



## Collected case studies:

### Going low carbon

- *Supporting growth in low carbon businesses*
- *Delivering green jobs and helping to develop a low carbon economy*

This paper brings together a number of case studies on how cities in the UK and beyond have promoted low carbon initiatives.

#### **A low carbon economy can offer financial as well as environmental returns to cities.**

Despite lacking a clear mandate and operating in difficult financial and policy contexts, UK cities are taking action to support economic growth while reducing their carbon emissions.

This can be done in many different ways: by pursuing jobs growth in low carbon sectors, working with businesses to reduce energy consumption, providing finance and incentives, and promoting regulations.

#### **The case studies demonstrating how cities are developing low carbon economies are split into five groups:**

- **Supporting growth in low carbon businesses**

To support growth in low carbon businesses, cities should first and foremost create an environment where businesses are able to grow. Cities are developing and delivering services in response to the specific challenges that many low carbon businesses experience in relation to regulation, research, innovation and production.

- **Supporting the growth of a low carbon economy**

Cities can support the growth of a low carbon economy using regulation. Internationally, some cities are championing green legislation in the building and waste sectors by implementing targeted laws and complementary support at their biggest source of carbon emissions – large buildings.

- **Encouraging low carbon decisions and behaviours**

Encouraging residents and businesses to adopt greener habits and use greener products is an important way to support the move to a low carbon economy.

- **Delivering green jobs and help develop a low carbon economy**

As part of a wider procurement strategy, cities can help develop the low carbon economy, and in turn deliver

green jobs locally. Some cities are using procurement frameworks to simplify the purchasing of low carbon infrastructure as well as to create and develop long term markets or opportunities for local businesses.

- **Maximising leverage of commercial funds into low carbon projects**

Councils can help deliver a low carbon economy by maximising leverage of commercial funds. By harnessing the power of communities, councils can do much more than they could on their own and can ensure public services such as energy provision benefit citizens.

## Supporting growth in low carbon businesses

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### Building business support networks and promoting information sharing

**Lead organisations: Regen Southwest and Low Carbon Southwest**

**Location: South West England and London, UK**

**Keywords: Low carbon, Business support; Environment; Planning; Smart cities**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

Business support networks such as Regen Southwest and Low Carbon Southwest provide a platform for local businesses and non-profit partners to work with one another. Bath and North East Somerset Council, Bristol City Council and South Gloucestershire Council are also all partners and play a key role in networking, advice and strategy.

Rather than choosing one sector or a few firms, Low Carbon Southwest works with businesses from construction, renewable energy and professional services to share information and build networks across sectors.<sup>1</sup> These organisations use their close links with the local councils to communicate the challenges they face and how local government can help overcome them, through for example networking events or regular surveys.

By joining up related businesses across the wider region, Regen South West and Low Carbon South West are able to build enough impetus to attract investors and build supply chains. For instance, Low Carbon Southwest organises members to attend trade missions and build trade relationships for the region. Regen South West members have also had opportunities to talk with key policy makers such as the Secretary of State for Energy and Climate Change and Chief Executive of the Office of Renewable Energy Deployment at DECC.<sup>2</sup>

Close working relationships between councils and firms in the South West has opened up new business opportunities, improved business confidence, reduced longterm planning risks and created momentum

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<sup>1</sup> <http://www.lowcarbonsouthwest.co.uk/>.

<sup>2</sup> <https://www.regensw.co.uk/benefits>.

for building the sector in the local economy. In turn, business groups have helped councils make informed decisions about their economic development frameworks and understand the current and future status of green sectors. These working relationships have allowed for knowledge and experience to be shared, encouraging better dialogue and understanding.

Regen South West also helps its member firms by working with local FE colleges and universities to supply workers with the skills they need. For example, Regen South West partners work with the University of Bristol to support research networks and makes use of its expertise in low carbon technologies. Meanwhile the University of the West of England has strong business links so Regen South West is working with them to deliver SME support and business skills programmes.<sup>3</sup> The relationships work as they identify expertise in local institutions and capitalise on existing strengths.

