

CARBON COMMISSION

Low Carbon Investment Working Group

Briefing:

- High level prospectus of Low Carbon Investment Opportunities in the London Borough of Haringey and wider North London area
- Meeting agenda 28th November
- Expected outputs from the Low Carbon Investment Working group

Cutting the Carbon: Our Ambitions

It is estimated that delivering the 40% CO₂ reduction target could require investment in the region of over **£400 million** over the next 10 years for energy efficiency and decentralised energy measures.

London Borough of Haringey jointly commissioned a number of studies to assess the investment potential and viability for the following low carbon technologies detailed in this briefing:

1. Solar Photovoltaic arrays on Council owned buildings and social housing
2. "Whole house" Green Deal packages of measures for households (excluding solar PV) covering social and private housing stock
3. Decentralised Energy Networks

The full reports can be accessed from

http://www.haringey4020.org.uk/index/about4020/lcf_studies.htm



A wider range of report summaries relating to each carbon Commission Working group and Haringey Context can be browsed in the document library

http://www.haringey4020.org.uk/index/useful-information/document_library.htm

1 Solar Photovoltaics

Over 1,200 buildings across North London have undergone desk top feasibility analysis to determine their solar PV potential, and a further 13,000 properties have had a high level assessment carried out. The analyses calculate the total theoretical potential to be:

- 74 MW for projects with an IRR greater than 6% (pre FIT changes)
- 25 MW for projects with an IRR greater than 10% (pre FIT changes)



North London: for the 1,200 buildings that have been analysed in more detail, a 49 MW potential has been identified, which represents capital expenditure of £122 million.

Haringey: There is potential for 6.8 MW and £20.4 million investment

In July 2011 Haringey Council committed a £16 million investment programme for installing solar PV on their estate and social housing. The realisation of this programme alone stands to double to solar capacity of London:

- £8 million prudential borrowing – Council buildings and schools
- £8 million roof-rental model – Social housing

This is now under review following early changes to the FIT.

2 Housing Retrofit – Green Deal

Whole house packages of measures have been established based upon financing through the Green Deal, with all measures paying for themselves over 25 years from energy bill savings at an IRR of 7%.

On a realistic assumption of take up this could provide a total capital investment of **£575m** and a 4% CO₂ reduction across the region. Haringey's proportion of this is over **£100m**



The archetypes have been grouped into three categories – high, medium and low Green Deal potential, depending on the savings and capital cost requirements for the recommended packages of measures:

Green Deal Potential	Carbon Savings (tCO ₂)	Capital Cost of Package
High	Greater than 2tCO ₂	Over £6,000
Medium	1 -2 tCO ₂	£2,100 - £6,500
Low	Less than 1tCO ₂	Less than £2,100

The dwelling analysis for Haringey illustrates that **£375 million** will be required to retrofit the 80,000 properties that have been modelled:

Archetype	No. of dwellings in Haringey	CO2 savings (tCO2)	Total Cost
Pre 1980 Solid Gas Terraced Poor	15,336	56,954	£157,168,014
Pre 1980 Solid Gas Semi Poor	5,041	36,051	£88,681,387
Pre 1980 Cavity Gas Terraced Poor	1,902	6,536	£17,292,292
Pre 1980 Cavity Gas Semi/Det Poor	796	4,679	£11,247,082
Pre 1980 Solid Electricity Flat Poor	386	981	£2,831,236
Pre 1980 Solid Gas Flat Poor	10,575	13,512	£27,813,745
Post 1980 Gas Flat Poor	8,746	10,783	£28,405,551
Pre 1980 Cavity Gas Flat Poor	4,095	6,230	£14,442,384
Pre 1980 Solid Electricity Flat Good	117	164	£508,001
Pre 1980 Cavity Electricity Flat Poor	81	156	£451,019
Post 1980 Gas Flat Good	7,686	2,877	£9,196,143
Pre 1980 Cavity Gas Flat Good	12,395	1,687	£4,348,170
Pre 1980 Solid Gas Flat Good	5,858	795	£2,055,079
Pre 1980 Cavity Gas Terraced Good	4,208	3,083	£8,782,059
Pre 1980 Cavity Gas Semi/Det Good	1,584	447	£1,103,173
Post 1980 Gas Terraced Good	864	349	£634,586
Pre 1980 Cavity Electricity Flat Good	566	148	£393,990
TOTAL	80,236	145,432	£375,353,911

3 Decentralised Energy (DE)

The **Broadwater Farm (incorporating social housing and a number of community buildings) and Hornsey Town Hall** mixed use re development site projects have both undergone a detailed feasibility study, and a pre-feasibility analysis of the remaining clusters has been carried out to establish the investment potential of all proposed DE schemes across the borough.

