PAS 2060 – THE JOURNEY TO CARBON NEUTRALITY

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NQA Principal Assessor

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NQA: CLIENTS WE CERTIFY

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KEY INFO

- 45 minute webinar
- Questions in the chat box
- Q&A at the end
- Recording of webinar circulated shortly

YOUR PRESENTER

Richard Walsh

CEnv MIEMA. ISO 9001, ISO 14001, ISO 50001, NHSS 18, Eco-Campus

NQA Principal Assessor
Environment & Energy

Richard is NQA's Principal Assessor for ISO 14001 and ISO 50001 management system standards. As a Principal Assessor his role is to lead and develop the technical knowledge and skill base of NQA staff and Assessors, whilst ensuring technical knowledge and changes within the industry are cascaded appropriately and accordingly to clients and external stakeholders.

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WEBINAR

- Learning Objectives
- What is Carbon Neutrality?
- PAS 2060 Approach
- Basic Principles of PAS 2060
- 4 Key Stages
- Questions

LEARNING OBJECTIVES

- Understand what is meant by Carbon Neutrality
- Background to Carbon Reductions
- Development of PAS 2060
- What are the benefits
- Explain different Scopes of Carbon Emissions
- 4 Stages of the process

WHAT IS CARBON NEUTRALITY - DEFINITIONS

Carbon Neutrality

- A state of balance between the CO_2 emitted into the atmosphere and the CO_2 removed from the atmosphere.

Zero Carbon

- No carbon emissions are being produced

Carbon Negative

- Reduction of the carbon footprint to less than neutral, so that there is a net effect of **removing** CO_2 from the atmosphere rather than adding it.

Carbon Trust definition:

Carbon neutrality has a minimum requirement of covering Scope 1 & 2 emissions with Scope 3 encouraged. Net zero must cover Scope 1, 2 & 3 emissions.

Net Zero – current definition

Science Based Targets initiative (SBTi) has defined net zero targets for corporate as follows:

‘To reach a state of net zero emissions for companies implies two conditions:

- To achieve a scale of value-chain emission reductions consistent with the depth of abatement achieved in pathways that limit warming to 1.5°C with no or limited overshoot and;
- To neutralise the impact of any source of residual emissions that remains unfeasible to be eliminated by permanently removing an equivalent amount of atmospheric carbon dioxide.’

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WHY THEN CARBON NEUTRALITY?

- To solve the problem of man-made emissions and their effects on climate change, we need to take account of our carbon emissions and make continued efforts to reduce them.
- But it is impossible to reduce our carbon emissions to zero, no matter how hard we try.
- Carbon neutrality allows the closing of this gap by purchasing carbon offsets.

CARBON NEUTRALITY – WHY?

- The earth's climate has seen many changes in its 4.5 billion years.
- 18,000 years ago most of Britain was covered in ice and glaciers.
- Up to now – changes in climate have been entirely natural.
- Current changes are a result of increasing human population and associated activities
- There are 3 possible positions on climate change…

CLIMATE CHANGE

1. That global warming is not occurring and so neither is climate change;
2. That global warming and climate change are occurring, but these are natural, cyclic events unrelated to human activity;
3. That global warming is occurring mainly as a result of human activity and so climate change is also the result of human activity.

CLIMATE CHANGE

- Scientists attribute the current warming trend to the use of fossil fuels because using them releases into the atmosphere stores of carbon that were sequestered (buried) millions of years ago.
- The addition of this “old” carbon to the world’s current stock of carbon is what is tipping the balance - further insulating the earth, causing global warming.

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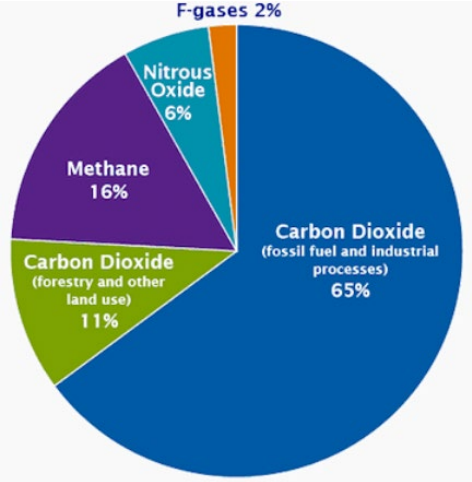
WHAT ARE THE MAIN CULPRITS?

