



Report of Director of Environment and Housing

Report to Executive Board

Date: 14 December 2016

Subject: Cutting Carbon Breakthrough Project Annual Report

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|---|---|--|
| Are specific electoral Wards affected? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| If relevant, name(s) of Ward(s): | | |
| Are there implications for equality and diversity and cohesion and integration? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is the decision eligible for Call-In? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Does the report contain confidential or exempt information? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| If relevant, Access to Information Procedure Rule number: | | |
| Appendix number: | | |

Summary of main issues

- 1 Since last year's annual report to Executive Board on this Breakthrough Project, the international Paris Agreement on climate change has come into force earlier than expected (4 November 2016) now that more than 55 parties (countries) have adopted it, representing more than 55% of global emissions. The UK Government has signalled its intention to adopt the agreement as well.
- 2 On a more sombre note, in September of this year carbon concentrations in the global atmosphere passed the symbolic 400 ppm (parts per million) threshold at a time of the year when atmospheric carbon dioxide is usually at its minimum. This means that global efforts to address climate change will need to be all the more urgent in order to avoid 2°C of warming which is generally considered the safe threshold for global climate change. But even at this level we are likely to see climatic change which will be very serious for parts of the world.
- 3 In response to this global challenge and in order to deliver economic, social and environmental benefits locally, Leeds City Council adopted Cutting Carbon and Improving Air Quality as one of its priority Breakthrough Projects. Under this project the Council has been delivering a number of carbon reduction schemes and fuel poverty initiatives in the city which are reported here including:-
 - Progress on the city wide district heating network the first phase of which will connect almost 2,000 Council flats as well as corporate buildings and other public and private sector businesses taking heat from the city's newly opened Recycling and Energy Recovery Facility.

- The continued success of the Council-backed solar photovoltaic (PV) scheme which aim to save 1,200 tonnes of CO₂ per year as well as saving tenants £130,000 per year on their fuel bills.
 - The launch of White Rose Energy, a not-for-profit energy company providing low cost energy to all households with pricing that is fair and transparent.
 - Another strong year of performance on domestic energy efficiency despite the challenging national policy context attracting several million pounds worth of investment to help some of the most vulnerable households in the city to reduce their fuel bills. The report also includes an update to the city's Affordable Warmth Strategy.
- 4 It is in the nature of all of the Breakthrough Projects that the Council cannot address the challenge alone so this report also records the activities of other key partners in the city, particularly the ambitious proposal by Northern Gas Networks for Leeds to be the first city in a national programme to convert the natural gas network to hydrogen.
- 5 The report includes a supplement to the Leeds Climate Change Strategy proposing an interim target for carbon emission reduction in 2050 and also reports on the establishment of a university-led initiative to create a cross sector Leeds Committee on Climate Change to mirror the national Committee on Climate Change in order to provide independent advice on the most effective steps required to meet the city's carbon reduction targets.

Recommendations

6 Members of the Executive Board are recommended to:-

- Note the progress and continue to support the delivery of the carbon reduction schemes within the Cutting Carbon and Improving Air Quality Breakthrough Project;
- Supplement the city's Climate Change Strategy with an interim target to reduce citywide CO₂ emissions by 60% by 2030 from a 2005 baseline;
- Support the creation of the university-led Leeds Committee on Climate Change and to work with the LCCC and partners to advise on how the city's carbon reduction targets can be achieved;
- Adopt the updated Affordable Warmth Strategy 2017-30.

1 Purpose of this report

- 1.1 To outline future carbon reduction priorities, strategy and targets forward to 2030;
- 1.2 To report on the creation of the university-led Leeds Committee on Climate Change;
- 1.3 To outline the progress the Council has made in reducing carbon emissions through the schemes in the Cutting Carbon Breakthrough Project and provide some insight into the progress of the city as a whole;
- 1.4 To present the updated Affordable Warmth Strategy 2017-30 for adoption.

2 Background information

- 2.1 Last year's Executive Board report (16 December 2015) provided a comprehensive update on the current carbon reduction targets that the city is working towards, the development of a Breakthrough Project for this area and the challenging national policy context within which this is being delivered. Executive Board on 16 November 2016 received a report on the progress being made on improving air quality. The report included in the agenda - Transport Conversation Update & Proposed Public Transport Investment Programme - is also relevant to work on air quality. This report will therefore focus on the cutting carbon and fuel poverty aspects of the Breakthrough Project.
- 2.2 The current carbon reduction targets (from the *Leeds Climate Change Strategy: Making the change 2012 to 2015*) are summarised below.

| Scale | Baseline year [approx. CO2 emissions]* | Target [approx. CO2 emissions] | Progress to date using latest data available |
|---|---|--|--|
| Internal (LCC's operational buildings and services) | 2008/9 [137k tonnes] | 40% reduction in CO2 emissions by 2020 [82k tonnes] | The council emitted 137k tonnes of carbon dioxide in 2008/09 and in 2014/15 this had reduced to 110k tonnes, a reduction of 20%. |
| Citywide | 2005 [5m tonnes] | 40% reduction in CO2 emissions by 2020 [2,993k tonnes] 80% reduction in CO2 emissions by 2050 [998k tonnes] | Citywide emissions were 5.06m tonnes of carbon dioxide in 2005 and in 2014 this had reduced to 3.66m tonnes, a reduction of 27.7%. |

- 2.3 In 2015, Leeds joined 50 other UK cities in signing a pledge that commits to eradicating carbon emissions (i.e. 100% reduction) and running the city on green energy by 2050. The current Climate Change Strategy for the city requires

updating in the light of the progress made to date and to take account of these new targets.

