these industries through support for business in the local workforce. But these direct interventions are not the only means by which councils can encourage economic growth in the renewable energy sector.

More indirectly, they can also promote the roll-out of renewables and growth in the relevant industries through the exercise of a demonstration effect.

By establishing the visible presence of renewable installations in the community on their own properties or land assets, they can promote their use across the whole area, and lend greater credibility to the technologies. The normalisation of installations such as wind-turbines and solar arrays could also reduce planning objections relating to these technologies.

When this demonstration effect is combined with the provision of information and advice relating to the suitability of particular properties to particular technologies, and how and why to go about installing them, it is likely to significantly enhance RHI and FIT uptake. Previous research has shown that there are a number of different channels of communication open to local authorities through which they can produce carbon reduction across their areas.[79] Examples included:

- stands at supermarkets and other areas with high footfall
- door-to-door initiatives
- working with faith groups, and tenants and residents associations
- mail-outs accompanying council tax bills (which, it was pointed out, everybody reads, rather than just throwing in the bin)

79 Luke Hildyard, *Paint the Town Green: Meeting the Energy Efficiency Challenge at Community Level*, NGLN, 2010 p40

- working with the local football club, to exploit their community links
- provision and demonstration of carbon reduction information from regular contact points between citizen and state, such as schools, hospitals or post offices.

Councils are regarded as a trusted and reliable source of information in comparison with other bodies. The Committee for Standards on Public Life found that 45 per cent of people trusted local councillors to tell the truth, and 35 per cent trusted senior managers in local councils, compared to just 24 per cent for people who run large companies.[80]

Using their status as a prominent local public body, the Yorkshire Dales National Park has commissioned a survey of the Park examining the potential for hydro electricity. The findings have now been published and are being promoted locally, to encourage uptake of hydro-electricity and highlight the opportunity provided by the FIT.

On a similar basis, Kirklees Council Re:Charge project, which will provide interest free loans for around 330 households to install microgeneration measures between 2008 and 2011, has had a similar focus.[81]

As well as securing buy-in from households and businesses by providing a trusted endorsement of the FIT and RHI, councils could also facilitate co-ordinated, area wide renewable energy projects, bringing down the upfront costs required by achieving economies of scale. The Sustainable Development Commission estimates that an area-wide approach to improving the energy efficiency of domestic properties could reduce costs by 20-30 per cent on the cost of treating the individual property.[82] This is borne out by the Wrexham and Birmingham projects, which anticipate a far lower unit cost than the EST's estimate of £12,750 for an individual 2.5 kwp solar PV installation. For phase 2 of the Birmingham project, expected to generate over 4 million kwh per year from 2,020 properties (an average of 2kwh per installation), the total cost is projected to reach £13 million – under £6,500

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80 Committee on Standards in Public Life, *Survey of public attitudes towards conduct in public life*, 2008, p25 via *http://www.public-standards.gov.uk/Library/SOPA_bookmarked.pdf* accessed 15 October 2010

81 Kirklees Council, *Case Study: The Re:Charge Scheme*, 2010, p1

82 Sustainable Development Commission, *The Future is local,* 2010 p7 per installation.[83] In Wrexham, the £24.9 million cost of PV installations for around 3000 social homes equates to £8,300 per installation.[84]

The Coalition Government have frequently cited community renewable energy projects as a pertinent example of their 'big society' agenda in action.[85] There are many areas in which civil society is already successfully promoting renewables across communities, such as the Peckham Power initiative in South London or the transition town movement in a number of different parts of the country.[86] However in parts of the country where voluntary environmental groups are less prominent, there could be a key role for councils to play in raising awareness of the FIT and RHI, and facilitating community or neighbourhood-level co-ordination.

