

REPORT TO: Cabinet Member – Technical
Cabinet Member - Regeneration
Cabinet Member – Environmental
Cabinet

DATE: 28th July 2010
4th August 2010
4th August 2010
5th August 2010

SUBJECT: Feed-in Tariff (Clean Energy Cashback) Scheme – Potential Opportunities

WARDS AFFECTED: All

REPORT OF: Andy Wallis – Planning and Economic Development Director
Alan Lunt – Neighbourhood & Investment Programmes Director

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**EXEMPT/
CONFIDENTIAL:** No

PURPOSE/SUMMARY:

To inform Members of potential opportunities available under the Feed in Tariff initiative, and to seek Members approval to explore these opportunities in more detail with interested and relevant partners and Energy Service Companies at both Sefton and sub-regional level.

REASON WHY DECISION REQUIRED:

Cabinet approval is necessary to undertake exploratory discussions with interested partners, and Energy Service Companies.

RECOMMENDATION(S):

That Cabinet:-

1. Agree to Officers undertaking exploratory discussions with interested partners, and Energy Service Companies as outlined in paragraph 4.3 of this report, and
2. That further report be presented on the findings of the above discussions.

That Cabinet Members for Technical Services, Environmental Services and Regeneration:-

1. Note the report

KEY DECISION: No

FORWARD PLAN: No

IMPLEMENTATION DATE: After the call in period

ALTERNATIVE OPTIONS:

There are a significant number of statutory duties upon Local Authorities to invest in energy saving measures and thereby reduce their carbon emissions and associated consumption costs. Not to undertake these exploratory discussions could lead to a significant loss of opportunity that, if successful, could make a sizeable reduction in Council's carbon footprint, and at the same time reduce Council's potential energy costs.

IMPLICATIONS:**Budget/Policy Framework:**

Financial: There are no financial implications as a result of this report.

<u>CAPITAL EXPENDITURE</u>	2010/ 2011 £	2011/ 2012 £	2012/ 2013 £	2013/ 2014 £
Gross Increase in Capital Expenditure				
Funded by:				
Sefton Capital Resources				
Specific Capital Resources				
<u>REVENUE IMPLICATIONS</u>				
Gross Increase in Revenue Expenditure				
Funded by:				
Sefton funded Resources				
Funded from External Resources				
Does the External Funding have an expiry date? Y/N	When?			
How will the service be funded post expiry?				

Legal:

There are no immediate implications, however strict procurement procedures will need to be followed during all stages, and that no legal or financial liabilities are incurred by Sefton during this process.

Risk Assessment:

N/A

Asset Management:

There are no immediate implications, but there is an opportunity for the Scheme to act as a catalyst for investment in the Council's property portfolio.

CONSULTATION UNDERTAKEN/VIEWS

Environmental and Technical Services Director

Neighbourhoods and Investment Programmes

Legal

Children, Schools and Families

Finance FD465 - The Interim Head of Corporate Finance & Information Services has been consulted and has no comments on this report

CORPORATE OBJECTIVE MONITORING:

<u>Corporate Objective</u>		<u>Positive Impact</u>	<u>Neutral Impact</u>	<u>Negative Impact</u>
1	Creating a Learning Community	/		
2	Creating Safe Communities	/		
3	Jobs and Prosperity	/		
4	Improving Health and Well-Being	/		
5	Environmental Sustainability	/		
6	Creating Inclusive Communities	/		
7	Improving the Quality of Council Services and Strengthening local Democracy	/		
8	Children and Young People	/		

LIST OF BACKGROUND PAPERS RELIED UPON IN THE PREPARATION OF THIS REPORT

1. Cabinet Report dated 8th July 2010 entitled 'Carbon Reduction Commitment Scheme'
2. Cabinet Report dated 10th June 2010 entitled REECH (Renewable Energy and Energy Efficiency in Housing)

1.0 Background

- 1.1 Sefton Council needs to prepare for a low carbon future, both pro-actively by developing innovative policies and practices combined with setting a transformational example to local stakeholders, whilst still adhering to new and existing legislative demands.
- 1.2 There are both statutory pressures under the Climate Change Act, Energy Act, EU Buildings Directive and legislative tools such as the Carbon Reduction Commitment Energy Efficiency Scheme (CRC) reported to Cabinet Members on 04 Feb and 07 July 10 respectively which provide the overwhelming imperative for the Council to reduce energy consumption to mitigate risk of rising emissions penalty and cost of supplies.
- 1.3 The purpose of this report is to explore potential opportunities offered by the recently introduced Feed in Tariff initiative in order to reduce Council's carbon footprint and its energy costs and potentially those of local stakeholders.