- 2.4 Fuel poverty levels in Yorkshire have dropped from 13% in 2005 to 10.6% in 2013, despite a 51% increase in real term domestic energy bills. The Affordable Warmth Partnership has recently recommended a new set of targets that are more ambitious than the national targets (see 3.7.2). However, it has to be recognised that in order to achieve lower levels of fuel poverty, significant investment in energy efficient works would need to occur and in recent years the level of support from central government has diminished.

3 Main issues

3.1 Leeds Climate Change Strategy Supplement

- 3.1.1 The Leeds Climate Change Strategy (Making the Change) covered the period 2012-2015. Through the Breakthrough project, the Council has reconfirmed its ambitions in this area and it is now appropriate to supplement the strategy by establishing a target for 2030 and setting the pathway towards the updated 2050 target, taking into account action at a national level to decarbonise grid electricity and the influence of projects such as H21 (see 3.5).
- 3.1.2 At a national level the Climate Change Act 2008 established the UK's 80% reduction target against 1990 baseline level by 2050. It also established interim 'carbon budgets' for total emissions within 5-year blocks e.g. 23% reduction 2008-2012, 29% reduction 2013-2017 etc.
- 3.1.3 The National Grid have published an annual "Future Energy Scenarios" report which models four Carbon Reduction scenarios up to 2050, depending on the scale of green ambition and economic prosperity, with the least ambitious called "No Progression" and the most ambitious "Gone Green". To meet the national 2050 target of 80% CO₂ reduction, a mix of renewables, nuclear and carbon capture storage is proposed, with an increase in electric generation required to support the decarbonisation of heating and transport.
- 3.1.4 Evidence to date suggests that relying on national policies alone will not achieve the city's targets. If implemented, the H21 scheme to replace mains gas with hydrogen (see 3.5), would significantly improve emissions, saving between 514,000 and 688,000 tonnes of CO₂ per year. Renewable energy schemes will be required but they will only make a small contribution to achieving the targets. Large scale (i.e. insulating approximately 75,000 solid wall properties) energy efficiency programmes will play a vital role in reducing energy demand and would save up to 182,000 tonnes of CO₂ per year. Local district heating will also help to decarbonise energy for heating and hot water, saving between 13,400 and 15,900 tonnes of CO₂.
- 3.1.5 The Council has been making significant steps to reduce CO₂ emissions across the city and in 2014 was on track to meet the 40% by 2020 target. However, achieving additional savings becomes increasingly challenging as the easier and more cost-effective measures tend to be installed first. Therefore to meet an 80% target by 2050 is very stretching and the commitment to eradicate carbon even more so. In order to help set a pathway to a 100% target by 2050 it would

therefore be sensible to set an interim 2030 target of 60% reduction in carbon emissions to assist us locally in selecting which projects to prioritise and also to provide a framework for lobbying efforts to influence national action.

3.1.6 The table shows that depending on how successful national programmes are in decarbonising energy there may still be a significant gap that local schemes will be needed to fill. These may include schemes such as H21 or other measures such as behaviour change measures to tackle food waste for example.

3.1.7 The table illustrates 3 scenarios:-

- (i) Business as usual, with unsupportive government policies and little local action: 3,100 ktCO₂ with a gap of 1,105 ktCO₂ to a 2030 target of 1,995
- (ii) Middle scenario with some achievement at a national level and local action but no hydrogen project: 2,580 ktCO₂ with a gap of 585 ktCO₂
- (iii) Local and national action, government follows the 'go green' trajectory and we achieve significant local action, particularly with H21 1,789 ktCO₂ beating our target by 206 ktCO₂

| | Business as usual | Local action | Local and national action |
|--|---|---|--|
| Carbon reduction contributions | Pessimistic Projection Carbon emissions in 2030 (ktCO₂e/yr) | Pessimistic Projection Carbon emissions in 2030 (ktCO₂e/yr) | Optimistic Projection Carbon emissions in 2030 (ktCO₂e/yr) |
| Result of national schemes | (Worst case national scenario: No Progression) 3,100 | (Middle case national scenario: Some Progression) 2,775 | (Best case national scenario: Gone Green) 2,450 |
| Contribution of Hydrogen 21 | Assumes no significant local progress | (Low impact) 0 | (mid-point impact)** -600 |
| Contribution of large scale insulation | | -182 | -45* |
| Contribution of District Heating | | (Low contribution) -13 | (High contribution) -16 |
| TOTAL | 3,100 | 2,580 | 1,789 |
| 2030 Target | 1,995 | 1,995 | 1,995 |
| Gap | 1,105 | 585 | No gap: the target will have been exceeded by 206 kilotons |

* Note that if H21 goes ahead then the large scale insulation saving of 182k tonnes will reduce to 45 tonnes because H21 replaces natural gas with hydrogen.

** We have selected a mid-point impact for H21 between low estimate of 514k tonnes and high estimate of 688k tonnes

3.1.8 It can be seen that meeting the proposed 60% reduction target by 2030 will be dependent on significant action at a national scale, coupled with a major transformative project such as H21 (hydrogen).

