RE-ENERGISING HEREFORDSHIRE

Reducing our energy use, changing where our energy comes from
…and how we all benefit

Herefordshire New Leaf

Herefordshire Council

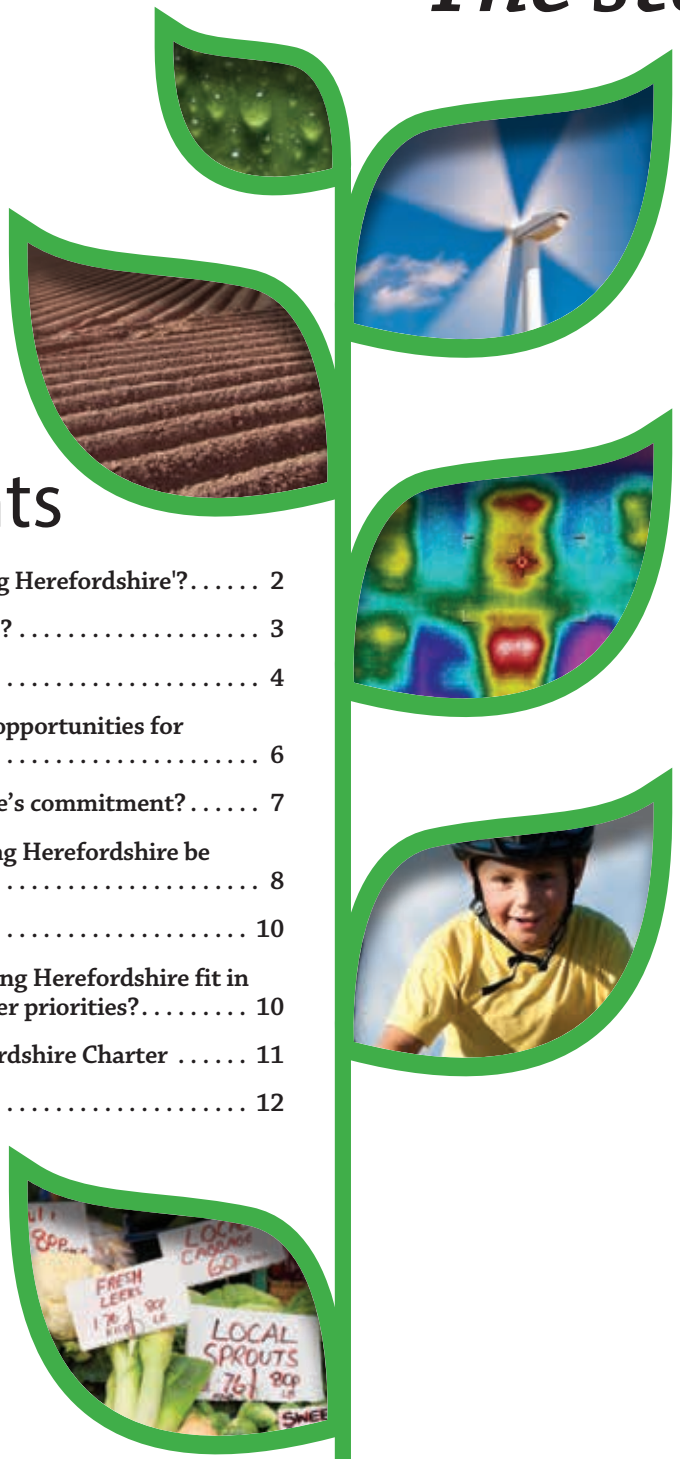
The story so far…

1990

- Baseline emissions measured

2001

- Herefordshire's first ecological footprint published
- Bulmers International conference on sustainability focused on Herefordshire



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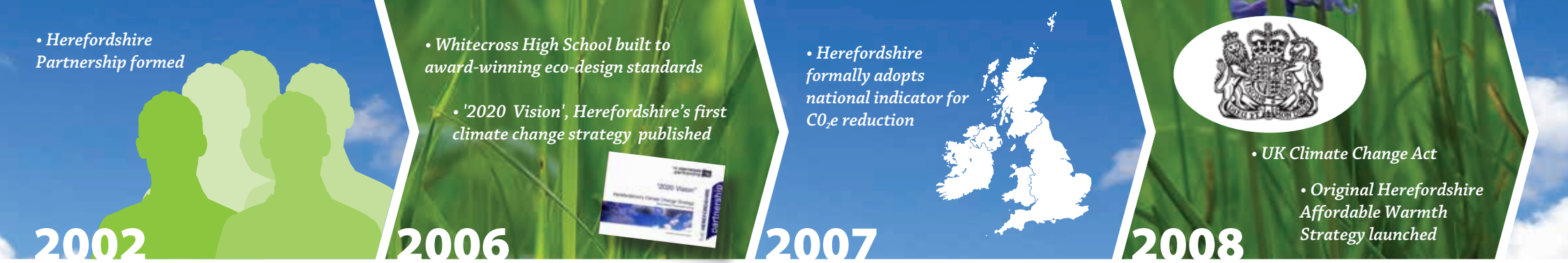
What is 'Re-energising Herefordshire?'