Other cities are also working with schools, FE colleges and local training programmes to develop skills where businesses have identified a deficit. For example, a new business support organisation, the London Clean Tech Cluster, has developed a mentor programme to match growing low carbon firms with mentors to help develop the skills base within the organisation. They have already successfully matched 20 mentors with clean tech firms to help them get to the next level.<sup>4</sup> Similarly, Low Carbon South West supports Teen Tech, a programme to inspire teenagers to pursue career choices in science, engineering and technology.

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### Reducing the costs of energy

**Lead organisation: Belfast City Council**

**Location: Belfast, UK**

**Year: 2015 - present**

**Keywords: Low carbon, Business support; Environment; Planning; Innovation**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

Through its close links with local businesses, Belfast City Council identified that fuel costs are a barrier for businesses in the city, as energy costs there are some of the highest in the UK.<sup>5</sup> To help companies reduce these costs and support a small, but growing, energy cluster, the city council is developing a Sustainable Energy Business Park.

The business park will be located on a 65-acre landfill site. The gases produced from this waste will be used for energy alongside solar and wind power, which will be sold to the tenants at a discounted rate. To help the green energy sector, the business park will also host part of Queens University's Centre for Advanced Sustainability to further support research, innovation and knowledge sharing in the park. The Belfast Green Energy Business Park brings together a close-knit group of businesses and localises the solution to high energy costs whilst minimising emissions. The city assists by providing planning support and in marketing the park's development. Most importantly, the park is developing the local skills and networks these businesses need to develop the sector.

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<sup>3</sup> Centre for Cities interviews.

<sup>4</sup> Centre for Cities interviews.

<sup>5</sup> Quarterly Energy Cost Statistics list Belfast as having the most expensive electricity in the UK: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/244580/qep\\_sep\\_13.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/244580/qep_sep_13.pdf).

## Supporting the growth of a low carbon economy

Cities can support the growth of a low carbon economy using regulation. Internationally, some cities are championing green legislation in the building and waste sectors by implementing targeted laws and complementary support at their biggest source of carbon emissions – large buildings.

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### Championing green legislations targeting energy efficiency in buildings

**Lead organisation: New York City authority**

**Location: New York City, New York, US**

**Year: 2009 - present**

**Keywords: Low carbon, Environment; Planning; International**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

In New York City, large buildings are responsible for 45 per cent of the city's carbon emissions and are an important target group of the city's climate strategy.<sup>6</sup>

The Greener, Greater Building Plan (GGBP) launched in 2009 by New York's Mayor Michael Bloomberg constitutes four laws targeting energy efficiency in the city's largest buildings and is supported by a number of complementary initiatives such as providing finance and business training.<sup>7,8</sup> In addition to enforcing new laws, the city provides building owners with the support to implement the changes required. It established a finance corporation to fund retrofitting works, provided training to businesses on compliance procedures and made all the relevant information available through a new call centre and website.<sup>9</sup> The additional support aims to reduce confusion regarding implementation and maximise compliance with the new laws.

According to the estimates issued by the Mayor's Office, GGBP is expected to reduce citywide carbon emissions by 5 per cent compared to 2009 levels, save £4.5 billion in energy costs and create 17,800 construction-related jobs by 2030.<sup>10</sup> Early figures from the GGBP show that implementing cost-effective measures can reduce businesses' energy use by up to 31 per cent.<sup>11</sup> The New York City authority has also retrofitted the Empire State Building and used it as a high profile example. Alone, it is saving £3 million in energy bills annually and created 250 new construction related jobs during the course of the work.<sup>12</sup> Since the launch of the GGBP, the city has also ensured there is effective monitoring and that this information is communicated clearly to building owners. For example, the authorities made benchmarking procedures easier to complete and ensured all changes are in the annual report.<sup>13</sup>

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6 The City of New York (2011), A greener, greater New York.

