An economy fit for the planet
We believe in a future where economic prosperity and environmental sustainability go hand in hand.
Building a sustainable future

Until now, natural resources such as energy, materials, water and land have been abundant and cheap. As a result, today’s economy - from buildings and transport to food and clothing – is wasteful. The scarcity of resources, the impact of their use and the growth of emerging economies mean that the infrastructure, products and services of tomorrow will have to be radically different.

The Carbon Trust works with organisations to address these challenges and deliver on our mission – to accelerate the move to a sustainable, low carbon economy.

Our partners and clients are leaders in this transition – governments and multilateral organisations, businesses and the public sector. We act as a catalyst, working closely with them to help them succeed. Our experts listen closely to their needs, understand their challenges and create bespoke solutions, often acting as a critical friend. With almost two decades of experience, we understand what does and doesn’t work and – most importantly – why.

We cut through uncertainty to provide insights that support better, often bolder, decisions. We design and manage complex projects and collaborations that overcome financial and behavioural barriers to deliver real results. And, when the time comes to celebrate success, we recognise achievement through assurance and certification of the outcomes.
Why the Carbon Trust?

We are impartial and – our clients and partners tell us – rigorous and innovative too. We understand the need for unique solutions, which is why we think global but act local. Every day we work with new technologies, markets and business models yet, in a sector where much is open to opinion, we make the case for change based on evidence and facts.

All this needs great people and real expertise. Fortunately we have both, with experts of over 30 different nationalities based across five continents. Our engineers, policy makers, financiers and entrepreneurs have experience from a wide range of sectors, and each is personally committed to delivering positive change to everyone we work with.

Lastly, as an organisation committed to our mission and without shareholders, we reinvest any surplus from our activities to further grow our impact.

5
Our work is global and our team is based across five continents.

30
Our expert team has colleagues representing over 30 separate nationalities.
Expertise in action

Just as our partners and clients worldwide are incredibly diverse, the breadth and depth of our experience is almost unrivalled. Whether we’re measuring the carbon footprint of a bag of rice or helping deliver the smart, flexible energy systems of the future, we bring the best of our skills to deliver real impact.

We work globally with businesses, governments, public bodies, and international organisations of all sizes, delivering projects – both large and small – from concept to completion.

To demonstrate the breadth of our experience, the flexibility of our thinking and the impact we have, we have brought together a snapshot of some Carbon Trust projects over the following pages.
Case studies

What the future has in store
Energy Systems Innovation Platform

If we build it, they will come
Low Carbon Workplace

High ambition goals
Carlsberg

Genuinely green finance
Barclays

A fair wind
Offshore Wind Accelerator

Claims with credibility
Samsung Galaxy

A Mexican model
Low Carbon States

A Cinderella story
Industrial Energy Efficiency Accelerator

Keeping it clean
Transforming Energy Access
If we build it, they will come

Frustration can sometimes be a great stimulus. We decided to break the ‘circle of inertia’ that has held back energy efficiency improvements in commercial buildings by creating a new business model for low carbon property working in partnership with Columbia Threadneedle Investments, the global asset management group, and Stanhope Plc, a leading UK property developer.

In 2010 we set up the Low Carbon Workplace property fund, to buy and refurbish office buildings to high energy efficiency standards, which we then let to commercial tenants. What is unique about the model is that we ask occupiers to commit to minimising energy consumption and carbon emissions, then provide them with ongoing support to ensure that day-to-day performance of our buildings matches up to the design intentions.

“The Low Carbon Workplace concept is economically viable, socially responsible, repeatable, scalable and profitable. It is a great example of the private sector taking the initiative and developing new commercial models that unlock the value in low carbon refurbishment.”

— Don Jordison, Managing Director, Property, Columbia Threadneedle Investments

£280m
The Low Carbon Workplace fund currently owns eight buildings and is valued at £280 million.