83 Birmingham City Council, *Birmingham Energy Savers* via *http://www.housing.org.uk/Uploads/File/BSHP/Birmingham%20Energy%20Savers.pdf* accessed 10 January 2011

84 Wrexham Borough Council, *Report to Executive Board: Agenda No. 6, 16 November 2010*, p2

85 Greg Barker, *The Big Society solution for clean energy*, Independent, 25 November 2010 via *http://blogs.independent.co.uk/2010/11/25/the-big-society-solution-for-clean-energy/* accessed 17 January 2011

86 For further info see *http://peckhampower.org/about-us*; and *http://www.transitionnetwork.org/about* accessed 31 January 2011

4 *Financing the opportunity*

Perhaps the most substantial deterrent to any local authorities seeking to access the FIT or RHI are the upfront costs involved.

The returns guaranteed by both schemes will ensure a net profit for participants in the scheme. However some councils are likely to be wary of risking large sums of money for longer term returns, particularly in a challenging funding environment when a number of other projects and priorities will be competing for diminishing financial resources. If local renewable energy programmes are to go ahead, serious consideration will need to be given to the most secure and financially advantageous funding options available to local authorities.

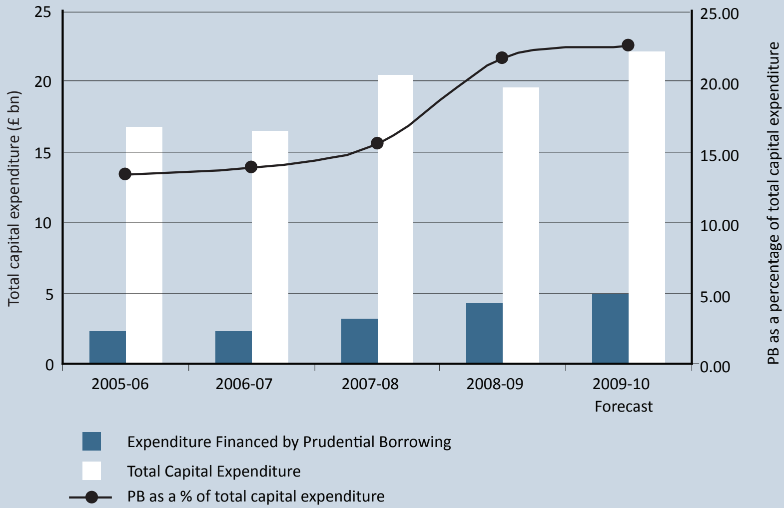
Generating revenue from local authority resources

Local government currently raises a significant amount of funding for capital spending projects from council resources – for example, their financial reserves their own revenue streams or sale of assets.[87] However, these are finite resources – either literally or politically. As a result of funding pressures, the proportion of capital spending financed through prudential borrowing from external sources has been steadily climbing from 13.4% in 2004/05 to 21.64% in 2010 (see figure 3).[88] In the face of spending cuts, the demand on councils' own resources from other council services is likely to increase exponentially. Therefore in some cases local authorities will need to look elsewhere for funding for renewable energy projects, despite the good value they offer as a long-term investment.

87 Tom Symons and Chris Leslie, *Capital Contingencies: Local government finance in an era of high public debt*, NLGN, 2009, p16

88 Tom Symons, *CapitalMomentum: New financing options for locally delivered capital investment*, NLGN, 2010, p17

Figure 3 Expenditure financed by prudential borrowing and total capital expenditure



Government grants

Grant-based funding is obviously the ideal option for local authorities. There is little risk involved, as no council money has been staked, and there is no requirement for repayment. The fact that upfront costs do not have to be covered from revenue means that the FIT and RHI become even more lucrative. However in the current financial climate, the opportunities to access funding in this way are restricted to the Regional Growth Fund.

Regional growth fund

The Regional Growth Fund aims to stimulate private investment in areas currently most reliant on the contracting public sector for employment, providing £1.4 billion in grants over three years.[89] This compares to total

89 Department for Business Innovation and Skills, *Regional Growth Fund* via *http://www.bis.gov.uk/policies/regional-economic-development/regional-growth-fund* accessed 31 January 2011

funding for the recently-abolished Regional Development Agencies of £2.3 billion in 2009 and £1.4 billion in 2010.[90] Competition for funding awards is likely to be high, and bids will only be accepted from Local Enterprise Partnerships. Nonetheless, it is one potential option for local authorities seeking to initiate a renewable energy project through an LEP.