Gas	Found	Relative to CO_2
Methane	Natural, decomposition, farming, combustion	30x
Nitrous Oxide	By product of fertilizer production and use	270x
F-Gas	Air-con, chillers (replaced ozone depleting)	800 – 10,000x
Sulphur hexafluoride	SF6 - insulators in high voltage applications	22,800x



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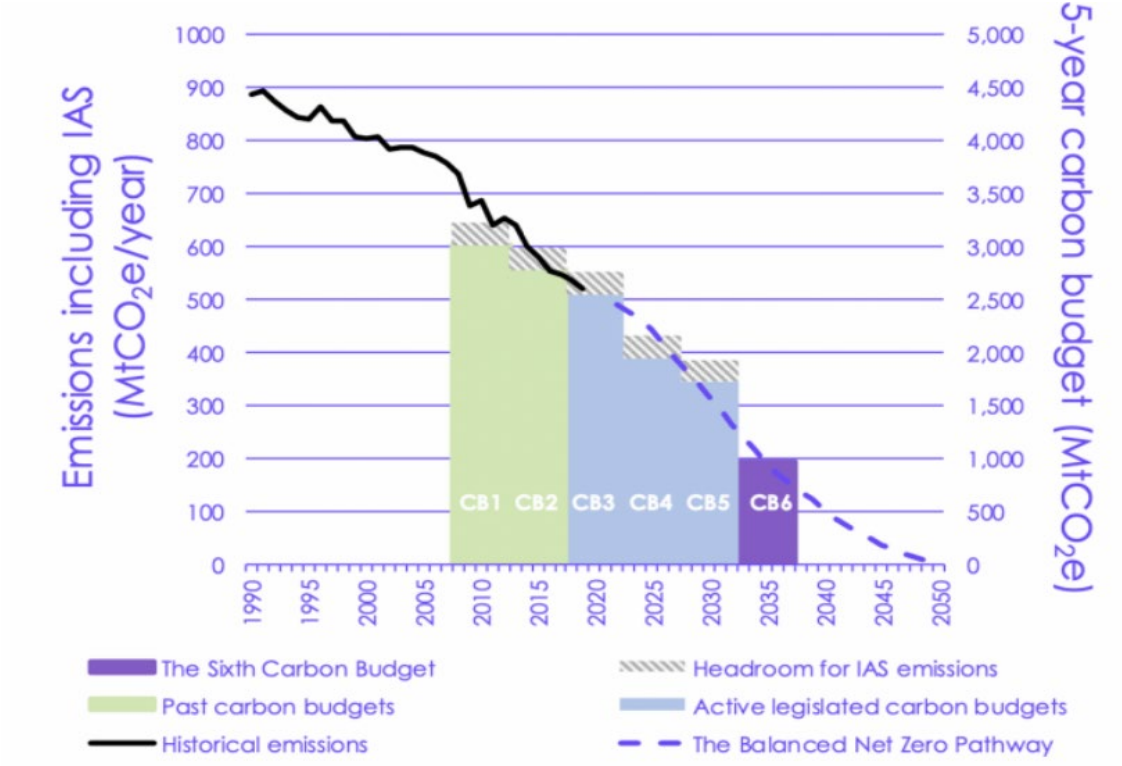
UK CARBON BUDGETS AND 2050 TARGET



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10-POINT PLAN TO GET UK ON TRACK FOR NET ZERO