Scheme	Proposed Technology (MW)	Carbon Savings (tCO ₂ p.a.)	NPV 25 yr 3.5% discount rate	Capital Cost (£m)
Broadwater Farm	Biomass Boiler	613	TBC	0.4
Hornsey Town Hall	CHP	166	TBC	1.2
Northumberland Park	CHP	193	£-1,621	1.4
Tottenham Town Hall/ Tottenham Green Centre/ Ashley Road	CHP	846	£331	1.6
Lawrence Rd/ St Ann's Hospital	CHP	TBC	TBC	TBC
Hale Village	CHP	Already installed – may be linked up to a wider network in the future		
Wood Green North	CHP	438	£-1,875	2.5
Wood Green East	CHP	433	£-1,505	2.1
Haringey Heartlands	CHP	1167	£-278	1.3
Hornsey High Street	CHP	896	£-914	3.3

Upper Lea Valley DE network (covering Enfield, Haringey and Waltham Forest)

The ULV is home to a number of strategic energy assets, including Enfield power station and Edmonton incinerator, and is a vibrant industrial corridor that hosts several significant users of energy. It has the potential to attract new industries with energy demands that could further enhance the viability of low-carbon, low-cost heat networks.

The vision for the DE network in the ULV is to deliver cost-competitive energy supplies (heating cooling and power) to assist with job creation, reduce overall carbon emissions to atmosphere, and support development in a coherent, unified fashion that prevents the emergence of widespread piecemeal, standalone energy solutions.

A detailed feasibility for this scheme is currently being carried out and due to complete in Spring 2012.

4 Agenda for 1st Low Carbon Investment Working Group Meeting

Aim of the meeting: Discussion of possible investment models for Haringey and wider north London area in the context of the boroughs wider aims of reducing inequality and creating a thriving local economy.

1. Presentations: (7 minutes each) (2.30-3.05)

- Cllr Joe Goldberg: Haringey's ambition
- Prashant Vaze (Chair): Introduction and highlights of the Green Deal
- Duncan Price: Low Carbon Investment models for Haringey/North London
- Justine Prain: Lessons learnt from PAYS and Birmingham experience
- Jess Sherlock: Summary of other DECC Local Carbon Framework work

2. Discussion of issues relating to each measure and sector (3.05-4.00):

- Financing pre-feasibility work
- Sources of finance such as Council borrowing, European (e.g. JESSICA) and private finance
- Grant funding and subsidies available (including those targeting wider social & economic outcomes)
- Investment models e.g. Joint ownership and community investment
- Aggregating investments e.g. across north London boroughs

4.00-4.15 (break and refreshments)

3. (Cont. 4.15-4.45) summarising key issues discussed and identification of key questions/gaps requiring further investigation prior to next meeting (4.45-5.00)

Meeting close

5 Expected outputs from Low Carbon Investment Working Group

1. Narrative from Working Group summarising issues discussed and recommendations made to the Carbon Commission (co-ordinated by Haringey Council)
2. Identification of key issues relating to other Carbon Commission working groups (Green Enterprise, Community Involvement, Transport, Tottenham regeneration)
Briefs for these groups can be downloaded from:
http://www.haringey4020.org.uk/index/about4020/carbon_commission/key_themes.htm
3. Summary of recommendations made relating to each of the following:

Table 1: Format of recommendations

Measure/sector Council role	1. Investment	2. Delivery	3. Enabling measures e.g. creating the conditions for private sector led investment and delivery
	Short term 2012-2014	Short term 2012-2014	
	Med term 2015- 2017	Med term 2015- 2017	
	Long term 2018-2020	Long term 2018-2020	Short/Med/Long Term
1.1 Green Deal - Social Housing			
1.2 Green Deal - Private owned and private rented housing			
1.3 Green Deal - Commercial properties			
2.1 Decentralised energy networks – private sector led new build schemes			
2.2 Decentralised energy networks – retrofit or new build schemes within Council owned properties such as social housing			