THIS DOCUMENT SETS OUT:

- How we in Herefordshire have reduced our energy use in recent years – and increasingly are switching to more renewable forms of energy
- Why this is important
- How we all benefit from this
- To propose an action plan for further reductions

Re-energising Herefordshire reflects our ambition to demonstrate leadership and resourcefulness to meet the challenge of providing for the county's energy needs in the 21st century as part of an overall approach to sustainable development. It builds on the growing momentum of partnership working by the public sector organisations, business and community sectors, integrating countywide policy making with the grass roots actions of local communities and environmental groups.



What are the benefits?

By playing our part in the global effort to address climate change we are achieving a number of other important objectives, namely:

- **Reducing our energy bills** (in real terms) by using less;
- **Growing the local low-carbon economy** – increasing local jobs, retaining/attracting skilled workers, boosting wages and business growth;
- **Supporting health and wellbeing** – promoting active travel; encouraging food growing and healthy food consumption; promoting affordable warmth and helping to reduce fuel poverty;
- **Promoting resilient communities** – bringing people and organisations together and supporting them in planning for sustainability;
- **Improving energy security** – by producing more of what we need locally by renewable means, so that we are not as dependent upon international supply nor as susceptible to significant price rises;
- **Sustainable Transport** – reduces congestion and pollution, promotes wellbeing, strengthens communities and saves money;
- **Adapting to known effects of climate change such as extreme weather events caused by increased climate variability (eg flooding, heat-waves, droughts and heavy precipitation events)** – building flood defences; selecting drought-resistant crops; installing more urban drainage and developing more water storage capacity.

An estimated half a billion pounds leaves the county each year in payments to energy companies – let's bring some of that back into the local economy

2009

HEP

• *Herefordshire Environment Partnership, now the Herefordshire Local Nature Partnership (HLNP), adopt responsibility for co-ordinating climate change action in the county*

HLNP

2010

• *Herefordshire New Leaf formed and first 'h.Energy' sustainability festival held across the county*

h.Energy
Sustainable Herefordshire Week

• *First house retrofitted to Passivhaus standard in Hereford*

2011

• *Herefordshire in top ten counties for solar PV installations*

• *Leominster community-owned renewable energy project*

• *Innovative ecological wet system installed at the new cattle market to deal with effluent*

• *Herefordshire Council adopts its own ambitious Carbon Management Plan*

Key predictions for Herefordshire's climate by the 2050s (UKCP):

Scientists are predicting hotter, drier summers and warmer, wetter winters. They estimate that if emissions are broadly in line with median expectations:

- **Winter mean temperature will increase by 2.1°c**
- **Summer mean temperature will increase by 2.6°c**
- **Summer mean daily maximum temperature will increase by 3.6°c**
- **Summer mean daily minimum temperature will increase by 2.7°c**
- **Change in winter mean precipitation is 13%**
- **Change in summer mean precipitation is -17%**

Source: UK Climate Projections, 2014

http://ukclimateprojections.metoffice.gov.uk/23767?emission=medium

Why does it matter?

IT IS NOW SCIENTIFCALLY ACCEPTED that the emission of carbon dioxide (CO_2) and other greenhouse gases are contributing to climate change and raising global temperatures.

Over the past 150 years the balance of these gases in the atmosphere has been upset by burning fossil fuels like coal, oil and gas, and by cutting down forests which naturally absorb CO_2 from the air. Extreme weather events, such as floods, storms and droughts are becoming more commonplace as a result.

The Intergovernmental Panel on Climate Change (IPCC), 5th assessment report, 2013 states :

"The atmospheric concentrations of carbon dioxide (CO_2), methane, and nitrous oxide have increased to levels unprecedented in at least the last 800,000 years. CO_2 concentrations have increased by 40% since pre-industrial times, primarily from fossil fuel emissions and secondarily from net land use change emissions. The ocean has absorbed about 30% of the emitted anthropogenic carbon dioxide, causing ocean acidification."

