Leeds CITY COUNCIL

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Report of: Director of Environment and Housing

Report to: Executive Board

Date: 16th December 2015

Subject: Update on Cutting carbon and Improving Air Quality breakthrough project

Are specific electoral wards affected?	☐ Yes	☒ No
Are there implications for equality and diversity or cohesion and integration?	☒ Yes	☐ No
Is the decision eligible for call-in?	☒ Yes	☐ No
Does the report contain confidential or exempt information? If 'yes', access to information procedure rule number: Appendix number:	☐ Yes	☒ No

Summary of main issues

1. Ahead of Paris climate talks, Leeds is one of 50 UK cities to sign a pledge that commits to eradicating carbon emissions and running the city on green energy by 2050.
2. Previously the Council set a target to reduce its own carbon emissions by 40% by 2020 from a 2008/9 baseline. The Council has already made significant steps towards meeting the target, reducing emissions by 20% between 2008 and 2014.
3. As well as setting an internal target, the Council adopted a 40% citywide carbon reduction target based on a 2005 baseline. By 2013 the city's emissions had reduced by 16% against the baseline.
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.
5. Key achievements include:
    a. The opening of the new Recycling and Energy Recovery Facility, (RERF) signalling an environmental step change for Leeds. The facility will capture a minimum of 16,000 tonnes of materials for recycling every year, and will export 11MW electricity to the national grid, equivalent to the power requirements of around 20,000 homes. The

move away from landfill will result in carbon savings of around 62,000 tonnes per annum, equal to taking 29,000 cars off the road.

b. The RERF's innovative and striking design and 'living wall' will set a new benchmark for high quality and sustainable development for this key regeneration area of the city.

c. Over 1,200 tonnes of CO_2 will be saved per annum as a result of the solar panels installed across the corporate estate and council housing. Tenants will save £130,000 per year on their fuel.

d. Installation of a biomass district heating network serving 232 flats at Clyde Court, Clyde Grange and Phil May Court, saving tenants up to 30% from their fuel bills.

e. Winning c£3m of DECC funding to improve heating and insulation in c800 private sector homes.

f. Launching a competition to establish a Leeds Energy Supply Company (LESCo), expected to attract c7,500 customers in the first year, each of which should save £100-200 pa.

g. Funding has been secured to support the development of a Compressed Natural Gas station, the first in the UK to support a city's back to depot fleet.

h. Procurement completed for the roll out of 45 electric vans into the Council's fleet by the end of 15/16. These will be used by parking enforcement, Housing Leeds and Civic Enterprise Leeds.

6. However, the recent central government policy changes have created a very challenging environment to deliver carbon targets and address fuel poverty, both as a Council and as a city.

7. Despite the challenges presented by government policy changes, the plans to deliver the Leeds Energy Supply Company, to introduce a compressed natural gas station, to further develop district heating across the city and to continue to invest in the environmental efficiency of the social housing stock will ensure that the city continues to reduce its emissions and support those residents in fuel poverty.

8. At September's Executive Board, the scope of the breakthrough project was increased to also focus on improving air quality to improve health outcomes for the citizens of Leeds and ensure that the city is compliant with the EU Directive on air quality by 2020.

9. To help deliver the long term objectives of the breakthrough project, the Council has developed a detailed Sustainable Energy Action Plan and a council wide energy policy.

Recommendations

10. Members of the Executive Board are recommended to:

- Note the progress the Council has made to date and its continued plans to reduce carbon emissions;

- Endorse the Sustainable Energy Action Plan in support of the Council's participation in the European Covenant of Mayors;
- Support the adoption of a Council wide energy policy from 4th January 2016 and the requirement for Council wide behaviour change to drive energy savings; and,
- Continue to demonstrate leadership in this area and continue to work closely with private, public and third-sector partners across the city.

1. Purpose of this report

1.1. To outline the significant progress the Council has made and provide some insight into the progress of the city as a whole;

1.2. To outline future priorities and highlight the challenges faced;

1.3. To detail the proposed energy policy, its associated benefits and the targets contained within it;

1.4. To provide the background to the Covenant of Mayors and the associated Sustainable Energy Action Plan (SEAP).

2. Background information

Current Targets

2.1. This report is brought forward at the same time that world leaders are debating the need for global action on climate change at the 21st Conference of Parties (COP) in Paris. The international Intergovernmental Panel on Climate Change (IPCC) estimates that that the fuel that is consumed and the other activities that take place within cities directly account for 44% of global greenhouse gas emissions. The importance of action taken within cities and led by city authorities is therefore acknowledged as an important contributor to addressing the causes of climate change and ensuring that cities benefit from the economic opportunities in improved energy management, resource efficiency and associated social benefits.

2.2. The Council has set a target to reduce its own CO_2 emissions by 40% by 2020 (using a 2008/09 baseline) equating to a 3.33% decrease each year. The Council needs to reduce total CO_2 emissions from 136,986t (08/09) to 82,191tonnes (20/21), at a rate of 4,566 t per annum, to meet the target.

