

A City For All Londoners

A response from Ashden

Draft – 5 December 2016

Introduction

The Mayor has published his vision statement, [A City For All Londoners](#), which outlines the capital's top challenges and opportunities across priority policy areas, as well as the changes City Hall wants to deliver over the next four years. This document presents Ashden's response to this vision. It also puts forward suggestions of inspirational organisations and initiatives from London, the UK and Europe which could inform the future development of this vision, as well as the strategies that are created to deliver it.

About Ashden

Ashden is a charity that champions and supports sustainable energy leaders to accelerate the transition to a low-carbon world. Our Awards programme, established in 2001, is a globally recognised measure for excellence in the field of green energy, with over 80 UK pioneering organisations receiving awards to date. These organisations are developing clever ways of helping people and businesses use energy more wisely, and between them, they have expertise in:

- **Reducing energy use in existing and new buildings** – both through technological solutions and behaviour change;
- Facilitating **renewable heat and power generation**, with a particular focus on enabling community ownership;
- Realising the potential of **smart technologies** including energy storage, demand response and making the grid 'smarter';
- Reducing pollution in urban areas by making **transport more sustainable**, while providing social and economic benefits to local residents and businesses.

A focus of our work is on bridging the gap between policy and practice. We aim to highlight the innovations of our winners to policy makers and show the work being done 'on the ground' to facilitate the development of policies and programmes that will bring about the transformational changes required to reach a zero carbon world.

As well as our network of Award winners, many of whom are based and operate in London, we also have access to wider networks of organisations through our **Fit for the Future Network**¹, a solutions-based network for organisations that have a large property portfolio and want to reduce energy bills and better manage environmental impacts. More than 100 members have joined the network in the past three years including TATE Modern, The Crown Estate, and Somerset House. Collectively they have saved 14,657 tonnes of CO₂ in 2015 alone, over 40,000 buildings.

What can Ashden offer?

Ashden has undertaken visioning around London's future with our winners and other key stakeholders over the past few months. Earlier this year, we held a workshop with some of our alumni which included a session exploring how they could contribute to some of the Mayor's key manifesto pledges related to making London a low carbon beacon and cleaning our air.

We would be delighted to help the GLA further develop the Mayor's 'A City for All Londoners' vision. Through our network of alumni and partner organisations, we can draw on a wealth of expertise from pioneering organisations to help establish what the city could and should look like in 2050, as well as the route map for achieving that vision. We have an excellent track record in this field, as evidenced by the achievements of our **Fit for the Future Network** and **LESS CO2** (which is sharing best practice amongst schools on reducing carbon emissions and engaging pupils).

We would welcome the opportunity to facilitate discussions between the GLA and some of our winners to help ensure that the GLA can build on existing best practice and expertise to deliver its vision. We could also facilitate site visits for GLA staff and councillors through our 'Seeing is Believing' programme.

Ashden's response to 'A City for All Londoners'

Ashden supports a very ambitious vision for London.

What should be different in 2050?

The London of 2050 should be a healthy, equitable, liveable city that is resilient to climate change:

- Where carbon emissions from both buildings and transport are close to zero;

¹ <http://fftf.org.uk/>

- Where fuel poverty is a thing of the past;
- Where Londoners have the opportunity to invest in local renewable energy generation and to purchase the energy produced from this; and
- Which is recognised internationally as a world-leading zero carbon city and as a hot bed for the skills required to achieve this.
- Cities around the world seek advice from London in terms of how to make this transition.

Is everything covered in ‘a City for all Londoners’

We welcome the emphasis within ‘A City for All Londoners’ on protecting and enhancing the environment and on making London a zero carbon city. However, we feel that the draft vision presented in this document would benefit from increased ambition as well as greater urgency in terms of meeting this ambition. As much progress as possible towards meeting this zero carbon goal should be achieved within the Mayor’s current term. To help with this, we would urge the GLA to look to others across the UK and Europe for inspiration and evidence of ways to achieve change rapidly. This is where we can help, through facilitating the sharing of ideas and learning with our range of winners, each of whom is leading the way in their particular field towards achieving a low carbon world.

What is the role of the GLA?

Ashden’s view is that GLA has a number of key roles to play in terms of ensuring the vision for London is realised. The GLA should:

Lobby the UK Government

The Mayor should lobby the UK Government to put in place the policies and structures that can enable change to happen. He has already been active in this area in terms of diesel vehicles; there is scope to extend this influence to areas such as zero carbon buildings, where the London Plan is leading the way in comparison to national policies.

Lobby for greater control over key policies and retention of funds generated in London

This could include:

- Greater power over minimum standards in **new and existing buildings** to achieve the zero carbon buildings target. Most policy in this area remains at a UK level; the GLA needs greater control over existing regulations (both residential and commercial). The evidence is clear that where the

Mayor does have powers, a great deal can be achieved; for example, through the London Plan, new build climate policies resulted in CO₂ savings of 35% over national building regulation requirements².

- **Greater powers to raise and retain funding.** The UK Government has announced that local authorities can retain 100% of the business rates that they raise locally; a similar power with the Climate Change Levy could generate around £200m a year for London to be spent on low carbon projects.
- Extra powers to **coordinate work across local authorities.** Turning London into a low carbon city will require a coordination of many different activities – retrofit, renewable generation, storage, microgrids, community energy, green infrastructure. Local authorities don't have the resources or capacity to coordinate this activity. The GLA should therefore be given extra powers and resources to be able to work with local authorities on coordinating this activity.

Use the London Plan to achieve zero carbon buildings

The London Plan already sets a 'zero carbon' target for residential development, commencing from 1 October 2016. This will require homes that are part of major developments to achieve at least a 35 per cent reduction in CO₂ emissions (beyond Part L) on site. The remaining CO₂ emissions are to be offset through a cash in lieu contribution to the relevant borough which is expected to raise millions of pounds each year. To this end, each borough should establish a carbon off-set fund, which could provide a funding source of future retrofit activity. We urge the GLA to encourage all local authorities to set up funds and provide support to them on how to use the funds effectively. We would urge zero carbon targets to be extended to all new homes and also to existing homes, for example through the introduction of consequential improvements (which would require any building where significant works such as an extension is being carried out to be brought up to new build standards of energy efficiency). As part of this, barriers to the installation of low carbon technologies (such as solid wall insulation or solar panels in conservation areas) should be minimised.

Access finance to deliver retrofit projects and energy efficiency advice.

