

## Appendix D: Funding Mechanism for Low & Energy Carbon Technologies

### Renewable Energy Certificates (ROCs)

The Renewables Obligation requires licensed electricity suppliers to source a specific and annually increasing percentage of the electricity they supply from renewable sources. The current level is 9.1% for 2008/09 rising to 15.4% by 2015/16<sup>62</sup>. The types of technology and the number of ROCs achieved per MWh are outlined in the table below. The value of a ROC fluctuates as it is traded on the open market. The value of a ROC fluctuates as it is traded on the open market but has an historical average of about £45 / MWh<sup>63</sup>.

Technology	ROCs /MWh	Technology	ROCs/MWh
Hydro	1	Energy from Waste with CHP	1
Onshore wind	1	Gasification/Pyrolysis	2
Offshore wind	1.5	Anaerobic Digestion	2
Wave	2	Co-firing of Biomass	0.5
Tidal Stream	2	Co-firing of Energy crops	1
Tidal Barrage	2	Co-firing of Biomass with CHP	1
Tidal Lagoon	2	Co-firing of Energy crop with CHP	1.5
Solar PV	2	Dedicated Biomass	1.5
Geothermal	2	Dedicated energy crops	2
Geopressure	1	Dedicated Biomass with CHP	2
Landfill Gas	0.25	Dedicated Energy Crops with CHP	2 <sup>64</sup>
Sewage Gas	0.5		

Table D1

### Feed-in-tariffs (FIT)

Feed-in-tariffs in the UK came into force in April 2010<sup>65</sup> for installations not exceeding 5 MW<sup>66</sup>. The following low-carbon technologies are eligible:

- Anaerobic Digestion
- Hydro
- Micro CHP (pilot trials)
- PV
- Wind

Feed-in tariffs are a per unit subsidy payment (p/kWh) for sub-5MW renewable electricity generation, Anaerobic digestion and micro CHP (pilot schemes only). The scheme will not initially support solid and liquid biomass technologies as they will be supported under the Renewable Obligations scheme.

The objective of FITs is to contribute to the UK's 2020 renewable energy target through greater take-up of electricity generation at the small scale and to achieve a level of public engagement that will engender widespread behavioural change.

Payments under the FIT scheme will include a Generation Tariff and an Export Tariff. The generation tariff will be fixed per kWh of energy generated. Electricity that is exported off site will also receive an income of 3p/kWh. The tariff will decrease over time to reflect the impact of increasing installation rates on end prices charged to consumers, the goal being to enable industries to "stand alone" at the end of the tariff period<sup>67</sup>.

### Renewable Heat Incentive (RHI)

This incentive follows a similar form to Feed-in-Tariffs (see previous section). Although out to consultation, it is proposed that the following technologies would be eligible for income from the tariff from April 2011:

- Solid biomass
- Bio-gas on site combustion
- Ground source heat pumps
- Air source heat pumps
- Solar thermal
- Bio-methane injection

### Salix Finance

This is a publicly funded company designed to accelerate public sector investment in energy efficiency technologies through invest to save schemes. Funded by the Carbon Trust, Salix Finance works across the public sector including Central and Local Government, NHS Trusts and higher and further education institutions. It will

provide £51.5 million in interest free loans, to be repaid over four years, to help public sector organisations take advantage of energy efficiency technology<sup>68</sup>.

Salix launched its Local Authority Energy Financing (LAEF) pilot scheme in 2004. The success of this programme has allowed the pilot to be rolled out into a fully fledged local authorities programme.

### The Community Infrastructure Levy

The CIL is expected to commence in April 2010 and unlike Section 106 contributions can be sought 'to support the development of an area' rather than to support the specific development for which planning permission is being sought. Therefore, contributions collected through CIL from development in one part of the charging authority can be spent anywhere in that authority area. This makes CIL potentially an ideal mechanism for operating the Carbon Buyout Fund proposed in the policy recommendations.

### Carbon Emission Reduction Target (CERT)

The Carbon Emissions Reduction Target (CERT) is a legal obligation on the six largest energy suppliers to achieve carbon dioxide emissions reductions from domestic buildings in Great Britain. Local authorities and Registered Social Landlords (RSL) can utilise the funding that will be available from the energy suppliers to fund carbon reduction measures in their own housing stock and also to set up schemes to improve private sector housing in their area.