Prudential borrowing

Borrowing from institutions and investors is an increasingly common source of local government funding for capital projects., and the revenue streams guaranteed by the FIT and RHI will enable Local Authority access to commercial borrowers, as well as public lending bodies.

This is the most likely source of funding, with all the potential funders having sufficient liquidity to back large-scale projects provided there is a solid business case.

The only caveat is that some commercial investors may find that the debt required by some local authorities is too small to justify lending. Research by the Green Investment Bank Commission found that institutional investors were unlikely to fund modest local projects such as those requiring loans of less than £20 million, as these involve the same transaction and diligence costs as large projects and necessitate the attention of a limited pool of qualified staff.[91]

A possible solution could be found in the aggregation of local authority borrowing requirements. Different councils each seeking to access the FIT or RHI could approach a lender collectively with the aggregated borrowing requirements being sufficiently attractive to investors to secure finance.[92]

With the problems of scale resolved, there are a number of funding bodies or institutions that would have the necessary finance and remit to cover the upfront costs of council investment in the FIT or RHI

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90 England's RDAs, *Q&As on the future of Regional Development Agencies,* via *http://www.englandsrdas.com/news/qas-on-the-future-of-rdas* accessed 24 January 2010

91 *Unlocking investment to deliver Britain's low carbon future*, p21

92 *Capital Momentum* p28-29

Public Works Loans Board (PWLB)

The PWLB is the traditional source of borrowing for local government capital or infrastructural projects. It offers loans at rates of 1 per cent more than the yields on Government gilts, following an increase announced in the 2010 CSR.[93] The rise was predicted by previous NLGN research, noting that the the terms of the PWLB become correspondingly unfavourable as the national debt increases.[94] At present it is still the best option for local authority borrowing, as there are minimal transaction costs and interest rates remain favourable compared to other lenders. It also offers flexibility regarding the size of the loan made available. However there is also a danger of PWLB resources becoming insufficient to fulfil the extent of local government borrowing requirements in their entirety over the next few years.[95] Therefore it cannot automatically be required upon to cover the upfront costs of an area-wide renewable energy programme.

Commercial banks

With the guaranteed returns from the FIT and the RHI providing a solid business case, local authorities have the option of accessing funding from the conventional borrowing market. This is how the bulk of phase 3 of the 'Birmingham Energy Savers' programme will be financed.[96] Borrowing from banks is probably the simplest alternative to the PWLB as a means of covering the upfront costs of renewable energy installation, however the terms offered may compare unfavourably to those offered by Government or Government-backed schemes. It will also entail a proportion of the FIT and RHI revenues being diverted to the commercial lender through interest on repayments.

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93 Public Works Loans Board, *Circular No. 147*, 20 October 2010 via *http://www.dmo.gov.uk/documentview.aspx?docname=pwlbcircular147.pdf&page=Circular_147* accessed 20 January 2010

94 *CapitalMomentum*, p20

95 Ibid p9

96 Birmingham City Council, *Birmingham Energy Savers* via *http://www.housing.org.uk/Uploads/File/BSHP/Birmingham%20Energy%20Savers.pdf* accessed 10 January 2011

Green Bonds

NLGN has previously argued that local authorities should be able to issue their own municipal bonds as an alternative to borrowing from the PWLB.[97] This is already common practice in a number of other countries, where investors are asked to fund upfront investment in low-carbon technologies and businesses. These are then repaid, with interest covered by the profit generated from the funded project.

'Green infrastructure bonds' have been cited as one of the best means of raising the necessary finance to cover the estimated £200 billion cost of the UK's low-carbon infrastructure. Climate Change Capital, an environmental investment group, suggest that they could 'refinance built and operating low carbon infrastructure, such as offshore wind turbines and grid connections. They are asset-backed corporate bonds that would be rated by ratings agencies (so as to be investment grade) and issued in sufficient quantities to be easily tradable.'[98]

Green infrastructure bonds were conceived for larger-scale undertakings than the roll-out of microgeneration. The Green Investment Bank Commission envisaged a role for the Bank in issuing the bonds and kickstarting the market for their sale and purchase. The funds raised would be used to meet the estimated £250 billion cost of the transition to a low-carbon infrastructure. However the operating principle could apply at a local level to fund the more limited contribution towards the long-term carbon targets from small-scale renewables. Again, local authorities that are unable to undertake projects on a sufficient scale to attract institutional investment could join together to pool their debt requirements.