7 Part of PlaNYC which consists of 132 initiatives aimed to reduce GHG emissions by 30 per cent by 2030.

8 Laws 84, 87 and 88 enacted in 2009 and law 85 enacted in 2010.

9 ICLEI, IMT (2011), Case Study: New York city's greener, greater building plan.

10 New York City Mayor's Office of LTPS (2012), Overview of the Greener Greater Building plan.

11 The city of New York (2012), New York city local law 84 benchmarking report. Data submitted in 2009 by 75 per cent of large private buildings in New York City.

12 Robbins Schneider A (2013), How The Empire State Building is Redefining Sustainability and Supporting the Economy in New York City, C40 New Team; City Solutions.

13 New York City Mayor's Office of LTPS (2012), Overview of the Greener Greater Building plan.

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## Using long-term, complementary and comprehensive laws

**Lead organisations: City and County of San Francisco**

**Location: San Francisco, California, US**

**Year: 1980s – to present**

**Keywords: Low carbon, Environment; Planning; International**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

San Francisco demonstrates how long term, targeted and complementary laws can drive change and create jobs. Between 1990 and 2010, the recycling rate in the city increased from 20 to 77 per cent, and Recology, the city's primary recycling factory, reported a 10 per cent increase in its workforce due to this surge in activity.<sup>14</sup>

San Francisco's high recycling rate is the result of a culmination of efforts that started in the 1980s. These include the emergence of volunteer-run recycling programmes driven by an environmental movement, the introduction of the California Waste Management Act in 1989 and the introduction of a number of pilots (such as a colour-coded system to separate waste and a Pay As You Throw scheme).<sup>15,16</sup> In 2002, the city set itself the goal of a 75 per cent reduction in landfill waste by 2010 and zero waste by 2020. Finding that these initiatives were still not enough, the city enforced over 20 new laws targeting residential waste, production waste, public procurement and other sectors. A recent example includes the 'mandatory recycling and reposting ordinance' passed in 2009 which requires all persons residing in the city to separate and recycle their waste. It also supports them with training, raising awareness and a website.<sup>17</sup>

San Francisco is already ahead of its targets, and similar to New York demonstrates that comprehensive, targeted and well supported laws and regulations are a key component of both good environmental management and green growth.

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## Improving co-ordination on low carbon infrastructure using City Deals

**Lead organisation: Liverpool City Region**

**Location: Liverpool, UK**

**Year: 2011 – to present**

**Keywords: Low carbon, Environment; Planning; City and growth deals**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

Whilst UK councils do not have the same breadth of powers as their international counterparts, they can still use the powers they have to target their city's main emitters (for instance in relation to transport and planning). Cities such as Liverpool, Manchester, Leeds and Birmingham included green initiatives in their City Deals. If well designed, City Deals offer a good opportunity for cities to accelerate growth in green investment by easing regulatory burdens or targeting funding to green projects.

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<sup>14</sup> Tellus Institute with Sound Resource Management (2011), More jobs less pollution, U.S.A.

<sup>15</sup> Janse K (2013), Recycling is deep in San Francisco's roots, Recology; USA: San Francisco.

<sup>16</sup> Pay as you Throw schemes are explained in the 'Incentives' section of the report.

<sup>17</sup> San Francisco Environment website <http://www.sfenvironment.org/zero-waste>.

Liverpool City Region has identified low carbon technologies as a key sector for attracting investment and generating jobs in the region. However, they also found that businesses investing in low carbon infrastructure are facing building delays due to lack of clarity in the planning process and slow responsiveness from local authorities and regulatory agencies.<sup>18</sup> To address these regulatory challenges, Liverpool used their City Deal to commit Whitehall and regulatory agencies to improve coordination and set a 13-week deadline for responding to permit applications for low carbon infrastructure (for example offshore wind turbine projects). In addition, the city region has committed to provide a brokerage support service for businesses and work closely with the Local Enterprise Partnership and the Green Investment Bank on delivering new projects. By easing the regulatory burdens, Liverpool is hoping to accelerate £100 million of investment in offshore wind and create 3,000 new jobs.<sup>19</sup>

To date, the Merseyside Environmental Advisory Service (MEAS) has appointed an environmental account manager to establish the brokerage support and is also working with Defra to find the right operational mechanisms for the pilot.<sup>20</sup> A number of low carbon projects are in the pipeline, although none have yet reached the final consent stage.<sup>21</sup>

## Encouraging low carbon decisions and behaviours

Encouraging residents and businesses to adopt greener habits and use greener products is an important way to support the move to a low carbon economy.