2.3. In addition, the Council has adopted a citywide 40% CO_2 reduction target by 2020, based on a 2005 baseline, equating to a 2.67% decrease each year. The city needs to reduce total CO_2 emissions from 4,988,000t (2005) to 2,993,000 (2020), at a rate of 133,000 t/annum, to meet the target.

2.4. Internal CO_2 emissions are calculated annually from primary data gathered from our own buildings, public lighting, business travel, fleet and outsourced fleet. Although we have gathered elements of this data for many years, 2008/09 was the first year that it was consistently and accurately collected and hence forms our baseline.

2.5. Citywide carbon emissions are produced annually by DECC, using annual energy consumption data from businesses, the public sector and housing, along with road transport. 2005 was the first year that this data became a recognised national statistic so forms our baseline.

2.6. In 2005, 13% of Yorkshire residents were in fuel poverty, according to the new ‘Low Income, High Cost’ measure of fuel poverty. By 2013, this had dropped to 10.6%, despite a 51% increase in real term domestic energy bills over that time. This clearly demonstrates the vital importance of improving home energy efficiency.

2.7. Government has recently redefined fuel poverty and removed specific targets to eradicate fuel poverty by 2016. Instead they have introduced a new target "to ensure that as many fuel poor homes as is reasonably practicable achieve a minimum energy efficiency standard of Band C, (energy performance certificate produced when every house is sold or let), by 2030." All but the lowest income households living in Band C properties tend not to suffer from fuel poverty.

2.8. To put this in context, only 27% of Leeds housing is currently band A - C i.e. at a decent level of energy efficiency, and this drops to 21% for terraced housing.

Carbon Reduction Breakthrough Project

2.9. The breakthrough project was established in November 2014 with an initial launch event. In the original scoping document a commitment was made to report back on progress to Executive Board in December 2015.

2.10. The original scoping document for the cutting carbon breakthrough project committed to deliver the following outcomes:

- Carbon reduction as a contribution to countering climate change;
- Greater energy security which provides the city with a competitive advantage;
- Energy consumption savings to consumers, providing advantages to businesses and residents;
- Reducing fuel poverty/ improving levels of affordable warmth, bringing benefits for health and well-being;
- Creation of jobs and apprenticeships;
- Development of skills within the environmental arena;
- Improved air quality bringing benefits for health and well-being; and,
- Greater visibility of energy usage and costs across the city.

2.11. As well as reducing carbon, the breakthrough project is also focused on reducing fuel poverty across the city. In 2013 11.6% of households in Leeds were defined as fuel poor, compared to 10.4% of English households.

2.12. The breakthrough project has now been expanded and renamed to include improving air quality. However, this report will largely focus on the cutting carbon aspects as a detailed report was brought to Executive Board in October that focused on the work that needs to be undertaken to improve the city's air quality.

Policy Framework

2.13. Leeds is a growing city with an anticipated additional 70,000 new homes to be built by 2028 as well as continued commercial development and associated infrastructure. The Core Strategy contains a suite of development policies designed to ensure that new development contributes to the city's low carbon targets with policies on low carbon major development, sustainable design & construction, low carbon energy and district heating.

2.14. However these policies are operating in a context where the Government have relaxed low carbon requirements on new developments, reduced the role of the Code for Sustainable Homes and abandoned previous targets for zero carbon housing. Key changes include:

2.14.1. The new government announced in July that it would no longer fund the Green Deal Finance Company after concern about low take-up and impact (c.15,000 loans in 2 ½ years).The Government also scrapped further planned investment in the Green Deal Home Improvement Fund, which had funded 27,000 energy efficiency measures in 9 months.

2.14.2. At present DECC say that the ECO scheme will continue to run as normal until March 2017, but that a new, lower cost, obligation (ECO3) will be available from April 2017 onwards. However, the timescales to lay legislation to launch in April 2017 are extremely tight. Industry indicates that without a clear successor policy in place, ECO will effectively end by summer 2016 as all utilities will have delivered their obligations. The remaining ECO grant rates are already lower than for any obligation over the last c10 years.

2.14.3. Feed in Tariff rates are also due to be substantially reduced. Domestic scale solar PV will be 90% lower; support for larger wind has ended and even small hydro projects are 33% lower and a total cap of £75m - £100m has been applied for all new registrations from January 2016 to 31 March 2019, with a series of triggers to drop rates further in that time.

2.14.4. Renewable Heat Incentive (RHI) has been reduced by £700 million over the next five years. The detail behind this reduction is not available yet as the announcement was only just made in the Autumn Statement.

2.14.5. The Allowable Solutions carbon offsetting scheme has been scrapped, along with the proposed 2016 increase in on-site energy efficiency standards.

2.14.6. Social landlords will also be forced to reduce rents by 1% a year for four years. This could mean a real term compound reduction of 15-25%, limiting the potential to invest in energy efficiency measures in social housing.