The Climate Change Act of 2008 commits the UK to reducing its emissions of greenhouse gases by 80% (from 1990 levels) by the year 2050. This

is a legally binding target which, added to the fact that energy efficiency measures offer the potential to save money and boost local trade, provides a powerful incentive for communities to develop 'low carbon economies'.

Reducing our carbon emissions can also bring direct personal rewards. By insulating our homes, getting on a bike, and eating food that we have grown locally we will be saving money and potentially improving our health and fitness.

2012

- *Woolhope Dome community woodfuel co-operative formed*
- *Herefordshire Council commits to £2million investment fitting solar panels to council roofs*
- *Herefordshire Partnership Executive Group adopts climate change targets*

2013

- *'Re-energising Herefordshire' Charter signed*
- *94% of the county's schools are registered eco-schools, 21 have the Green Flag award giving Herefordshire the fifth highest percentage of Green Flag schools in England*

2014

- *Network of electric car charging points installed across the county*

2016

- *Latest Herefordshire Affordable Warmth Strategy launched*
- *Herefordshire is believed to be the first county in the UK to have installed 100% LED street lighting. By 2020 it is estimated it will have saved £1.4m over the 2009 baseline*

Floods at Ross-on-Wye, December 2012
Photo: Craig Mordecai

What are the unique opportunities for Herefordshire?

AS ONE OF the UK's most rural counties, Herefordshire faces some energy challenges which are distinct from the rest of the UK.

The county's housing stock can be characterised as expensive to heat and hard to insulate. This is particularly the case in rural areas, though less true in the county's towns, where more modern housing estates can be found.

Approximately a third of the county's homes are not on the mains gas grid, which means that heat comes from relatively more expensive sources, particularly oil, coal and LPG. Again, this is particularly the case in rural areas.

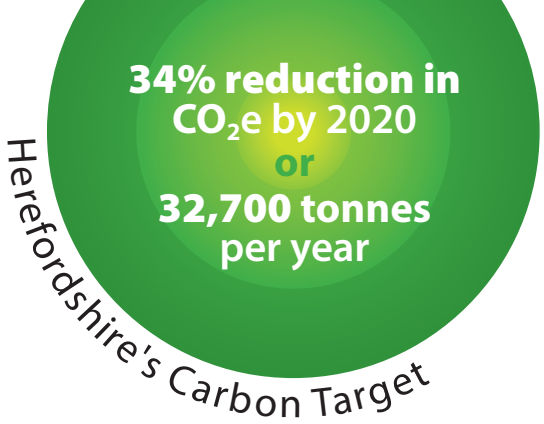
Another feature of the county's rural nature is the general limited access to public transport. Subsidised bus services go some way to addressing this need, but for the most part the county's population is reliant on cars as the primary means of transport. A typical household in rural Herefordshire has at least two cars, including at least one large car, whereas in large urban areas this figure is much lower. While cars are becoming ever more fuel (and carbon) efficient, they still remain one of the most carbon-intensive forms of transport available.

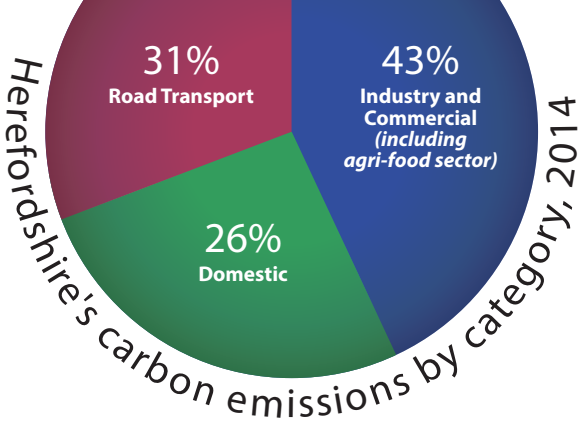
In short, from one perspective, the county can be characterised as an expensive and carbon-intensive place to live. However, the flipside of these features is that people who choose to live and work here tend to develop strong links with the local community and are enterprising, meaning we are well placed to find our own local solutions to the challenges of heat, power and transport.

For example, the challenge of insulating the county's housing stock represents a major economic opportunity. The county already boasts an unusually large number of ecologically-minded architects and highly skilled self-builders and buying groups are being established for the collective purchasing of insulation materials. Owning and producing power locally offers another significant opportunity. This is already being tapped, as demonstrated by the county's place in the UK's top ten for solar PV installation, and the unusually high levels of biogas production. Providing creative solutions to the county's transport challenges is another potential source of livelihoods.