3.1.9 Executive Board is recommended to supplement the city's Climate Change Strategy with an interim target to reduce citywide CO₂ emissions by 60% by 2030 [1,995,000 tonnes] from a 2005 baseline.

3.2 Leeds Committee on Climate Change

3.2.1 Leeds has a strong track record in engaging with city stakeholders on climate change that has contributed to the suite of Council-led projects outlined in this report (see 3.3). In 2012, leading research by the Centre for Low Carbon Futures / University of Leeds (*A Mini-Stern Review for the Leeds City Region*) set out the strategic business case for investment and commercialisation of low carbon projects.

3.2.2 While significant progress has been made towards achieving city-wide carbon reduction targets, with Leeds City Council taking a leading role, many of the economically advantageous carbon reduction opportunities identified in the Mini-Stern review remain unrealised at a city-wide level. Opportunities to reduce vulnerability to climate-related risks such as flooding also remain under exploited.

3.2.3 A cross-party working group has previously assisted in setting the context for a number of schemes (including work on home energy efficiency measures and solar panels) that the Council has been able to lead on. A new cross party Member Group, chaired by the Executive Member for Environment and Sustainability, has been established to oversee progress on the Breakthrough Project. However, the task cannot be left to one actor or sector alone and there is much to be gained from bringing together the key actors in the public, private and civic sectors to promote further collaboration. Following discussions earlier this year with key representatives from these sectors, it was agreed that the city should establish an independent Leeds Committee on Climate Change (LCCC) which mirrors the national Committee on Climate Change.

3.2.4 The purpose of the Leeds CCC will be to

- Promote leadership in the city on climate change, encouraging stakeholders to take effective action now, while maintaining a long term perspective;
- Provide authoritative independent advice on the most effective steps required to meet the city's carbon reduction target so as to inform policies and actions of local stakeholders and decision makers. Initially it will focus on the top 10-15 carbon reduction activities and top 10-15 carbon emitters;
- Monitor progress towards meeting the city's carbon targets and recommend actions to keep on track;
- Advise on the assessment of the climate-related risks and adaptation opportunities in the city and on progress towards climate resilience;

- Bring together major organisations and key groups in Leeds to collaborate on projects that result in measurable contributions towards meeting the city's climate reduction target and also to deliver enhanced climate resilience, particularly in the area of flood risk;
 - Promote best practice in public engagement on climate change and its impacts in order to support robust decision-making;
 - Act as a forum where organisations can exchange ideas, research findings, information and best practice on carbon reduction and climate resilience.
- 3.2.5 The LCCC will be chaired initially by the University of Leeds (the Executive Member for Environment and Sustainability will be vice-chair) who have also secured funding towards the initial secretariat costs. Recruitment to the LCCC is being completed and it is intended that it will commence work in 2017.
- 3.2.6 The LCCC will help to carry out further detailed analysis of the measures needed to fill the gap between the impact of national schemes and local carbon reduction targets and to understand the scale of new investments by local partners in all sectors required to meet these targets. The LCCC will also be able to evaluate other ways of reducing local carbon emissions such as through addressing food waste.
- 3.2.7 Executive Board is recommended to support the creation of the university-led Leeds Committee on Climate Change and to work with the LCCC and partners to advise on how the city's carbon reduction targets can be achieved.

3.3 Cutting Carbon Breakthrough Project

- 3.3.1 In order to achieve the carbon reduction targets set out above, the Council has a number of low carbon schemes in place under the Breakthrough Project which were introduced in last year's Executive Board report. The main achievements this year are summarised below.
- 3.3.2 District Heating: The Council continues to make good progress towards its short term aim to construct the first phase of a citywide district heating network, to pipe lower cost and lower carbon heat from the perimeter of the city to businesses and residents in dense urban areas.
- 3.3.3 In order to turn this opportunity into a reality, the Council is working to secure sufficient heat load to justify the construction of a c6.4km Spine to the city centre with a spur to Lincoln Green. This spur will connect into almost 2,000 Council flats as well as corporate buildings and other public and private sector businesses.
- 3.3.4 Since December 2015, the Council has:
- Secured a £7m grant/loan package from the LEP to support the development of the Spine.