2.15. These national policy changes will have significant implications for our work programme.

2.16. The table in section 3.18 outlines how we intend to refocus our work programme in the short term to deal with these changes.

2.17. Although policies designed to support renewable and improve energy efficiency have been weakened, the indication from government is that they intend to refocus resources in the domestic sector on fuel poor households. Specifically, ECO3 is expected to have an almost complete focus on properties that meet the new Low Income High Cost fuel poverty definition. Government have reduced the notional budget for ECO3 to £640m pa and intend to encourage companies to focus on lower cost measures.

2.18. However, we know that many of the easy cost effective measures have already been completed so we will continue to work to persuade government to spend at least a part of the budget on Victorian terraced properties where fuel poverty levels are highest.

3. Main issues

Council Breakthrough Project Progress

Council Progress – Non residential

3.1. The Council has reduced its own emissions by 20% by 2014/15, against the 2008/9 baseline, which means the emissions have reduced in line with the 40% target. Key achievements include:

3.2. The council installed solar panels in 2012 on 7 major buildings. The scheme was then placed on hold due to the significant reduction in Feed in Tariffs (FITs) in 2012. This year it was determined that, despite the reduction in FITs, the cost of materials had decreased sufficiently to make solar panels a worthwhile investment again. An additional 627 kW peak have been installed across the corporate estate on the following buildings:

- Middleton Park Highways
- St George Centre
- Adel Beck
- Tech North
- Armley Leisure Centre
- Morley Leisure centre
- Holt Park Leisure Centre

3.3. An additional 2,400 kW peak will be installed on 1,000 council houses by the end of the calendar year. In total, these 3 solar schemes will save 1,200 tonnes of CO_2 per year as well as saving tenants £130,000/ year on their fuel bills. However, with the expected drastic cuts in FITS in 2016, solar schemes will no longer be financially viable.

3.4. In March 2015 a report was taken to Executive Board to approve the inclusion of a 2MW peak gas fired electricity generating station within the base specification of the Merrion House refurbishment project. This project is an invest to save opportunity that provides the added benefit of improving the Council's and city's energy security, one of the stated aims of the breakthrough project.

3.5. Work commenced in October 2013 to look at street light selective part night switching, subsequently a total of 3489 street lights have been modified resulting in a consumption saving of over 1,079,000 kWhs.

3.6. LED Lanterns have also been installed on the Inner Loop Road, A58(M) Woodhouse Tunnel and The Calls. Work was completed in April 2014 on the conversion of 345 lanterns on the Inner Loop Road. An annual saving of 304,000 kWhs is being achieved.

3.7. Salix funding has been utilised to finance a range of energy efficiency measures, such as installation of Building Energy Management Systems(BEMS), improved insulation, LED lighting schemes and boiler replacements across the authority's estates. Salix Finance delivers 100% interest-free capital to public sector organisations to improve energy efficiency and reduce carbon emissions. Salix Finance are an independent not for profit company funded by the Department for Energy and Climate Change.

3.8. Cumulatively Salix funded schemes are now delivering over 2,000 tonnes of CO_2 savings per year as well as delivering revenue savings.

3.9. Salix funding has also been utilised to deliver energy efficient lighting schemes to schools on the same payback basis. There will be an ongoing programme of lighting schemes for all interested schools that meet the funding criteria.

3.10. The replacement programme for LCC's fleet has been reviewed with alternative fuel and low emission vehicles determined as the preferred option where available. Identification of all opportunities to introduce alternative fuel and low emission vehicles will see 7% of the authority's fleet having been converted by the end of 2015/16.

3.11. The following are identified as the key deliverables to continue to work towards the 40% reduction by 2020 in carbon target within the Council's estate and fleet:

- Installation of a compressed natural gas station to support the conversion of the Council's Refuse Collection vehicles and vans as well as other vehicles across the city, estimated to reduce carbon emissions of vehicles that convert by circa 30% as well as reducing the emissions that contribute to poor air quality by approximately 90%;
- Installation of an electric vehicle charging network to support the Council's vehicles;
- Improved energy management of corporate buildings via the increased use of energy data and Building Energy Management Systems;
- Continued investment in corporate buildings, utilising SALIX revolving funding;
- The LCC corporate travel plan will be reviewed with the objective of changing travel practice across all Council Services to provide safe and

sustainable commuting and business travel activity particularly sustainable travel choices for our employees utilising schemes such as the Cycle Superhighway.

- The terms of the Street Lighting PFI determine that the supplier, SSE must deliver a reduction in consumption based on forecast use over the term of the contract (to 2031). This incentivises SSE to promote and introduce innovation aimed at reducing the overall street lighting energy consumption.
- An evaluation of new to market 'Budget' LED lanterns will be undertaken with a view to introduce 3000 to the portfolio. An estimated consumption saving of 928,125kWhs per annum through these conversions has been made.
- The fleet replacement programme will be reviewed annually to ensure that lower emission vehicles are considered for all vehicles due for replacement. By 2020/21 it is anticipated that 25% of the Council's fleet will have been replaced by alternative fuel or low emission vehicles.