Funding vehicles

The basis on which borrowing could be arranged from institutional investors could include the following funding models:

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97 Ibid

98 Guardian, *What exactly are green bonds?,* 11 January 2011 via *http://www.guardian.co.uk/environment/cif-green/2011/jan/11/what-are-green-bonds?&CMP=EMCENVEML1631* accessed 23 January 2011

Tax Increment Financing

A new form of local government borrowing that enables councils to pay for infrastructural improvements from the uplift in business rates that will occur as a result. If a local authority was able to demonstrate that their investment in the FIT/RHI would bring about sufficient growth in local businesses over time to cover the upfront cost through an increase in rates, this could be a viable means of funding the roll-out of renewable installations.

Special Purpose Vehicle

The creation of a Special Purpose Vehicle (SPV) could enable local authorities to deliver renewable energy projects through a private company that they would establish and own (or co-establish and share own, in partnership with a private sector organisation), but would operate independently of the council. Where the private sector partner held at least a 50% shareholding in the SPV, this would mean that the borrowing was off balance sheet. This may prove a more politically attractive option than increasing the local authority's recorded debt levels.

NLGN has previously argued that councils should partner with Green Deal providers to deliver the scheme across their areas, generating a possible long-term revenue stream and increasing Green Deal uptake.[99] A similar approach could be applied to the FIT and RHI, particularly as microgeneration installations may well encompass part of a 'whole house' eco-refurbishment paid for under a Green Deal arrangement.

An SPV could also be used as a vehicle for bond issuance, with a view to keeping the accumulated debt off balance sheet.

Funding from the community

With public spending cuts limiting the availability of grant funding and Government anxiety over the fiscal deficit making borrowing politically difficult, the idea of raising funds from the local community is theoretically attractive. This would ensure that a portion of local citizens savings/

99 *Paint the Town Green*, p78

investments were used to support local community initiatives. In reciprocation, interest payments on local government would accrue to the community, rather than external institutional investors.

Enhanced community involvement in renewable energy projects would also enhance citizen engagement with the issues of climate change and economic growth strategies. It would be likely to encourage more favourable attitudes to green initiatives. At the same time however, the feasibility of citizens providing sufficient funding to cover the upfront costs of a council's renewable energy programme compares unfavourably with borrowing from lending institutions. Uncertainty over the level of uptake would be a potential problem, as would the difficulty in raising money within the timescales set out by the FIT and the RHI

Green retail/citizen bonds

An alternative model to investment bonds issued to major institutions, would be a retail bond offered to the public with a guaranteed return, on the understanding that their money would be invested in low-carbon programmes. There are already a number of private sector financial services that are marketed on the basis of their commitment to socially and environmentally responsible business practices.

Parallels are frequently drawn between the mobilisation of the home front in the Second World War and the collective responsibility that citizens share for tackling climate change.[100] A green bond issued to stimulate low carbon development in the area, could serve a similar function to the war bonds that households purchased to fund the war effort from 1939-45. If issued and promoted by the local authority, they would also be able to convey how the investment would be used, and the benefits it would bring to the community.

The bonds could take the traditional form of an upfront payment issued with a guaranteed return over a period of time. Alternatively, local authorities could ask residents to voluntarily pay a supplement to their council Tax on the basis that they would receive a future rebate or deduction, as their own profits accumulate through the FIT/RHI. This approach may enable local

100 Green Party, *The New Home Front - Showing leadership: How we can learn from Britain's war time past in an age of dangerous climate change and energy insecurity*, January 2011 authorities to keep the liabilities off balance sheet, preventing political difficulties around an increase in local public debt. It would draw on the example of many American states, where voluntary taxation has raised substantial sums of money for the state governments, enabling them to provide services that would otherwise have lacked sufficient funding.[101]

Difficulties around uptake would be a particular challenge for a green bond issuance because of a) the long-term nature of the returns and b) the need for interest rates to compete with commercial investment products (thereby driving up costs for the local authority). One possible means of circumventing this latter problem would be to remove income tax liability for verified green bonds, so that they would be able to provide a more competitive offer to investors.

