

Blackpool Council

Sustainability, Energy and Water Strategy (Draft)

*Delivering a low-carbon, energy efficient, economically resilient
community*

2018 to 2024

Blackpool Council



Blackpool Council

Sustainability Strategy

2018 to 2024

Vision statement

Sustainability and the supply of energy and water are three of the key challenges facing the World.

Energy is essential in almost every aspect of our lives and for the success of our economy and the UK faces two long-term energy challenges:

- tackling climate change by reducing carbon dioxide emissions both within the UK and abroad; and
- ensuring secure, clean and affordable energy

The world is also projected to face a 40% global water deficit by 2030 under the business-as-usual climate scenario. With only 3% fresh water resources, the fact is there is not enough water to meet the world's growing needs without dramatically changing the way water is used and managed.

By managing and taking the lead for the reduction of energy, water and carbon dioxide emissions across the Borough, the Council is at the hub of the sustainability challenge to deliver, demonstrate and encourage sustainable practises not only across the Borough, but across the Fylde and Lancashire and it is committed to meeting that challenge.

The Sustainable Strategy formally commits Blackpool Council to taking action to assist the region in achieving the national goal of reducing carbon dioxide emissions by 80% by 2050 and improving local sustainability. This is an ambitious strategy that invests in the future of Blackpool and puts our planet and sustainability at the heart of Council decisions.

Through improved sustainability, the development and utilisation of local energy supply and shifting to a more energy-efficient and low carbon economy, innovative technological solutions to improve efficiency, reduce demand and costs will aid Blackpool's aim to boost the local economy and help in creating more resilient communities.

Blackpool is well placed to develop new specialisms in these fields and in order to protect and maintain the visitor economy from climate change within our region, we must learn to change with it.



Councillor Jackson,
Cabinet Member for Environmental Services and Highways

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Blackpool Council

Sustainability Strategy

2018 to 2024

Part 1

Introduction

Ensuring that the actions and decisions we take guarantee a better quality of life for everyone now and generations to come.

The Council recognises the importance of sustainability in contributing to resilience of its services, town and the community.

It also recognises that by reducing its environmental impact and consuming less natural resources this will improve the local environment and make a contribution to improved health, better social cohesion and economic prosperity and community resilience.

Taking a sustainable approach will enable us to:

- Support the delivery of the Council Plan
- Reduce the Council's impact on the environment
- Reduce the amount of natural resources we consume and purchase
- Achieve efficiency savings by reducing our operating costs
- Increase resilience of corporate services and assets, ensuring they are fit and efficient to deliver
- Improve the sustainability of the supply chain

The strategy will set a clear vision of what Council needs to do become a sustainable organisation and realise the benefits it brings.

Scope

The Sustainability Strategy will focus initially on the Council's own activities and will be accompanied by an Action Implementation Plan.

Monitoring and Review.

The Sustainability Strategy is a 5-year strategy 2018-19 to 2023-24.

The strategy will be reviewed in its final year and the Action Implementation Plan will be monitored quarterly and progress reported annually.

The Strategy will work in conjunction with and support the following Council strategies and policies:

- Council Plan
- Local Plan
- Local Transport Plan
- Destination Management Plan
- Health and Wellbeing Strategy
- Fylde Coast Growth Accelerator Strategy
- Lancashire and Blackpool Flood Risk Management Strategy
- Commissioning and Procurement Strategy
- Blue and Green Infrastructure Strategy

Why do we need a Sustainability Strategy?

- Environmental Sustainability
- Uncertain Energy supply
- Rising Energy prices
- Wider Policy Context

Environmental Sustainability

The World Economic Forum The Global Risks Report 2017 ranked “water crises” at number 3 in the list of the top 10 global risks in terms of impact and “Failure of Climate Change mitigation and adaptation” at number 5.

The report notes that whilst progress is being made and “that the transition to a low-carbon economy is underway” unfortunately “the pace of change is not yet fast enough” and requires further collective action.

The report calls for action to “redouble our efforts to protect and strengthen our systems of global collaboration. Nowhere is this more urgent than in relation to the environment, where important strides have been made in the past year but where much more remains to be done”.

The energy sector is at a transition point and facing a range of growing challenges.

Countries have committed to reducing greenhouse gas emissions under the 2015 climate change agreement (COP 21) putting a renewed focus on the decarbonisation of the energy sector whilst trying to deliver consumer affordability and industry competitiveness, and security of supply.

This is known as the Energy Trilemma.

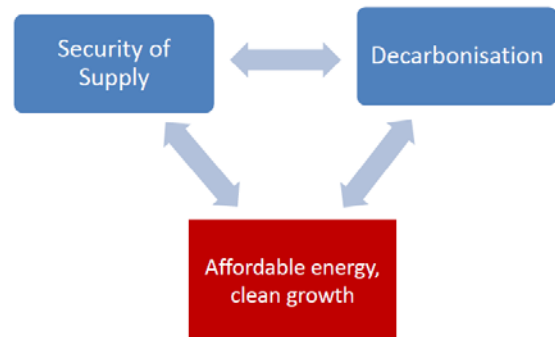


Figure 1 The Energy Trilemma.

Energy Security Uncertain Energy Supply

The UK has an uncertain future with the security of energy supply. As the UK continues to import more energy from abroad this means there is less security over supply, less price stability and less freedom in foreign policy decisions.

With the national grid struggling to cope with the rising demand and gap in supply capacity reducing demand, alongside local and renewable energy generation will make Blackpool more resilient to supply and price fluctuations and offer opportunities to develop the local economy.

Rising Energy prices

The cost of energy and water continues to rise and that appears to be trend for the immediate future on the back generation and storage capacity issues, energy security and the decarbonisation agenda.

This strategy aims to minimise the impact of rising prices for the Blackpool Council, our residents and local businesses.

What is ‘Sustainable Development’?

Sustainable development was defined as *‘development which meets the needs of the present, without compromising the ability of future generations to meet their own needs’* by the World Commission on Environment and Development (WCED) report, 1983.

Through this report, it was recognised for the first time that the environment, economy and society are interconnected and mutually dependent, and that their management holistically would enable sustainable development.

The UK Government’s Sustainable Development Strategy ‘Securing the Future’, published in 2005, set out five guiding principles of sustainable development:

1. Living within the planet’s environmental limits
2. Ensuring a strong, healthy and just society
3. Achieving a sustainable economy
4. Promoting good governance
5. Using sound science responsibly

‘Mainstreaming Sustainable Development’, February 2011, defined sustainable development as, *‘making the necessary decisions now to realise our vision of stimulating economic growth and tackling the deficit, maximising wellbeing and protecting our environment, without negatively impacting on the ability of future generations to do the same.’*

Transforming our World: The 2030 Agenda for Sustainable Development (United Nations 2015) adopted by Heads of State and Government at a special UN summit set out a commitment to achieve sustainable development by 2030 world-wide, providing for a shared global vision towards sustainable development for all:



“A worldwhere there is universal access to affordable, reliable and sustainable energy”

Delivering the Council's vision?

The Sustainability Strategy follows the Council Plan, which sets out the Council's vision and priorities out to 2020, being an essential component for building and safeguarding the long-term economic growth and resilience of the community.