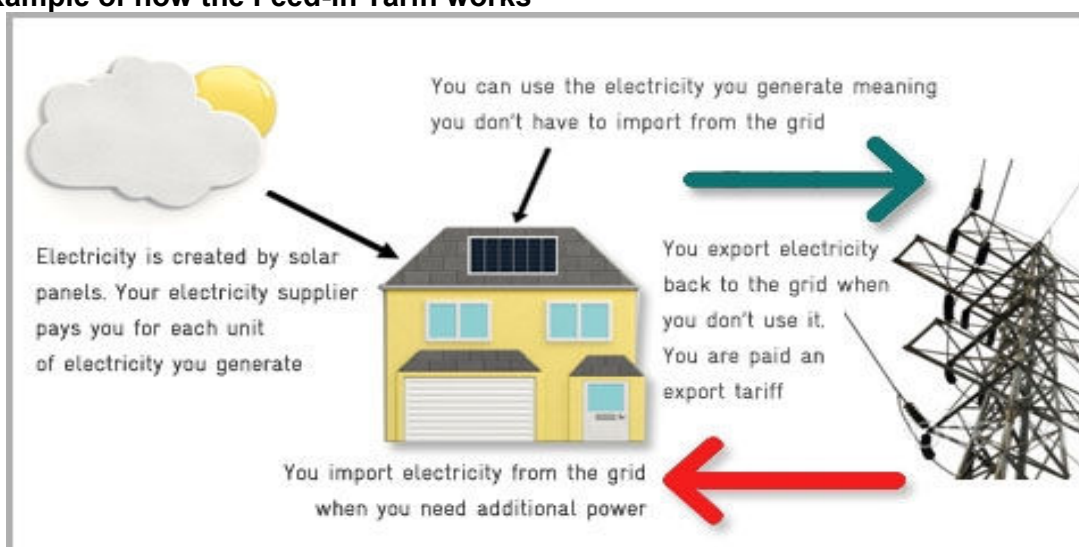
2.0 Feed-in Tariff (Clean Energy Cashback) scheme

- 2.1 Feed-in Tariffs (FITs) became available in Great Britain from of 1st April 2010. Under this scheme energy suppliers make regular payments to householders and communities (including Local Authorities) who generate their own electricity from renewable or low carbon sources such as solar electricity panels, or wind turbines.
- 2.2 The scheme guarantees a minimum payment for all electricity generated by the system, as well as a separate payment for the electricity exported to grid. These payments are in addition to the bill savings made by using the electricity generated on-site. The scheme covers the following electricity-generating technologies:-
 - Solar electricity (PV) (roof mounted or stand alone)
 - Wind turbine (building mounted or free standing)
 - Hydroelectricity
 - Anaerobic digestion
 - Micro combined heat and power (mCHP) (limited to a pilot at this stage)
- 2.3 The tariffs available and the process for receiving them vary, depending on when the technology was installed, and whether the system and the installer were certificated under the Microgeneration Certification Scheme (MCS). MCS is an independent scheme that certifies microgeneration products under 50kW and installers in accordance with consistent standards. Any commercial or larger scale systems, over 50kW, and all anaerobic digestion installations must apply directly through the Renewables Obligation Order feed-in tariff process for larger installations (ROO-FIT) process, as they are not covered by the MCS. For illustration purposes it is worth noting that the Eco-visitor Centre wind turbine is 20KW.

2.4 The Feed in Tariff scheme offers three main financial benefits, in addition to CO2 reductions:-

1. **Generation tariff** – a set rate paid by the energy supplier for each unit (or kWh) of electricity generated. This rate will change each year for new entrants to the scheme (except for the first 2 years), but once in the scheme it will continue on the same tariff for 20 years, or 25 years in the case of solar electricity (PV).
2. **Export tariff** - a receipt of further 3p/kWh from the energy supplier for each unit export back to the electricity grid that is when it isn't used on site. The export rate is the same for all technologies.
3. **Energy bill savings** –savings on electricity bills, because generating electricity to power appliances means the end user does not have to buy as much electricity from the energy supplier. The amount saved will vary depending on how much of the electricity is used on site.

Example of how the Feed-in Tariff works



2.5 As an example, a typical domestic solar electricity system, with an installation size of 2 kWp could earn around:-

- £700 per year from the Generation Tariff
- £25 per year from the Export Tariff
- £110 per year reduction in current electricity bills.

2.6 This gives a total saving of around £830 per year. This assumes 50% of the electricity generated is exported. The figure will vary depending on how much is exported.

2.7 The Table below shows Tariff levels, for technologies installed between 15th July 2009 and 31st March 2012 of most significance to householders.