Green ISAs

A proposal for 'Green ISA's has already been suggested by the Green Investment Bank Commission.[102] As with the Retail Bonds, these could be issued by local authorities for their citizens, with repayments generated from FIT/RHI revenue. The tax-exempt status of ISAs would mean authorities would be able to offer more favourable financial terms when competing with other savings products. UK Citizens currently have over £158 billion invested in cash ISAs.[103] Consumer Focus told the Environmental Audit Committee that a tax-exempt savings vehicle would be an attractive option for retail savers, and that as the typical rate offered commercially is only 0.5 per cent above the London Interbank Offered Rate (LIBOR) at which the banks lend to one another.[104]

Rather than a pay-out over a fixed time period however, ISA holders would be able to withdraw money as they chose. This is likely to make them a more attractive savings vehicle, but would mean they would need to raise a substantial pool of money in order to be a secure way of funding a programme of renewable installations while also maintaining the necessary liquidity to cope with withdrawals.

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101 Boston Globe, *Voluntary Taxes*, 7 June 2010 via *http://www.boston.com/bostonglobe/ideas/articles/2010/06/27/voluntary_taxes/?page=2* accessed 24 January 2010

102 Ibid p17

103 Environmental Audit Committee, *Green Investment Bank: Written evidence submitted by Consumer Focus (GIB 16)*, October 15 2010 via *http://www.publications.parliament.uk/pa/cm201011/cmselect/cmenvaud/memo/greeninvest/wrev16.htm* accessed January 31 2011

104 Ibid

Energy Co-operatives – Community mutuals supported by Councils

On a similar basis, there maybe a role for the local authority in supporting communities to undertake renewable energy projects themselves. As discussed in Chapter 3, the Coalition have been keen to highlight the role of community level energy schemes as a possible manifestation of their 'Big Society' vision, but this may still entail a role for local authorities. The council could signpost and accredit the FIT and RHI as guaranteed revenue streams. They could also provide advice and support for neighbourhoods or streets or villages, enabling them to pool resources and purchase a community renewable energy installation. Participation could be encouraged through local authority communication channels, and meetings and discussions could be hosted on local authority premises. Council expertise in areas such as procurement and facilities management would also be of undoubted value to the process. This would be in keeping with the 'Big Society' ethos of the Coalition, and would also transfer risk away from the council to the community. If the approach was successful on a wide enough scale, it would still reap benefits in terms of jobs and economic growth. The revenue generated through the FIT and RHI would be shared amongst participants, rather than providing an additional source of funding for the council.

Case Study

Kirklees Councils – Greening the Gap

Kirklees Council identified the Hillhouse area of Huddersfield as being one that would benefit from community renewable energy facilities, for reasons including the low-income levels and factors effecting community engagement such as the high levels of ethnic diversity and private-rented housing.

Residents were targeted using a variety of methods including:

- *Consultation and engaging with local community groups and community representatives; where members of the community acted as advocates to promote the scheme and encourage people to engage.*

- *Letter drops introducing the scheme, door knocking and door step assessments / in the home advice.*
- *Events held by the council within a variety of Hillhouse Community venues to encourage take up and pass on energy efficiency information*
- *Attendance at local community events*

Following these initiatives, which promoted existing energy efficiency programmes as well as the FIT, a neighbourhood of 8 streets was identified as being particularly suitable for renewable energy. They were approached by additional measures such as:

- *further home visits from greening the gap team including weekend and evenings where required and accompanied by the local Elected Member, who also acted as a translator to encourage sign up and dialogue.*
- *landlords were contacted individually to get their sign up to the Kirklees Landlord and Property Accreditation Scheme and agreement to PV installation and other works at their properties.*
- *and local businesses were advised about what was happening so they could tell their customers.*

Eventually 53 households signed up to the scheme. The scheme does not provide a precise model for future renewable energy projects, as funding was provided through grants, rather than the households themselves. However there could be a future role for Local Authorities in this respect in terms of helping the community to access finance, in addition to signposting the FIT.