The Blackpool Council - Council Plan has two main goals:

- boosting our local economy by maximising growth and opportunity and
- creating, stronger, healthier, more resilient communities

The vision for Blackpool is that it will be:

"The UK's number one family resort with a thriving economy that supports a happy and healthy community who are proud of this unique town."



The economy: Maximising growth and opportunity across Blackpool

Ensuring a constant supply of energy is one of the key challenges facing the world, and Blackpool is well placed to develop a new specialism in this field.

All across the Fylde Coast, developments are taking place in areas such as nuclear, wind and gas power, with further potential offered by other renewable energy sectors, such as tidal power.

A new Enterprise Zone will give added support to this industry as it emerges, and tether important elements of the supply chain to Blackpool.

There is no denying that the potential of shale gas is enormous and could be worth many millions to the Fylde Coast economy over the next 30 years. This potential has to be considered given the economic climate. Of course any environmental impact will be carefully considered through the process.

With more than 1200 people already employed at the former BNFL plant at Springfield the Fylde Coast has the real potential to become a hub for the energy market, not only because of shale gas exploration, but also the growth in the number of offshore windfarms in the next few years.

Through improved sustainability, the development and utilisation of local energy supply and advanced technologies to improve efficiency, reduce demand and costs this will aid Blackpool's aim to boost the local economy and help in creating more resilient communities.

Policy Context

National Policies

The **Climate Change Act, 2008** set the world's first legally binding climate change target to reduce greenhouse gas emissions by 80% by the year 2050 compared to the 1990 base level.

By doing so it aims to encourage the transition to a low carbon economy and reduce the effects of climate change on the economy, society and the environment to a manageable level

Under the Act UK Governments are obliged to:

- Set five year carbon budgets to limit greenhouse gas emissions
- Reduce the demand for energy and improving energy efficiency
- Invest in low-carbon technologies
- Publicly report carbon emissions from businesses and the public sector
- Use statistics on greenhouse gas emissions and further evidence, analysis and research to inform energy and climate change policy

EU Renewables Directive (2009/28/EC). The Directive mandates levels of renewable energy use within the European Union, requiring that 20% of the energy consumed within the European Union is from renewable resources. This is a pooled target across member states.

The UK specifically has been given the target of sourcing 15% of its energy from renewable sources by 2020.

Local Policies

Blackpool Local Plan, Part 1 Core Strategy (2012 to 2027). The Core Strategy adopted in January 2016 is a key planning document for Blackpool, setting out where new development, including housing, employment, retail and leisure should be located to meet Blackpool's future needs to 2027.

In April 2008 Blackpool Council signed up to the **Nottingham Declaration**, which was a formal commitment recognising the role of local authorities in leading society's response to the challenge of climate change by:

- Helping communities to become resilient to more extreme weather events
- Reducing greenhouse gas emissions from their own buildings, services and the community

In April 2008 Blackpool Council signed up to the **Local Authority Carbon Management Programme** and was formally recognised for its efforts by the Carbon Trust in reducing energy use, improving energy efficiency and cutting carbon dioxide emissions.

Since 2010 Blackpool Council has been a qualifying member for the **Carbon Reduction Commitment (CRC) Energy Efficiency Scheme** and has a statutory annual reporting requirement to 2019 to report carbon emissions generated by qualifying energy consumption and purchase Carbon Allowances for associated carbon dioxide emissions.

See Appendix A1: Wider Policy Context for further information

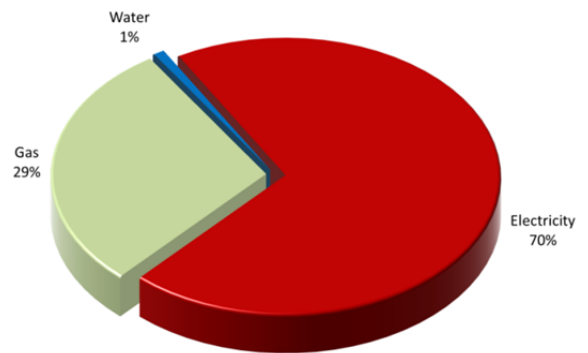
The Challenge

As a Council we have direct control over our energy and water use and carbon dioxide emissions. This section sets the baseline for 2016/17:

Carbon Emissions

In 2016/17 Blackpool Council emitted approximately 17,273 tonnes of Carbon Dioxide, with Electricity consumption accounting for majority at 70%.

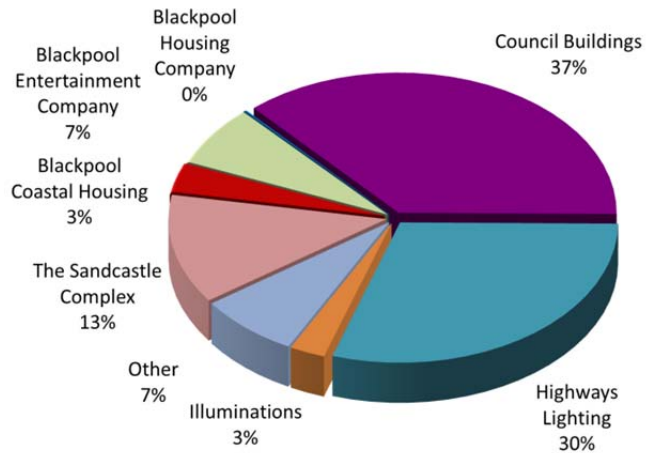
Annual Gas consumption accounted for 29% of the annual emissions with water consumption accounting for 1%



Electricity Consumption

In 2016/17 Blackpool Council consumed 27.1 Million kilowatt hour hours of electricity with Council Buildings' consumption accounting for majority at 37%, closely followed by Highways Lighting at 30%.

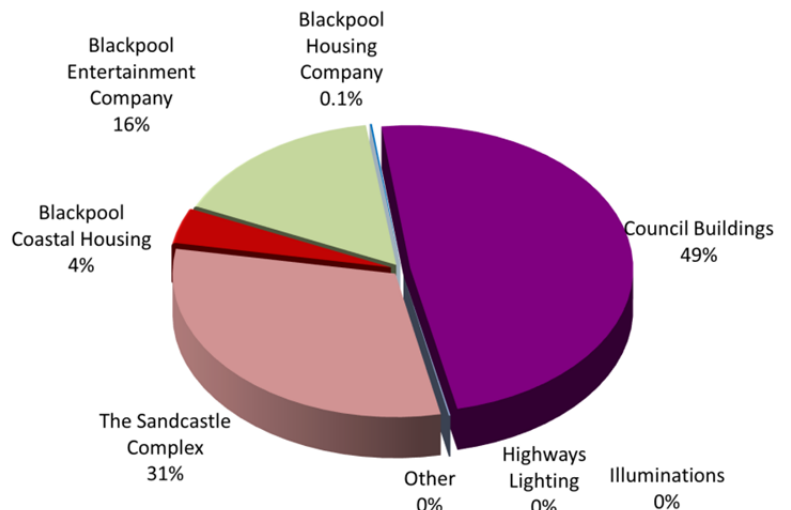
The largest singular site is the Sandcastle Waterpark complex which account for 13% of the annual electricity consumption.



Gas Consumption.

In 2016/17 Blackpool Council consumed 27.3 Million kilowatt hour hours of gas with Council Buildings' consumption accounting for majority and nearly half at 49%.