1. Offshore wind:	Quadrupling to 40GW by 2030, supporting up to 60,000 jobs.
2. Hydrogen	5GW of low carbon hydrogen production capacity by 2030 - transport, power, homes
3. Nuclear	Developing the next generation of small and advanced reactors
4. Electric vehicles	Transforming our national infrastructure to better support electric vehicles
5. Public transport	Zero-emission public transport. Cycling and walking.
6. Jet Zero/Greener maritime	Research projects for zero-emission planes and ships.
7. Homes & public buildings	Install 600,000 heat pumps every year by 2028. Buildings more energy efficient
8. Carbon capture	Target to remove 10MT of carbon dioxide by 2030
9. Nature	Restoring our natural environment, planting 30,000 hectares of trees every year
10. Innovation & finance	Cutting-edge technologies needed to reach these new energy ambitions Green finance and investment

GOING FORWARD

- We are at an important inflection point.
- Governments, industry and civil society are coming together to take climate action. There is a growing global consensus around a zero-carbon future.
- To achieve the Paris goals we must halve global emissions over the next decade, and rapidly adapt to our warming climate.
- To do this we must all move faster.

Carolyn Fairburn – past Director-General, CBI

Immediate and decisive action is needed to avoid the catastrophic impacts of climate change and create opportunities in low carbon technologies.

GREENWASHING

- Greenwashing is an attempt to capitalize on the growing demand for environmentally sound products.
- Greenwashing can convey a false impression that a company or its products are environmentally sound.
- Genuinely green products back up their claims with facts and details.

How do we do this?

PAS 2060

- Specification for the demonstration of carbon neutrality
- Specifies requirements to be met by any entity seeking to demonstrate carbon neutrality through the quantification, reduction and offsetting of greenhouse gas (GHG) emissions from a uniquely identified subject.
- Came into effect in April 2010 – reissued April 2014

BUSINESS BENEFITS

- Demonstrate environmental integrity
- Provide a clear and credible message to instil customer trust in their environmental messages
- Meet increasing customer demand for environmentally friendly products and services
- Engage and motivate their staff and stakeholders to reduce costs through operational and behavioural changes
- Differentiate their business from the competition to increase their revenue and market share

THE BASIC PRINCIPLES OF PAS 2060

The standard sets measurement and reduction targets for any organisation. Through the examination of documents and plans, it then allows for a specific carbon neutrality statement to be fully verified.

The standard process is composed of 4 key stages >>>

WHAT CAN BE CERTIFIED?

- Entity – shall in its determination of the subject:
  - Uniquely identify itself
  - Uniquely identify the subject of the declaration of carbon neutrality
  - Establish all characteristics (purposes, objectives or functionality) inherent to that subject
  - Establish and take into consideration all activities material to the fulfilment, achievement or delivery of the subject.

ENTITY

Entities include

- Public sector
- Communities
- Organisations
- Companies (or parts of)
- Clubs/social groups
- Families
- Individuals

Scope

- Activities
- Products
- Services
- Buildings
- Projects & major developments
- Events
- Developments

1. MEASURE

Starting point is to calculate the actual carbon footprint for the entity seeking declaration.

Recommended methodologies are:

- ISO 14064-1
- World Business Council for Sustainable Development (WBCSD) Greenhouse gas protocol
- National Government Environmental Reporting protocols
- Products and services - PAS 2050 - Specification for the assessment of the life cycle greenhouse gas emissions of goods and services

1. MEASURE

Footprint measurements must include:

- A minimum of 95% of the total calculated emissions
- Can exclude emissions that constitute less than 1% of total.

Scope 1

Direct emissions from owned or controlled sources

Scope 2

Indirect emissions from generation of purchased electricity, steam, heating and cooling

Scope 3

All other indirect emissions that occur in an organisation's value chain (waste treatment, purchasing of goods, business travel, employee commuting etc).

2. REDUCE

Plan to reduce these identified emissions - Carbon Management Plan

- Public Commitment to Carbon Neutrality
- Timescale for achieving carbon neutrality of the defined entity
- Specific targets for GHG reductions that are appropriate to timescale
- The planned means of achieving & maintaining the GHG reductions:

  a) Justification of the techniques and measures to be used

  b) The time period that any historic reductions are calculated over and that a constant methodology has been used

  c) The offsetting strategy to be used including estimate of quantity required

The plan must be updated annually - continual improvement!