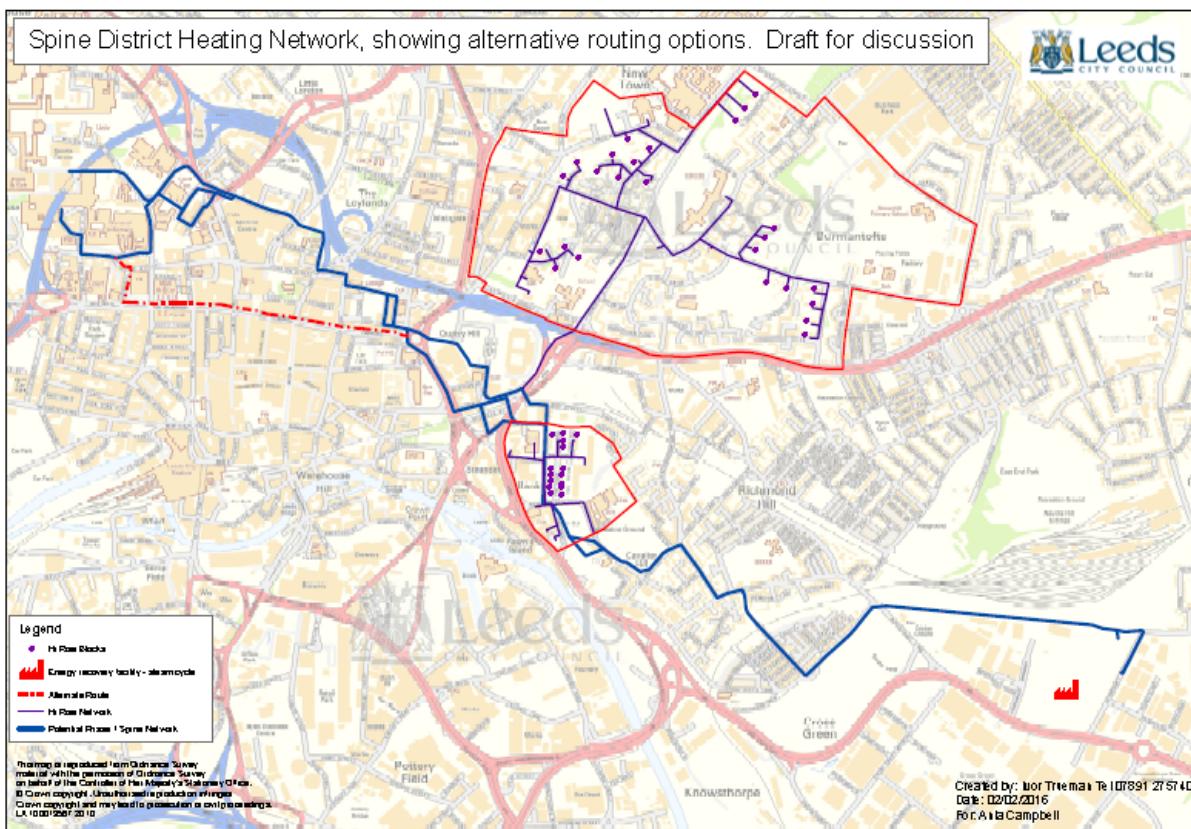
- Secured in principle agreement from Executive Board for £14m of loan funding for the Spine.
- Secured in principle agreement for £5.8m of ERDF funding to support connection of 2,000 flats.
- Secured £10.3m of HRA funding for Housing.
- Launched 2 procurements for the Spine and Housing projects and received high levels of interest from the market.
- Engaged with potential heat customers from across the city.

3.3.5 In 2017, the Council aims to:

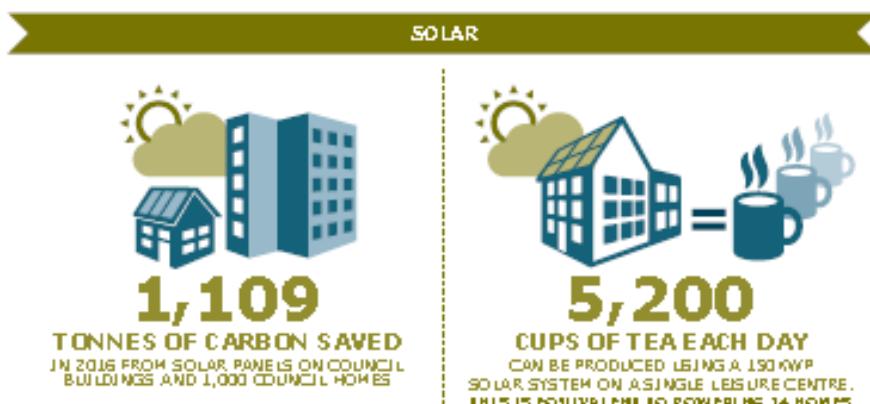
- Secure ERDF funding.
- Secure sufficient heat customers to enable the Executive Board to make a decision on investment.
- Subject to the above, complete the 2 procurements and appoint 2 contractors.
- Commence construction on both projects.

3.3.6 Longer term, we have a vision to create an interlinked series of district heating networks covering much of the city, similar to the Scandinavian models. We have therefore undertaken detailed heat mapping and master-planning to identify opportunities and used this evidence to create supportive planning policies within the Core Strategy and to inform a district heating Local Development Order, adopted in March 2016. We are now working closely with businesses, developers and public sector partners to secure their interest in our short and longer term district heating vision.

The [link](#) to the map below sets out the initial plan.

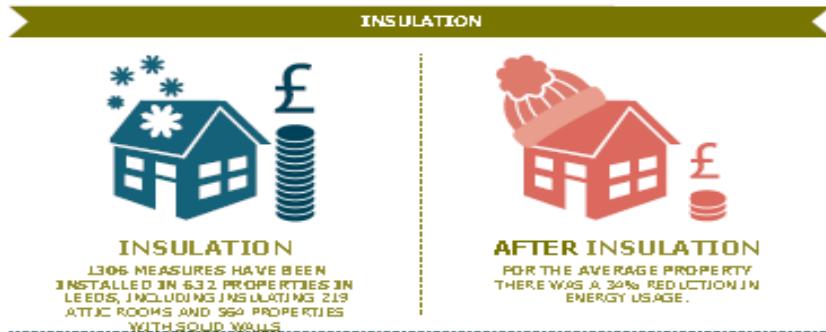


3.3.7 Solar schemes: The council installed solar panels on 7 major buildings in 2012. The scheme was then placed on hold due to the significant reduction in Feed in Tariffs (FITs) in 2012. Following a reduction in the cost of materials, an additional 627 kW peak were installed across the corporate estate together with a further 2,400 kW peak during 2015 on 1,000 Council homes. In total, these 3 solar schemes will save 1,200 tonnes of CO₂ per year as well as saving tenants £130,000/ year on their fuel bills. However, since the drastic cuts in FITS in 2016, solar schemes are not financially viable at present. Alternative business models are being explored with other partners, particularly local Universities to investigate how new technologies such as greater use of energy storage may be deployed to assist with the business case for solar schemes.