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### Incentivising recycling with a Pay As You Throw scheme

**Location:** Cities in the UK and abroad

**Keywords:** Low carbon, Environment; Planning; City and growth deals

**Read the full report here:** [Delivering change: How cities go low carbon while supporting economic growth](#)

In the UK, landfill tax (currently £72 per tonne and increasing each year) is becoming a significant burden on councils' budgets, which makes cutting the amount of waste produced increasingly important. With only 44 per cent of municipal waste currently recycled, there is substantial potential for councils to save money, reduce their environmental impact and even add recycling jobs to the economy.<sup>22</sup>

One way to incentivise recycling is by implementing Pay As You Throw schemes (PAYT) which charge customers based on the amount of waste they throw away. Waste becomes a chargeable utility and users are incentivised to produce less waste and to recycle more of that waste.

Evidence from international examples shows that PAYT schemes can be effective.<sup>23</sup> These work best when accompanied by initiatives such as running high profile residential awareness programmes. For example,

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18 Centre for Cities Interview.

19 Liverpool City Council (2013), City deal extract, accelerating investment in the low carbon economy, Liverpool: Liverpool City Council.

20 A sub-regional service that provides environmental and technical advice to councils.

21 Centre for Cities interview.

22 A study by Friends of the Earth suggests that recycling 70 per cent of municipal waste in the UK would create over 50,000 direct jobs. Friends of the Earth (2010), More jobs, less waste, London.

23 Waste Watch, Pay as you throw.

cities such as San Francisco (77 per cent recycling rate), Portland (63 per cent) or the German town of Neustadt an der Weinstrasse (70 per cent) all use PAYT schemes.<sup>24</sup>

Based on the evidence, a number of UK policy organisations including Green Alliance, IPPR, and Waste Watch have also been in favour of PAYT schemes.<sup>25,26</sup> Local authorities in the UK currently do not have the powers to introduce a PAYT scheme. Previous PAYT programmes introduced under the Labour Government were labelled a ‘bin tax’ by sections of the media and the opportunities for councils to introduce them was paradoxically removed in the Localism Act 2011.

The strength of international evidence suggests this decision needs to be revisited. Local authorities can instead implement Recycling Reward Schemes, whereby households are offered financial or other rewards for recycling. In 2004-2005, DEFRA pledged £3.1 million to a number of local authorities to pilot such reward schemes. Similar more recent programmes include the Recycle Bank and ‘London Green Point’. The effects of reward schemes on recycling and waste is still not widely researched although some evaluations show moderate increases in recycling among targeted communities.<sup>27,28</sup> Whilst more popular than PAYT programmes, reward schemes are criticised for failing to reduce waste as effectively, often encouraging the production of more recyclable material.<sup>29</sup> Reward schemes also require longer term funding, which might not be available to councils under current conditions.

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### Challenging businesses to lead the way

**Lead organisation: New York City Council**

**Location: New York City, US**

**Year: 2007 – to present**

**Keywords: Low carbon, Environment; Planning; International**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

Reputational incentives can be a low-cost way for cities to encourage businesses to reduce their carbon emissions. For example, Carbon Challenges ask businesses to reduce their CO<sub>2</sub> emissions by a certain percentage within a deadline, in return for being recognised as top carbon-savers.

Businesses respond best to the incentives when there are clear benefits such as savings on energy costs, networking opportunities and branding as leaders in sustainability.<sup>30</sup> But there must be meaningful buy-in from the business community to ensure it is a significant and desirable prize.