3.12. However, the next 20% reduction will be more difficult to achieve as many of the cheaper and easier measures have been completed and the items that are left are the more challenging items such as behaviour change and installation of district heating. This is compounded by the weakening of government policy support

Progress in domestic sector

3.13. The table below shows the change in emission levels as per DECC's published data from 2005 to 2013. Overall the city has achieved a 16% reduction in carbon emissions.

	Baseline 2005	2013	
	Tonnes C02	Tonnes C02	% difference
Tertiary Buildings	1,868,129	1,572,900	-16%
Residential Buildings	1,841,000	1,539,400	-17%
Private and commercial transport	1,084,916	928,900	-14%
Total	4,917,502	4,132,400	-16%

3.14. The council is able to directly and indirectly influence emissions reduction across the city, particularly in the residential sector. Key achievements in this sector include:

3.14.1. Leeds City Council was awarded £2.48m from DECC's Green Deal Communities Fund to focus on area based external wall insulation. Leeds used this funding to improve a total of 379 homes, create 3 show homes and attract £1.29m of match funding. The majority of homes were system built properties in Holt Park, Cookridge and Kippax but the funding also allowed us to externally insulate Victorian terraced homes in the Nowells and Cross Green. Both the Nowells and Cross Green are long-standing regeneration priorities and the insulation has made a huge difference to people's lives: of 121 fuel poor households, 42 are no longer fuel poor and for the remainder, the 'affordability gap' has reduced from £681 to £272 per home.

3.14.2. The Green Deal Communities Fund has two further, smaller, phases with funding of c£212k, focusing on hard to treat cavities and attic room insulation as well as carrying out work in the houses of those in fuel poverty.

3.14.3. The Council has also been awarded c£280k by DECC through the Central Heating fund to install new central heating systems in fuel poor private sector homes, currently without central heating systems. This is working closely alongside a larger Housing Leeds project, installing new gas mains to council properties that are still all electric. Housing Leeds expects to replace electric storage and underfloor heating with gas central heating in 2000 homes over the next 4 years.

3.14.4. As referenced in 3.3 above, the Council has installed 1,000 solar panels on council housing during the last 3 months.

3.14.5. Housing Leeds is also planning to significantly expand district heating, particularly for multi-storey blocks. Arup have undertaken detailed feasibility work on c2,000 flats in the Saxton Gardens, Lincoln Green and Ebor Gardens areas and on the back of this we have submitted a grant application for c£5.7m to ESIF (EU grant funding) to part pay for the conversion of flats from electric storage heaters to wet central heating systems, build a new energy centre and construct a local district heating network Arup are also assessing the energy efficiency options for all our multi-storey blocks and have identified around 26 blocks in 6 clusters that could feasibly connect to a district heating scheme once in existence. These will either have their own energy generation or some may connect to a future DHN taking heat from the RERF or other large central sources.

3.14.6. Ahead of these major DH schemes, Housing Leeds is nearing completion of a small biomass district heating network serving 232 flats at Clyde Court, Clyde Grange and Phil May Court. We expect this to

save tenants up to 30% from their fuel bills. We have already received positive feedback from one tenant who estimates he is saving c50% on heating,

3.14.7. Housing Leeds has also been working closely with Keepmoat to improve the energy efficiency of over 1,200 existing homes and build almost 400 new ones in the Little London and Beeston Hill areas under a PFI agreement. This is on track to be completed in 2016.

3.14.8. Another key achievement has been the agreement to set up a Leeds Energy Supply Company (LESCo) to offer competitive tariffs to all residents and replace prepayment meters, with smarter, cheaper alternatives. This is currently out to competition and is due to be implemented in spring 2016. It is anticipated that this will attract circa 7,500 customers in the first year, each of which should save £100-200 pa. Full details can be found in the executive board report dated 23rd September 2015.

3.14.9. The introduction of the Leeds Standard for New Council Homes places an emphasis on achieving high levels of air-tightness and thermal insulation that provides high levels of energy efficiency to minimise running costs for tenants, address fuel poverty and contribute to broader sustainability, health and well-being agendas. This will apply to future tranches of the Council house building programme of c1,000 units.

3.15. The business cases for solar PV, solid wall insulation and renewable heating no longer make financial sense due to the policy changes. The Council will therefore shift away from planned work in these areas, unless additional grant funding or investment can be attracted.

3.16. Even some 'low cost' improvements such as loft insulation and cavity wall insulation are now unattractive: the private sector market is used to heavily subsidised offers and experience suggests without subsidies the uptake rates will be very low.

3.17. Given the national policy changes highlighted in 2.14, the council must re-evaluate domestic energy priorities. The work programme has to be focussed and the Council must be prepared to shift away from some work areas if they become unaffordable.