3.3.8 Domestic Energy Efficiency: Key highlights this year include:-

- Attracting £3.3m of external funding to a £4.84m Green Deal Communities Fund scheme which installed 1,306 measures in 632 properties. The University of Leeds undertook monitoring of energy usage before and after works. This demonstrated that for the average property there was a 34% reduction in energy usage achieved.
- Installing central heating in lower income and fuel poor private sector homes as a result of a successful bid for £1.76m from DECC's central heating fund. Of the households assisted in Leeds by the central heating fund, around a quarter had a member who suffered from some sort of cold-related illness, whilst a third had a member over age sixty.



3.3.9 Our domestic energy efficiency priorities for the year ahead will include:-

- Attracting energy company investment into the redefined ECO scheme once this is finalised. This will help to benefit the following schemes.
- Warm Well Homes: We expect to hear from the Green Investment Panel this month whether we have been successful in bidding for £280,000 of local growth funding which will be matched with existing funds such as the discretionary fuel poverty fund and the Energy Company Obligation to install heating and insulation measures in the homes of residents suffering from cold related illness such as cardio-vascular, respiratory and mental illness. The scheme will run to March 2019 and we will work with public health, local clinical commissioning groups and Leeds community healthcare to identify fuel poor residents suffering from these conditions and assess their homes to identify approximately £5,000 worth of heating and energy efficiency improvements per household on average. The scheme will enable residents to live safely in their own homes without their health conditions being exacerbated by living in cold conditions.
- Holbeck Group Repair Scheme: This is a group repair project in the Holbeck LNA area the 2nd most deprived area in Leeds, with many empty homes and with about 67% of the houses in the private rented sector. Community engagement, advice and enforcement work has been going over the last two years. Energy efficiency work, including attic room and solid wall insulation, will begin in January 2017 initially starting with 200 houses. This £5.03m project, approved by Executive Board in November, is being funded from LCC £1.995m, with a further £850,000 from the HRA budget for our own stock in

the area, customer contributions of about £504,000 and a Local Growth Fund grant of £1.5 million.



Before and after insulation works

3.4 Developments by private and third sector organisations in the city

- 3.4.1 During the year, a number of private and third sector organisations in the city have delivered and progressed successful new developments that demonstrate high standards of sustainable construction and low carbon efficiency. These include the University of Leeds, Yorkshire Water, CITU and Hammersons. Case studies of these developments are now included on the Council website <http://www.leeds.gov.uk/council/Pages/Environmental-Policy-and-Performance.aspx> where they will be used to illustrate measures contained in the Council's Sustainable Energy Action Plan. An updated series of case studies from the developments included in the Council's Supplementary Planning Document, "Building for Tomorrow Today" has now been published as a dataset on Data Mill North (<https://datamillnorth.org/>).

3.5 Leeds City Gate H21 (Hydrogen gas network trial in Leeds)

- 3.5.1 Northern Gas Networks have completed and launched a study to determine the feasibility, from both a technical and economic viewpoint of converting the existing natural gas network in Leeds (and parts of Bradford, Harrogate, Kirklees and Wakefield) to 100% hydrogen. Use of hydrogen as a fuel produces zero CO₂ emissions at point of use and improves air quality. NGN are promoting the project as an alternative method for decarbonising heat in the UK. The main alternative at present is to switch heating to electric heating which would require a quadrupling of electricity generation capacity and would leave the national gas network as a stranded asset. Supporting Northern Gas Networks' plans to convert existing gas pipes to hydrogen could reduce emissions from the region by over 11% by 2030.

- 3.5.2 The main elements of the project would include:

- Four steam methane reforming plants built in Teesside, fitted with 90% carbon capture that would convert natural gas into hydrogen;
- The construction of a pipeline to transport the captured carbon from Teesside into the North Sea;

- Salt storage caverns for hydrogen built in Teesside, some of which may be repurposed existing caverns in the area. These would be used to deal with interseasonal and other storage requirements;
- A Hydrogen Transmission system (a pipe) that will transport the hydrogen from Teesside to Leeds;
- Minor upgrades to the gas network infrastructure within Leeds, which generally already have the capacity to convert to 100% hydrogen;
- Conversion of gas appliances for consumers.