The largest singular site is the Sandcastle Waterpark complex which accounts for 31% of the annual gas consumption



Blackpool Council Sustainability Strategy 2018 to 2024

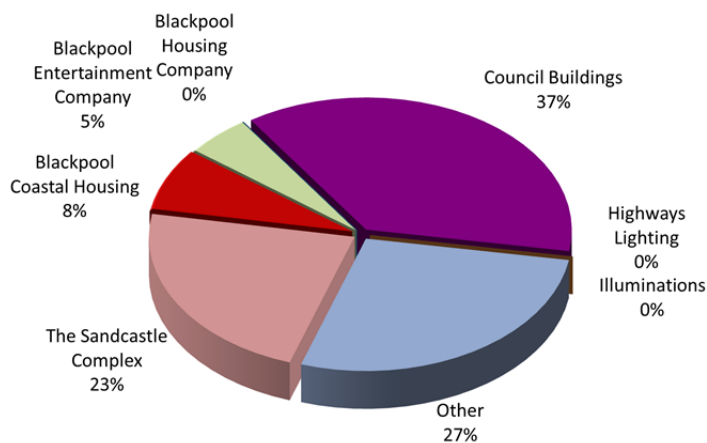
Part 1

Water Consumption

In 2016/17 Blackpool Council consumed 135,031 cubic metres of water with Council Buildings' consumption accounting for majority at 37%.

The largest singular site is the Sandcastle Waterpark complex which accounts for 23% of the annual water consumption.

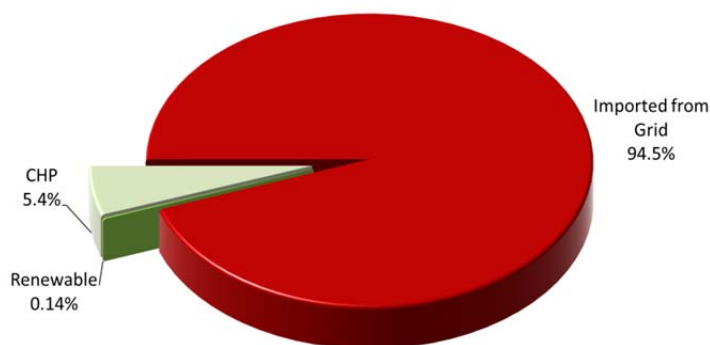
"Other" which is the 2nd largest category user is an amalgamation of miscellaneous sites comprising Parks, Car Parks, Toilets and smaller consumers.



Renewable and Sustainable Energy Generation

In 2016/17 Blackpool Council generated 39,000 kilowatt hour hours of electricity, accounting for just 0.14% of the total electricity

Combined heat and Power (CHP) is an efficient method of generating heat and power, as opposed to conventional boilers and importing electricity from the grid and accounting for 5.4%.



The Challenge

The majority of Council Carbon Dioxide emissions arise from the electricity use within Council buildings and Highways Lighting, accounting for 79% of the overall emissions and should be the primary area for action for investment and decarbonisation.

The Council's Highway Lighting and Sandcastle Waterpark are the two highest energy singular consumers and responsible for 40% of overall emissions.

With utility prices set to rise over the next 5 years and in particularly with regards to electricity, the increasing role of non-commodity elements becoming the primary cost there is greater emphasis than ever to reduce consumption and utilise renewable energy to mitigate the cost of grid supplied electricity.

The Strategy

In line with National and Local strategies, to assist the region and UK in achieving its sustainability and energy objectives, targets and local goals Blackpool Council commits to:

Objectives

The strategic aims are to:

- **Take action to mitigate, build resilience and adapt to climate change and support the move to renewable and low carbon energy;**
- **Help the region achieve the national goal of reducing Carbon Dioxide emissions by 80% by 2050 and sourcing 15% of its energy from renewable sources by 2020;**
- **Acknowledge, demonstrate and raise awareness that action needs to take place at all levels, global, international, European, national, regionally and locally to reduce carbon dioxide emissions and integrate sustainability into Policy and operational and service delivery procedures;**
- **Blackpool will become an exemplar in energy and water demand management;**
- **Provide effective support to deliver a green economy and achieve sustainable economic development;**
- **Catalyse further innovation and new business and employment opportunities in low carbon products and services**

With the strategic objectives:

- To take all practical steps to reduce the Council's carbon dioxide emissions and respond to the challenges posed by the impacts of climate change
- To minimise the Council's demand for energy and water and eliminate unnecessary use
- To use the Council's energy and water efficiently
- Ensure its estate is properly maintained to enable energy and water use to be optimised
- To maximise the Council's use of renewable energy, to support the region in achieving the national goal of reducing carbon dioxide emissions by 80% by 2050 and sourcing 15% of its energy from renewable sources by 2020
- To explore and maximise the Council's use of recycled and alternative water resources
- To manage and use energy at the most economic and environmental cost
- Stimulate business opportunities and employment opportunities in low carbon products and services
- To integrate and embed sustainability and carbon reduction management into Policy and operational and service delivery procedures
- Integrate Sustainable design and carbon reduction management into building design, construction and maintenance.

Delivering the Strategic Objectives

1. Demand Management

- 1.1** Take all practical steps to reduce the Council's carbon dioxide emissions and respond to the challenges posed by the impacts of climate change
- 1.2** Minimise the Council's demand for energy and water and eliminate unnecessary use.
- 1.3** Use the council's energy and water efficiently
- 1.4** Any continuing use of fossil fuels to use clean technologies and to be efficient, such as using combined heat and power
- 1.5** Ensure the Council's estate is properly maintained to enable energy and water use to be optimised

The Clean Growth Strategy, published by the Department for Business, Energy & Industrial Strategy " in October 2017 sets out the action needed to take to cut emissions, increase efficiency, and help lower the amount consumers and businesses spend on energy across the country" to meet the UK's 2050 target and the intermediary 2032 Carbon Budgets.

The Strategy calls for a public sector 30 per cent reduction in greenhouse gases by 2020/21, against a 2009/10 baseline

Under Demand Management Blackpool Council will:

1. Reduce service emissions by 30% by 2020/21, against a 2009/10 baseline, and be on the path to a 50% target by 2030.
2. Develop Strategy Action Implementation Plan to detail how the 30% target will be met.
3. Develop Water Action Plan to ensure the Council's water use is efficient and on the path to becoming an exemplar in water management.
4. Identify and reduce energy and water consumption and eliminate unnecessary use through the use of advanced metering and building management systems.
5. Maximise the utilisation of efficient LED lighting systems through Council services, buildings and highways lighting.
6. Maximise the potential for dimming through the highways lighting portfolio.
7. Maximise the utilisation of voltage optimisation power management systems.
8. Maximise the utilisation of Combined Heat and Power systems.
9. In conjunction with "**Generation and Supply**", will explore the potential for using battery storage to manage council electricity demand and load shift to avoid peak electricity costs.



2. Generation and Supply

- 2.1** Maximise the Council's use of renewable energy, to support the region in achieving the national goal of reducing carbon dioxide emissions by 80% by 2050 and sourcing 15% of its energy from renewable sources by 2020
- 2.2** Explore and maximise the Council's use of recycled and alternative water resources
- 2.2** Explore energy and water supply options to develop commercial offering.

