Achieving Carbon Zero

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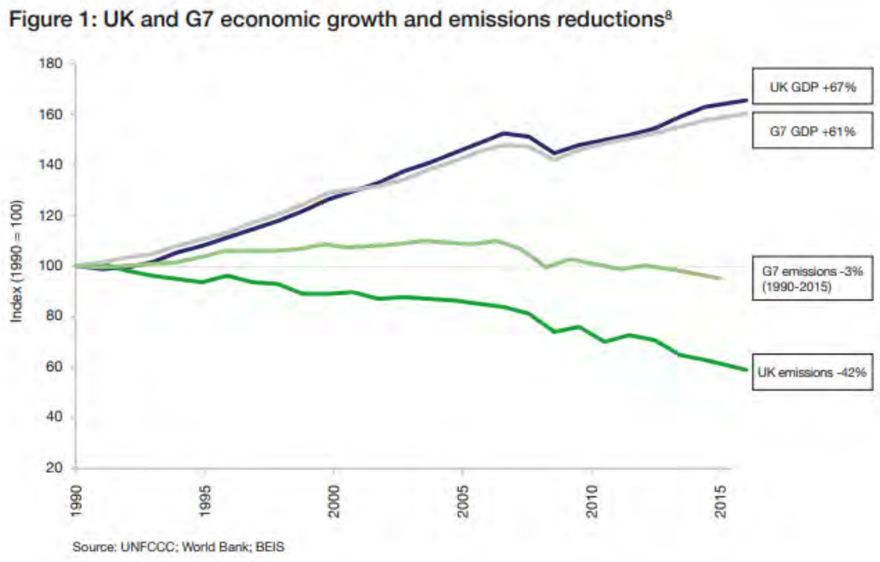
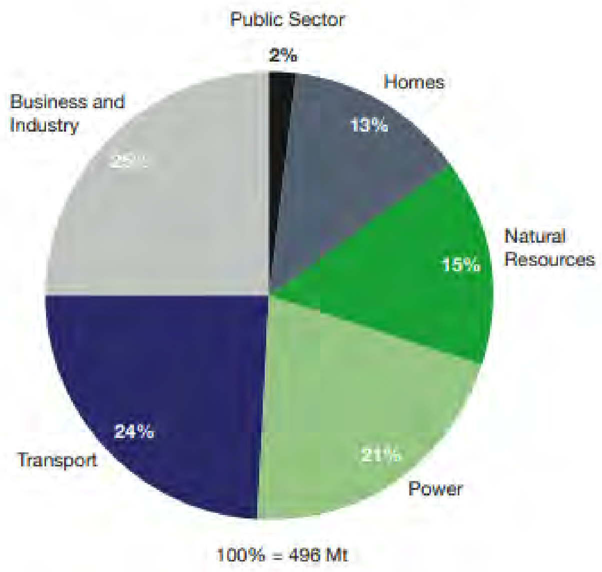
01

Carbon Zero in a Business Context

The Clean Growth Strategy: Leading the way to a low carbon future



"This Government is determined to leave our natural environment in a better condition than we found it. Clean growth is not an option, but a duty we owe to the next generation, and economic growth has to go hand-in-hand with greater protection for our forests and beaches, clean air and places of outstanding natural beauty."



Executive Summary

Clean growth means growing our national income while cutting greenhouse gas emissions. Achieving clean growth, while ensuring an affordable energy supply for businesses and consumers, is at the heart of the UK's Industrial Strategy. It will increase our productivity, create good jobs, boost earning power for people right across the country, and help protect the climate and environment upon which we and future generations depend.

The Clean Growth Strategy: Leading the way to a low carbon future

Improving Business and Industry Efficiency – 25% of UK Emissions.

Support businesses to improve their energy productivity, by at least 20 per cent by 2030.

Establish an industrial energy efficiency scheme to help large companies install measures to cut their energy use and bills.

Publish joint industrial decarbonisation and energy efficiency action plans with seven of the most energy intensive industrial sectors.