In New York, the Mayor first launched the Carbon Challenge to healthcare facilities and universities in 2007. By 2013, 27 universities had cut their emissions by an average of 12.8 per cent and 22 hospitals by 8 per cent.<sup>31</sup> The Challenge was recently scaled up to include commercial offices, residential co-ops and Broadway theatres.

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24 Hickman L (2011), ‘A small town in Germany where recycling pays’, *The Guardian*, 18 March 2011.

25 Green Alliance and IPPR (2006), *Zero Waste UK*, London.

26 A sub-regional service that provides environmental and technical advice to councils.

27 Leedham E (2013), *Investigating the effects of recycling incentives*, [http://resource.co/article/Latest/Investigating\\_effects\\_recycling\\_incentives-3429](http://resource.co/article/Latest/Investigating_effects_recycling_incentives-3429), Resource Magazine.

28 Over half (57 per cent) reported an increase in recycled material, of which the maximum increase was 15 per cent. <http://archive.defra.gov.uk/environment/waste/localauth/documents/aeat-householdincentives.pdf>.

29 Ottery Ch (2013), *Insight: Is it too early to invest in rewards schemes?* *Material Recycling World*: 14 June 2013.

30 Centre for Cities Interview.

31 New York City (2013), *New York city mayor’s carbon challenge progress report*, New York: New York City.

In the UK, similar initiatives have also been implemented such as the West of England Carbon Challenge in Bristol and Green 500 in London.<sup>32</sup> The cost effectiveness of such initiatives, their appeal to businesses and the potential of achieving scale through progressively including different sectors make them a feasible and effective way to induce behavioural change in local businesses.

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### Promoting behaviours change campaigns

**Lead organisation: The Carbon Trust**

**Location: UK**

**Year: 2007 – to present**

**Keywords: Low carbon, Environment; Planning**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

Behaviour change campaigns can be an effective alternative to traditional campaigns. Posters, letters, stickers and even ‘green champions’ within firms rarely change individuals’ energy use or recycling behaviour.

Responding to this, the Carbon Trust has run a number of innovative projects in cities across the UK to change behaviours within both households and organisations. For example, the Trust developed online tools which help business leaders to estimate how much money and carbon they can save within their organisation.<sup>33</sup> This simple tool, alongside information and advice, changes the emphasis towards the benefits – of a change in behaviour – to the business, and away from the more intangible arguments of environmental responsibility and “Thinking Global”.

To influence decisions and behaviours that increase CO<sub>2</sub>, incentives must understand and target the underlying motivations that inform the behaviour.<sup>34</sup> The most successful programmes use the nudge principle to help individuals “make better choices (as judged by themselves) without forcing certain outcomes upon anyone.”<sup>35</sup> For example, a London police authority reduced energy costs by shutting down their computers each night because they were concerned for information security rather than energy savings. And working from home initiatives have been more successful when promoted as saving workers’ time rather than saving on transport related emissions.<sup>36</sup>

Councils can use this principle more widely to reduce energy consumption and pollution, and increase recycling efforts that can support greener business practices and reduce carbon emissions in their area. For example in California, recycling became socially desirable and even competitive between residents when the waste pick up was moved from the back yard to the more visible front lawn.<sup>37</sup> This change resulted in a significant rise in recycling and a reduction in waste. By increasing the desirability of greener lifestyles and products-through – for example introducing planning criteria that supports cycle infrastructure or car clubs over private car parking – cities can nudge individuals and businesses to make green decisions.

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32 The programme was discontinued after the closure of the London Development Agency.

33 <http://www.carbontrust.com/resources/tools/empower-savings-calculator>.

34 <http://www.instituteforgovernment.org.uk/sites/default/files/publications/MINDSPACE.pdf>.

35 <http://www.nudges.org/>.