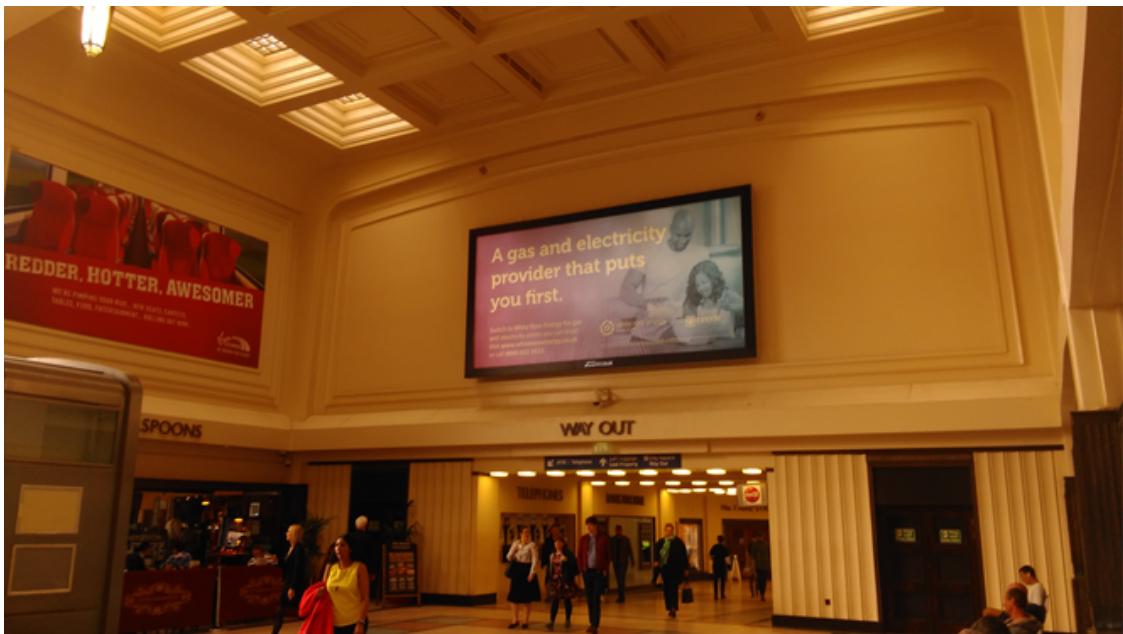
3.5.3 Leeds is anticipated to be the first city to be converted in what is essentially a vision for the country, with all major cities being converted by 2052. The gas pipe network in Leeds is being upgraded to plastic pipework anyway and NGN have an existing track record of working in the city such as the CNG refuelling station.

3.5.4 The cost of the project is estimated to be in the region of £2bn split between the costs of new gas infrastructure and appliance conversion. NGN's financing model assumes that these costs will be socialised (effectively shared across all UK gas bills) in the same way that ongoing infrastructure upgrades are currently financed. In fact, the project timings assume that this phase of additional network upgrade would come into play just as the current phase of polyethylene pipe replacement ends, meaning that consumers would not see any difference in their gas bills overall.

3.5.5 The earliest practical date for the initial conversion of Leeds is 2025. In order to achieve this, having completed a high level feasibility study, Northern Gas Networks are seeking funding for a Roadmap of 16 further work packages (estimated to take 5 years) of research and testing. Leeds City Council is working with NGN, Leeds City Region LEP and Tees Valley LEP to make the case to Government for support for the project.