Funding for energy efficiency has reduced considerably in recent years. However, there are a number of ways that the GLA and individual boroughs could secure funding for activities in this area. For example:

² GLA, 2015, Energy Planning, Monitoring the Implementation of the London Plan Policies in 2014,
https://www.london.gov.uk/sites/default/files/2014_gla_energy_planning_monitoring_report_approved_final.pdf

- Ensuring that London receives its fair share of supplier obligation funding. Historically, London has received much less than its fair share of this funding, meaning that Londoners have effectively been subsidising measures being installed in other parts of the UK and missing out on around £420m under the CERT and CESP programmes³. The Government has proposed that the current energy supplier obligation scheme, ECO2, be extended to March 2018, with a focus on the fuel poor and low-cost insulation i.e. increase in the relative size of the Affordable Warmth element. The Government has also consulted on the high-level design for a new supplier obligation which will focus on heating and insulation for the fuel poor. A full consultation is expected in early 2017. See **Cosy Homes in Lancashire (CHIL)** (below) for an example of how local authorities working together can be very effective in pulling in funding and pooling resources to offer subsidised energy efficiency measures to households.
- Seeking innovative sources of funding such as S106 funding, Electricity Capacity Market revenue (secured through enabling Demand Side Response in public buildings when the grid is constrained) and generating revenue from local authority-owned renewable installations. See **Abundance** and **Open Energi** (below) for examples of the latter two.

Provide direction and support to London boroughs

The Mayor should place clear expectations on London boroughs about what he expects them to be doing in terms of cutting carbon emissions from homes and eradicating fuel poverty. This could include making explicit an expectation that public health authorities will work in partnership with local authorities to ensure that ill health from cold homes is minimised. GLA should provide technical and financial support to this end, building on the RE:NEW programme, to help all London boroughs to achieve best practice on energy efficiency and fuel poverty e.g. a programme to support roll-out of the SHINE initiative.

Support local authority enforcement

Minimum Energy Efficiency Standards for the private rented sector are being introduced; with some exceptions, from April 2018, properties which are given new leases or extensions of leases must have an EPC rating of E or higher. Our winners tell us that local authorities do not have the capacity to enforce these standards and, without enforcement, the standards are unlikely to achieve a great deal. Local authorities will therefore need support to enforce both the standards and the minimum standards related to Excess Cold that are set out in the Housing Health and Safety Rating Scheme. The GLA could provide whole range of complementary technical support for local authorities on improving the energy efficiency of the worst-performing PRS properties.

³ GLA, 2014, Using Local Powers to Maximise Energy Efficiency Retrofit,
https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/Using%20Local%20Powers%20Toolkit_FINAL_0.pdf

Detailed response to 'A City for All Londoners'

The following table lists the areas within the document where we feel that vision could be strengthened, with suggestions on the opportunities that exist and reference to Ashden winners who could contribute expertise and inspiration in these areas. Appendix A includes further details on each of the Ashden winners listed below, with links to further information; Ashden would also be delighted to facilitate contact between the GLA and any of its winners. (Where information is included below on initiatives that are not related to an Ashden winner, links to further information are included within the text.)

| Part | Sub-section | Suggestions and opportunities | Key Ashden alumni (see Appendix) |
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| Part 1 – Accommodating growth | Changing the way we travel (p.29) | <p>Achieving a change in the road hierarchy</p> <p>We are supportive of plans to encourage more efficient LEVs, with less car/van use, more business deliveries by bike and more trips by foot or bike.</p> <p>We would urge even greater ambition to achieve transformative change in this area in the context of London's continuing growth. One objective should be to fundamentally alter the road hierarchy, with pedestrians and cycling at the top of the new hierarchy and private vehicles at the bottom.</p> <p>Ashden is supportive of the London Cycling Campaign, which is calling for:</p> <ul style="list-style-type: none"> • More space for cycling on main roads and at junctions: London urgently needs more high quality, protected space on main roads and at junctions – these places force cyclists to mix with heavy or fast moving motor traffic, which can put people off cycling. A dramatic increase is needed of miles of protected cycle lanes on London's roads, to help people of all ages and abilities access the road network by bike. • A 'Mini-Holland' for every London borough: 'Mini-Holland' schemes create cycle-friendly town-centres. They encourage people to make local journeys by bike or on foot, help regenerate communities, and bring more customers to local businesses. New schemes have been secured for Waltham Forest, Enfield, and Kingston. | Sustrans Liftshare Tisséo |

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| | | <ul style="list-style-type: none"> • An end to lorry danger: Lorries are the largest vehicles on our streets and pose the greatest risk to cyclists - their design restricts the driver's vision. The Safer Lorry Scheme should be upgraded and using planning powers used over major construction projects so that only the safest lorries, with 'Direct Vision' cabs and minimal 'blind spots', are allowed onto London's streets. <p>Long-listed Ashden applicant Nottingham City Council is one of the UK's leading cities for public transport. The city's railway station has been developed into a transport hub, its world class tram system has been extended, and the city boasts a fantastic bus network that has two award winning bus operators. The council has demonstrated that major change can be achieved relatively quickly. Further details are available in the council's Local Transport Plan.</p> <p>Ashden winner Sustrans is a pioneer in terms of creating the infrastructure that is needed to change the way we travel, with a focus on getting people out of their cars and travelling by bike, foot and public transport. There is enormous scope for increasing cycling in the city; according to Cycle Logistics, 50% of goods transported by motorised transport could be carried by cycle instead. See for example companies like Green Work Force, which operate by bicycle or Award winner, Les Boîtes à Vélo, in France.</p> <p>Liftshare won on Ashden Award for its success in reducing car journeys through filling empty car seats. By supporting employers set up car sharing schemes and providing a free online national car sharing network, the organisation enables around 80,000 journeys to be taken off the road every day, which it estimates saves around 110,000 tonnes of CO2 this year. TfL has found that 60% of car journeys in London are made alone, without any passengers⁴ so there is enormous potential to reduce congestion and pollution by encouraging car sharing.</p> <p>Ashden winner Toulouse transport operator Tisséo-SMTC has developed a comprehensive web of sustainable transport options to achieve an 80% increase in public transport journeys. This has included expanding the public transport system and offering smart travelcards which can be used across the whole transport network, including bicycle hire and storage.</p> | |
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⁴ <http://content.tfl.gov.uk/technical-note-14-who-travels-by-car-in-london.pdf>