For many people the beauty and peace of the county's rural nature provides compensation for the expense and logistical challenge of living here. However the great natural resources of the county – its woodlands, farmlands, rivers, hills and strong community links – potentially do far more than simply balance out the challenges of living here. They may provide the answers to achieving (and surpassing) Herefordshire's carbon reductions targets.

'We will need to reduce our emissions by 32,700 tonnes of CO_2 every year, in order to achieve the proposed target'





What is Herefordshire's commitment?

HEREFORDSHIRE HAS PUBLICLY committed itself to reductions in carbon dioxide emissions in line with the UK Climate Change Act, ie a reduction of 34% by 2020 and 80% by 2050 (from a 1990 baseline). This is a bold step, and we believe we were the first county in the UK to do this.

Our ability to manage emissions is fundamentally linked to our ability to *measure* emissions. There are three specific challenges associated with this.

1: Data on carbon emissions – the data underpinning the assumptions made in this document is currently provided centrally by the Department of Energy and Climate Change (DECC) and has a two-year time lag;

2: DECC data only covers carbon dioxide and does not include other greenhouse gas emissions such as methane – which is a potentially significant omission in a county with a strong agricultural sector such as Herefordshire;

3: The data does not include the embedded energy in consumer products– a recent report by the UK Government's Climate Change Committee acknowledged that, if we were to take into account the carbon emissions resulting from the production of consumer products in places such as China, the UK's carbon footprint would increase significantly. According to the report: "the UK is now one of the world's largest net importers of emissions, with a carbon footprint that is around 80% larger than its production emissions, reflecting the relatively small share of manufacturing in UK GDP."

Despite the challenge of attempting to measure and manage carbon emissions, Herefordshire's ambition and that of the UK Climate Change Act, remains an unusually far-sighted response and it may be that the process of data measurement, and the conversations that this process inspires, can help to point the way to solutions. Perhaps more significantly, the data should be interpreted as broad indications of current trends, rather than absolute figures.

The graph below *illustrates the estimated rate of reduction in CO_2 emissions achieved from 1990 to 2014 and projects it forward at current levels to 2050 (Hfds Council, DECC).*

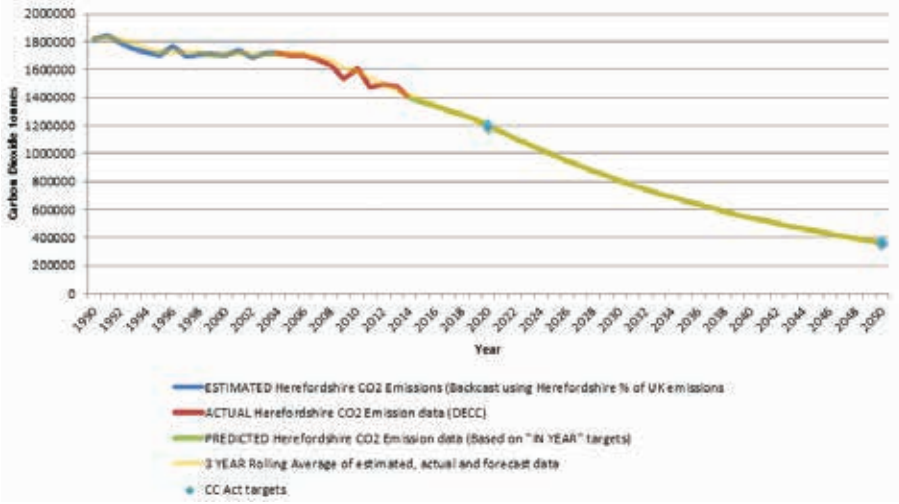
This graph indicates that the actions we have all taken across the county in recent years have helped us to reduce our carbon emissions roughly in line with (though slightly below) the level of reductions that need to take place up to now.

This reduction can largely be explained by the fact that the relatively easy carbon-reducing measures have now been achieved and that the national economy has been in recession in recent years.

However, on current trends we will not achieve the levels of reduction necessary to reach our future targets. It is clear that we will need to raise our game and to work together more effectively than ever in order to meet these objectives.

The key message of Re-energising Herefordshire is that achieving these milestones is both necessary and could be beneficial to us all, as the process of bridging the gap offers the potential for major social, economic and environmental gains.