36 Centre for Cities Interviews.

37 Centre for Cities interview.

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## Incentivising the use of new technologies

**Lead organisation: The Carbon Trust**

**Location: UK**

**Year: 2007 – to present**

**Keywords: Low carbon, Environment; Planning**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

Incentivising businesses and residents to use low carbon vehicles is important for saving energy and reducing carbon emissions. For example, a recent study suggests that if 10 per cent of vans in London became electric, this would reduce fuel costs by £200 million.<sup>38</sup>

In addition to government subsidies for the purchase of Electric Vehicles (EV) and the cost of installing charging points, the GLA offers 100 per cent discounts on the Congestion Charge and some boroughs offer free parking spaces and discounts on parking permits for EV. There is also a London wide membership scheme which allows users to charge their vehicle for free at charging points across London.<sup>39</sup> However, despite these incentives, by spring 2012, only 2,400 EVs were registered in London and charging points were only being used rarely.

Despite good intentions, the London experience shows that incentives do not always achieve the desired results. A recent study attributed this slow take up to a lack of knowledge and awareness about EVs in general and the lack of information on the location of charging points. Other reasons include the perceived problems of the high upfront cost of the car, a short battery life and the lack of rapid charging facilities in key locations.<sup>40</sup> While cities have little or no control over the cost or effectiveness of EV technology, they can ensure the enabling infrastructure – in this case charging points – are in place and that an effective marketing strategy is issued to build awareness. Similarly, it is not enough for cities to simply implement government incentives as given. These need to be accompanied by local actions tailored specifically to the needs of the city (such as infrastructure needs or awareness raising) in order for them to meet their purpose and accomplish the best results.

## Delivering green jobs and helping develop a low carbon economy

As part of a wider procurement strategy, cities can help develop the low carbon economy, and in turn deliver green jobs locally. Some cities are using procurement frameworks to simplify the purchasing of low carbon infrastructure as well as to create and develop long term markets or opportunities for local businesses.

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## Simplifying procurement and cutting the costs of public bodies

**Lead organisation: Buy for Good (BFG)**

**Location: Birmingham, UK**

**Year: 2011 – to present**

**Keywords: Low carbon, Environment; Planning; Job creation**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

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<sup>38</sup> Energy Saving Trust (2013), Plugged-In Fleets Initiative: Charging Forward, London.

<sup>39</sup> Information obtained from the GLA website <https://www.london.gov.uk/what-we-do/transport/green-transport>.

<sup>40</sup> Greater London Authority (2012), Charging ahead? an overview of progress in implementing the Mayor's Electric Vehicle Delivery Plan.

Birmingham City Council was a founding member of Buy for Good (BFG), a Birmingham-based Community Interest Company that aims to simplify procurement and cut the costs for public bodies. BFG develops, sources, and delivers locality-based contract frameworks for public, private and third sector organisations to invest in low carbon measures. A standardised contract means that each user of the framework avoids the lengthy and expensive procurement process (estimated at up to £40,000).<sup>41</sup>

Birmingham City Council maximises the benefits for the local economy by working closely with BFG and local suppliers. Local suppliers are actively engaged through BFG, either mandatorily in the framework agreement or recommended through promoting local contractors (through local workshops and a website created to share procurement information).<sup>42</sup> Around 80 per cent of BFG's income is from West Midlands based contracts.<sup>43</sup> The city council in collaboration with BFG partners is also developing new skills in the local workforce through the contracts. The city and CIC develop local businesses' capacity to win business through targeted training, sharing information and running workshops that ensure they can exploit the opportunities. The council's employment access team liaise with local colleges to ensure coordinated training requirements. This, in combination with the West Midlands 'Green Bridge' supply chain programme, means that local SMEs can benefit from the contracts.<sup>44</sup> By building capacity and networks with the local business community, BFG is ensuring that local contractors are best placed to benefit from the procurement opportunities and improve their capacity and skills in delivering green infrastructure at competitive prices.