Under Generation and Supply Blackpool Council will:

- Increase the amount of amount of renewable energy generation to meet the **15% target**, through the development of a Renewable Energy Programme to deploy of technologies such as roof top and ground based Solar PV, Wind, Biomass, Ground Source and Tidal.
- Increase the amount of rainwater harvesting and alternative sources of water to meet **15% target** of Council consumption.

With a coastal location, Blackpool is an excellent location to explore and utilise renewables such as wind, tidal and solar and with the enterprise zones, the potential for sustainable energy centres with smart grid connectivity to realise the benefits.

Generating renewable energy, whilst providing the council with low carbon energy also provides the Council with the opportunity to generate new stable income streams by selling to local businesses and the community and the introduction of green energy bond schemes.



The Fylde Coast also has the potential for shale gas and the Council is well placed to take advantage when sustainable supplies come to market

Generating local low carbon energy will also improve security of supply and the resilience of the Council and the community.

- Under the Renewable Energy Programme, Blackpool Council will initially create Urban Solar Farm making the use of the roofs of the Council's assets not yet being utilised.
- Develop and deliver Water Self Supply Solution to drive out efficiencies from direct portfolio management and deregulated market.
- Develop and deliver Energy White labelling solution for Blackpool residents and businesses.

Part 2

3. Economic Development

- 3.1 Stimulate business opportunities and employment opportunities in low carbon products and services
- 3.2 Share best practise with Local businesses and develop forum to discuss opportunities
- 3.3 Work with wholly owned companies, schools and academies, to share best practise and develop commercial sustainability opportunities

The Blackpool and Fylde Coast Enterprise Zones present excellent opportunities to stimulate the energy, sustainable generation and technology sectors.

In October 2017, Blackpool saw the opening of the new Lancashire Energy HQ, a cutting-edge flagship development by Blackpool and Fylde College. The facility, funded by Lancashire Local Enterprise Partnership and Blackpool and The Fylde College, has been co-designed with employers to support their workforce requirements and to deliver training and education to support the renewable energy sectors, as well as nuclear, oil and gas.

With nuclear, tidal, wave, wind and alternative gas abstraction technologies at the forefront of energy development, the

Fylde Coast is ideally positioned to drive and capitalise on this burgeoning industry.

The region is already home to 80 energy sector businesses, with the huge potential for renewable tide, wind and wave power generation, the capacity for commercial growth is significant.

With that growth comes job creation.

By developing and working with the Enterprise Zones and the Lancashire Energy HQ, a suitably skilled local workforce and business opportunities capable of sustaining growth and safeguarding the region's future prosperity is assured.

Under **“The Clean Growth Strategy”**, published by the Department for Business, Energy & Industrial Strategy in October 2017 Local Authorities have a lead and primary role to deliver resilient and long term sustainable economic development which will:

- catalyse further innovation in low carbon products and services
- generating new business and employment opportunities
- release funds for front line services



4. Policy

- 4.1** Integrate and embed sustainability and carbon reduction management into Policy and operational and service delivery procedures
- 4.2** Integrate Sustainable design and carbon reduction management into building design, construction and maintenance
- 4.3** Improve sustainability and Social value offering in the supply chain, particularly for utility and low carbon technology suppliers

Each year Blackpool Council spends in the region of £200m from its revenue & capital budgets with third party providers.

The Council wants to work with providers in all sectors and users of services, to ensure that better outcomes can be secured for the people of Blackpool.

Through Social Value, ‘a process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits to society and the economy, whilst minimising

damage to the environment’, sustainability is developed and improved throughout the supply chain from provider to service end user, to the wider Blackpool Community.

Blackpool Local Plan, Part 1 Core Strategy (2012 to 2027) The core strategy, adopted in January 2016 is a key planning document for Blackpool, setting out a number of important goals, objectives and policies in relation to Sustainable building Design and Renewable and Low Carbon.

The strategy requires all new non-residential development designs mitigate the impacts of climate change, minimise carbon emissions and ensure buildings are energy efficient.

Non-residential developments must follow the principle of the energy hierarchy with the additional requirement that those over 1,000m² will be required to achieve BREEAM ‘very good’ (or any future national equivalent)

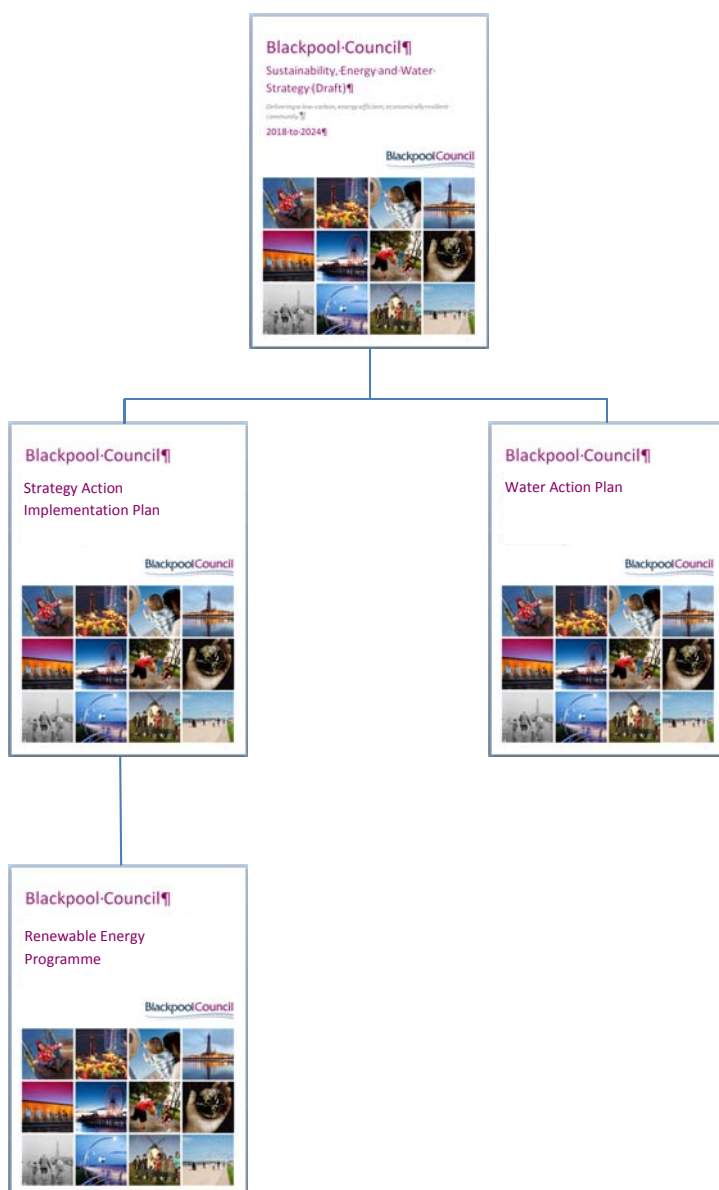
Blackpool Council has demonstrated its commitment and capability to deliver sustainable, energy efficient building design with the recent completion of the new Council office, Bickertaffe House – a BREEAM “excellent” rated and “A” rated EPC design.



Strategy Structure

The Sustainability Strategy will be supported by three additional documents which will be delivered in the next 12 month, detailing further actions in relation to energy, water and renewable energy.