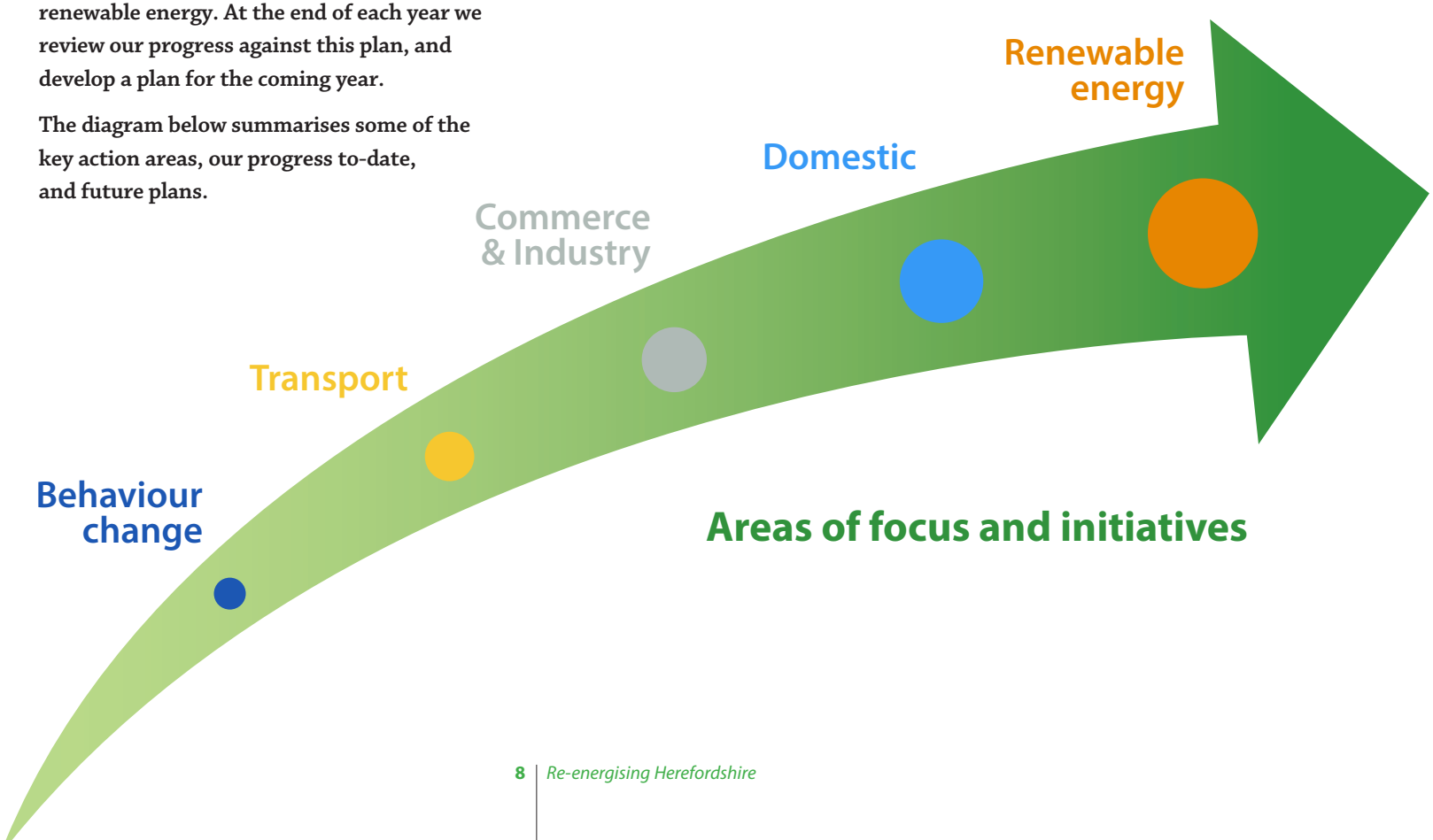
Herefordshire 1990–2050 Carbon Descent



How is Re-energising Herefordshire being delivered?

SINCE 2013 WE have developed an annual plan, including actions to reduce energy demand in the county, and actions to generate renewable energy. At the end of each year we review our progress against this plan, and develop a plan for the coming year.

The diagram below summarises some of the key action areas, our progress to-date, and future plans.