67%
Improvement in Energy Performance Certificate rating after refurbishment.
A Mexican model

Mexico has a federal system of government, so individual states have a wide range of powers – from education and justice, to environment and transport. Because of this they have a considerable opportunity to influence the carbon emissions from their own buildings and transport fleets, as well as the power to influence the behaviour of local businesses and communities.

In 2014 we launched our Low Carbon States programme in Mexico, with funding from the UK Government’s Prosperity Fund. We have worked with the governments of Jalisco, Tabasco, Morelos, Yucatán and Baja California – representing a combined population of 17 million people. We support them in setting ambitious but realistic targets for carbon emissions reductions, as well as identifying a prioritised list of projects that can help to achieve their targets.

“This has given us clear step-by-step pathways for our large and complex state government organisation. The purpose-designed methodology and tools are helping us to make high level (and sometimes abstract) carbon reduction targets credible and achievable.”

— Project Leader, Jalisco State Government

The state government of Jalisco has set a target to reduce its own carbon emissions by 40% by 2020.
Claims with credibility

As the world’s largest smartphone manufacturer, each year Samsung Electronics sells hundreds of millions of new handsets all around the world. At this scale, even very small improvements can have a huge impact. As a responsible business, the company has integrated continuous improvement of sustainability into the design process for each new model, with the ambition to understand and reduce the environmental impact of its products as far as possible.

We have worked with Samsung Electronics since 2012 to certify the carbon emissions of each new generation of the company’s flagship Galaxy smartphone devices, beginning with the Samsung Galaxy S2. This independent verification allows the company to credibly communicate sustainability achievements to customers and stakeholders that are increasingly concerned about environmental impacts, with the Carbon Trust’s Carbon Label displayed on boxes containing the handsets.

40%

The Samsung Galaxy S9 has a carbon footprint almost 40% lower than the Samsung Galaxy S4, released just five years before.
A fair wind

Clean energy technologies can only succeed if they become competitive. But creating a new industry means finding new ways to do things. Since 2008 we have run one of the world’s biggest collaborative innovation programmes, the Offshore Wind Accelerator (OWA), to unlock opportunities in a hugely promising but technically challenging source of renewable energy.

The OWA is collectively funded by developers representing three-quarters of Europe’s installed offshore wind capacity, alongside support from the UK and Scottish governments. Focusing on everything except the turbine, we target areas with the greatest potential for cost reduction. The innovations pioneered through the programme have played a significant role in building a thriving offshore wind industry that is delivering new projects at prices exceeding government’s most optimistic expectations.

43%

In 2017 the UK government awarded contracts for new offshore wind farms at 43% below its auction reserve price.

“Scottish Government support for the OWA has helped develop new ideas in key areas of importance to companies operating in Scottish waters.”

— Paul Wheelhouse MSP, Minister for Business, Innovation and Energy, Scottish Government

£100m

Over £100 million has been invested through the OWA into projects targeting specific needs, challenges and opportunities.
High ambition goals

Getting better is no longer good enough. Carlsberg Group is one of the world’s largest brewers, producing billions of beers each year and already performing well on sustainability. But the company’s leadership recognised that to deliver on a truly sustainable future, most industries will need to do more than just reduce their environmental impact. They need to rapidly move towards zero.

We worked with Carlsberg to help set science-based targets on greenhouse gas emissions, making them one of the first companies worldwide to commit to action in line with the Paris Agreement’s higher ambition goal of pursuing efforts to limit global warming to 1.5°C. Our team of technical experts continues to work with the business, supporting them in delivering against this goal across their global operations in a way that makes good business sense.

“Global challenges such as climate change and water scarcity require strong collective action, and with Together Towards ZERO we’re setting new industry standards for science-based and partnership-driven sustainability.”

— Cees ’t Hart, CEO, Carlsberg Group

Carlsberg is aiming for zero carbon emissions from its breweries by 2030.