Having the city council as a founding member helped provide both the credibility of an established institution, and the scale of purchasing needed to make the model viable.<sup>45</sup> Despite this, selling the concept and raising start-up funding were cited as issues to begin with.<sup>46</sup> The council made substantial savings, estimating it saved £300,000 from just one framework for photovoltaic panels and the risks were minimised as running costs were recovered by a 2 per cent charge in the contracts.<sup>47</sup>

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### Using the city as a test-bed

**Lead organisation: City of Hamburg**

**Location: Hamburg, Germany**

**Keywords: Low carbon, Environment; Planning; International**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

In Hamburg, the city authority did this by making use of recycled materials mandatory in road construction. The city encouraged a group of local businesses to experiment with using 100 per cent recycled road material on the city's road network. The city also set up a 'rubble exchange' auction website for local businesses to source and sell material and benefit from networking.

By building links with businesses and creating feedback loops, both the city and local businesses can

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41 Centre for Cities Interviews.

42 <http://www.finditinbirmingham.com/>.

43 Centre for Cities Interviews.

44 Green Bridge is a West Midlands LEP grant supporting SMES with between £20,000 and £100,000 to develop new markets, new products, skills development and purchase of capital equipment in the Green sector.

45 Centre for Cities Interviews.

46 Centre for Cities Interviews.

47 Centre for Cities Interviews.

benefit. The city gets a tailored product and local businesses gain a competitive advantage through testing new products and services in the city.

The UK has committed to reducing the amount of construction, demolition and excavation waste materials by 70 per cent from 2008 levels by 2020. This gives councils the impetus to maximise the use of recycled material in road building (over 60 per cent already do) and could be a catalyst for councils to follow the Hamburg example.<sup>48</sup> Indeed Hampshire has attempted a similar approach engaging local businesses in recycling aggregate road surfacing through their Material Resources Strategy. Within the first three years, Hampshire reduced the tonnage of material sent to landfill by in excess of 40,000 tonnes per annum.<sup>49</sup> Both these examples highlight the advantages gained if cities are willing to use the procurement process as a means for encouraging innovation.

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### Stimulating consumer demand through GPP

**Lead organisation: Leeds City Council**

**Location: Leeds, UK**

**Year: 2009 – to present**

**Keywords: Low carbon, Environment; Planning; Job creation**

**Read the full report here: [Delivering change: How cities go low carbon while supporting economic growth](#)**

The Low Carbon Vehicle Public Procurement Programme (LCVPPP) aims to stimulate the market for low-carbon vehicles in the UK. LCVPP's principal aim is to test whether there is a sustainable long-term market for such vehicles and provide evidence of the potential for this technology to reduce CO2 emissions.

Leeds City Council is one of the largest investors, trialling a 24-vehicle fleet. The city aims to reduce the risk for 'first movers' by improving the local infrastructure using first hand feedback gained from the trial. The collection of 'real-world' data about the vehicles' performance and usage helps the suppliers with technological development and improvements in the product. For example installing short-cycle charge points at strategic docking sites meant the electric vehicles could top up their charge when in use off-loading or being stacked. The trial also helped the council demonstrate the existing capabilities of these vehicles to partners in a visible way.

Whilst it is too early to evaluate the results of the pilot (as the bidding framework process ended only in June 2013), the policy remains one to watch for the near future.

### Maximising leverage of commercial funds into low carbon projects

Councils can help delivering a low carbon economy by maximising leverage of commercial funds. By harnessing the power of communities, councils can do much more than they could on their own and can ensure public services such as energy provision benefit citizens.

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48 WRAP, Recycling in Local Authority road networks. <http://www.wrap.org.uk/sites/files/wrap/RR2%20Recycling%20in%20LA%20highway%20works%20-%20Scotland.pdf>.

49 Hampshire City Council, Project Integra Household Waste Treatment: <http://www3.hants.gov.uk/projectintegra>.

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## Investing in energy efficiency, energy provision and building retrofit

**Lead organisation:** Leeds City Council

**Location:** Cities across the UK

**Keywords:** Low carbon, Environment; Planning

**Read the full report here:** [Delivering change: How cities go low carbon while supporting economic growth](#)

Across the country community cooperatives are investing in energy efficiency, energy provision and building retrofit through flexible investment models. Community Energy Warwickshire invested in solar energy for a local hospital; Bristol Energy Co-op is investing in community assets; and the Carbon Co-op in Greater Manchester invests in whole home retrofits.