3.18. The priorities outlined below are projects that can realistically be undertaken over the next couple of years, regardless of future government policy changes.

Priority	Rationale	Timescales
1. Establish **LESCo** to sell gas and electricity to residents and SMEs.	Unaffected by policy changes; cost neutral to the council with potential for income generation; significant financial benefit for vulnerable customers.	Establish the company by April 2015 and achieve 10,000 customers by April 2017.
2. Deliver **district heating** to c1,500 council houses in the Lincoln Green area.	Unaffected by policy changes; significant council priority; existing HRA budget and identified opportunity for ESIF funding (European grant funding).	Commence procurement Jan 2016; contract award Aug 2016; start on site Jan 2017; construction complete Jan 2020.
3. Continue to deliver integrated **affordable warmth service** and **winter warmth campaigns to** vulnerable households	Largely unaffected by policy changes; some local budgets (e.g. fuel poverty fund)/grant funding(e.g. central heating fund); government indicated that CSR/Autumn Statement will launch new fuel poverty support mechanism; major local priority to tackle poverty.	Central Heating Fund to install new heating systems in 75 fuel poor homes by Mar 2016; otherwise ongoing.
4. Complete **Green Deal Communities** funded insulation work and support **Better Homes Yorkshire** to deliver energy efficiency improvements to all sectors.	Although policy changes will make this difficult, we have attracted grant funding and identified further funding via ESIF; some BHY work (particularly heating) can continue regardless of government funding.	GDC completed March 2016; ESIF grant determined summer 2016; completed summer 2019.
5. Commence a **10 year energy efficiency investment programme** in multi-storey blocks.	Local priority; HRA budget available; feasibility study will provide a practical, deliverable model, regardless of grants.	Technical study and related investment/procurement programmes completed Nov 15; specifications developed Apr 16; procurement underway Apr 16

3.19. The following sections provide a more general analysis of progress across the city.

New Developments by Private and Third Sector

3.20. Leeds-based developer Citu have permission for 300 zero-carbon one and two-bedroom flats and three and four-bedroom houses at Low-Fold in Hunslet with high levels of insulation and electricity-generating solar panels. This follows their existing award-winning conversion of Shaftesbury House into the Greenhouse development, featured in the Council's Supplementary Planning Document, Building for Tomorrow Today.

3.21. LILAC is a pioneering project of 20 sustainable low impact living housing development in Leeds. The project was based on core values of low impact living, affordability and community living. It used co-housing design principles and gradually moved to being permanently affordable through the formation of a Mutual Home Ownership Society (MHOS). The LILAC project, which stands for Low Impact Living Affordable Community, has homes that are super-insulated, use natural and locally sourced materials, such as straw and timber, and make use of heat from the sun to warm the houses and reduce energy bills. For a three bed house, energy costs are around £400 a year for gas and electricity combined (£7 a week).

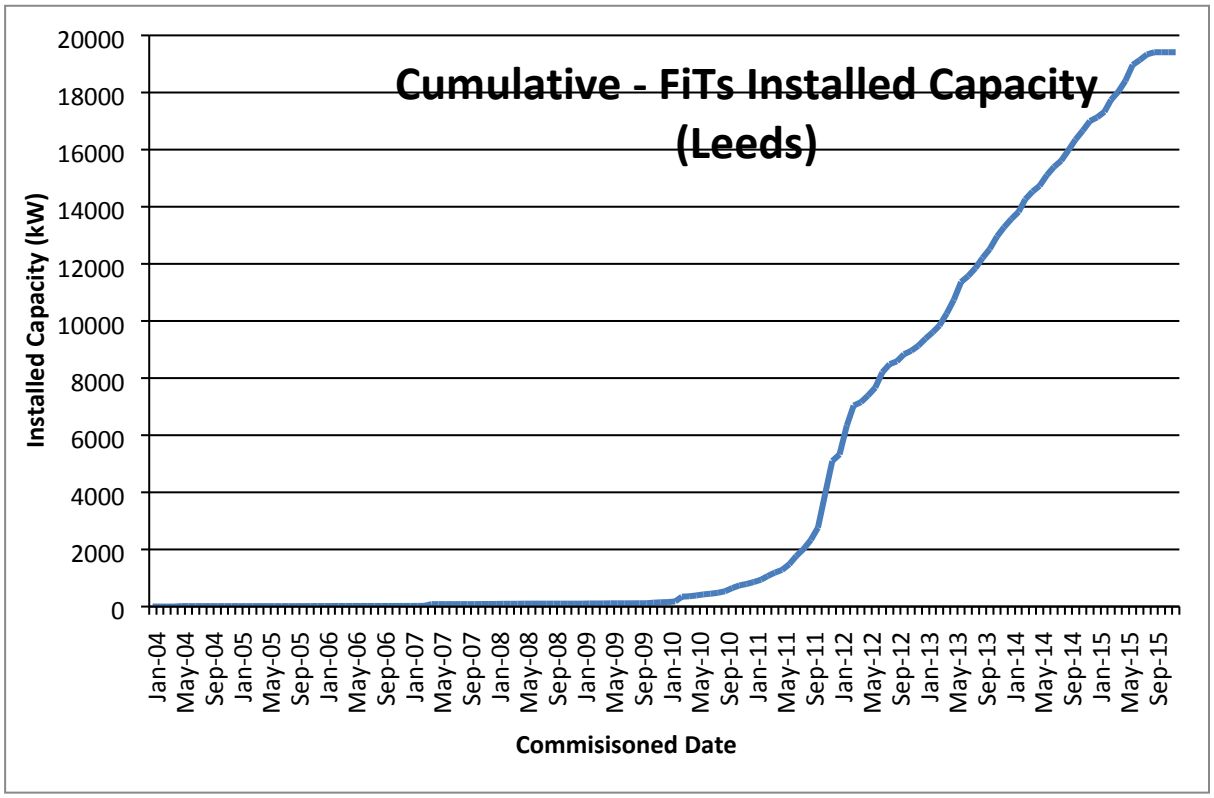
3.22. Leeds First Direct Arena state of the art 13,500 capacity "super-theatre" was completed in 2013 and attracts some of the biggest names and events in the world of entertainment. The building is a ground breaking achievement in energy efficiency and environmentally friendly construction of theatres. Features include: open air source heat pumps, a roof that collects rainwater to be reused in the running of the building, and an area with a green sedum roof to help enhance the environment. The arena achieved a 'Very Good' BREEAM rating, a milestone for a large capacity infrastructure.