92%

By 2030 Carlsberg will reduce greenhouse gas emissions related to its operations by 92% compared to 2015 levels.
What the future has in store

In a sustainable future we will need to meet all our demands for power, heat, cooling and transport without any carbon emissions. This cannot be achieved through business as usual. We still do not know the best way to achieve a successful transition to a clean, flexible, stable and affordable energy system at the lowest cost.

To address this challenge we created the Energy Systems Innovation Platform (ESIP), bringing together companies representing almost half of the UK electricity supply market, to help them find new business models that meet future system needs. Through this approach we deliver technology-agnostic insights that help find solutions that will help our partners make smarter strategic investments, such as uncovering new ways to use energy storage to effectively integrate wind energy onto the grid.

£2.4bn
Better use of energy storage could save the UK £2.4 billion a year.

50%
ESIP partners represent almost half the UK’s electricity supply market.
Keeping it clean

Billions of people around the world still lack access to modern energy technologies. Without this, children struggle to do schoolwork after dark, unrefrigerated food spoils quickly, and health is damaged by indoor air pollution from fuel use. Addressing this challenge is critical for alleviating poverty and improving lives. However, unless this is done in a low carbon way it will exacerbate climate change, where impacts will disproportionately affect the very same people and counteract development efforts.

The Carbon Trust leads the delivery consortium behind the UK government’s Department for International Development’s Transforming Energy Access (TEA) programme, aiming to accelerate access to affordable, clean energy services for poor households and enterprises in South Asia and sub-Saharan Africa through applied research and innovation. This programme is working to develop new technologies and create a robust evidence base on how to overcome the most significant barriers that hold back systemic change.

Over 70 projects have been funded through TEA’s Energy Catalyst programme, supporting clean energy innovation.
A Cinderella story

Energy efficiency is the Cinderella of the clean energy transition, often overlooked and neglected, but full of virtue. Cutting out energy waste can improve economic productivity, save vast amounts of money, and help deliver on international ambitions around climate change. One of the areas where better energy efficiency is most needed is in industry, which accounts for around a third of all global greenhouse gas emissions. The opportunities for improvement are enormous, with around 60% of identified energy efficiency potential still to be realised.

The Carbon Trust and UNIDO jointly lead the UN’s Sustainable Energy for All Global Industrial Efficiency Accelerator, working with 15 countries over 8 years to rapidly drive higher energy productivity in industry. The project is currently in its initial phase, taking US$2 million of funding from the Global Environment Facility to develop market transformation programmes in five high impact countries: Mexico, Brazil, Morocco, Indonesia and China.

"Industrial energy efficiency is a no regret investment, it helps our client countries meet their sustainable development goals, create jobs, and enhance economic security. We are pleased to be working with UNIDO, the Carbon Trust and many private sector partners to accelerate the adoption of energy management systems in key industry sectors."

— Naoko Ishii, CEO and Chairperson, Global Environment Facility
Genuinely green finance

Trillions of dollars will be needed to finance the transition to a sustainable economy. To support this, the market for green bonds has seen explosive growth. In 2017 bond issuances of $155 billion were labelled as green, compared to just $11 billion in 2013. But green is a relative term – not every green bond will really lead to green outcomes.

We worked with Barclays to develop a unique framework and methodology to make sure that the bank’s green bonds were based on robust principles using meaningful metrics. This resulted in the launch in 2017 of an innovative issuance backed by mortgages for energy efficient properties – the first of its kind in the UK market. We then provided assurance on this bond against international standards to give investors the confidence that it will really deliver on the intended positive impacts.

“This issuance is an exciting step and complements Barclays’ existing involvement in the well-established green bond market. It will help us diversify our investor base, attracting interest from the growing group of environmental, social and governance investors.”

— Tushar Morzaria, Group Finance Director, Barclays

Barclays’ €500 million green bond was the first issuance from a UK bank used to fund domestic assets.
We would like to thank all of our clients and partners who make our work possible.