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| | | Commercial traffic is one of London's greatest problems; according to TfL, vans now comprise 13% of vehicles in London ⁵ and up to 20% of vehicles in peak hours and there is an anticipated 22% growth in van traffic by 2031. 92% of vans are diesel fuelled, contributing to London's poor air quality. International companies with large fleets are already doing a great deal, but primarily in other countries and cities. For example, in Hamburg, Dortmund and Basel, UPS uses an electric assisted tricycle with a range of 35km for many of their deliveries; FedEx uses a similar tricycle in Paris and Brussels. Meanwhile, in Delft, Ikea is trialling bike rentals (with 250kg loads) for customers to take their shopping home. | |
| Part 2 – Housing | Affordable Housing (p.39) | <p>Affordable heating and fuel costs</p> <p>As mentioned in Part 4 of 'A City for all Londoners', more than 1 in 10 London households is fuel poor. At present, this section of the vision refers to affordability only in terms of the purchase cost. For housing to be truly affordable, energy costs also need to be affordable – i.e. new homes need to be built to high standards of energy efficiency with the provision of efficient heating systems. Two of Ashden's winners are delivering pioneering approaches in this area:</p> <ul style="list-style-type: none"> • Radian Housing won an Ashden Award for their successful delivery of highly efficient new homes which ensure that occupiers can access affordable warmth; this organisation is leading the way to deliver the Government's 2050 target of reducing total CO2 emissions by 80% in all homes. • Parity Projects won an Ashden Award for their energy efficiency retrofit services. This includes their Carbon Reduction Options for Housing Managers (CROHM). The retrofit stock assessment service is designed to help housing providers and private landlords design and implement strategic retrofit programmes which can help to reduce fuel poverty. | Radian Parity Projects |
| Part 3 - Economy | Infra-structure (p.45) | <p>Accessing inspiration from further afield</p> <p>Ashden is strongly supportive of plans to develop a common strategic investment programme which is low carbon and which can adapt to technological change (including distributed energy production/storage), and of looking beyond London's boundaries to work with leaders from across the rest of the South East. We would urge the GLA to consider looking beyond the South East as well.</p> | Abundance CSE Repowering London |

⁵ <http://content.tfl.gov.uk/technical-note-05-what-are-the-main-trends-and-developments-affecting-van-traffic.pdf>

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| | | <p>A number of Ashden winners and longlisted applicants can provide inspiration and evidence of successful approaches in this area. Ashden would be delighted to facilitate conversations between the GLA and these brilliant innovators around the country who are demonstrating success in this area:</p> <ul style="list-style-type: none"> Ashden winner Abundance Generation is supporting the development of renewable infrastructure funded by individual investors, who can invest from just £5. This is plugging a gap in access to finance for small-scale renewable energy developers, enabling the development of more projects. So far this pioneering FCA-regulated company has secured a total of £26 million for 21 renewable energy projects across the UK, with many more in the pipeline. Abundance recently launched an innovative ISA which allows investors to fund projects that create something good for the environment and society, without compromising their financial return. Ashden winner the Centre for Sustainable Energy (CSE) is one of the organisations pioneering a smart cities approach. They are leading the Bristol Smart Energy City Collaboration which aims to provide a road map for how Bristol can achieve its ambition to become a smart energy city over the next 5 years. Repowering London won an Ashden Award this year for their work in co-producing community energy programmes with community groups and local authorities that enable people to take control of energy infrastructure. They support communities to deliver, own and manage renewable energy projects that provide benefits to the citizens that surround them. So far, Repowering London has installed 132kWp of community owned renewable energy, saving almost 60 tonnes of CO² per annum. Long-listed Ashden applicant Moixa produces Smart Batteries which are being installed in homes across the UK to cut electricity bills. Home batteries collect and store electricity when it's cheap (either off-peak from the grid or from householders' solar panels) for you to use when you like. They can save households up to 60% off their electricity bills. | |
| | Opportunity and economic fairness – skills & careers (p. 50) | <p>We are supportive of plans to ensure all Londoners understand opportunities generated by the jobs of the future and the pathways to get there. A number of Ashden winners have initiatives that are developing skills in the low carbon economy:</p> <ul style="list-style-type: none"> CSE's Bright Green Future initiative is a five-year leadership programme for up to 200 young people aged between 15 and 19 that will equip them to become the environmental decision makers of the future. Funded by the National Lottery, the project will give some of the skills, understanding and practical | CSE Repowering London Parity Projects |

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| | | <p>experience to help young people shape the future of their neighbourhoods, focusing on sustainable energy.</p> <ul style="list-style-type: none"> • Repowering London runs paid work experience programmes for estate residents with each community energy project set up. This includes a 30-week programme for young people aged 14-24, an 8-week programme for unemployed adults, and a 2-week solar power reskilling programme for professionals in construction and engineering. They also run a series of unpaid internship placements for University level graduates. • Parity Projects has been instrumental in setting up Retrofit Works, a member-owned cooperative working to improve the performance of the UK's existing building stock, creating new opportunities for the construction industry, and benefits to property owners, based on the delivery of high quality retrofit services. The organisation bulk buys training for its members to ensure they have the skills necessary to retrofit London's buildings to achieve substantial carbon emissions. | |
| Part 4 – Environment, transport and public space | Low carbon economy (p.57) | <p>Zero emissions buildings</p> <p>We are supportive of plans to ensure all businesses adapt to becoming lower carbon, in line with global imperatives.</p> <p>It is vital that all buildings become zero emissions <u>as quickly as possible</u>. This requires fabric improvements, exemplary building management systems and behavioural change.</p> <ul style="list-style-type: none"> • Ashden winner Max Fordham works closely with architects to create beautiful buildings with the highest standards of energy efficiency. Clients can cut their carbon emissions by up to 50% through increasing natural light and ventilation and installing energy-efficient equipment and insulation. The company has also pushed the concept of 'soft landings', working closely with occupants to make sure their new buildings work as efficiently as possible, and helping tackle what's often a huge gap between the way buildings are designed and how they are actually used. • Demand Logic won an Ashden Award for their approach to helping organisations save 20-30% on their energy bills through identifying waste. Their cloud-based system that plugs into the building management systems and quickly identifies what it describes as 'energy insanities', like rooms being heated and cooled at the same time, or faulty equipment. Demand Logic then works with the building | Max Fordham Demand Logic GAP RE:FIT |

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| | | <p>management team to develop a plan to fix them. This can generate huge savings: in total, Demand Logic's clients (which include the FT, University College London and the Crown Estates) are saving around £1.4m annually on their energy bills.</p> <ul style="list-style-type: none"> • Global Action Plan has run a number of highly successful behaviour change programmes and won an Ashden Award for their work with Barts Health NHS Trust where their 'Operation TLC' project is reducing energy waste whilst also improving patient care. They have also worked with firms such as Sainsbury's, where they tapped into the motivations of Sainsbury's colleagues to develop an action-focused campaign that demonstrates the link between energy-saving actions and a great shopping experience. On average, stores are meeting their 3% energy reduction target through this initiative, with millions of pounds saved in energy bills and carbon savings of over 10,000 tonnes. • The GLA's RE:FIT programme was one of this year's Ashden winners, in recognition of its achievements in delivering 'spend to save' environmental retrofit projects in over 600 public sector buildings in London, which are reducing carbon emissions by making substantial guaranteed energy and financial savings. | |
| | Road transport (p.57) | <p>Creating the right transport for low carbon transport to thrive.</p> <p>Ashden is supportive of plans to reduce emissions from road transport, including plans for a central London ULEX and phasing out the purchase of diesel buses. We would urge that very high targets are set on emissions reductions, to be achieved with a degree of urgency. The GLA can play a crucial role in creating the right environment for low/zero carbon transport to thrive.</p> <ul style="list-style-type: none"> • As an example of what can be achieved quickly, we would refer to long-listed applicant Nottingham City Council. Their electric bus network, the largest in Europe, has 58 fully electric buses operating on over 50 routes. Their Workplace Parking Levy (which they state is the first in the Western Hemisphere) imposes a legal obligation on employers to licence workplace parking and pay if they provide 11 or more liable places. This revenue is then used for transport infrastructure including electric buses and new tram lines. • Ashden winner Toulouse transport operator Tisséo-SMTC has achieved an 80% increase in public transport journeys through expanding the public transport system and incentivising more sustainable forms of transport. | Tisséo-SMTC Low Carbon Hub Ecotricity |