3.23. The Trinity Leeds development was a removal and regeneration of existing retail stock and the encasement of the entire development under a glazed roof. The glazed roof provides the walkways of the shopping mall with sufficient natural lighting in lieu of artificial lighting which is saving a lot of energy. The development achieved a BREEAM 'Excellent' rating which was realised through a number of initiatives including a process of generating energy through waste and by ensuring the project achieves its goal of sending zero waste to landfill, a target achieved by the developer at six previous sites.

3.24. No additional car parking spaces were developed as result of the arena and Trinity developments. The absence of further car parking spaces will encourage people to make alternative travel arrangements when visiting these attractions.

Renewables

3.25. The graph below shows the level of renewable technologies installed across the city and how it has grown over the last 4 years with the support of the government feed in tariff scheme.



3.26. Based on an average output of 750 kWh per kW peak, the above installations will equate to the equivalent of 15,000 MWh of electricity per annum, the equivalent of the electricity used by about 5,000 homes. Solar panels account for just under 99% of the installations with one commercial hydro installation and wind making up the balance.

3.27. Examples of Renewables in other parts of Private and Public Sector

Kelda Water Services installed a 2MW wind turbine in the Aire Valley in October 2014. It was 78M high with a rotor diameter of 90 metres. The site started to receive electricity from the turbine from late November 2014, with enough power being provided to supply 10% of the site's energy requirements, the equivalent to 1,100 homes' annual usage.

At Pool in Wharfedale 2 old water turbines lay disused for decades but were refurbished (2009-10) by Derwent Hydro. Both have been equipped with new gearboxes, generators and control system and each supplies around 70kW (peak) to the adjacent factory.

In 2009/10, the University of Leeds' carbon footprint, resulting from electricity, gas,

steam and fuel used in its buildings and vehicles, was 70,454 tonnes of carbon emissions with a financial cost of around £9.8M in energy bills. This represents a reduction of 358 tonnes of carbon against the 2005/6 baseline. The University aims to reduce its carbon emissions by 35% by 2020/21, against the 2005/6 baseline. To support their target reductions, a range of interventions have been proposed across University buildings. Some initiatives will focus on control and management of systems, other initiatives improve efficiency and performance, whilst others will focus on how staff and students can support carbon reduction in their everyday activities.

Council's Energy Policy

3.28. Having implemented many of the low cost options, behaviour change is still an area where limited progress has been made to date. Previous big switch off campaigns have shown benefits but only on a very time limited basis and required significant management. However, behaviour change is recognised as an area that can reap significant benefits at minimal cost. To make it sustainable, it requires more of a permanent cultural shift rather than short term intensive campaigns. The proposed implementation of the energy policy is intended to kick start the cultural shift by raising the profile of energy management council wide, supporting our target to reduce carbon emissions by 40% by 2020.

3.29. The Leeds City Council Energy Policy will help manage our energy use in council buildings. The policy supports Leeds City Council meeting national and local targets, as well as complementing existing plans and strategies in the council.

3.30. It will help manage our buildings in a more consistent manner. Setting fixed temperatures can eliminate unnecessary anomalies, along with reducing our energy use in some cases, as reducing the thermostat by just 1°C can potentially reduce the annual heating bill by up to 8%.

