



Briefing

Job creation from local action on climate

Independent research commissioned by Friends of the Earth shows that at least 70,000 jobs could be created across England and Wales if councils slash climate-changing emissions locally.

Leading advisors to councils on climate change, *Carbon Descent*, analysed the labour needed needed to insulate homes and businesses, and to install green energy on buildings – two of the key ways in which councils could achieve a reduction in their emissions of at least 40 per cent by 2020.

New jobs could be available as loft ladders, architects, plumbers, builders, electricians, plasterers and insulation specialists – with new admin, transit and warehouse positions also created to support the installation of insulation and renewable energy.

This briefing shows the research findings and methodology.

The research was carried out as part of Friends of the Earth's [Get Serious About CO₂](#) campaign which calls on all councils to do their bit to tackle climate change.

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1. Introduction

Friends of the Earth's *Get Serious About CO₂* campaign is calling for every council to do its bit to tackle climate change. If we are to meet our national commitments under the Climate Change Act, and build a low-carbon future, all councils will have to be part of the solution, and lead emissions cuts in their area in line with the level of ambition called for by the latest scientific evidence.

Friends of the Earth commissioned Carbon Descent to use their software modelling system, VantagePoint, to see if it was reasonable to ask local authorities of different types – rural, urban etc. – to cut emissions in their area by 40 per cent by 2020.

The results showed that 40 per cent cuts are possible in these very different local authority types, but that the mix of measures to meet the target would vary significantly. For example more [combined heat and power](#) is feasible in an urban area.

The 2006 Stern Review¹ found that there could be major economic benefits from tackling climate change, and in 2008 the Manchester City Region “Mini-Stern”² report by Deloitte found that the economic impact for the area of not acting on climate change could be £21bn over the next decade.

As part of our campaign, we wanted to find out more about what the local benefits could be. We commissioned Carbon Descent to produce a model to calculate the number of jobs that would be created by implementing such reductions. The research³, which was published by Friends of the Earth in June 2009, found that at least 70,000 jobs could be created by tackling climate change locally.

2. The research methodology

[Carbon Descent](#) is an independent social enterprise and environmental trust working in energy, resource use, transport, the built environment and renewables. They partner with local authorities, private businesses, charities and communities. Carbon Descent's VantagePoint⁴ software system models how different CO₂ reduction targets can be achieved in local authority areas.

For Friends of the Earth, Carbon Descent considered how three very different local authorities - Middlesbrough, Tower Hamlets and Hampshire – could achieve cuts in CO₂ from their areas of 40% by 2020. They then produced a model to calculate the number of jobs that would be created by implementing packages of measures such as used in the above three case-studies.

The research was based on empirical data obtained from a range of installers and agencies about how many hours of labour it would take to fit the various forms of domestic insulation and renewable

¹ **Stern Review on the Economics of Climate Change**, Sir Nicholas Stern, 2006

http://www.hm-treasury.gov.uk/sternreview_index.htm

² http://www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/UK_GPS_MiniStern.pdf

³ **Pathways to 40% Carbon Reductions by 2020 Modelling report: Hampshire, Tower Hamlets and Middlesbrough**, Carbon Descent, June 2009. http://www.foe.co.uk/resource/reports/pathways_to_40_percent_report.pdf

⁴ See <http://www.carbondescent.org.uk/pages/vantage-point.html>

energy including: cavity, loft and solid wall insulation; double glazing; solar thermal and PV panels, ground-source heat pumps, combined heat and power.

Example labour figures showed that two people:

- would take a third of a day to insulate the cavity walls in a home
- would take up to ten days to fit external insulation to a house
- would take three days to fit internal insulation to a terraced house, or 6 days for a detached house
- can do five loft installations per day
- take two days to fit solar photovoltaic to a house, and a day to erect the scaffolding for the job
- take 2 to 3 days to fit a house with solar hot water, and half a day to erect the scaffolding
- take three days to fit heat pumps to a house

Friends of the Earth obtained relevant local data for each of the local authorities where we were running the *Get Serious About CO₂* (see table below) and inserted it into the model to obtain estimates of the jobs that would be created if a comparable package of measures was implemented in that authority. The local data for the number of cavity walls and the number of lofts that could be insulated, was obtained from the local authority or, in the absence of local authority data, from the Energy Saving Trust's Home Energy Efficiency Database ⁵.

Broader job creation figures were calculated by extrapolating on a population basis from the most similar type of the three 'model' authorities - Middlesbrough, Tower Hamlets and Hampshire. So, for example Nottinghamshire's job creation figures are based on the type of green measures in the Hampshire case study.

The Carbon Descent model divides the number of measures that could potentially be fitted by ten on the assumption that this work is done evenly during the ten years between 2010 and 2020; it then multiplies the result by the number of person hours required for each job. The model makes allowances for training, leave etc. taken from standard studies and produces the number of full time jobs that would result for each measures and for the package of measures. An additional percentage is added in rural areas for the extra travel time involved.

This was done for each of the 65 local authorities where we were running Friends of the Earth's *Get Serious About CO₂* campaign at the time of the research. These local authorities represented a very good geographical cross section of England and Wales. It was a large sample – representing almost 33 per cent of the England and Wales population (16,805,400 out of a population of 50,748,000).

The total job creation from the 65 authorities was 23,190 jobs. Simple extrapolation to England and Wales produced the figure of 70,029 jobs.

The job creation figure total is based on conservative assumptions and should be regarded as a minimum estimate: it takes no account of jobs created in the manufacture, wholesaling, transport and storage of the materials involved (insulation, renewable energy).

⁵ HEED is 'a national database which tracks house-by-house the sustainable energy characteristics of the UK's housing stock' see <http://www.energysavingtrust.org.uk/business/Business/Resources/Homes-Energy-Efficiency-Database-HEED>

3. Job creation findings

The research showed that 70,029 jobs could be created across England and Wales. The below table shows the break-down of job creation figures in local authority areas.

Local authority area	Number of potential jobs
Anglesey	175
Birmingham	433
Bradford	211
Brent	491
Brighton & Hove	106
Bristol	179
Caerphilly	425
Calderdale	87
Camden	422
Cardiff	264
Central Beds	376
Cheltenham	51
Colchester	72
Dacorum	327
Darlington	46
Derby City	98
Doncaster	110
Ealing	551
East Sussex	1434
Exeter	55
Gosport	36
Fareham	54
Guildford	59
Gwynedd	282

Hackney	389
Hampshire	3567
Haringey	419
Harrogate	70
Harrow	388
Havant	52
Havering	385
High Peak	206
Islington	346
Lancaster	64
Leeds	301
Leicester	98
Lewes	41
Lincoln	37
Liverpool	197
Luton	81
Manchester	200
Mid Beds	438
Monmouthshire	227
Newcastle	128
N Herts	374
N Lincs	386
N Tyneside	83
Northumberland	784
Nottingham	115
Nottinghamshire	2553

Oxford	66
Plymouth	129
Preston	86
Reading	62
Sheffield	215
Shropshire	751
Solihull	89
Southend	68
South Kesteven	379
South Oxfordshire	270
Stoke	106
Surrey Heath	214
Swansea	122

Telford	73
Test Valley	293
Wandsworth	588
Warrington	89
Watford	36
West Lancs	300
Wight	360
Woking	41
Worcestershire	751
York	54
Total for 65 local authorities	23,469

4. Information

To find out more about the job creation research or Friends of the Earth's Get Serious About CO₂ campaign, please visit www.foe.co.uk/getserious

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