Because these co-ops are embedded within the community, they can reduce the costs of identifying projects and building community support for them. With support from local councils, co-ops could play a greater role in providing cheaper utilities emitting less carbon. The support required is often quite small but can be critical, especially in the early stages. For example, providing opportunities for project trialling including within public buildings (for example using a school roof to test photovoltaic panels); or providing planning and environmental information to support emerging community schemes.

But while co-ops and community investment models offer many benefits, in reality the UK has had a slow take up relative to other EU countries, especially Germany. Whilst there were 31 co-ops managing local energy projects in the UK in 2012, Germany has over 600 co-operative energy groups, and Hamburg residents recently voted to buy back their energy grid from the private sector.<sup>50</sup>

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## Using co-investment models

**Lead organisation:** The London Energy Efficiency Fund

**Location:** London, UK

**Year:** 2009 – to present

**Keywords:** Low carbon, Environment; Planning

**Read the full report here:** [Delivering change: How cities go low carbon while supporting economic growth](#)

Low carbon projects can encounter significant barriers to their development due to being innovative or high in set-up costs. These barriers include access to finance, sharing risk, and policy uncertainty. Because of these challenges, green projects are often on the margins of viability for private investors and developers.

Urban Development Funds (UDFs) tackle these problems by using a co-investment model matching the different approaches of public and private partners. London has three UDFs that focus on the low carbon agenda. The London Energy Efficiency Fund, for example, has £100 million to invest in retrofitting public and voluntary sector buildings such as universities, hospitals and schools to make energy efficiencies. Each UDF is run by a Fund Manager (a single institution or consortium of partners) who helps source potential projects, manage legal and financial due diligence for each project, contract projects and

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<sup>50</sup> [https://www.uk.coop/sites/default/files/uploads/attachments/energymanifesto2012\\_0.pdf](https://www.uk.coop/sites/default/files/uploads/attachments/energymanifesto2012_0.pdf).

subsequently monitor project performance. None of the projects funded through the London Green Fund (LGF) would have been brought forward if left to the market, because the returns cannot be fully internalised by investors and the risk profiles would be hard to manage for any single partner. But by setting up a transparent, formal arrangement, the LGF is bringing forward investment in green projects that provide financial, environmental and social returns.<sup>51</sup>

The benefits of co-investment funds like UDFs include: the different risk and return appetites of public and private funders are matched at various stages of the investment process. Risk averse and institutional investors fund the UDF, while investors seeking a higher return invest at the project level. The fund allocates money for multiple projects and investments, hedging risk and building confidence for investors at the project-level. Fund managers provide the interface between the public and private partners, investors and developers, and drive the project from conception to completion.

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51 Sources: <http://www.london.gov.uk/priorities/business-economy/championing-london/london-and-europeanstructural-funds/european-regional-development-fund/jessica-london-green-fund>; <http://www.centreforcities.org/assets/files/2013/13-03-21-Developing-Interest-no-appendix.pdf>; <http://www.leef.co.uk/>; <http://www.buildup.eu/sites/default/files/content/LEEF.pdf>.

## More information



The case studies in this document came from the report: *'Delivering change: How cities can go low carbon'* published in 2013. Read it at: [www.centreforcities.org/publication/delivering-change-how-cities-go-low-carbon-while-supporting-economic-growth/](http://www.centreforcities.org/publication/delivering-change-how-cities-go-low-carbon-while-supporting-economic-growth/)

You can find more case studies on our website across key areas of economic growth policy such as housing, transport, business growth and innovation.

Go to our website at [www.centreforcities.org](http://www.centreforcities.org) for more.

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**Centre for Cities**  
Second Floor  
9 Holyrood Street  
London SE1 2EL

**020 7803 4300**

[info@centreforcities.org](mailto:info@centreforcities.org)  
[www.centreforcities.org](http://www.centreforcities.org)

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