Demonstrate international leadership in carbon capture usage and storage (CCUS) by collaboration with partners.

Work in partnership with industry, through a new CCUS Council.

Develop a strategic approach to greenhouse gas removal technologies.

Phase out the installation of high carbon forms of fossil fuel heating in new and existing businesses off the gas grid during the 2020s.

Support the recycling of heat produced in industrial processes, to reduce business energy bills and benefit local communities.

Invest around £162 million of public funds in research and innovation in energy, resource and process efficiency.

The Financial Risks of Climate Change

Bank of England governor Mark Carney and France's François Villeroy de Galhau set out the dangers to the global economy in an open letter on 17th April 2019.

The NGFS* sets out three climate-related financial risks that companies, banks and governments need to fight against.

Physical: These are the immediate problems caused by increasingly frequent climate and weather-related events - such as severe droughts or cyclones that affect crops.

Transition: For example, when a business moves away from carbon-intensive industries and technologies in a "sudden or disorderly" way, their business models and asset valuations can end up taking a hit.

Liability: When people or businesses claim compensation for losses suffered from either the physical or transition risks, which can have a huge impact on insurers.

"If some companies and industries fail to adjust to this new world, they will fail to exist. "

*Network for Greening the Financial System

Societal Pressures

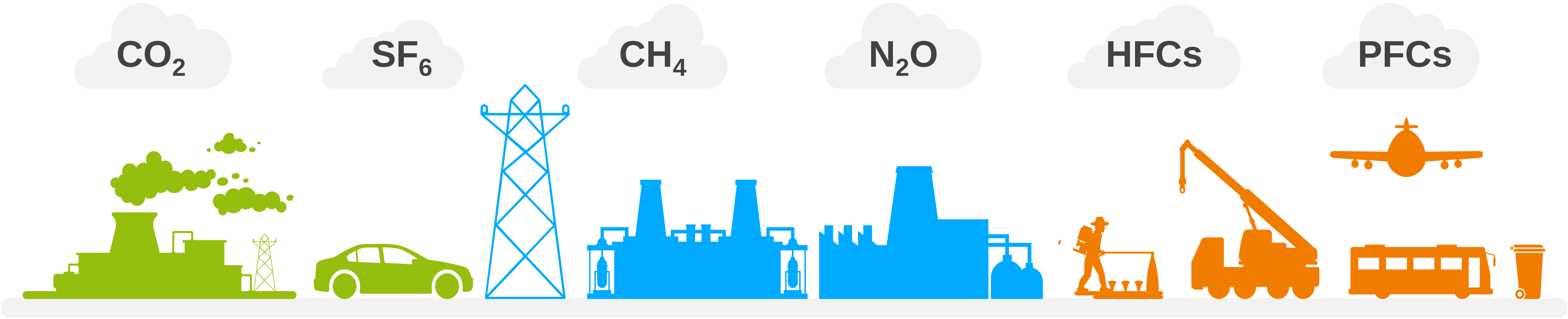
Climate activists have blockaded the London Stock Exchange by gluing themselves across the entrances. **25th April 2019**

'You did not act in time': Greta Thunberg addresses MPs at the Houses of Parliament. **23rd April 2019**

02

How Can it Be Achieved?

Where are your emissions from?