3.31. The energy policy is designed as a two tier document, with the top tier encompassing a high level vision, benchmarking our general approach and providing strategic guidance on energy use. It promotes energy efficiency through a civic leadership role, ensuring Leeds City Council is a trailblazer in the creation of a low carbon city. The second tier provides operational guidance and targets to both technical managers and staff. It also encompasses operating procedures, data management and roles & responsibilities. The energy policy directs Leeds City Council in how we manage our energy consumption and covers building gas and electricity only. It will not address water, transport (fuel) or waste.

3.32. The targets contained within the policy are outlined below:

3.32.1. All council buildings must use the council's approved utility contracts

Currently 2.4% of Council buildings buy energy outside of the Council's contracts (based on 2014/15), therefore not benefitting from the bulk purchasing discounts that the Council benefits from.

3.32.2. Purchase no less than 25% of electricity from low carbon/renewable sources.

Maintaining a 25% target until 2020 would permit the purchase of low carbon energy without financial disadvantage, despite the proposed changes to Climate Change Levy.

3.32.3. All council buildings will be required to fit an Automatic Meter Reading (AMR) by 2020

Costs of installing AMRs have already been accounted for. AMR for smaller buildings is included as a metering charge within utility bills. Larger buildings are under an existing contract for installation.

3.32.4. Larger buildings with energy bills greater than £30,000 will be required to implement a smart Building Energy Management Systems (BEMS) by 2020.

Approximately 60 council buildings (excluding schools) have energy bills greater than £30,000. Half of these buildings already have BEMs in place. Proposed BEMS installation would be subject to a business case evaluation to ensure viability. It is proposed that any intended installation be subject to Salix funding criteria, or similar, where viable.

3.32.5. An application or programme will be developed for presenting energy consumption data to all council employees and will allow nominated personnel to take ownership of their own space/building energy use.

A Leeds Energy Innovation Lab event took place on the 24th August, which looked to provide a solution about how we access and use our energy data. Three data solutions were agreed to be developed over a 12 week period. This work is funded from an allocation of funds for data dive innovation labs.

3.32.6. An intelligent data management system will be employed to ensure an integrated and smart approach to controlling overall council energy use.

This will either be further development of the current system or identification of a better system. We are currently considering options available to provide smarter energy management via use of data.

3.32.7. Building Energy Audits will be conducted on the top 100 energy consumers, to help identify any energy reduction measures that would help reduce consumption.

Building energy audits will help assess our top energy users to understand where opportunities exist for buildings to reduce their energy consumption.

3.32.8. Financial responsibility of energy budgets will be universally adopted by all building/site managers (either by building or building clusters).

Building/site managers would have a better understanding of how energy is used in their buildings and where wastage may be taking place.

Sustainable Energy Action Plan (SEAP)

3.33. Leeds City Council is a signatory to the European Covenant of Mayors, a movement of local authorities that are aiming to meet or exceed the European Union objective of a 20% CO_2 reduction by 2020. This commitment is achieved through the implementation of a Sustainable Energy Action Plan (SEAP). The SEAP is a key document showing how the Council will reach its commitment by 2020. It uses the results of a Baseline Emission Inventory (in Leeds' case 2005 – the first year for which we have comprehensive and reliable energy data for the city) to identify the fields of action and opportunity for reaching our target of a 40% reduction in CO_2 emissions by 2020.

3.34. The SEAP will not be a fixed and rigid document and will be updated as circumstances change. In line with the Cutting Carbon & Air Quality Breakthrough project, an annual report will be presented to the Executive Board to capture progress on the full range of activities to provide wider accountability. We intend to submit an Action Report (providing qualitative information about the implementation of the SEAP) every 2 years accompanied by an Implementation report (including an updated Monitoring Emissions Inventory) every 4 years.

3.35. The Covenant of Mayors focuses on action at local level within the power of the local authority. The SEAP concentrates on measures aimed at reducing CO_2 emissions and final energy consumption by end users. The Covenant's commitments cover the whole geographical area of the local authority. Therefore the SEAP includes actions concerning both the public and private sectors, with an expectation that the local authority will demonstrate leadership through measures relating to its own buildings, facilities and vehicle fleet. Capturing information and data about measures being taken in the private sector is a challenge and this first SEAP is an initial attempt to identify some of the most significant action being undertaken across the city by other partners (referred to in SEAP terminology as 'Tertiary Facilities'). This has involved pulling together a database of contacts across the city which it is anticipated will provide the basis for updates in the future.

3.36. In approving the SEAP, Executive Board will approve its submission to the European Covenant of Mayors and its publication on their website (www.covenantofmayors.eu). A version will also be made available on the

Council's website accompanied in time by further information on the projects being undertaken in the city.