Renewable energy 26%
- Solar
- Renewable heat
- District heating
- Wind
- Anaerobic digestion

Domestic 15%
- More efficient boilers
- Loft and cavity wall insulation
- LED lighting

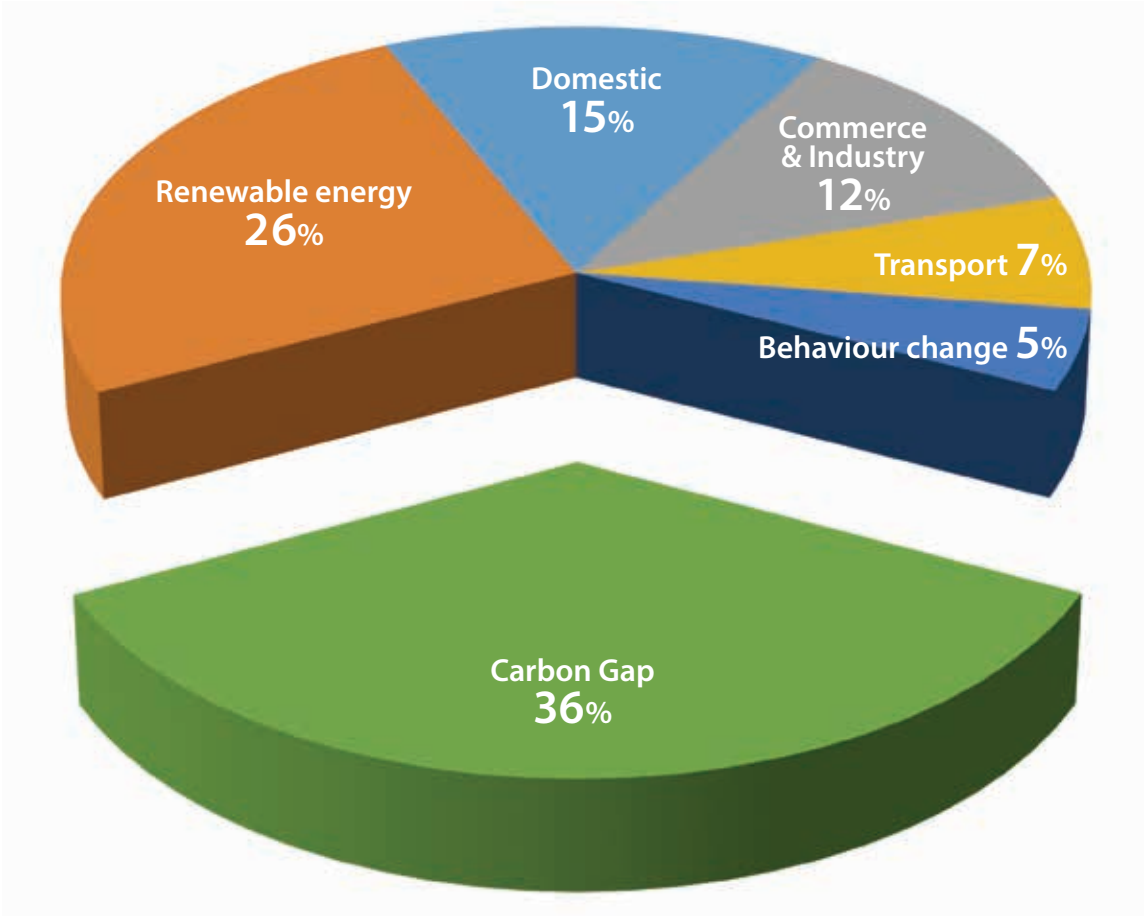
Commerce & Industry 12%
- Micro business
- Large businesses improvements
- Public sector contributions
- Food and farming

Transport 7%
- Travelling less per household
- More efficient travel
- Travelling differently
- Improved transport infrastructure