SCOPE 1

Direct emissions
Fuel combustion
Owned vehicle fleet
Fugitive emissions

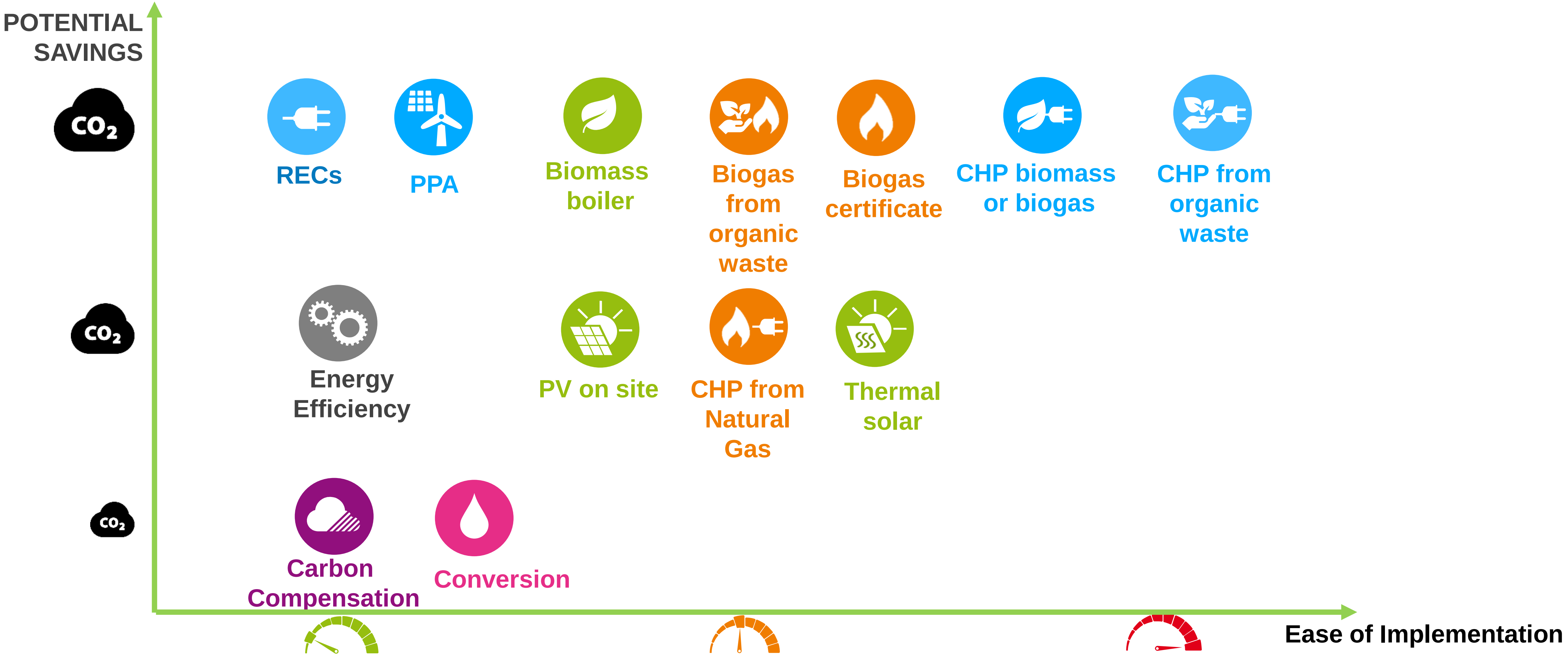
SCOPE 2

Energy indirect emissions
Purchased electricity for own use
Purchased heat, steam, cooling for own use

SCOPE 3

Other indirect emissions
Purchased goods and services
Product use
Waste disposal
Transportation and distribution
Employee business travel

Where are your reductions coming from?



The Law of Unintended Consequences

Unexpected benefit:
A positive unexpected benefit.

Unexpected drawback:
An unexpected detriment occurring in addition to the desired effect of the policy.

Perverse result:
A perverse effect contrary to what was originally intended.