- Strategy Action Implementation Plan Reviewed Annually
- Renewable Energy Programme Reviewed Annually
- Water Action Plan Reviewed Annually



Key Performance Indicators

The following performance indicators will be reported annually to monitor the performance of the strategy and implementation plans, against 2016/17 baseline.

• Annual Electricity Consumption	27,126,625	kWh
• Annual Gas consumption	27,314,309	kWh
• Annual Water consumption	135,032	m ³
• Annual Renewable energy generated	38,789 (0.1%)	kWh
• Annual water from recycled process.	0	m ³
• Annual Energy use per unit floor area		kWh/ m ²
• Annual Water consumption per unit floor area		m ³ / m ²
• Annual Carbon Dioxide emissions	17,273.4	Tonnes of CO ₂
• Annual Carbon Dioxide emissions per unit floor area		Tonnes of CO ₂ / m ²

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Summary Action Plan

No	Theme	Action	Benefit	Timescale	Owner
1.	Demand Management	Reduce service emissions by 30% by 2020/21, against a 2009/10 baseline, and be on the path to a 50% target by 2030	Reduced Carbon dioxide emissions, improve sustainability. Comply with Energy Act and Growth Strategy. Reduce energy costs.	2018 to 2024	Energy & Utilities Group
2	Demand Management	Develop Action Implementation Plan to reduce service emissions by 30% by 2020/21.	Reduction of energy consumption and associated costs	2018-19	Energy & Utilities Group
3	Demand Management	Develop Strategy and Action Plan to be on the path to a 50% by 2030.	Reduction of energy consumption and associated costs	2024	Energy & Utilities Group
4	Demand Management	Develop Water Action Plan to ensure the Council's water use is efficient and on the path to becoming an exemplar in water management	Reduction of water consumption and associated costs.	2018-19	Energy & Utilities Group
5	Demand Management	Maximise the utilisation of efficient LED lighting systems through Council services, buildings and highways lighting.	Reduction of electricity consumption, carbon dioxide emissions and associated electricity charges	2018-24	Andrew Duckett Service Manager
6	Demand Management	Maximise the potential for dimming through the highways lighting portfolio.	Reduction of electricity consumption, carbon dioxide emissions and associated electricity charges	2018-19	Clare Nolan Barnes/ PFI contractor
7	Demand Management	Maximise the utilisation of efficient power management/ voltage optimisation systems.	Reduction of electricity consumption, carbon dioxide emissions and associated electricity charges	2018-19 Installation programme.	Andrew Duckett Service Manager
8	Demand Management	Maximise the utilisation of Combined Heat and Power systems.	Reduction of electricity consumption, carbon dioxide emissions and associated electricity charges.	On-going	Andrew Duckett Service Manager

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9	Demand Management	Explore the potential for using battery storage to manage council electricity demand and load shift to avoid peak electricity costs	Reduction of electricity consumption and carbon emissions. Reduced exposure to peak electricity costs	2018-19	Andrew Duckett Service Manager
11	Generation and Supply	Develop Renewable Energy Programme to increase the amount of amount of renewable energy generation to meet the 15% target, to deploy of technologies such as roof top and ground based Solar PV, Wind, Biomass, Ground Source and Tidal.	Reduction of electricity consumption, carbon dioxide emissions and associated electricity charges Assist region in making 15% targets	2018 -2024	Andrew Duckett Service Manager
12	Generation and Supply	Increase the amount of rainwater harvesting and alternative sources of water to meet 15% target of Council consumption.	Reduction of water consumption and associated costs	2018 -2024	Andrew Duckett Service Manager
13	Generation and Supply	Develop and deliver Water Self Supply Solution to drive out efficiencies from direct portfolio management and deregulated market.	Reduction of water consumption and associated costs	2018-19	Andrew Duckett Service Manager
14	Generation and Supply	Develop and deliver Energy White labelling solution for Blackpool residents and businesses.	Reduction of energy costs to Blackpool community and businesses	2018-19	Andrew Duckett Service Manager
15	Economic Development	Stimulate business opportunities and employment opportunities in low carbon products and services	Increase economic prosperity of Blackpool. Development of local low carbon technology supply base.	2018 -2024	
16	Economic Development	Share best practise with Local businesses and develop forum to discuss opportunities.	Reduction of energy costs to Blackpool community and businesses. Assist region in making national CO2 reduction targets	2018 -2024	

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17	Economic Development	Improve sustainability and Social value offering in the supply chain, particularly for utility and low carbon technology suppliers.	Deliver improved social value offering to improve wider Blackpool economic and environmental sustainability.	2018-2024	Andrew Duckett Service Manager Procurement Commissioning team
18	Policy	Integrate and embed sustainability and carbon reduction/ low carbon management into Policy and operational and service delivery procedures	More efficient and sustainable services with lower lifecycle costs, reducing operating costs.	2018-2024	Energy & Utilities Group
20	Policy	Integrate Sustainable design and carbon reduction management into building design, construction and maintenance.	More efficient and sustainable buildings/ assets with lower lifecycle cost, reducing operating costs.	2018-2024	Energy & Utilities Group

Appendix A1: Wider Policy Context:

There is a hierarchy of context and drivers.

- International
- European
- National
- Local

A1.1 International Context

The concept of sustainable development received its first major international recognition in 1972 at the UN Conference on the Human Environment in Stockholm followed, in 1979, by the first World Climate Conference in Geneva which was the first occasion on which global governments were asked to consider and address man-made climate change.

A1 The Rio Earth Summit in 1992 was in turn the first summit at which world leaders acknowledged that a range of global issues should be addressed holistically. An outcome was 'Agenda 21', which set out the main issues key to sustainable development in the 21st century, including social and economic dimensions as well as environmental protection.

A1.1.1 The Kyoto Protocol was put in place in 1997, committing the European community and 37 other industrialised nations to reducing their emissions of greenhouse gases by 5% compared to their 1990 base levels; this remains the world's only encompassing climate change legislation and provided the framework for all future international agreements.

A1.1.2 Rio +10 (2002) the World Summit on Sustainable Development, took place in Johannesburg. The Johannesburg Declaration produced a number of

initiatives aimed at achieving the Millennium Development Goals, eight international development goals set in 2000, which integrate the three aspects of sustainable development; environment, economy and society.

A1.1.3 The Doha Climate Change Conference in 2012As a result of the most recent response to the Kyoto Protocol, the Doha Climate Change Conference in 2012, developing as well as developed countries now have a legal obligation to reduce emissions.

A1.1.4 Rio +20, in 2012, prioritised two particular themes for sustainable development; building a green economy and improving international co-ordination. They both emerge from 'The Future We Want' document which establishes a common vision to integrate economic, social and environmental values in order to achieve sustainable development.

A1.1.5 Background, Impact and the Way Forward - Water Resources Group, 2012. In 2012, the Water Resources Group prepared a briefing report for the Annual World Economic Forum Annual Meeting setting the stage for the water challenge reporting that the demand is already exceeding the sustainable supply, causing an imbalance and depletion of water resources and that by 2030 the gap between water supply and demand is projected to be of 40% if business as usual water management approaches continue.

Appendix

A1.1.6 The World Health Organisation Sustainable Development Goals were adopted by the United Nations General Assembly in September 2015 and look to 2030.

The Sustainable Development Goals (SDGs), officially known as Transforming our world: the 2030 Agenda for Sustainable Development is a set of 17 "Global Goals" with 169 targets covering a broad range of sustainable development issues, below figure 1.