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| | | <ul style="list-style-type: none"> • London Borough of Waltham Forest's cycling pilot scheme, delivered in Walthamstow Village in 2014, demonstrates to people how their area could feel if non-local traffic was removed. It involved temporary road closures and traffic calming i.e. pocket parks, cycle parking infrastructure and tree planters. • The Low Carbon Hub, in Oxford, has been involved in a collaboration between Formula 1 teams and the local Oxford Bus Company to increase bus efficiency. • Ecotricity's electric highway enables electric vehicle drivers to travel the length and breadth of Britain – completely emissions free. It now covers almost the entire motorway network in Britain, and is moving onto A roads and beyond. | |
| | Building emissions (p.57) | <p>Ashden is supportive of the objective of ensuring all new buildings in London are 'air quality positive', i.e. that they actively contribute to a progressive reduction in the total amount of London's emissions and exposure. We assume that in this section 'air quality positive' relates to ensuring that buildings' energy consumption and thus any associated emissions are minimised. We would strongly urge that this ambition be extended to existing buildings too. This should include:</p> <ul style="list-style-type: none"> • Building highly efficient, zero carbon buildings. As mentioned above, Max Fordham's environmental engineers use their engineering know-how to deliver and run better, more energy-efficient buildings, cutting carbon emissions by up to 50%. • Passivehouse is a rigorous, voluntary standard for energy efficiency in a building, reducing its ecological footprint. It results in ultra-low energy buildings that require little energy for space heating or cooling. Architype have considerable expertise in domestic and commercial buildings, built to this standard with strong evidence of effectiveness. • Retrofitting buildings. The GLA's RE:FIT programme helps public sector organisations deliver 'spend to save' environmental retrofit projects that improve their estates and reduce carbon emissions by making substantial guaranteed energy and financial savings. It would be fantastic to see a version of this extended to the private sector to enable similar emissions reductions being achieved across London's | <p>Max Fordham RE:FIT Demand Logic Global Action Plan Sir George Monoux College National Trust</p> |

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| | | <p>buildings. The National Trust has demonstrated that listed buildings can successfully and sympathetically be retrofitted to achieving impressive carbon savings.</p> <ul style="list-style-type: none"> • Monitoring buildings to identify and minimise energy waste. Demand Logic has developed the equivalent of a 'FitBit' for large London buildings which identifies waste from energy plants. The City of London alone has 1,000 buildings – savings of £300,000 a year can be achieved in a single building. If this was rolled out to all of London, savings of over £100m a year are feasible. • Behaviour change programmes with occupants. Global Action Plan has saved Barts Health NHS Trust vital funds through 'Operation TLC', which has embedded an energy-saving ethos into hospital culture by incentivising staff to 'Turn off equipment, switch off Lights and Close doors'. • Combining retrofitting with inspiring students. The Principal of Sir George Monoux Sixth Form College in Walthamstow has overseen low carbon improvements to the school including switching to low-energy lighting, installing efficient boilers and installing solar panels, whilst inspiring students of all beliefs and backgrounds to embrace his vision of a carbon-neutral college. Creative ideas to get the message across include an open-air 'eco gym' where students can use their own energy to charge their mobiles. And annual income from the solar panels finances scholarships for ten of its students. | |
| | A resource efficiency city – zero-carbon by 2050 | (Sub-sections listed below.) | |
| | Heating our homes (p.61) | <p>Cutting carbon from heating homes and ensuring affordable warmth for all</p> <p>We applaud plans to make more use of locally produced energy and to use London's own energy resources such as waste heat from the Underground.</p> <p>Increase efficiency</p> | <p>Radian Parity Projects CSE Max Fordham Repowering London Solarcentury</p> |

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| | | <p>The first priority should be to make homes as efficient as possible to reduce heating demand. 830,000 London homes (a quarter) that have been given an Energy Performance Certificate since 2009 have the worst energy ratings of E, F or G and are therefore wasting a large proportion of their energy⁶.</p> <ul style="list-style-type: none"> • Radian Homes has demonstrated how low efficiency homes can be dramatically improved by applying a 'whole house' approach, achieving a 90% reduction in carbon emissions and providing homes that are significantly cheaper to heat. • Parity Projects has the software required to provide a bespoke service to identifying the most effective retrofit measures for any particular property or estate. • CHIL has demonstrated how local authorities can effectively work together to pool funding and subsidise energy efficiency improvements for low income households. <p>District heating Heat mapping activities can identify opportunities for district heating schemes which can provide low carbon, cost effective heating to homes:</p> <ul style="list-style-type: none"> • CSE has created the National Heat Map, commissioned by DECC, to support the planning and deployment of local low-carbon energy projects in England. It aims to achieve this by providing publicly accessible high resolution web-based maps of heat demand by area. <p>Making use of waste heat Environmental engineers Max Fordham have made use of waste heat from a local electricity substation to heat the Tate Modern new 11-storey 'Switch House' extension. This has helped to achieve an energy demand that is 50% lower than a typical gallery.</p> <p>Electric heating In the medium to longer term we will need to see the electrification of heating system as well as the utilisation of renewable heat. This will require a rollout of rooftop solar and household storage solutions.</p> | |
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⁶ Association for the Conservation of Energy, 2016, Energy Efficiency in London <http://www.ukace.org/wp-content/uploads/2016/07/Energy-Efficiency-in-London.pdf>

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| | | <p>Large scale solar rollout of solar water heating across London's rooftops could achieve an enormous reduction in gas demand.</p> <ul style="list-style-type: none"> • Repowering London delivers community-owned renewable power stations on social housing blocks and community buildings. Their model could be applied to facilitate a large-scale rollout of solar water heating. In addition, in partnership with Brixton Energy, they are exploring the potential to collect food waste around Brixton Market and convert it into biogas to generate heat and electricity for local homes and businesses. • Solarcentury has been at the forefront of showing the practical and effective ways that solar systems can be used in buildings across the UK - even in crowded urban locations. Founded in 1998, they've installed solar on more types of sites than any other company in the industry - 750 MWp to-date on more than 1,000 sites across the world (including many urban locations). • Moixa's Smart Batteries could be instrumental in helping to achieve electrification of heat, by collecting and storing electricity when it's cheap (either off-peak from the grid or from your own solar panels) for householders to use when they like. | |
| | Better buildings (p.61) | <p>We are fully supportive of plans to ensure that new homes are zero carbon, and of developing new approaches to energy efficiency retrofitting and innovative ways of providing direct funding for retrofitting activity.</p> <p>Retrofitting</p> <ul style="list-style-type: none"> • Parity Projects has specialised software that can identify the most cost effective retrofitting options for individual home owners and estate-wide for housing providers. • CHiL demonstrates the benefits of local authorities working in partnership to lever in supplier obligation and other funding to offer discounted retrofit measures to home owners. <p>Innovative financing:</p> <ul style="list-style-type: none"> • Abundance has partnered with Swindon Borough Council to help the council secure investment for a solar farm which will then generate income for community projects. The Swindon Community | SHINE Parity Projects Abundance CHiL |