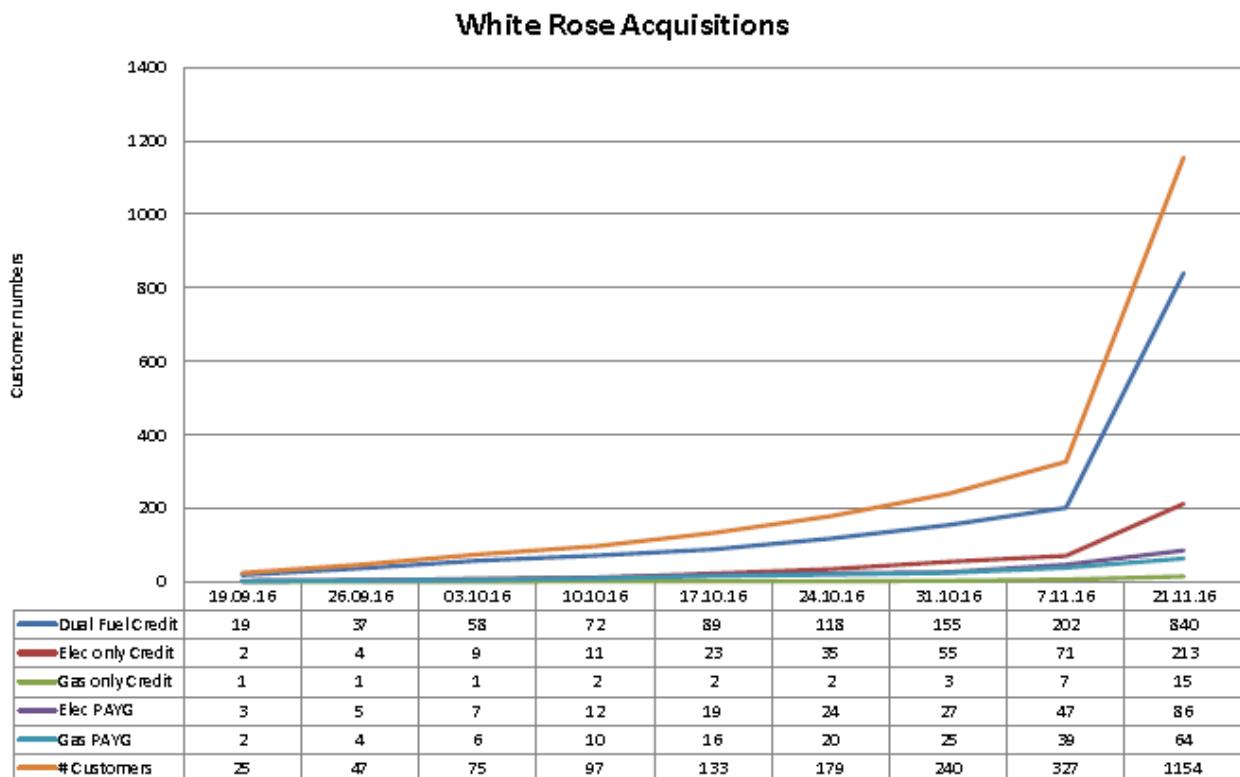
3.6 Fuel Poverty Initiatives

3.6.1 White Rose Energy (WRE) is a partnership between Leeds City Council and Robin Hood Energy (RHE), a not-for-profit energy company that the Council chose to endorse following a competitive process. Collectively, we're driven by the same social motive, which is to provide low cost energy to all households, with pricing that is fair and transparent. WRE launched on the 12th of September 2016 and its tariffs are open to all.



The biggest outdoor advert so far, which was a billboard in Leeds Train Station. The aim of the advertising campaign when we launched was to hit high footfall areas in and around the city centre, with a view to raising brand awareness quickly and spreading that knowledge out across the region by preferentially targeting transportation hubs

- 3.6.2 The justification for the scheme emerged from a longstanding belief that people across Yorkshire deserved a better type of energy company and we – as a large local authority – should be leveraging our influence to bring about better outcomes for people in this regard. Our primary aim is to help people to stay warm, comfortable, and energised in their own homes, without paying over the odds.
- 3.6.3 Although the partnership will serve the interests of every one of its customers, there is also a heavy emphasis on providing fairer tariffs to prepayment – or ‘pay-as-you-go’ (PAYG) – customers, who have traditionally been poorly served by the energy market. In particular, WRE will be offering smart PAYG meters to such customers, which open up a much wider range of top-up methods and provide a route for them to potentially move away from prepayment style arrangements, towards cheaper credit based deals.
- 3.6.4 At the time of this report, WRE had only been operational for less than 4 months, so it is difficult to fully appraise the scheme’s achievements at this early juncture in its development; however the graph below shows the significant recent uplift in customer acquisitions. The ambition for the next 12 months is to acquire and retain at least 10,000 new customers from across the region (with a more ambitious figure of 20,000 being our ‘blue sky’ aspiration). A target in-between these figures is seen as eminently achievable based on the fact that much of the customer acquisition strategy is based on automatic switching of ‘voided’ council house properties. At present 100 void customers per week are now being connected to WRE. As such, social housing voids will provide an anchor for the customer base, wherein there will be a reasonably consistent and predictable uplift with the passage of time.



3.6.5 We expect to partner with Bradford early in 2017, once a formal decision has been taken, paving the way for additional LCR authorities and housing associations to partner with us before the end of the financial year. Ultimately, the goal is to maximise customer numbers as this will mean that more residents are saving money on their bills and additionally, there will be a greater chance of the council and its partners being able to create a fund that can be used to further reduce fuel poverty with targeted initiatives across the region.

3.7 Affordable Warmth Strategy

3.7.1 This year, we have been developing our 2017-30 affordable warmth strategy to outline Leeds' approach to promoting affordable warmth over the coming years. The updated strategy is available at www.leeds.gov.uk/council/Pages/Affordable-Warmth-Strategy.aspx. The previous strategy ran from 2007 to 2016, and many changes to national affordable warmth policy have taken place since then including:-

- Wholesale changes to the way energy efficiency and heating improvements are funded, including a switch from grant funding to energy supplier contributions;
- The re-definition of fuel poverty as being where a person experiences low household income and high energy costs;
- The publication of the national fuel poverty strategy "Cutting the cost of keeping warm – a fuel poverty strategy for England" in 2015.

3.7.2 The strategy includes the following aims:

- To increase the average SAP rating of housing in Leeds to band C by 2020 as a whole, and to ensure that no properties are below band E by 2030 which is more ambitious than the target outlined in the National fuel poverty strategy “to ensure that as many fuel poor homes as is reasonably practicable achieve a minimum energy efficiency rating of Band C by 2030”.
- To ensure that residents’ health and wellbeing isn’t put at risk due to being unable to heat their home, as per the NICE guidelines on preventing excess winter deaths.

3.7.3 The strategy proposes to achieve this by pursuing the following four objectives:-

- Increasing energy efficiency through developing domestic energy efficiency schemes and providing energy advice to residents;
- Reducing fuel poverty, by targeting assistance at fuel poor households, maximising the income of fuel poor households and reducing household fuel bills;
- Improving health and wellbeing through increasing affordable warmth, by improving household heating without increasing carbon emissions where possible, crisis intervention for vulnerable people in cold homes, including heating installation and repairs and preventing people from falling into fuel poverty;
- Enabling residents to benefit from renewable energy.

3.7.4 Executive Board is recommended to adopt the updated Affordable Warmth Strategy 2017-30.

4 Corporate Considerations

4.1 Consultation and Engagement

4.1.1 The Affordable Warmth strategy has been developed through consultation with the Leeds Affordable Warmth Partnership which brings together representatives from various sectors including the Council, public and private sector housing, public health, and the voluntary sector with an interest in promoting affordable warmth throughout the City. The draft strategy was presented to the Affordable Warmth Partnership in December 2015 and was formally adopted by the partnership in March 2016.