The main different types of measures that can receive funded under CERT are:

- Improvements in energy efficiency
- Increasing the amount of electricity generated or heat produced by microgeneration
- Promoting community heating schemes powered wholly or mainly by biomass (up to a size of three megawatts thermal)
- Reducing the consumption of supplied energy, such as behavioural measures.
- Section 106 Agreements
- Section 106 agreements are planning obligations in the form of funds collected by the local authority to offset the costs of the external effects of development, and to fund public goods which benefit all residents in the area
- The Community Energy Saving Programme

This is a £350million programme for delivering "whole house" refurbishments to existing dwellings through community based projects in defined geographical areas. This will be delivered through the major energy companies and aims to deliver substantial carbon reductions in dwellings by delivering a holistic set of measures including solid wall insulation, microgeneration, fuel switching and

<sup>62</sup> What is the Renewables Obligation? (department for Business, Innovation and Skills website <http://www.berr.gov.uk/energy/sources/renewables/policy/renewables-obligation/what-is-renewables-obligation/page15633.html>, accessed August 2009)

<sup>63</sup> <http://www.e-roc.co.uk/trackrecord.htm>

<sup>64</sup> Renewable Obligation Certificate (ROC) Banding (DECC websites <http://chp.defra.gov.uk/cms/roc-banding/>, accessed August 2009)

<sup>65</sup> Green feed-in tariff needs to maximise solar power (Guardian website <http://www.guardian.co.uk/environment/2009/may/14/feed-in-tariff-solar-power>, accessed August 2009)

<sup>66</sup> Energy Act 2008 Section 41.4.b

<sup>67</sup> Feed in tariffs (Action Renewables website [http://www.actionrenewables.org/uploads\\_documents/SolarcenturyFeedTariffguide.pdf](http://www.actionrenewables.org/uploads_documents/SolarcenturyFeedTariffguide.pdf), accessed August 2009)

<sup>68</sup> Loans section (Salix website <http://www.salixfinance.co.uk/loans.html>, accessed August 2009)

connection to a district heating scheme. Local authorities are likely to be key delivery partners for the energy companies in delivering these schemes.<sup>69</sup>

The Community Sustainable Energy Programme has two grant initiatives. Both are only available to not-for-profit community based organisations in England.

#### Prudential borrowing and bond financing

The Local Government Act 2003 empowered Local Authorities to use unsupported prudential borrowing for capital investment. It simplified the former Capital Finance Regulations and allows councils flexibility in deciding their own levels of borrowing based upon its own assessment of affordability. The framework requires each authority to decide on the levels of borrowing based upon three main principles as to whether borrowing at particular levels is prudent, sustainable and affordable. The key issue is that prudential borrowing will need to be repaid from a revenue stream created by the proceeds of the development scheme, if there is an equity stake, or indeed from other local authority funds (e.g. other asset sales).

Currently the majority of a council's borrowing, will typically access funds via the 'Public Works Loan Board'. The Board's interest rates are determined by HM Treasury in accordance with section 5 of the National Loans Act 1968. In practice, rates are set by Debt Management Office on HM Treasury's behalf in accordance with agreed procedures and methodologies. Councils can usually easily and quickly access borrowing at less than 5%.

The most likely issue for local authorities will be whether or not to utilise Prudential Borrowing, which can be arranged at highly competitive rates, but remains 'on-balance sheet' or more expensive bond financing which is off-balance sheet and does not have recourse to the local authority in the event of default.

#### Local Asset-Backed Vehicles

LABVs are special purpose vehicles owned 50/50 by the public and private sector partners with the specific purpose of carrying out comprehensive, area-based regeneration and/or renewal of operational assets. In essence, the public sector invests property assets into the vehicles which are matched in case by the private sector partner.

The partnership may then use these assets as collateral to raise debt financing to develop and regenerate the portfolio. Assets will revert back to the public sector if the partnership does not progress in accordance with pre-agreed timescales through the use of options.

Control is shared 50/ 50 and the partnership typically runs for a period of ten years. The purpose and long term vision of the vehicle is enshrined in the legal documents which protect the wide economic and social aims of the public sector along with pre-agreed business plans based on the public sector's requirements.

Many local authorities are now investigating this approach, with the London Borough of Croydon being the first LA to establish a LABV in November 2008. LABVs are still feasible if adapted to suit the current macro economy. The first generation of LABVs were largely predicated on a transfer of assets from the public sector to a 50/50 owned partnership vehicle in which a private sector

developer/investor partner invested the equivalent equity usually in cash. The benefits were in some instances compelling.

This transfer of assets suited the public sector given yields and prices had never been stronger. There is now a need for a second generation of LABVs that deliver many of the recognised benefits of LABVs as set out above but protect the public sector from selling 'the family silver' at the bottom of the market.

The answer may lie in LABV Mark 2 – a new model that is emerging based on the use of property options that will act as incentives. A better acronym would be LIBVs (Local Incentive Backed Vehicle) in which the public sector offers options on a package of development and investment sites in close 'place-making' proximity. The private sector partner is procured, a relationship built, initial low cost 'soft' regeneration is commenced such as; understanding the context, local consultation, masterplanning, site specific planning consents etc. Thereafter, as and when the market returns, the sites and delivery process will be ready to respond, options will be exercised, ownership transferred and a price paid that reflects the market at the time

#### JESSICA

The Joint European Support for Sustainable Investment in City Areas (JESSICA) is a policy initiative of the European Commission and European Investment Bank that aims to support Member States to exploit financial engineering mechanisms to bring forward investment in sustainable urban development in the context of cohesion policy.