Behaviour change 5%
- Saving energy
- Transport
- Awareness
- Financial savings

Carbon gap 36%

Estimated contribution towards target

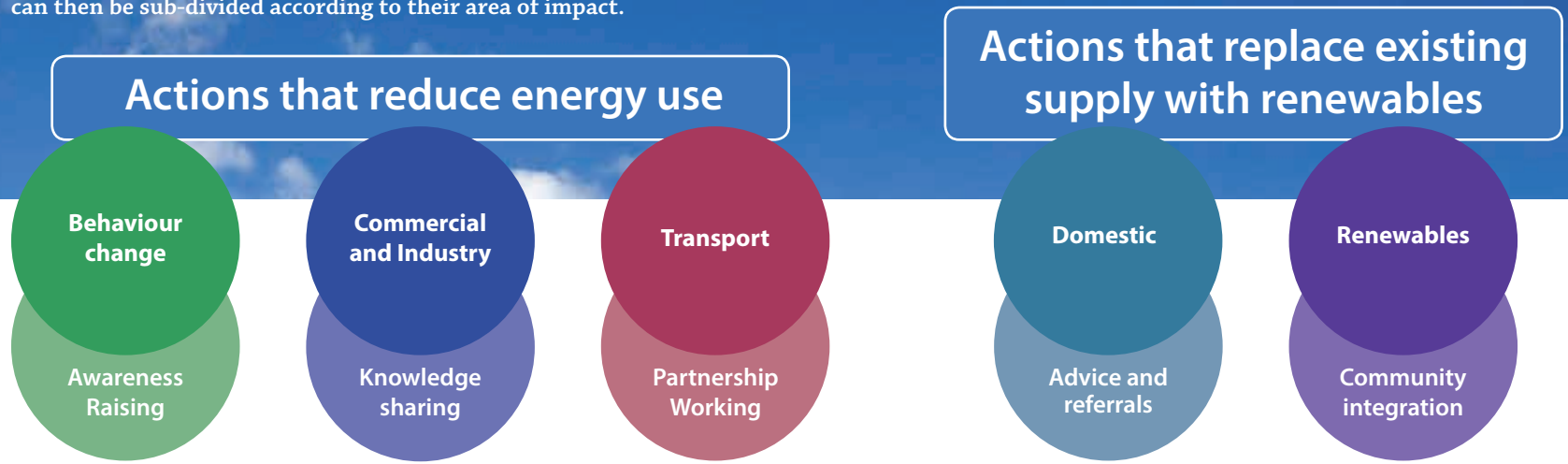


Target by 2020:
34% CO_2e reduction based on 1990 levels

What will we do?

The actions required to deliver the carbon reduction targets set out in Re-energising Herefordshire can be divided into two areas: actions that reduce energy use and actions that replace existing supply with renewables. These can then be sub-divided according to their area of impact.

An annual action plan (see appendix 1) will be developed, through consultation with the organisations that have committed to it, and will be delivered via the methods outlined below.



How does Re-energising Herefordshire fit in with the county's other priorities?

This initiative is one of several which aim to improve the economic, social and environmental wellbeing of the county, and it aims to complement and support other plans. Of particular relevance are:

The Herefordshire Local Plan – Core Strategy 2011–31, a framework for the future development of the county which highlights a number of key issues, including:

- **"…meet the challenge of climate change and adapt to its impacts such as increased risk of flooding and air pollution"**
- **"…create places that actively promote and enable healthy lifestyles"**
- **"…achieve sustainable development and reduce reliance on the private car whilst accepting the sparsely populated nature of the area and difficulty communities have in accessing services"**

Herefordshire Council Corporate Plan 2016-20 priorities to:

- **Enable residents to live safe, healthy and independent lives**
- **Keep children and young people safe and give them a great start in life**
- **Support the growth of our economy**
- **Secure better services, quality of life and value for money**

The Herefordshire Local Transport Plan 2016-31 aims to provide a transport network that supports growth, enabling the provision of new jobs and houses, whilst providing the conditions for cleaner, safe and healthier travel, which reduces congestion and increases accessibility.

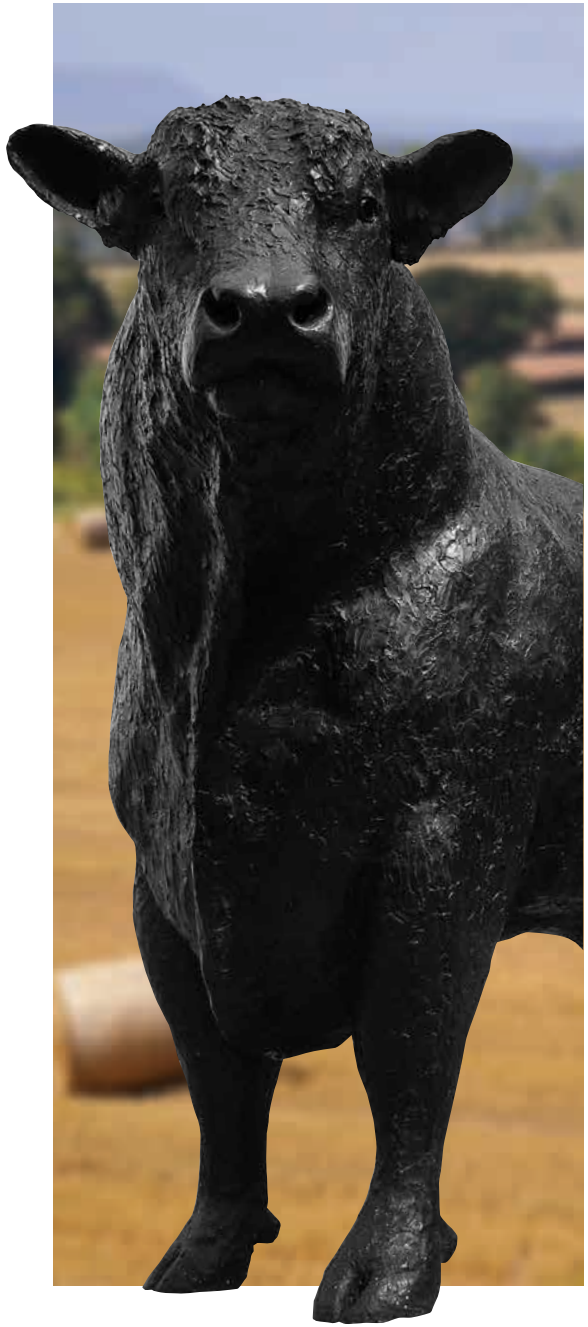
The Herefordshire Economic Plan 2016 (in development) aims to achieve the creation of the right conditions for economic growth and to move towards a higher value economy for Herefordshire, part of which will be delivered through environmentally-based projects.