Figure1: World Health Organisation Sustainable Development Goals

In relation to energy, environment and property the following are applicable:

Goal 7: Affordable and Clean Energy

Affordable and Clean Energy - Ensure access to affordable, reliable, sustainable and modern energy for all:

Goal 7 targets:

- By 2030, ensure universal access to affordable, reliable and modern energy services
- By 2030, increase substantially the share of renewable energy in the global energy mix
- By 2030, double the global rate of improvement in energy efficiency
- By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology
- By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support

Goal 11: Sustainable Cities and Communities - Make cities and human settlements inclusive, safe, resilient and sustainable

Goal 12: Responsible Consumption and Production - Ensure sustainable consumption and production patterns

Goal 13: Climate Action - Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy

Goal 14: Life Below Water - To conserve and sustainably use the world's oceans, seas and marine resources.

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A1.1.7 Paris Agreement (COP 21) At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal.



The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C.

The Paris Agreement is a bridge between today's policies and climate-neutrality before the end of the century.

Governments agreed:

- a long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels;
- to aim to limit the increase to 1.5°C, since this would significantly reduce risks and the impacts of climate change;
- on the need for global emissions to peak as soon as possible, recognising that this will take longer for developing countries;
- to undertake rapid reductions thereafter in accordance with the best available science.

Under the agreement cities, regions and local authorities are recognised for their value in meeting targets and invited to:

- scale up their efforts and support

actions to reduce emissions;

- build resilience and decrease vulnerability to the adverse effects of climate change;
- uphold and promote regional and international cooperation

A1.1.8 World Economic Forum: The Global Risks Report 2017. The Global Risk Report ranked “water crises” at number 3 in the list of the top 10 global risks in terms of impact and “Failure of Climate Change mitigation and adaptation” at number 5, *figure 1*.



Figure2: Top 5 Global risks World Economic Forum Report 2017.

Definitions:

Water Crises: A significant decline in the available quality and quantity of fresh water, resulting in harmful effects on human health and/or economic activity

Failure of climate-change mitigation and adaptation: The failure of governments and businesses to enforce or enact effective measures to mitigate climate change, protect populations and help businesses impacted by climate change to adapt

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The report notes that whilst progress is being made and “that the transition to a low-carbon economy is underway” unfortunately “the pace of change is not yet fast enough” and requires further collective action. The report calls for action to “redouble our efforts to protect and strengthen our systems of global collaboration. Nowhere is this more urgent than in relation to the environment, where important strides have been made in the past year but where much more remains to be done”.

A1.2 European Context

Sustainable development has been at the heart of the EU legislation and the EU Treaties giving recognition to its economic, social and environmental dimensions that should be tackled together and one of the fundamental objectives of the European Union

The European Union has produced much key legislation related to sustainability and energy notably:

- EU Directive on the Energy Performance of Buildings, 2008 & 2010 (2010/31/EU).
- 1.3.2 EU Renewables Directive (2009/28/EC).
- 1.3.3 EU Energy Efficiency Directive 2012 (2012/27/EU)

A1.2.1 EU Directive on the Energy Performance of Buildings, 2008 & 2010 (2010/31/EU). Around 40% of final energy consumption in the European Community is in the buildings sector. EC research has indicated that by improving energy efficiency, carbon emissions from buildings could be reduced by 22%. This will help the EU to meet its climate change objectives under the Kyoto Protocol commitments as well as improve the energy performance of new and existing buildings.

The principal objective of the Directive is to promote the improvement of the energy performance of buildings within the EU through cost effective measures and to make the energy efficiency of buildings transparent to the public.

In May 2010, the Council of the European Union and European Parliament adopted a recast of the Directive in order to strengthen the energy performance requirements of buildings:

The main points of the directive are as follows:

- When buildings are advertised for sale or rent, energy performance certificates are to be included.
- Larger public buildings must display a Display Energy Certificate (DEC).
- Inspection schemes must be established for heating and air conditioning systems or measures put in place with equivalent effect.

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- All new buildings must be nearly zero energy buildings by 31 December 2020 (public buildings by 31 December 2018).
- EU countries must set minimum energy performance requirements for new buildings, for buildings that undergo major renovations and for the replacement or retrofit of building elements (heating and cooling systems, roofs, walls, etc.).
- EU countries have to draw up lists of national financial measures to improve the energy efficiency of buildings.

A1.2.2 EU Renewables Directive (2009/28/EC). The Directive mandates levels of renewable energy use within the European Union, requiring that 20% of the energy consumed within the European Union is from renewable resources. This is a pooled target across member states.

The UK specifically has been given the target of sourcing 15% of its energy from renewable sources by 2020.

A1.2.3 EU Energy Efficiency Directive 2012 (2012/27/EU). Coming in to force in December 2012, the Energy Efficiency Directive (EED) mandates energy efficiency improvements within the European Union, introducing legally binding measures to encourage efforts to use energy more efficiently in all stages and sectors of the supply chain.

The directive established a common framework for the promotion of energy efficiency within the EU in order to meet the energy efficiency headline target of 20% by 2020 and for making further improvements after 2020.

On 23 July 2014 the European Commission announced a new target of a 30% improvement in energy efficiency by 2030.

A1.3 National Context

Sustainable development is led through government policy by the Department for Business, Energy & Industrial Strategy (BEIS) and the Department for Environment, Food & Rural Affairs (DEFRA)

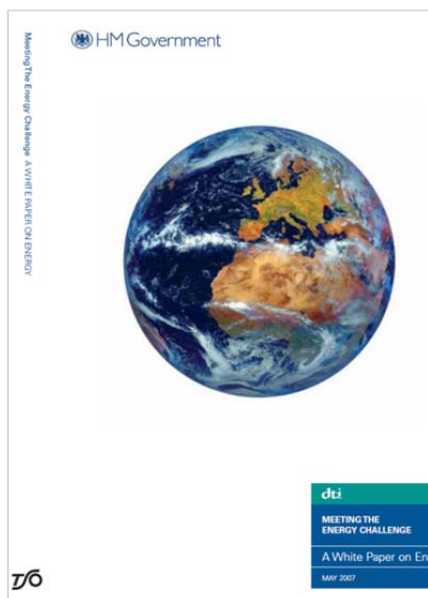
UK sustainability and energy strategy are directed and driven at a national level by:

- Energy White Paper, Meeting the Energy Challenge 2007
- Carbon Reduction Commitment (CRC) Energy Efficiency Scheme, 2007
- The Climate Change Act, 2008
- UK Solar PV Strategy, 2013
- Future Water – The Governments water strategy for England, 2008
- Energy Saving Opportunities Scheme regulations, 2014
- Greening Government Commitments, 2016
- The Clean Growth Strategy, 2017 (draft)

A1.3.1 Energy White Paper, Meeting the Energy Challenge 2007, outlines the Government's international and domestic strategy for responding to two main challenges, cutting carbon emissions to tackle global warming and ensuring secure, clean and affordable energy as imports replace declining production from North Sea oil and gas

The strategy has 4 policy goals

- To cut the UK's carbon dioxide emissions by some 60% by about 2050, with real progress by 2020;



- Maintain the reliability of energy supplies
- Promote competitive markets in the UK and beyond, helping to raise the rate of sustainable economic growth and to improve productivity;
- Ensure that every home is adequately and affordably heated.