4.1.2 The relevant Breakthrough Project cross-party working group has been consulted with on proposed interim 2030 target for carbon reduction and remains a key group for driving forward initiatives and making linkages with other issues (e.g. air quality) as appropriate.

4.2 Equality and Diversity / Cohesion and Integration

4.2.1 There are no immediate implications for equality and diversity or cohesion and integration arising from this report. A full Equality Impact Assessment of Leeds Affordable Warmth Strategy 2017 – 2030 has been carried out (see Appendix 1)

and each scheme within the Breakthrough Project is subject to the appropriate screening assessment.

4.3 Council policies and the Best Council Plan

4.3.1 The Best Council Plan sets out what the council will do to help improve the lives of local people and how we will measure progress in delivering better outcomes across Leeds. The most relevant of these are identified below:-

- supporting communities and tackling poverty: improving housing conditions and energy efficiency
- promoting sustainable and inclusive economic growth: improving the competitive position of the city through the enabling of low carbon energy infrastructure and reduced carbon emissions.
- becoming a more efficient and enterprising council: reducing the energy and carbon footprint of the Council.

4.3.2 Cutting Carbon and improving Air Quality is one of the Council's Breakthrough Projects. The development of the related low carbon energy infrastructure directly contributes to the Council's forward looking commitment of introducing 21st Century infrastructure.

4.4 Resources and value for money

4.4.1 To successfully deliver many of the projects identified under the breakthrough project, a cross Council and cross partner approach is required as it cuts across so many areas of work (e.g. public health, planning, parking, transport, environmental health, highways, waste management, Housing Leeds).

4.4.2 Where possible, the team are identifying and bidding for grants to support the development of this work. Details of successful bids have been summarised in the report. The developing collaboration with the University of Leeds and Leeds Beckett University has resulted in a further secondment (0.25 fte for 3 years) of a member of the team. It is intended that this arrangement will continue to help to secure additional resources for the city.

4.5 Legal Implications, Access to Information and Call In

4.5.1 There are no legal implications arising from this report.

4.6 Risk Management

4.6.1 The instability in government policies that support energy efficiency works and renewable technologies makes it very difficult to establish long term plans and robust business cases. Each scheme within the Breakthrough Project is subject to a rigorous risk management procedure.

4.6.2 It has to be recognised that in order to achieve lower levels of fuel poverty as set out in the Affordable Warmth Strategy, significant investment in energy efficient works would need to occur and in recent years the level of support from central government has diminished.

- 4.6.3 To meet the average ‘Band C’ criteria, there would need to be a significant programme of energy efficiency works, and concomitant investment by Government. In Leeds, we would need to insulate around 75,000 solid walled properties and upgrade their heating where needed at a cost of roughly £10,000 per property, amounting to approximately £750 million. There would also need to be insulation and heating upgrades to a further 26,500 non-solid walled properties at roughly £2,000 per property, costing £53 million. This would mean a total cost of £803 million.
- 4.6.4 The second energy efficiency target of “No properties below Band E by 2030” will also require significant investment, but is more achievable and would be targeted at households with the highest levels of fuel poverty. EPC data suggests there are around 19,000 households in Leeds with a SAP band F & G. This would equate to improving approximately 1,500 properties per year, which with costs of £5,000 - £10,000 per property would cost £7.5-£15m per year.
- 4.6.5 As the Council has to bid for funding to support many of the activities that it wants to undertake in this area, if the Council is unsuccessful in winning the funds, it will impact on our ability to deliver our identified projects.

5 Conclusions

- 5.1 This report has demonstrated the progress that the Council has made in delivering on the schemes within the Cutting Carbon Breakthrough Project. The Council’s leadership in this field is critical as achieving carbon reduction targets into the future inevitably becomes more difficult as ‘low hanging fruit’ is picked.
- 5.2 This makes the Council’s partnerships with other parties in the city all the more important as without strong cross city collaboration, achieving the city’s ambitions and priorities will be impossible.
- 5.3 We are working closely with Government to attempt to make external wall insulation a national infrastructure priority. Insulating all 70,000 solid walled homes in Leeds would generate over £0.5bn of investment and cut carbon by almost 4%.
- 5.4 The progress with large scale projects is encouraging and this will need to be supplemented by complementary measures to address challenging issues such as behaviour change and tackling food waste.

6 Recommendations

- 6.1 Members of the Executive Board are recommended to:-

- Note the progress and continue to support the delivery of the carbon reduction schemes within Cutting Carbon and Improving Air Quality Breakthrough Project;
- Supplement the city’s Climate Change Strategy with an interim target to reduce citywide CO₂ emissions by 60% by 2030 from a 2005 baseline;

- Support the creation of the university-led Leeds Committee on Climate Change and to work with the LCCC and partners to advise on how the city's carbon reduction targets can be achieved;
 - Adopt the updated Affordable Warmth Strategy 2017-30.
- 6.2 All of these recommendations will be delivered from 2017 onwards by the Sustainable Energy & Climate Change team, led by the Executive Programme Manager within the Projects, Programmes, & Procurement Unit.

7 Background documents¹

7.1 None

8 Appendices

Appendix 1 Affordable Warmth Strategy equality, diversity, cohesion and integration impact assessment form

Appendix 2 Leeds Affordable Warmth Strategy 2017 - 2030

¹ The background documents listed in this section are available to download from the Council's website, unless they contain confidential or exempt information. The list of background documents does not include published works.