03

A Methodology

Understanding the Sources

BREAKDOWN OF EMISSIONS FROM SCOPE 1 & 2

433,414 tCO_2e

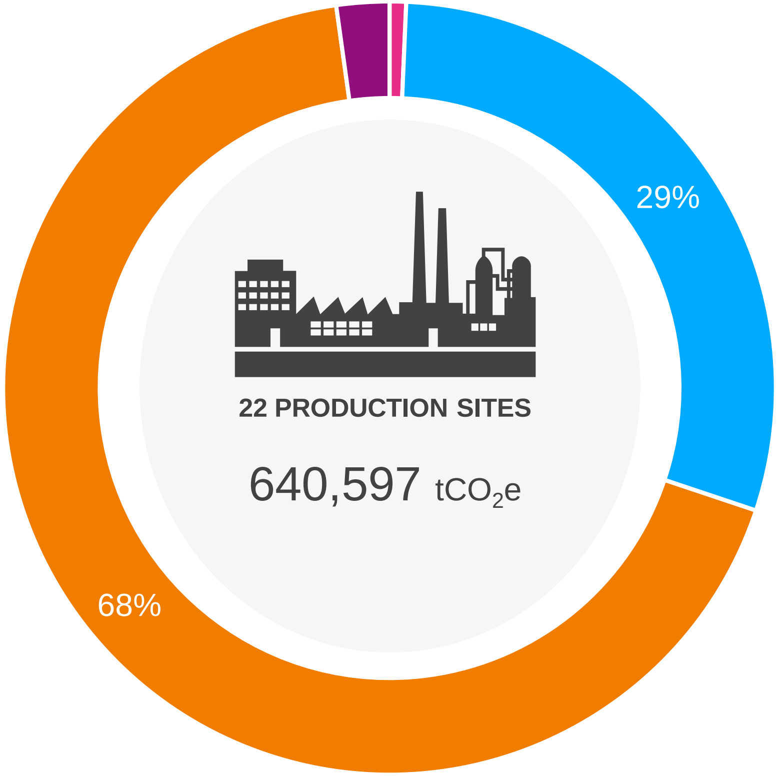
Emissions from **Natural Gas**

4,420 tCO_2e

Emissions from **Light Fuel Oil**

0 tCO_2e

Emissions from **Bioliquid**



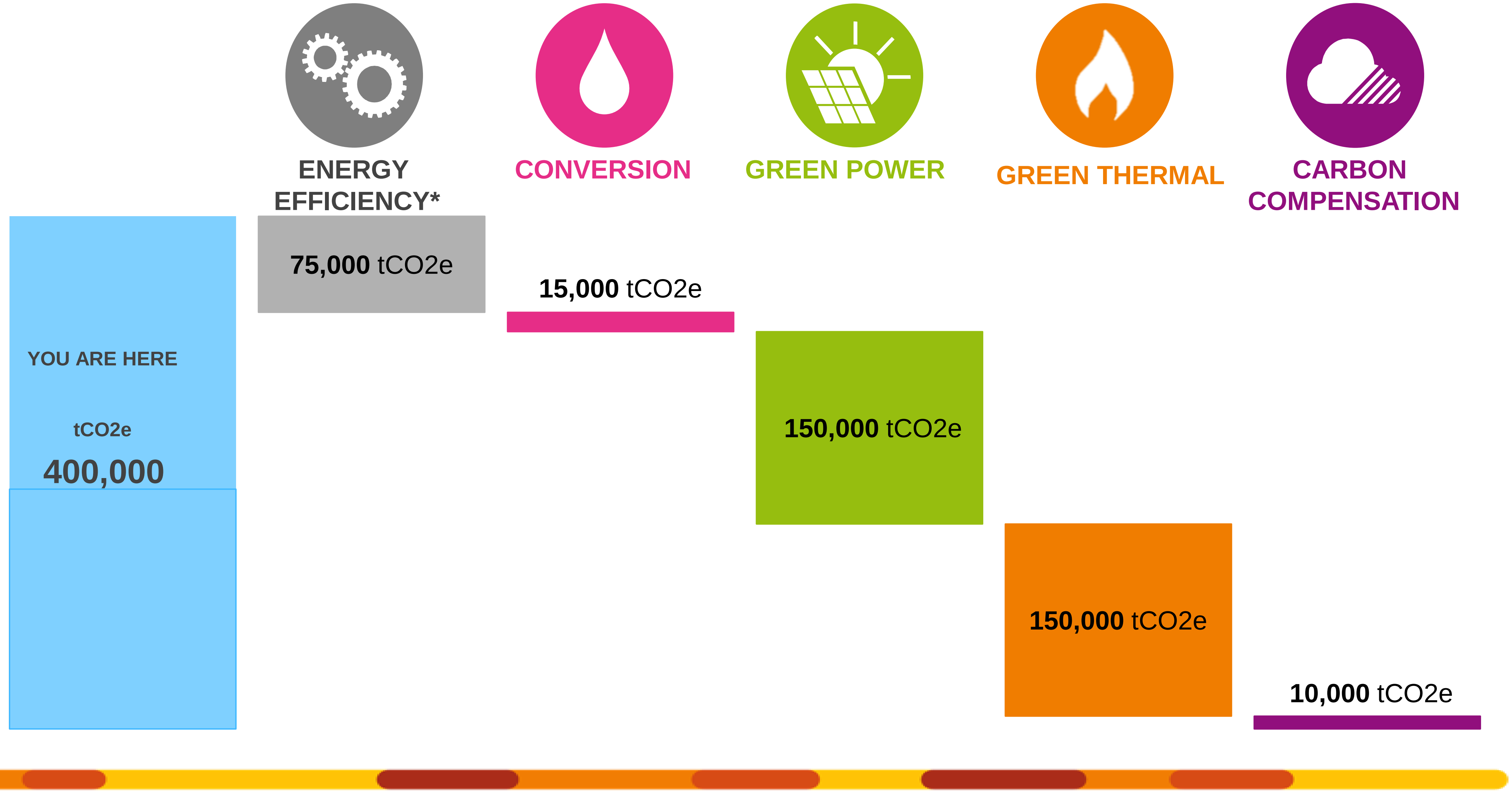
188,606 tCO_2e

Emissions from the **Electricity grid**

14,157 tCO_2e

Emissions from **Purchased Heat**

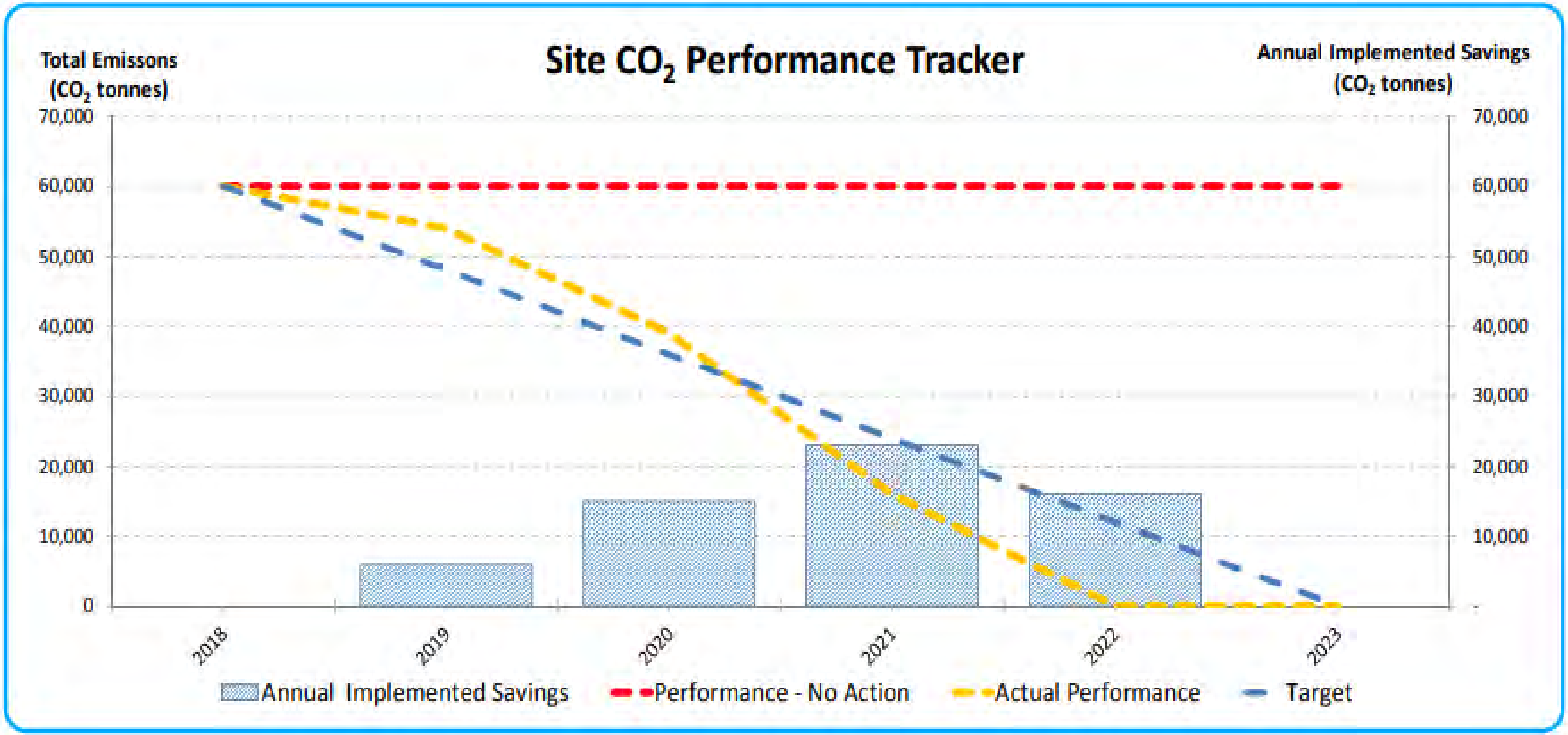
Carbon Waterfall



REGOs and RGGOs

- Electricity you buy via renewable energy contracts comes from 100% renewable energy sources, such as wind or hydro-electric power – which produce zero carbon emissions and do not deplete finite natural resources.
- The origin of renewable electricity should be fully certified by UK Renewable Energy Guarantees of Origin (REGOs) or EU Guarantees of Origin (GoOs), meaning that all of the electricity you buy is fully traceable to specific renewable generators.
- “Green gas” is sourced from generation plants that produce biogas from anaerobic digestion or landfill waste gas. Biogas produces at least 46% less carbon emissions than standard natural gas, enabling you to reduce your carbon footprint.