Summary of Funding options

In an ideal world, funding from citizens, either by bond/ISA issuance or a council-facilitated 'Big Society' mechanism, would be the best option for local authority renewable energy programmes. However the uncertainties surrounding uptake and the limited time horizons of the FIT and RHI mean that councils wishing to access the schemes require guaranteed funding within set deadlines.

Traditional lenders, such as the PWLB or commercial banks, offer this reliability, as do alternative vehicles through which institutional investment might be sought, such as TIF or municipal bonds. As such, these are the most likely options through which councils can invest in the FIT or RHI, assuming that the limited Government grants available will remain difficult to access.

Nonetheless, there is much to commend citizen funding initiatives. Local Authorities should continue to actively support and encourage Community renewable energy issues. While investment in climate change mitigation continues to represent long-term value, a climate change bond based on the war bonds model should be considered as a potential source of funding.

Conclusion and recommendations

The potential rewards on offer through the FIT and RHI are substantial. The need to further diversify our energy supply and reduce carbon emissions makes renewable energy an attractive option for local authorities anyway, but at a time of severe budgets cuts, a Government accredited scheme providing guaranteed returns should further incentivise the roll-out of these technologies.

Though both schemes are at an embryonic stage, with the FIT now undergoing a review and the details of the RHI still to be finalised, early indicators point to two main conclusions:

Firstly, that the sums available to local authorities could amount to billions of pounds over the lifetime of the scheme. Secondly, that early uptake from councils has been lower than might be expected.

This is something of a missed opportunity, given the indirect benefits that can accrue as a result of investment in renewable energy. The sector is expected to grow annually by around 5 per cent in the coming years. The wind energy industry is being targeted as one of the principle means of regenerating the depressed manufacturing sector in the North East. In rural areas, where UK agriculture has also experienced recent difficulties, field-based solar arrays or wind farms can provide an additional source of revenue. As the case study from Devon highlighted in Chapter 3 demonstrates, the renewable heat provided through biomass installations can support jobs in woodland management, providing fuel and maintaining forestry.

Area-wide renewable energy projects, endorsed by the local authority, can also encourage interest in microgeneration and reduce installation costs through economies of scale.

For this reason, we believe that, just as 19^{th} century municipal leaders such as Joseph Chamberlain in Birmingham played a key part in providing mass access to Gas and Water, there is now a vital role for councils in managing the transition to low-carbon energy.

This will entail considerable strategic vision and initiative from the councils themselves. At the same time, central government should make it easier for local authorities to take the lead on delivering the renewable agenda through the structure of the FIT and RHI, and other national energy policy instruments. ***To this end we make the following recommendations:***

- Recent guarantees of the future of the FIT and the RHI as part of the 2010 CSR are welcome. However by carrying out the review of the FIT earlier than planned and delaying the RHI, the Government has increased the risk factor for local authorities planning to roll-out microgeneration installations across their estates. Renewable energy projects require costly and time-consuming planning and research, which councils maybe reluctant to undertake in an uncertain environment. As such**, the Government's FIT review should maintain the scheme as it is currently constituted, including planned timescales and access requirements.** Whatever objections there maybe to larger installations remaining eligible for the FIT and consuming a greater-than-anticipated portion of the budget, these are likely to be less problematic than the uncertainty and increased levels of risk created by continued changes to the schemes. As discussed in chapter 3, the changes may also limit the opportunity to incentivise planning approval for renewable energy projects that have experienced difficulty in the past.