Under proposed new procedures, Managing Authorities in the Member States, which in the case of the UK is the RDAs, will be allowed to use some of their Structural Fund allocations, principally those supported by ERDF, to make repayable investments in projects forming part of an 'integrated plan for sustainable urban development' to accelerate investment in urban areas. The investments may take the form of equity, loans and/ or guarantees and will be delivered to projects via Urban Development Funds (UDFs) and, if required, Holding Funds (HF). The fund will recycle monies over time and series of projects.

#### Green Renewable Energy Fund

An example of this is operated by EDF. Customers on the Green Tariff pay a small premium on their electricity bills which is matched by EDF and used to help support renewable energy projects across the UK.

This money is placed in the Green Fund and used to award grants to community, non-profit, charitable and educational organisations across the UK.

The Green Fund awards grants to organisations who apply for funds to help cover the cost of renewable energy technology that can be used to produce green energy from the sun, wind, water, wood and other renewable sources.

Funding will be provided to cover the costs associated with the installation of small-scale renewable energy technology and a proportion of the funding requested may be used for educational purposes (up to 20%). Funding may also be requested for feasibility studies into the installation of small-scale renewable energy technology.

There is no minimum value for grants, with a maximum of £5,000 for feasibility studies, and £30,000 for installations. All kinds of small-scale renewable technologies are considered. The closing dates for the applications usually fall on the 28th February and the 31st August.

#### Intelligent Energy Europe

The objective of the Intelligent Energy - Europe Programme aims to contribute to secure, sustainable and competitively priced energy for Europe. It covers action in the following fields:

- Energy efficiency and rational use of resources (SAVE)
- New and renewable energy resources (ALTENER)
- Energy in transport (STEER) to promote energy efficiency and the use of new and renewable energy sources in transport

The amount granted will be: up to 75% of the total eligible costs for projects and the project duration must not exceed 3 years.

#### Merchant Wind Power

A scheme of this type is operated by Ecotricity who build and operate wind turbines on partner sites. Ecotricity take on all the capital costs of the project, including the turbine itself, and also conducts the feasibility, planning, installation, operation and maintenance of the wind turbines. MWP partners agree to purchase the electricity from the turbine and in return receive a dedicated supply of green energy at significantly reduced rates.

Partnerships for Renewables is a company that has been set up to deliver turbines on public sector land. In return for a turbine the recipient receives an annual return on its investment. Importantly, installation would be limited to local authority owned land. Ecotricity operate a scheme whereby they build and operate wind turbines on partner sites. Ecotricity take on all the capital costs of the project, including the turbine itself, and also conducts the feasibility, planning, installation, operation and maintenance of the wind turbines. Partners agree to purchase the electricity from the turbine and in return receive a dedicated supply of green energy at significantly reduced rates

#### Energy Saving Trust Low Carbon Communities Challenge

Local authorities can apply for up to £500,000 for energy efficiency and renewable energy measures across their locality. This could help deliver carbon-saving projects such as area-based insulation schemes or community renewables. The two year programme will provide financial and advisory support to 20 'test-bed' communities in England, Wales and Northern Ireland, support inward investment and foster community leadership. The programme is open to local authorities and community groups and the Challenge is focused on communities already taking action, or facing change in the area as a result of climate change and those looking to achieve deep cuts in carbon over the long term.

The programme will provide around £500,000 capital funding (up to 10% can be spent on project management). The timescale on the scheme is short with the capital money needing to be spent very soon. The challenge will be run in two phases with applicants able to apply for either of them. Phase 1 will be for green 'exemplar' communities that have already integrated community plans to tackle climate change and Phase 2 is for communities already taking some action or facing change in their area.

#### Biomass Grants

If grown on non-set-aside land then energy crops are eligible for £29 per hectare under the Single Farm Payment rules (set-aside payments can continue to be

<sup>69</sup> Funding section (Energy Saving Trust website <http://www.energysavingtrust.org.uk/business/Business/Local-Authorities/Funding>, accessed August 2009)

claimed if eligible). The Rural Development Programme for England's Energy Crops Scheme also provides support for the establishment of SRC and miscanthus. Payments are available at 40% of actual establishment costs, and are subject to an environmental appraisal to help safeguard against energy crops being grown on land with high biodiversity, landscape or archaeological value.

#### **Local Authorities Carbon Management Programme**

Through the Local Authority Carbon Management Programme, the Carbon Trust provides councils with technical and change management guidance and mentoring that helps to identify practical carbon and cost savings. The primary focus of the work is to reduce emissions under the control of the local authority such as buildings, vehicle fleets, street lighting and waste.

Participating organisations are guided through a structured process that builds a team, measures the cost and carbon baseline (carbon footprint), identifies projects and pulls together a compelling case for action to senior decision makers. Carbon Trust consultants are on hand throughout the ten months. Direct support is provided through a mixture of regional workshops, teleconferences, webinars and national events.

The Programme could provide a useful mechanism for the Council to address its carbon emissions of which energy planning and delivery will be an important part.

Report End