4. Corporate considerations

4.1. Consultation and engagement

4.1.1. The Energy Policy is not for public consultation and is an internal facing document only. As part of development of the Energy Policy, we have directly consulted with Corporate Property Management, Facilities Management, Human Resources, Changing the Workplace and various members of staff associated with or working closely with energy management and finance. We have also made contact with all Unions, the Disability Network and the Water Management Team. Those directly consulted with were also invited to the Manager Challenge Event (Managing Our Energy Use, on 10th Nov), along with other employees who would be influenced by the introduction of the energy policy; such as staff from leisure centres, museums, galleries and libraries, energy analysts, maintenance officers and communication officers. All personnel contacted have been sent a copy of the draft energy policy. The draft policy was discussed at Environment Programme Board on the 2nd November 2015.

4.1.2. Leeds City Council has agreed to a year-long feasibility trial with SmartKlub. SmartKlub is a new approach to developing distributed energy infrastructure at city scale. It works to conceptualise and develop the overarching strategy and projects to enable cities to have affordable energy, become zero carbon and move towards more sustainable, resilient communities. Through a collaborative process between the members of SmartKlub and LeedsCity Council (LCC), potential projects will be outlined and developed resulting in project specifications which are innovative, realisable and meet the Council's requirements of reducing carbon, addressing fuel poverty within a sound business case.

4.1.3. SmartKlub has its origins in the successful Leeds Energy Forum which the Council has facilitated over the past 2-3 years, engaging with the private sector on the strategic direction for low carbon energy projects in Leeds. The focus within SmartKlub is now more clearly focussed on project innovation and delivery. The opportunity to participate in SmartKlub has been advertised to all of the Energy Forum participants and each SmartKlub workshop has also been advertised through the YORtender website.

4.1.4. SmartKlub events to date have focussed on the low carbon innovation opportunities presented by the Council's programme for Towerblocks improvement; plans for improvement in low carbon transport fuel infrastructure; and the introduction of Smart Meters & their integration in the Leeds' new energy tariff as part of the proposed Leeds ESCo.

4.2. **Equality and diversity, cohesion and integration**

4.2.1. An Equality, Diversity, Cohesion and Integration Screening assessment was undertaken for the Energy Policy on the 12 November 2015. The assessment is attached as appendix 1.

4.2.2. The nature of the working environment and the diverse groups of people using the different stock of buildings results in a variety of ways people have to adjust to circumstances. People have individual needs and require a comfortable working environment. This policy looks to ensure a consistent working environment, but recognises individual needs and the requirement to make reasonable adjustments where necessary.

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 and the Council has agreed a city wide target to reduce carbon emissions by 40% by 2020 from a 2005 baseline. This target is also reflected as a corporate target for the Council's own operational estate to which the proposed Energy Policy will apply.

4.3.3. 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. The Energy Policy will help improve building management and resource efficiency. Associated projects will be developed and expanded at the action plan stage. All future projects will assume normal business case process and be assessed for viability at project initiation stage. The use of SALIX funding will be maximised to deliver spend to save schemes.

4.4.2. 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).

4.4.3. Where possible, the team are identifying and bidding for grants to support the development of this work. As well as all the bids to support the improvement of air quality (as detailed in October's report), there have also been two ESIF bids submitted to the value of £9 million to support the conversion of social housing to district heating and the promotion of energy efficiency measures in social housing.

4.4.4. A successful secondment to the University of Leeds has resulted in greatly improved collaboration with academic partners in the city. As a result joint funding for projects has been pursued, with successes in both attracting funding for specific projects (e.g. c£10k for Energy Use in Social Housing), funding for projects being developed in the city (e.g. c£3m for Smarter Travel Solution and Energy Storage technologies) and numerous examples of in kind support from existing research resources.

4.5. **Legal implications, access to information and call-in**

4.5.1. There are no legal implications to note in respect of 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.

4.6.2. If we do not meet the EU directive for air quality by 2020, the Council could face huge fines being passed down from Central Government.

4.6.3. 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

Although the national policy context for energy efficiency is difficult, we are continuing to identify opportunities that will enable us to improve the fabric of the city's homes, lower residents' bills, reduce CO_2 emissions and tackle fuel poverty. It is however almost inevitable that the installation rate and linked improvements to bills, CO_2 and fuel poverty will slow down.

The council will continue to bid for any suitable funding that becomes available but the most efficient way to be able to continue to reduce emissions at a city level is to focus on getting energy efficiency included within a strong devolution deal for LCR.

6. Recommendations

Members of the Executive Board are recommended to:

- Note the progress the Council has made to date and its continued plans to reduce carbon emissions;
- Endorse the Sustainable Energy Action Plan in support of the Council's participation in the European Covenant of Mayors;

- Support the adoption of a Council wide energy policy from 4th January 2016 and the requirement for Council wide behaviour change to drive energy savings; and,
- Continue to demonstrate leadership in this area and continue to work closely with private, public and third-sector partners across the city.

7. Background documents[1]

LCC Energy Policy
LCC SEAP (Sustainable Energy Action Plan)

[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.