The paper also comprised a number of proposals for practical measures for energy conservation, and sustainable energy supply. The main ones being:

- A new mandatory cap and trade scheme for organisations consuming more than 6,000 MWh of electricity per year, to be known as the Carbon Reduction Commitment.
- The introduction of Energy Performance Certificates for business premises and Display Energy Certificates for public sector organisations.
- A requirement for all new homes to be zero-carbon buildings as soon as practically possible and preferably by 2016.
- Improving the energy efficiency of existing homes.

- Increasing the Carbon Emission Reduction Target for the electricity and gas industries for 2008-2011.
- The introduction of a Biomass Strategy to expand the use of biomass as an energy source.
- Measures to grow distributed electricity generation and distributed heat generation alongside the centralised system.
- reconfirmation that, under the Renewables Obligation, renewable energy should supply 10% of electricity generation by 2010, an 'aspiration' to achieve 20% by 2020,

A1.3.2 Carbon Reduction Commitment (CRC) Energy Efficiency Scheme, 2007, announced in the Energy White Paper 2007, is a mandatory carbon emissions levy scheme introduced by the government to incentivise energy efficiency and reduction and cut carbon emissions from large commercial and public sector organisations.

The scheme currently in its second phase will end in March 2019, following a simplification exercise to reform the business energy efficiency tax landscape and associated regulations, including the CRC Energy Efficiency Scheme, Climate Change Agreements, and energy and carbon reporting including links to the Energy Savings Opportunity Scheme.

The scheme will be replaced in two parts, the revenue/ levy element will be addressed by increasing of the Climate Change Levy rates collected through utility invoices and the mandatory reporting element is envisaged to be picked up through the ESOS – Energy Saving Opportunities Scheme though this is yet to be confirmed at this time.

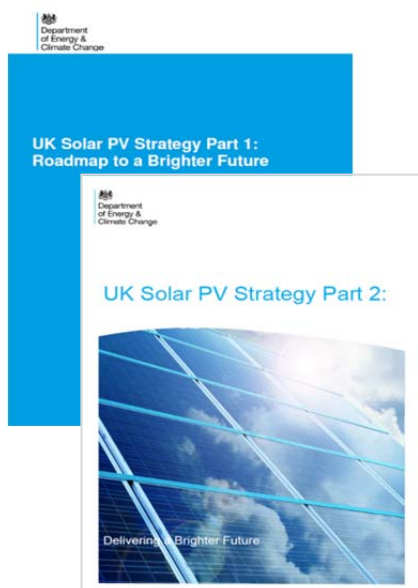
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A1.3.3 The Climate Change Act, 2008 set a target to reduce greenhouse gas emissions by 80% by the year 2050 compared to the 1990 base level. By doing so it aims to encourage the transition to a low carbon economy and reduce the effects of climate change on the economy, society and the environment to a manageable level.

At a local level, the Local Government Association, in June 2012, launched the Climate Local initiative to assist councils in reducing carbon emissions and adapting to the effects of climate change.

A1.3.4 UK Solar PV Strategy Parts 1 and 2: In October 2013, the Department of Energy and Climate Change published the UK Solar PV strategy Part1: Roadmap to a Brighter Future document to assist the delivery and set out the key objectives of Government energy policy to ensure the future security of electricity supplies; to drive the decarbonisation of our electricity generation; and to minimise costs to the consumer.

Cost-effective deployment of renewable energy technology, including solar PV, is a central element of the strategy.



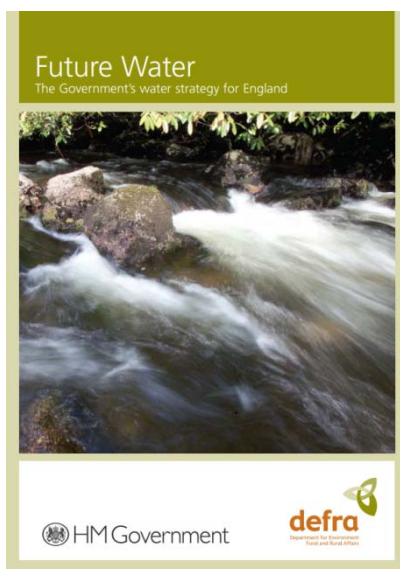
- Support for solar PV should allow cost-effective projects to proceed and to make a cost-effective contribution to UK carbon emission objectives in the context of overall energy goals – ensuring that solar PV has a role alongside other energy generation technologies in delivering carbon reductions, energy security and affordability for consumers.
- Support for solar PV should deliver genuine carbon reductions that help meet the UK’s target of 15 per cent renewable energy from final consumption by 2020 and in supporting the decarbonisation of our economy in the longer term – ensuring that all the carbon impacts of solar PV deployment are fully understood.
- Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them.
- Support for solar PV should assess and respond to the impacts of deployment on: grid systems balancing; grid connectivity; and financial incentives – ensuring that we address the challenges of deploying high volumes of solar PV.

A1.3.5 Future Water - The Government’s water strategy for England. In 2008 Government published Future Water - Government’s water strategy for England to address increasing burden on sustainable water supplies and provide strategy for addressing with the vision for:

“Continuous adaptation to climate change and other pressures embedded across the

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water sector, resulting in sustainable delivery of secure water supplies, and an improved and protected water environment”.



Under the strategy there are five themes:

- Water supply
- Water Demand
- Water Quality in the natural environment
- Surface Water Drainage
- River and Coastal Flooding
- Greenhouse gas emissions
- Charging for Water Regulatory framework, competition and innovation

Under these themes, the main objectives:

- Consumers using water wisely, appreciating its value and the consequences of wasting it
- A sustainable supply and demand balance across England with no seriously water stressed areas.
- Reduced per capita consumption of water through cost effective measures, to an average of 130 litres per person per day by 2030, or possibly even 120 litres per person per day depending on new

Technological developments and innovation

- Low levels of leakage, with targets set and met at the optimum balance of economic, environmental and other costs
- Water efficiency playing a prominent role in achieving a sustainable supply demand balance, with high standards of water efficiency in new homes, and water-efficient products and technologies improving standards in existing buildings
- Pro-active industrial and commercial sectors leading by example through initiatives such as voluntary agreements
- Better management of surface water drainage, allowing for the increased capture and reuse of water; slow absorption through the ground; and more above ground storage and routing of surface water separate from the foul sewer system
- Better public appreciation of the causes and consequences of surface water run-off and the actions we can all take to minimise the risks
- Householders aware of the link between water use in their homes and greenhouse gas emissions, and acting accordingly to minimise water wastage and maximising water efficiency

A1.3.6 Energy Saving Opportunities Scheme (ESOS) Regulations, 2014. In 2014, Government established The Energy Saving Opportunities Scheme to implement Article 8 (4 to 6) of the EU Energy Efficiency Directive (2012/27/EU). ESOS is a mandatory energy assessment scheme for organisations in the UK that meet the qualification criteria.

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Organisations that qualify for ESOS must carry out ESOS assessments, comprising audits of the energy used by their buildings, industrial processes and transport to identify cost-effective energy saving measures.