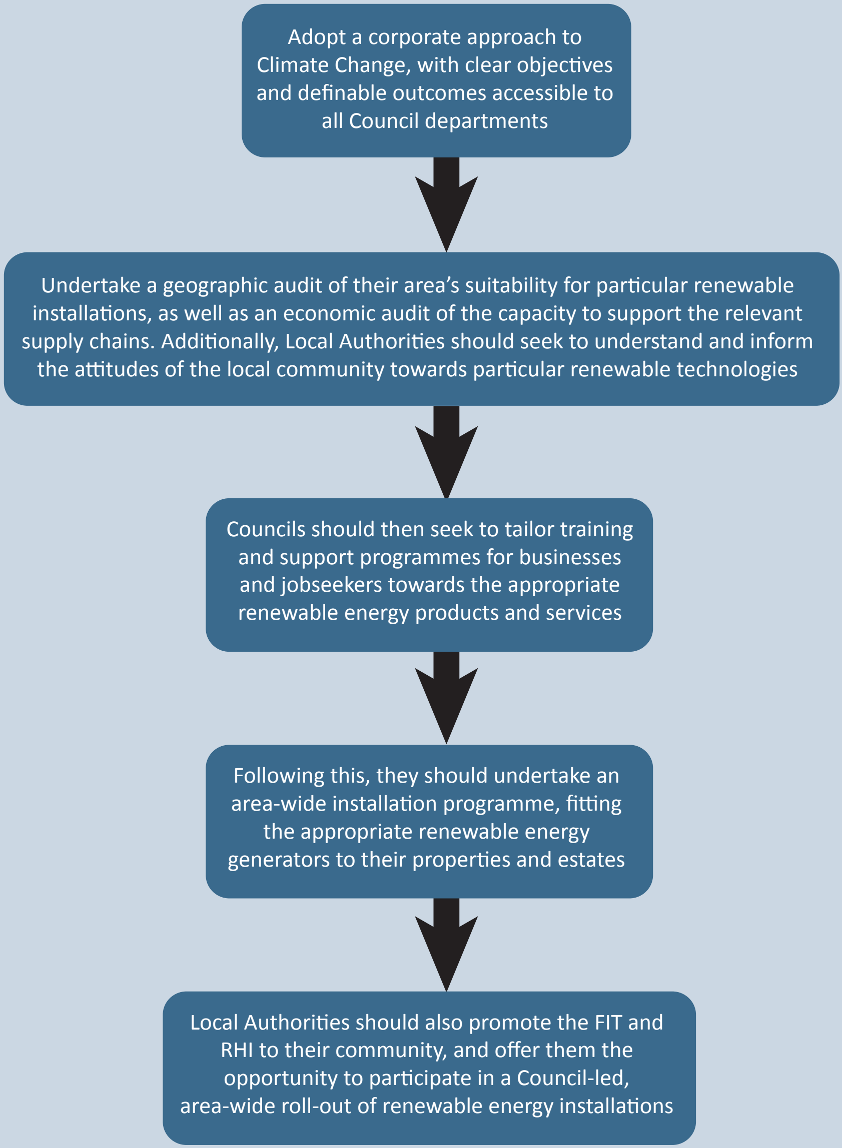
- **The Government must consider the anticipated economic impacts of subsidies for particular technologies when reviewing the FIT and planning the RHI**. They should examine the likely effects on job creation, and the types of job created by an increased uptake of each of the eligible schemes. Whether the FIT/RHI are intended to create a UK-based infrastructure for industries where comparatively little exists (eg solar) or to strengthen areas in which we are already a world leader (eg wind).

- **Government should also review the feasibility of offering regional variation in the tariff levels for the FIT and RHI.** The current FIT system of national tariffs does not reflect the different suitability of particular technologies to particular areas. It is worth considering that, where certain installations are more efficient or economically advantageous in certain areas – for example wind power in rural communities – whether the tariffs should reflect this.