- Renewable Gas Guarantee of Origin (RGGO), which identifies exactly where, when and how it was produced. This gives you complete traceability and assures you that your gas comes from authentic biogas sources.

Performance Tracker



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Streamlined Energy and Carbon Reporting (SECR)

SECR – Overview

The UK Government has published plans for Streamlined Energy and Carbon Reporting (SECR) regulations.

It outlines the new mandatory reporting framework which will replace the existing CRC Energy Efficiency Scheme.

The scheme targets about **11,900** companies.

SECR – Who needs to comply?

- All quoted companies.
- All large UK incorporated unquoted companies. To be considered as “a large company” a business must fulfil at least 2 of the following criteria within a financial year: employ at least 250 employees, have an annual turnover greater than £36m or an annual balance sheet total greater than £18m.
- All large LLPs.
- Companies using less than 40,000 kWh of energy in the reporting year will be exempted from SECR.
- UK subsidiaries that qualify for SECR in their own right, will not be required to report, if covered by a parent’s group report.
- Companies that are not registered in the UK are not required to report under SECR.
  - There will be an exemption from the scheme for unquoted companies when it would be not practical to obtain some or all of the SECR information.
  - There will be an exemption from disclosing information which the Directors think would be seriously prejudicial against the interests of the company.

How to Comply

- Include a report on carbon emissions **annually** in their **Directors Report.**

- The **reporting** must include:
  - **electricity, gas and transport** (Scope 1 and Scope 2 emissions) however Scope 3 emissions (business travel, waste, water, etc) will be optional.
  - at least one **intensity metric** such as **tCO2/employee.**
  - a **narrative** about **energy efficiency actions** taken in the financial year.

Our Ambition