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| | | <p>Solar Farm is the first of its kind in the UK to allow residents to invest directly in Council Solar Bonds for a minimum stake of just £5. Sixty-five per cent of the profits from the solar farm will go towards local community initiatives, with the remaining 35% to investors and the Council. Investors benefit from a 6% IRR through a 20-year fixed debenture.</p> <ul style="list-style-type: none"> • SHINE has helped 15,000 vulnerable households, over 70% of whom are in fuel poverty and a third of whom have cardio/respiratory issues. Beneficiaries have saved millions on their energy bills as well as seeing improvements in their health. This is a highly replicable model that could be rolled out across London. | |
| | Energy for Londoners (p.61) | <p>We are excited about the prospect of Energy for Londoners and would urge that the breadth of its remit should be as broad as possible, encompassing:</p> <p>Funding</p> <p>Securing energy supplier obligation funding for London should be a priority. The GLA should lobby to ensure this is ring-fenced for London and/or make it more attractive for suppliers to install measures (as noted above, London has historically secured less than its fair share of supplier obligation funding, owing to a combination of higher costs and a range of non-financial barriers).</p> <ul style="list-style-type: none"> • CHiL is an excellent example of how local authorities working together can be very effective in pulling in funding and pooling resources. • Through the electricity capacity markets substantial income can be generated by tapping into the potential to turn off demand when the grid is constrained. Open Energi has developed cutting-edge software which can automatically switch energy-hungry equipment on or off when required, without disrupting business operations. Large energy users like water companies identify which items of equipment are not time-sensitive in their operation and this equipment can then increase or decrease its consumption within agreed parameters to provide a rapid response service to National Grid. • Abundance has demonstrated how funding can be generated to help local authorities invest in renewable energy projects that then provide the council with an income that can be used on projects that benefit the community. | <p>Repowering London</p> <p>SHINE</p> <p>Parity Projects</p> <p>RE:FIT</p> <p>Open Energi - DSR</p> <p>Solarcentury</p> |

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| | | <p>Community energy</p> <ul style="list-style-type: none"> • Repowering London is a Community Benefit Society with a very powerful vision, working in partnership with Local Authorities and community groups to deliver local solutions to local energy problems. A collaborative approach ensures that the interests of the community are at the heart of any project, and its residents are included in every step of the way. Repowering has been instrumental in setting up Community Energy London, which will enable the sharing of ideas and expertise between London's various community energy groups. • TGV Hydro are project managing a new offering, 'Energy Local' which is developing a new business model for community energy projects that no longer requires subsidy. This model will provide cheaper energy to local residents and businesses as well as paying a better rate to local generators. This may be of specific interest with regards to the rollout of smart meters and development of 'Energy for Londoners'. • Ovesco gives local residents the opportunity to take a stake in locally generated renewable energy and helping similar groups start up across the country. They are currently working with another Ashden winner, Ringmer Community College, to raise funds from parents and members of the local community in Ringmer to invest in new solar panels on the college's roof. The college has strong eco-credentials; around 180 students are active eco-representatives and some have helped to plan and deliver the share offer. <p>Energy supply We are excited at plans to explore the establishment of a not-for-profit energy company to supply cleaner energy in the city. This should link up with community energy schemes like those being established by Repowering London.</p> <p>Retrofit Retrofit activity should focus on fuel poverty – and should ensure that links are made between energy efficiency and health.</p> <ul style="list-style-type: none"> • We would like to see the mayor setting a clear expectation that agencies across London which are working in the field of health and fuel poverty must work collaboratively to reduce morbidity and mortality from cold homes. SHINE and CHiL provide excellent examples of how this can be achieved; | |
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| | | <p>rolling out the SHINE model across London would reap tremendous benefits for vulnerable householders suffering ill health from cold homes.</p> <ul style="list-style-type: none"> Minimum Energy Efficiency Standards are being introduced in the private rented sector and the Housing Health and Safety Rating System offers further powers to local authorities to ensure that excess cold hazards are eradicated. However, there is a lack of enforcement capacity within local authorities. Offering some kind of London-wide enforcement support could be extremely effective in ensuring that these minimum standards are met. <p>Smart meters</p> <p>Community engagement will be critical to realising the full benefits of smart meters. Ideally, an in-home energy advice service should be available, for free, to vulnerable customers to ensure they fully understand how to get the most from their smart meter. CSE offers an excellent example of how in-house advice can have a major impact.</p> | |
| | <p>Cycling and walking (p.62), cycling measures (p.64)</p> | <p>We applaud the 'Healthy Streets' initiative and its objectives of reducing traffic, pollution and noise, and of creating more attractive, accessible people-friendly streets. Key components of this should include:</p> <ul style="list-style-type: none"> Streets that are more convenient and safer for human-powered transport rather than motor vehicles. This includes reallocation of road space to create wider, car free pedestrianised areas and protected cycle routes that create the feeling of safety that is essential to achieving a widespread shift. On-road cycle training (provision of which is now borough-dependent) <p>See for example:</p> <ul style="list-style-type: none"> The city of Ghent, which won an Ashden Award for the creation of cycle routes and a 35-hectare car free area. Key to their success has been: <ul style="list-style-type: none"> Enforcing lower speed limits at certain times of the day and making some areas cycle-only. Offering incentives to help persuade children from a young age that cycling is the best way to travel within the city – including free lights and other safety equipment for free, as well as training in cycling safety and proficiency. Making sure that cycling is accessible for all; second-hand bike sales in the city are frequent, which means that most people can afford a bike. | <p>Ghent (small but could apply to a borough) Sustrans London Cycling Campaign Nottingham</p> |