Technology	Scale	Tariff level (p/kWh)	Tariff lifetime (years)
Solar electricity (PV)	≤4 kW (retro fit)	41.3	25

Solar electricity (PV)	≤4 kW (new build)	36.1	25
Wind	≤1.5 kW	34.5	20
Wind	>1.5 - 15 kW	26.7	20
Micro CHP	≤2kW	10.0	10
Hydroelectricity	≤15 kW	19.9	20

2.8 Tariff levels vary depending on the scale of the installation. The tariff levels shown in the table above apply to installations completed from 15th July 2009 to 31st March 2012 for the lifetime of the tariff. After this date, the rates decrease each year for new entrants into the scheme, in line with the retail price index. All generation and export tariffs will be linked to the Retail Price Index (RPI), which ensures that each year they follow the rate of inflation.

3.0 Energy Service Companies

3.1 Energy Service Companies perform an in-depth analysis of the property, designs an energy efficient solution, installs the required elements, and maintains the system to ensure energy savings during the payback period. The savings in energy costs is often used to pay back the capital investment of the project over a five- to twenty-year period, or reinvested into the building to allow for capital upgrades that may otherwise be unfeasible. If the project does not provide returns on the investment, the Energy Service Companies are often responsible to pay the difference.

3.2 Most Energy Service Companies offer three options for organisations interested in energy systems.

Option 1 – Minimal End User Investment and Risk

Under this option the Energy Service Company undertakes all works and costs associated with it in terms of design, installation, and maintenance of energy systems over the life of the programme, normally between 20 to 25 years. The end user benefits from reduced energy bills, but feed in tariff is collected by the Energy Service Company. As the option suggests there are no or minimal costs and risks to the end user.

Option 2 – Total End User Ownership

Under this option the end user pays for all works to be undertaken by the Energy Service Company for the design, installation, and maintenance of energy systems, and therefore takes all the risk, but in so doing keeps all the financial benefits generated from such systems, i.e. generation tariff, and export tariff. The end user, however, does benefit from reduced energy bills.

Option 3 – Shared Investment & Shared Savings

As the name suggests, under this option an agreement is reached between the end user and the Energy Service Company whereby both costs and benefits are shared equally over an agreed time period, again normally between 20 to 25 years.

3.3 It is quite possible that by offering a selected Energy Service Company a whole range of public sector, and RSL buildings across the sub-region it may be

possible to minimise any end user costs, but at the same time be able to share savings generated by achieving economies of scales by the Energy Service Company.

4.0 Way Forward

- 4.1 Carbon Reduction Commitment Energy Efficiency Scheme (CRC) imposes a statutory duty on local authorities to invest in energy saving initiatives and thereby reduce their carbon footprints, and associated energy costs. The introduction of Feed-in-Tariff, under which the end user who generate their own electricity from renewable or low carbon sources receives regular payments from energy suppliers provides an opportunity for Sefton Council, either independently or with other partners within the sub region to explore how this could be used to reduce CO2 emissions and energy costs.
- 4.2 Informal discussions with Fusion 21, which represents some of the RSLs within the subregion suggests that they have already been approached by some Energy Service Companies, but they would prefer to work in unison with local authorities in order to generate economies of scale and thereby maximise potential benefits. Maghull Town Council has also expressed similar views regarding its buildings.
- 4.3 The Cabinet at its meeting on 10th June 2010 agreed to the establishment of REECH Steering Group, in order to progress the REECH (Renewable Energy & Efficiency in Housing) Programme. Cabinet Member for Regeneration will chair this Group, with representations from other local authorities, (including Halton), RSLs, Energy Saving Trust, and sub-regional Community organisation. It is proposed that this Group be used as a vehicle to undertake the exploratory discussions with potential interested partners, and Energy Service Companies.
- 4.4 This report is mainly concerned with the implementation of energy generating systems on public buildings, and to a degree on social housing, however if successful it has the potential to kick start similar initiatives on private sector housing, and critically creating significant job and work opportunities for local SMEs.
- 4.5 For example a 3KW domestic system of 30 m² PV array can produce a benefit to the household of around £1,200 p.a (saving of £252 p.a. on bills, an income of £950). A 2KW system will produce £830 p.a. and a 1KW system requiring around 10 m² PV array will produce £404 p.a. With a total of 120,000 dwellings in Sefton, a target figure of 1% of dwellings fitted with PV's would produce, over 25 yrs, between an extra £12.1 million and £36 million retained income for local householders. The current cost of installing a 3kw system is approximately £12,000, producing a total cost for 1,200 systems of £14.4 million, with a payback period per system of 10 years. With the benefits of economies of scale, this cost could to reduce to around £12 million or below. The net financial benefit, therefore, for 1,200 3KW, 2KW and 1KW capacity domestic systems would be approximately £24 million, £16 and £8 million respectively.
- 4.6 The scale of this financial benefit represents the size of investment the government and private sector energy companies are prepared put in to local economies, particularly when the public sector estate, commercial and industrial sectors are added to the equation. The broader benefits produced by achieving a critical mass of activity would include the business and jobs generated by the installation programme, the increased preparedness of the local economy to

take advantage of further low carbon work streams, and the reduction of CO₂ emissions.