A1.3.7 Greening Government Commitments, 2016. In December 2016, DEFRA released the Greening Government Commitments 2016 to 2020 (updated January 2017), actioning UK government departments and their agencies to reduce their impacts on the environment in the period 2016 to 2020

1. Reduce our emissions: Reduce greenhouse gas emissions by at least 32% from a 2009 to 2010 baseline (in line with individual departmental targets).
 - 1a. Reduce the number of domestic business flights by at least 30% from the 2009 to 2010 baseline.(This excludes front line military flights; departments which are already exceeding a 30% reduction will be expected to set their own internal targets for further reductions.)
2. Improve our waste management: Reduce the amount of waste going to landfill to less than 10%
Also continue to improve our waste management by reducing the overall amount of waste generated and increasing the proportion which is recycled.
- 2a. Reduce government's paper use by at least 50% from a 2009 to 2010 baseline
3. Reduce our water use: Continue to further reduce water consumption. Each department will continue to improve on the reductions they had made by 2014 to 2015.

In addition to the above targets, the government commits to:

4. Buying 'greener' products and services: Continue to buy more sustainable and efficient products and services with the aim of achieving the best long-term, overall value for money for society.
5. Being open and transparent
Departments will be open and transparent by reporting publicly on the steps they are taking to address the following areas:
 - climate change adaptation
 - biodiversity and the natural environment
 - procurement of food and catering services
 - sustainable construction
 - any other issues that departments consider to be most significant to reducing the environmental impact of their activities



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A1.3.8 The Clean Growth Strategy, 2017 October 17 has seen the publication of the “**The Clean Growth Strategy**”, published by the Department for Business, Energy & Industrial Strategy which “sets out the action needed to take to cut emissions, increase efficiency, and help lower the amount consumers and businesses spend on energy across the country” to meet the UK’s 2050 target and the intermediary 2032 Carbon Budgets.

Under the Strategy, local authorities have a lead and primary role with their capability to:

- deliver energy efficiency measures at scale
- demonstrate best practise
- catalyse further innovation in low carbon products and services
- generating new business and employment opportunities
- release funds for front line services.

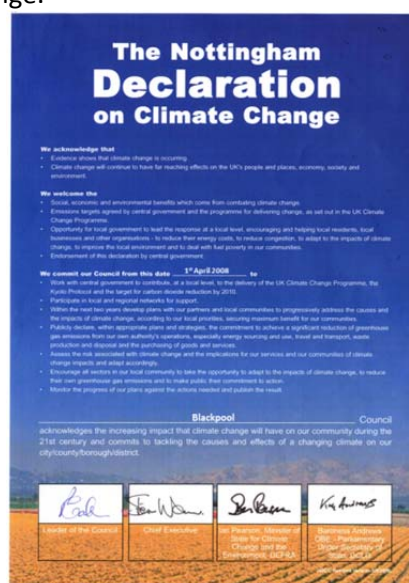
Under the Strategy Local Authorities are

The strategy sets out that to meet the UK’s 2050 target, emissions from the buildings and activities of the public sector will need to be near zero and the pathway to 2032 sees emissions from the public sector falling by around 50% compared to today.

The strategy proposes to introduce a voluntary wider intermediary public and higher education sector target of a 30 per cent reduction in greenhouse gases by 2020/21, against a 2009/10 baseline

A1.4 Local Context

In April 2008, Blackpool Council signed up to the **Nottingham Declaration**, which was a formal commitment recognising the role of local authorities in leading society's response to the challenge of climate change.



By signing the Declaration councils pledge to systematically address the causes of climate change and to prepare their community for its impacts by:

- Helping communities to become resilient to more extreme weather events
- Reducing greenhouse gas emissions from their own buildings, services and the community

In April 2008, the Blackpool Council signed up to the **Local Authority Carbon Management Programme** was formally recognised for its’s efforts by the Carbon Trust in reducing energy use, improving energy efficiency and cutting Carbon Dioxide emissions.

Since 2010, Blackpool Council is a qualifying member for the **Carbon Reduction**

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Commitment (CRC) Energy Efficiency Scheme and has a statutory annual reporting requirement to 2019 to report carbon emissions generated by qualifying energy consumption and purchase Carbon Allowances for associated Carbon Dioxide emissions.

A1.4.1 Blackpool Local Plan, Part 1 Core Strategy (2012 to 2027)

The core strategy, adopted in January 2016 is a key planning document for Blackpool, setting out where new development, including housing, employment, retail and leisure should be located to meet Blackpool's future needs to 2027.



It also identifies areas which will be regenerated, protected or enhanced and sets out the key development principles such as design and affordable housing.

The strategy sets out a number of important goals, objectives and policies in relation to sustainable development, energy and water:

GOAL 1: Sustainable regeneration, diversification and growth Objectives:

1. Ensure a balanced approach to regeneration and growth with

sustainable development which meets the needs of Blackpool's people now and into the future.

6. Address climate change issues by managing flood risk, protecting water quality, reducing energy use and encouraging renewable energy sources

CS10: Sustainable Design and Renewable and Low Carbon Energy

1. To mitigate the impacts of climate change, minimise carbon emissions and ensure buildings are energy efficient, non-residential developments must follow the principle of the energy hierarchy, which is to:

- a. Reduce the need for energy by taking all reasonable steps to locate and orientate buildings to incorporate passive environmental design for heating, cooling, ventilation, and natural day-lighting;
- b. Minimise energy use by ensuring appropriate energy efficient measures are integral to development proposals
- c. Investigate opportunities to include renewable and low carbon energy provision.

2. The development of renewable, low carbon, or decentralised energy schemes, excluding wind turbines will be supported where proposals:

- a. Are located appropriately and do not cause an unacceptable impact on surrounding uses or the local environment, landscape character or visual appearance of the area, taking into account the cumulative impact of other energy generation schemes;
- b. Mitigate any potential noise, odour, traffic or other impacts of the

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development so as not to cause an unacceptable impact on the environment or local amenity.

3. For development involving one or more wind turbine, planning permission will only be granted where:

- a. the development site is in an area identified as suitable for wind energy development in the Blackpool Local Plan Part 2: Site Allocations and Development Management Policies DPD
- b. following consultation, it can be demonstrated that the planning impacts identified by affected local communities have been fully addressed and therefore the proposal has their backing.

4. All new non-residential development over 1,000m² will be required to achieve BREEAM 'very good' (or any future national equivalent)

Policy CS9: Water Management

1. To reduce flood risk, manage the impacts of flooding and mitigate the effects of climate change, all new development must:

- a. Be directed away from areas at risk of flooding, through the application of the Sequential Test and where necessary the Exception Test, taking account of all sources of flooding;
- b. Incorporate appropriate mitigation and resilience measures to minimise the risk and impact of flooding from all sources;
- c. Incorporate appropriate Sustainable Drainage Systems (SuDS) where surface water run-off will be generated;
- d. Where appropriate, not discharge surface water into the existing

combined sewer network. If unavoidable, development must reduce the volume of surface water run-off discharging from the existing site in to the combined sewer system by as much as is reasonably practicable;

- e. Make efficient use of water resources; and
- f. Not cause a deterioration of water quality.

2. Where appropriate, the retro-fitting of SuDS (sustainable drainage systems) will be supported in locations that generate surface water run-off.

A1.4.2 Council Plan 2015-2020



The Blackpool Council - Council Plan has two main goals:

- boosting our local economy by maximising growth and opportunity and
- creating, stronger, healthier, more resilient communities