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| | | <ul style="list-style-type: none"> ○ Targeting students; universities and colleges part fund subsidised bike hire and maintenance and now 80% of the 65,000 students in Ghent cycle to their lectures. ○ Providing plenty of secure parking plus effective measures for reporting stolen or damaged bikes. <ul style="list-style-type: none"> ● Sustrans are well known for their pioneering work to create a better cycling infrastructure designed to encourage people out of motor vehicles and onto bicycles. They have been working on a two-year project with a community in East London which combines community-led street design, behaviour change work and infrastructure improvements with the aim of increasing opportunities for walking and cycling. On behalf of the local authority we set out to address a number of challenges; a car-dominated environment, low levels of cycling, poor mental and physical health indicators and a lack of community empowerment. 65% of respondents have walked or cycled more as a result of changes in the local area. <p>Other examples of area wide traffic reduction measures include Mechelen, Utrecht, Strasbourg, Frankfurt, Madrid and Barcelona.</p> | |
| Part 5 – A city for all Londoners | Strong communities and active citizenship (p.73) | <p>Ashden are strongly in favour of ambitions to proactively build strong communities in London and to encourage active citizenship. Several of the initiatives mentioned above can contribute to these goals, including:</p> <ul style="list-style-type: none"> ● CSE's youth mentoring programme Bright Green Futures is seeking to inspire the next generation of environmental leaders. It involves training activities, a work experience placement and a summer camp, plus support with setting up and running a local project. ● Another Ashden winner that is successfully engaging teenagers is Sir George Monoux Sixth Form College in Walthamstow, which demonstrates how teenagers can be inspired in a short space of time to help save the planet. Visionary Principal Paolo Ramella has inspired students of all beliefs and backgrounds to embrace his vision of a carbon-neutral college. Creative ideas to get the message across include an open-air 'eco gym' where students can use their own energy to charge their mobiles. And annual income from electricity generated from the college's solar panels finances scholarships for ten of its students. ● Repowering London's community energy projects in Brixton and Hackney encourage community ownership of renewable energy installations, with investments starting at just £50 for local residents, | CSE Repowering London Sir George Monoux College |

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| | | <p>reducing the barrier to entry for locals in two of the most deprived local authorities in the UK. They further engage the communities in which the projects are being established by running a range of paid work experience programmes for residents of the estates where the projects are being installed. Opportunities are available for young people (from the age of 14) as well as unemployed adults. To-date, the organisation has employed 24 interns paid at the London Living Wage as well as mentoring 40 local volunteers.</p> | |
| | Healthy London (p.73) | <p>We are strongly in favour of ensuring that health considerations form part of all policies, and would also urge a joining up of budgets where appropriate. For example:</p> <ul style="list-style-type: none"> • Ill health from cold homes. Both SHINE and CHiL have successfully leveraged funding from public health to be spent on energy efficiency measures targeted at reducing ill health from cold homes. • Ill health from poor air quality. Global Action Plan has worked with Barts Health NHS Trust to reduce ill health from poor air quality. This has included: <ul style="list-style-type: none"> ○ Community-based emissions – patients in Tower Hamlets receiving energy packs to help them stay Warm and Well in their homes over winter while also reducing boiler emissions, a cause of air pollution. ○ Active travel – working with Barts Health staff to encourage them to leave their car at home and use other ways to get to work. ○ Cleaner Fleets, Healthier Streets – ERS Medical being proactive in improving air quality by reducing emissions from their own fleet vehicles. A video on this work is available here. • Ill health from lack of mobility. Persuading people to make every day journeys by foot or bike is key to cutting congestion and pollution as well as improving health. Sustrans work focuses on developing segregated cycle lanes and other infrastructure to help break down some of the barriers. | SHINE CHiL Global Action Plan Sustrans |

Further information

For further information on any of the schemes listed in this document, or to discuss how Ashden could facilitate discussions with any of our winners to help inform the development of this vision, please contact;

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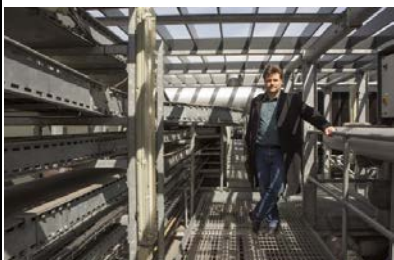

www.ashden.org




Appendix – relevant Ashden winners and Ashden initiatives




The main text above lists Ashden winners that can provide expertise and inspiration on how the Mayor’s vision for London can be achieved.




| SCHEME | DETAILS | FURTHER INFORMATION |
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| BUILDINGS – HOMES | | |
| SHINE  | <p>Living in a cold, damp home makes respiratory illnesses and many other chronic health conditions worse. The London Borough of Islington’s Seasonal Health Intervention Network (SHINE) links up 86 local organisations in an integrated approach to tackling fuel poverty and improving the wellbeing of its most vulnerable residents. Member organisations, from GP surgeries and health visitors to housing and community organisations, refer vulnerable people to the SHINE team. The team then steps in with advice on fuel debt and energy efficiency, as well as helping residents access discounts on fuel bills and grants for new boilers. With residents saving an average of £200 each on annual fuel bills, SHINE is also easing the pressure on local health budgets.</p> | www.ashden.org/winners/Islington15 |
| PARITY PROJECTS  | <p>This dynamic, London-based company offers tailor-made advice to home owners and social housing providers on how best to reduce their fuel bills and CO2 emissions through energy efficiency measures as well as micro-renewable energy generation. A Parity assessor first visits properties to take measurements and find out how clients use their buildings, then inputs the information into Parity’s specialised software which estimates costs and savings for a large number of different retrofitting options, and suggests packages of measures to suit the client’s specific needs. So far Parity, has given advice to over 700 households and 17 social housing providers covering more than 240,000 homes, as well as training over 500 people to carry out retrofitting.</p> | www.ashden.org/winners/parityprojects12 |
| CHiL  | <p>A group of 14 local authorities make up the Cosy Homes in Lancashire (CHiL) energy improvement scheme. The authorities work collaboratively to subsidise energy efficiency measures for the most vulnerable households. From external wall insulation to new boilers, CHiL is addressing fuel poverty in the region and has assisted more than 7,000 households to date, focusing on the oldest properties in the most deprived areas. This is a rare example of a Public Health working in partnership with local authorities, and of a local authority contracting directly with energy companies to deliver the full range of energy efficiency measures.</p> | www.ashden.org/winners/CHiL16 |




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| CENTRE FOR SUSTAINABLE ENERGY  | <p>Bristol-based Centre for Sustainable Energy (CSE) is on a mission to eradicate fuel poverty in the UK. As well as providing direct assistance to people at risk of fuel poverty in Avon and Somerset, it insulates large numbers of properties and offers advice and help on saving energy. So far almost 100,000 fuel-poor households have been helped.</p> <p>CSE also helps other organisations to tackle fuel poverty in their own spheres of influence with a range of freely available resources.</p> | www.ashden.org/winners/CSE14 |
| RADIAN  | <p>Social housing provider Radian is leading the way to deliver the Government's 2050 target of reducing total CO2 emissions by 80% in all homes. A recognised pioneer within the sector, many of Radian's retrofit projects have been adopted as best practice case studies nationally and regionally. Nearly 44,000 people are living in more energy efficient homes as a result, and reaping the benefits every day in lower fuel bills and a better quality of life. And by improving efficiency, Radian has achieved cuts of 34 per cent in CO2 emissions across its housing stock.</p> | www.ashden.org/winners/radian11 |
| BIOREIONAL  | <p>London-based Bioregional have extensive expertise in renewable heat and district wide heating systems as well as delivering their pioneering 'One Planet' approach. One Planet Living is their vision of a world in which people enjoy happy, healthy lives within the natural limits of the planet, wherever they live in the world, leaving space for wildlife and wilderness. The One Planet Living framework, based on ten easy-to-grasp principles, enables those they work with to plan for, communicate and deliver sustainable development. The framework provides a clear, practical route map for those who are seeking a better way to live and do business.</p> | www.bioregional.com/ |
| BUILDINGS – COMMERCIAL | | |
| FIT FOR THE FUTURE NETWORK  | <p>Fit for the Future, set up by Ashden in partnership with the National Trust, is a solutions-based network for organisations that want to reduce energy bills and better manage environmental impacts. Through sharing and collaboration, the network enables practitioners to move forward with energy efficiency and generation projects. The Fit for the Future Network's mission is to ensure that all organisations are sharing best practice and collaborating to become more sustainable. We have more than 80 membership organisations ranging</p> | http://fftf.org.uk/ |