The Herefordshire Health and Wellbeing Strategy 2015 has a long-term vision to ensure that Herefordshire residents are resilient, lead fulfilling lives, are emotionally and physically healthy, and feel safe and secure.

Herefordshire's Affordable Warmth Strategy 2016-19 aims to raise awareness of fuel poverty, encourage and support households to achieve affordable warmth as well as developing sustainable strategies and delivery models through co-operation and evaluation.

The Home Energy Conservation Act (HECA) and implementation of the 2015 HECA report action plan.

THE RE-ENERGISING HEREFORDSHIRE CHARTER



WE ARE COMMITTED to pursuing the achievement of a healthy, economically vibrant, socially just and sustainable Herefordshire.

WE HAVE AGREED therefore to work together; separately in our individual organisations – and where appropriate with our members – to ***Re-energise Herefordshire***, with the intention of:

- **reducing the county's carbon emissions to the targets stated**
- **growing a resilient, localised, low carbon economy**
- **enhancing the wellbeing of all sections of our community**
- **improving our food and energy security**
- **reducing fuel poverty and other forms of social vulnerability**
- **adapting proactively to changing climatic and weather conditions.**

SPECIFICALLY WE WILL:

- **reduce carbon emissions in our own organisations and co-operate with countywide reduction initiatives in order to achieve the target reductions specified in the Climate Change Act**
- **encourage renewable energy generation, where this fits with legal and other considerations**
- **collaborate in programmes of training and job creation to ensure that Herefordshire residents benefit from the opportunities produced by a modern, low carbon economy**
- **promote ethically-produced local food and local independent companies to assist in creating a relocalised and resilient economy**
- **help to improve the lives of the county's most disadvantaged people by working to eliminate fuel poverty**
- **support a programme of sharing best practice and piloting sustainable technologies and innovation**
- **monitor and report annually on progress against the 'Re-energising Herefordshire' commitments.**

WE ACKNOWLEDGE the progress being made already by many people and organisations across the county who are raising awareness of these issues and taking actions to address them.

We call upon communities, organisations and businesses in Herefordshire to sign this Charter and to help re-energise our county.

Cllr Roger Phillips
Cabinet member, Enterprise Culture and Environment, Herefordshire Council

Alistair Neill
Chief Executive, Herefordshire Council

Rob Garner
Chair, Herefordshire Local Nature Partnership

Richie Cotterill
on behalf of Herefordshire in Transition Alliance

Lynda Wilcox
Chief Executive, Herefordshire Association of Local Councils

Cllr Graham Powell
Chair, Herefordshire Health & Wellbeing Board

Mike Ashton
Chief Executive, Herefordshire & Worcestershire Chamber of Commerce

Richard Asghar-Sandys
Chairman, Federation of Small Businesses (Herefordshire)

Peter Brown
Chair, Herefordshire Business Board & Chief Executive, Herefordshire Housing

Will Lindesay
Chief Executive, HVOSS (Herefordshire Voluntary Organisations Support Service)

Ian Peake
Principal & Chief Executive, Herefordshire and Ludlow College

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We would like to thank all of the signatories of the Re-Energising Herefordshire Charter, including those individuals, communities and organisations who signed after the Charter was published.

The support of Herefordshire Local Nature Partnership, the Herefordshire Green Network and all those who contributed to the consultation process is also gratefully acknowledged.

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