- The FIT and RHI will run alongside the Green Deal from 2013. For an installation to be eligible for the FIT, it must be installed by an installer accredited under the Microgeneration Certification Scheme (MCS). Green Deal providers will also need to be registered and accredited. A number of households will seek to install both energy efficiency and renewable energy measures simultaneously as part of a 'whole house' approach to reducing energy bills and their carbon footprint. At the same time, many businesses will seek to provide products and services relating to the different schemes. It would be more convenient for these organisations if they were able to gain a **single 'eco-home provider' accreditation covering the Green Deal, RHI and FIT**. This would also create a more substantial professional qualification for learners.
- To further integrate with the Green Deal, **the Government should enable households to pay for renewable energy installations under a Green Deal arrangement.** The Green Deal is intended to mitigate the risk of spending large sums of money on home improvements, only to move to a new property before realising the savings on energy bills. This risk applies as much to microgeneration, as to energy efficiency products such as insulation or double-glazing. It is inconsistent to provide safeguards for energy efficiency but not for renewable energy, particularly when the Government has demonstrated its commitment to renewables by maintaining the FIT and the RHI.

For their part, councils seeking to access the FIT and RHI should do so in a strategic manner that maximises the benefits of the scheme:

Figure 4


Adopt a corporate approach to Climate Change, with clear objectives and definable outcomes accessible to all Council departments
Undertake a geographic audit of their area's suitability for particular renewable installations, as well as an economic audit of the capacity to support the relevant supply chains. Additionally, Local Authorities should seek to understand and inform the attitudes of the local community towards particular renewable technologies
Councils should then seek to tailor training and support programmes for businesses and jobseekers towards the appropriate renewable energy products and services
Following this, they should undertake an area-wide installation programme, fitting the appropriate renewable energy generators to their properties and estates
Local Authorities should also promote the FIT and RHI to their community, and offer them the opportunity to participate in a Council-led, area-wide roll-out of renewable energy installations

In terms of funding local renewable energy projects, we recommend that in the long-term, local authorities investigate ways in which to help communities initiate their own renewable energy projects, and profit from investment in climate change mitigation themselves. The timescales of the FIT and the RHI make this problematic however, and institutional funders – possibly lending to aggregated local authority renewable projects, rather than to individual councils – are a more likely source of funding. These timeframes, combined with the competition for a finite amount of money, and the imminence of severe local authority budget cuts, make it imperative that councils act quickly to realise the substantial opportunity provided by renewable energy.

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Kirklees City Council

Since the early 1990's Kirklees Council has taken a lead at a local, regional, and national level on issues relating to the environment and renewable energy. Some of their key achievements on renewable energy are highlighted below:

- Kirklees Council established a renewable energy fund (2000-2010) which enabled around £4 million of additional funding from the EU, UK Government and private investment to be brought into Kirklees.
- Kirklees delivered one of the largest local authority solar energy projects in the UK (Suncities) involving 500 households in 2006.
- Kirklees Council has Installed ground source heat pumps to 30 council owned homes.
- Kirklees Council has installed renewable technology installations of solar PV, solar thermal, biomass and wind turbines to office buildings and schools.
- Kirklees Council developed a £3m renewable energy scheme for homes in Kirklees called the Re Charge scheme (2008-2011) which offered interest free loans up to £10k to private households to install renewables.
- Kirklees Council is currently developing a large scale roll out of solar PV on council owned housing, council buildings and schools utilising the Feed In Tariff to finance the scheme.

All the projects aim to develop a local green economy by supporting and creating jobs as well as reducing carbon and tackling fuel poverty.

For more information please see ***www.kirklees.gov.uk/community/environment/renewable***

Kirklees COUNCIL

NEW LOCAL GOVERNMENT NETWORK

Supported by

Kirklees Council

The Feed-in Tariff and Renewable Heat Incentive subsidies for renewable energy represent a significant opportunity for local government. The two schemes will provide guaranteed revenue streams worth an estimated £12 billion up until 2030. At a time when Local Authorities are experiencing substantial budget cuts, this is a potentially valuable source of funding – in addition to the environmental benefits – for councils undertaking an ambitious renewable energy programme across their areas.

Furthermore, this report highlights the indirect benefits of local government investment in renewables. For councils who approach renewable energy strategically, supporting local businesses and the local workforce to develop the necessary skills to take advantage of the growing low-carbon economy, the FIT and RHI could also stimulate job creation and local economic growth.