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| | from charities and landowners to public sector organisations. These include The Crown Estate, the RNLI, Oxfam GB, Tate, Natural England and the Youth Hostel Association. | |
| GLOBAL ACTION PLAN  | <p>Improving patient care is the focus of this sophisticated behaviour change programme, first implemented at Barts Health NHS Trust in London, designed to help staff use hospital buildings as efficiently as possible. Operation TLC has embedded an energy-saving ethos into hospital culture by incentivising staff to 'Turn off equipment, switch off Lights and Close doors'. The result: closed doors maintain privacy and lowered lights help patients sleep, while vital NHS funds are saved.</p> <p>With a proven business case for action, there's huge potential to roll out the model across the NHS, with accompanying benefits for patients, planet and the public purse.</p> | <p>Work with the NHS https://www.ashden.org/winners/GlobalActionPlan14</p> <p>Work with Sainsbury's www.globalactionplan.org.uk/sainsburys-greenest-grocer</p> |
| DEMAND LOGIC  | <p>Mining the information generated by most building management systems (BMS) found in large commercial buildings is usually like looking for a needle in a haystack. Many businesses waste huge opportunities to save energy and money. But Demand Logic has created a cloud-based system that plugs into the BMS and quickly identifies what it describes as 'energy insanities', like rooms being heated and cooled at the same time, or faulty equipment. Demand Logic then works with the building management team to develop a plan to fix them. This can generate huge savings: one of Demand Logic's clients, Kings College in London, has cut an estimated £390,000 off its annual energy bill.</p> | <p>www.ashden.org/winners/DemandLogic15</p> |
| MAX FORDHAM  | <p>Max Fordham has spent nearly 50 years developing sustainable building services, working closely with architects to create beautiful buildings with the highest standards of energy efficiency. The results are impressive: clients are able to cut their carbon emissions by up to 50% through increasing natural light and ventilation and installing energy-efficient equipment and insulation. The company has also pushed the concept of 'soft landings', working closely with occupants to make sure their new buildings work as efficiently as possible, and helping tackle what's often a huge gap between the way buildings are designed and how they are actually used.</p> | <p>www.ashden.org/winners/MaxFordham15</p> |


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| <p>NATIONAL TRUST WALES</p>  | <p>The National Trust has defied assumptions that historic buildings can't be retrofitted, cutting energy use across its Welsh properties by a massive 41% over just two years. With over 400,000 buildings across England and Wales having listed status, it's great to have this demonstration that even the most sensitive buildings can be made much more energy efficient. The Trust's success derives from a combination of efficiency measures and a culture change in how energy is managed. As well as cutting down on energy use it has also installed biomass heating, and renewable sources of electricity including solar PV and hydro power, so the cut in CO₂ is an even more impressive 46%.</p> | <p>www.ashden.org/winners/nationaltrust12</p> |
| <p>GLA RE:FIT</p>  | <p>RE:FIT is the Mayor of London's innovative scheme to help public sector organisations deliver 'spend to save' environmental retrofit projects that improve their estates and reduce carbon emissions by making substantial guaranteed energy and financial savings. RE:FIT provides expert advice and a framework that simplifies procurement and guarantees energy savings. This tried and tested approach is now supporting energy saving works to over 600 public sector buildings in London, including NHS and UK Government departments, museums and education organisations. Once the retrofits are complete, the resulting CO₂ saving will be at least 30,000 tonnes each year and save the client organisations £7.1 million annually.</p> | <p>www.ashden.org/winners/GLA16</p> |
| <p>BUILDINGS - SCHOOLS</p> | | |
| <p>LESS CO₂</p>  | <p>Ashden's LESS CO₂ helps create more sustainable schools – and galvanises young people to join the movement for a low-carbon world. The LESS CO₂ programme was established in 2010 in response to requests from schools for practical, hands-on support to help them make the changes they need to reduce their energy bills and to help build a low-carbon future.</p> <p>Schools that have taken part in the LESS CO₂ programme have gone on to save an average of £2,648 and 10 tonnes of carbon each year.</p> | <p>www.ashden.org/apply/schools</p> |
| <p>SIR GEORGE MONOUX COLLEGE</p> | <p>Sir George Monoux Sixth Form College in Walthamstow, North East London, is a fantastic example of how teenagers can be inspired in a short space of time to help save the planet. As well as making changes like switching to low-energy lighting and installing efficient boilers, visionary Principal Paolo Ramella has inspired students of all beliefs and backgrounds to embrace his vision of a carbon-neutral college. Creative ideas to get the message across include an open-air 'eco gym' where students can use their own energy to charge their</p> | <p>www.ashden.org/winners/SirGeorgeMonoux14</p> |

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|  | <p>mobiles. And annual income from electricity generated from the college's solar panels finances scholarships for ten of its students – put simply, this College is turning sunlight into education.</p> | |
| TRANSPORT | | |
| <p>ECOTRICITY</p>  | <p>Vehicles powered by electricity generated from renewable sources will be an integral part of our low-carbon future. Eco entrepreneur and founder of Ecotricity Dale Vince decided to kick start demand for electric vehicles by creating a new 'Electric Highway' – a network of fast-charging points across the UK motorway network. This has eliminated one of the biggest barriers to uptake of electric vehicles – the limited distance it's possible to travel before having to re-charge.</p> <p>The Highway now covers almost the entire motorway network in Britain and is being extended to A roads and beyond.</p> | <p>www.ashden.org/winners/Ecotricity14</p> |
| <p>TISSEO-SMTC</p>  | <p>'Tisser' means 'to weave' in French, and Toulouse transport operator Tisséo-SMTC has done just that – weaving together a comprehensive web of sustainable transport options to create a model low-carbon travel network. Aside from expanding and improving the public transport network, it works with businesses to help them incentivise employees to use more sustainable forms of transport.</p> <p>What's more, smart travelcards can be used across the whole transport network, including bicycle hire and storage as well as for buses and car parking. These measures combined have resulted in a phenomenal 80% increase in public transport journeys.</p> | <p>www.ashden.org/winners/tisseo14</p> |

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| <p>SUSTRANS</p>  | <p>Persuading people to make every day journeys by foot or bike is key to cutting congestion and pollution, and improving health and happiness. Segregated cycle lanes and other infrastructure can help break down some of the barriers, as sustainable travel charity Sustrans well knows: it has completed a five-year programme to extend the National Cycle Network into the heart of our towns and cities.</p> <p>The Network now stretches over 14,000 miles and is used by almost 5 million people, including walkers and wheelchair users.</p> | <p>www.ashden.org/winners/sustrans13 East London project: www.sustrans.org.uk/news/making-healthy-streets-people</p> |
| <p>GHENT CITY COUNCIL</p>  | <p>Ghent City Council has broken down the barriers to cycling and moved it into the mainstream, with a range of initiatives on infrastructure, bike availability and information designed to get people out of their cars and onto their bikes. Infrastructure change includes creating a car-free city centre and a 300km network of cycle lanes. Subsidised bike hire-and-repair facilities at universities and colleges make it easy for students to opt for cycling, and a hire facility at the main railway station is accessible for both residents and visitors. Innovative marketing and information campaigns have helped reinforce cycling's dominance in the city.</p> <p>Nearly a fifth of all journeys to work and school are now made on two wheels and 7,000 bikes are regularly parked at the railway station</p> | <p>www.ashden.org/winners/ghent12 Lessons for London: www.ashden.org/blog/freewheeling-what-can-london-learn-ghents-cycling-success</p> |
| <p>LIFTSHARE</p>  | <p>Norfolk-based Liftshare is helping fill empty car seats on the roads while offering a friendlier, greener and cheaper way to travel. By helping employers set up car sharing schemes and providing a free online national car sharing network, the organisation enables around 80,000 journeys to be taken off the road every day, which it estimates will save around 110,000 tonnes of CO2 this year. As well as helping reduce greenhouse gas emissions, congestion and pollution, Liftshare estimates that a typical commuter saves £1,000 a year, opening up opportunities for people to travel to jobs they wouldn't otherwise be able to get to.</p> | <p>www.ashden.org/winners/liftshare12</p> |
| <p>ENERGY GENERATION</p> | | |

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| <p>OVESCO</p>  | <p>The community energy company Ouse Valley Energy Services Co. (OVESCO) in Lewes is at the vanguard of a community energy revolution, giving local residents the opportunity to take a stake in locally generated renewable energy and helping similar groups start up across the country. Formed by members of Transition Town Lewes in 2007, the company has installed solar panels on the roofs of two schools, a farm, a nursery and the town's local brewery, with more than 250 shareholders benefitting.</p> <p>With dramatic plans for expansion, OVESCO is also dedicated to passing on its know-how to other community energy groups across Southern England, and is a mentor in the Government's Community Energy Peer Mentoring Scheme.</p> | <p>www.ashden.org/winners/OVESCO14</p> |
| <p>REPOWERING LONDON</p>  | <p>Repowering London delivers community-owned renewable power stations on social housing blocks and community buildings, alongside social works programmes. Solar PV arrays on estates in inner-city areas like Hackney and Brixton are generating valuable community funds, and the holistic approach means that fuel poverty and employment and mentoring opportunities for young people and local residents are simultaneously being provided. Started by a group of volunteers, Repowering London is now a Community Benefit Society with a very powerful vision, working in partnership with Local Authorities and community groups to deliver local solutions to local energy problems. A collaborative approach ensures that the interests of the community are at the heart of any project, and its residents are included in every step of the way.</p> | <p>www.ashden.org/winners/RepoweringLondon16</p> |
| <p>LOW CARBON HUB</p>  | <p>A social enterprise championing community energy in Oxfordshire, Low Carbon Hub works with communities, schools and businesses to scale up renewable energy generation and put local power in the hands of local people. Projects include solar panels on schools, businesses and community buildings, a micro hydro project on the Thames, and making homes more energy efficient.</p> <p>Low Carbon Hub has an extremely compelling vision for the rivers and rooftops of Oxfordshire to be the power stations of the future, delivering economic, social and environmental benefits for residents. Their surplus, in the form of community benefit funds, is ploughed back into local sustainable energy initiatives that are reducing carbon emissions in the county. Win win!</p> | <p>www.ashden.org/winners/LowCarbonHub16</p> |

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| SOLARCENTURY  | <p>Solarcentury has been at the forefront of demonstrating the practical and effective ways that solar systems can be used in buildings across the UK - even in crowded urban locations. Founded in 1998, they've been around since the early days of the solar industry and have been part of the evolution that has made solar PV the attractive investment it is today. They've put solar on more types of sites than any other company in the industry - 750 MWp to-date on more than 1,000 sites across the world (including many urban locations).</p> | www.solarcentury.com |
| ABUNDANCE GENERATION  | <p>Abundance Generation is revolutionising the way people invest for their future. Its user-friendly crowdfunding platform lets people take control of where their money is invested by allowing them to put it directly into sustainable energy projects of their choosing. With a minimum investment of just £5, investors get a financial return and the feel-good factor of joining the growing renewable energy movement in the UK.</p> <p>Abundance is also plugging a gap in access to finance for small-scale renewable energy developers, so they can build more projects. So far this pioneering FCA-regulated company has helped secure over £26 million investment in 21 renewable energy projects across the UK, with many more in the pipeline.</p> | www.ashden.org/winners/Abundance14 |
| SMART ENERGY SYSTEMS | | |
| OPEN ENERGI  | <p>To keep the lights on, National Grid has to keep electricity demand and supply exactly in balance, and when faults occur a rapid response is needed – within two seconds! Traditionally this was provided by gas and coal power plants running below full power, so they can adjust output quickly, but this is inefficient, expensive and increases CO2 emissions. Open Energi has developed an alternative – cutting-edge software which can automatically switch energy-hungry equipment on or off when required, without disrupting business operations. Large energy users like water companies identify which items of equipment are not time-sensitive in their operation and this equipment can then increase or decrease its consumption within agreed parameters to provide a rapid response service to National Grid.</p> | www.ashden.org/winners/OpenEnergi16 |

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| <p>CSE</p>  | <p>The Centre for Sustainable Energy has a wealth of experience in sustainable energy, research, policy and project delivery. They recently published a major piece of research setting out the roadmap to creating truly energy smart cities. Bristol has ambitions to become a smart energy city. CSE is leading the Bristol Smart Energy City Collaboration which aims to provide a road map for how Bristol can achieve its ambition to become a smart energy city over the next 5 years.</p> <p>(They are also delivering the Bright Green Future programme – inspiring the next generation of environmental leaders.)</p> | <p>Smart cities work www.cse.org.uk/projects/view/1296 Bright Green Future www.bright-green-future.org.uk/more-info</p> |
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