Declared reduction can be absolute or intensity.

3. OFFSET

PAS 2060 requires that the total amount of carbon emissions at the end of a reduction period be offset by high-quality, certified carbon credits which meet the following criteria:

- From one of the PAS 2060 approved schemes (for example the Clean Development Mechanism, Joint Implementation, The Gold Standard or Voluntary Carbon Standard)
- Genuinely additional (i.e. reductions that would not have happened anyway)
- Verified by an independent third party to ensure that emission reductions are permanent, avoid leakage (so that emissions are not increased in another area as a result of the project reductions) and are not double counted.
- Retired after a maximum of 12 months to a credible registry.

3. OFFSET – APPROVED SCHEMES

Kyoto compliant

- Clean Development Mechanism (Certified Emission
- Reductions)
- Joint Implementation (Emission Reduction Units)
- EU Allowances

Non-Kyoto compliant (Voluntary Emission Reductions)

- Gold Standard
- Voluntary Carbon Standard
- Climate, Community and Biodiversity Standard

Other domestic schemes

- In UK – the Woodland Carbon Code
- WWF Gold Standard
- Verified Carbon Standard

3. OFFSET – TYPICAL QUANTITIES NEEDED

- Average territorial emissions from 1 person in UK = 6.5 tonnes CO_2
- 1 person in USA = 16.5 tonnes CO_2
- 1 person in EU = 6.4 tonnes CO_2
- Return flight from New York to London, economy = 1.7 tonnes CO_2
- Same flight business class = 5 tonnes CO_2
- Construction of a building, embodied carbon, per m^2 Gross Internal Area (GIA) = 0.5 to 1.0 tonnes $CO_2{}^e$ per m^2 GIA
- Construction of a 1,000 m^2 building = 500 to 1,000 tonnes CO_2
- Construction of a 10,000 m^2 building = 5,000 to 10,000 tonnes CO_2
- Office space energy for 100 employees = 50 to 100 tonnes CO_2

4. DOCUMENT & VALIDATE

The final stage of the process is the documentation, verification and declaration of carbon neutrality.

This requires a statement that the required standards have been met, supported by a “Qualifying Explanatory Statement”

The standard requires public disclosure of all documentation supporting the carbon neutrality statement.

This in practice includes…

4. DOCUMENT & VALIDATE

- Proof of emissions reduction
- Withdrawn offsetting credits
- Carbon footprint report
- Carbon Management Plan
- Qualifying Explanatory Statement.

The requirement to provide all this information is fundamental to the final validation of carbon neutrality status.

VALIDATION

The standard permits three separate types of validation:

- Self validation
- Validation from a non-accredited organisation
- Independent 3rd party validation.

NQA as a UKAS accredited Energy and Environmental Management System certification body is able to provide this fully independent validation of carbon neutrality.

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TIPS FOR ACHIEVING CARBON NEUTRALITY

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SIX TIPS FOR ACHIEVING CARBON NEUTRALITY

1. Seek accreditation
   Certification from external bodies will bolster your credibility within the industry and can also provide guidance if you need support in meeting your carbon-neutral goals.

2. Make the most of technology
   Use dashboards and data-based solutions to find out where the carbon is and use technological solutions where possible to mitigate it.

3. Leadership must come from the top
   Embedding largescale change is only successful if there is buy-in and visible support from senior leaders.

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SIX TIPS FOR ACHIEVING CARBON NEUTRALITY

4. Share responsibility across the company

   Once each employee and each department see their carbon footprint, they are empowered and encouraged to find ways to cut it.

5. Collaborate with other organisations

   Ask your suppliers and partners how they can help you reduce your carbon footprint.

6. Set science-based targets

   Make sure you're playing your fair part in cutting carbon, to reach the global goal of attaining net-zero emissions.

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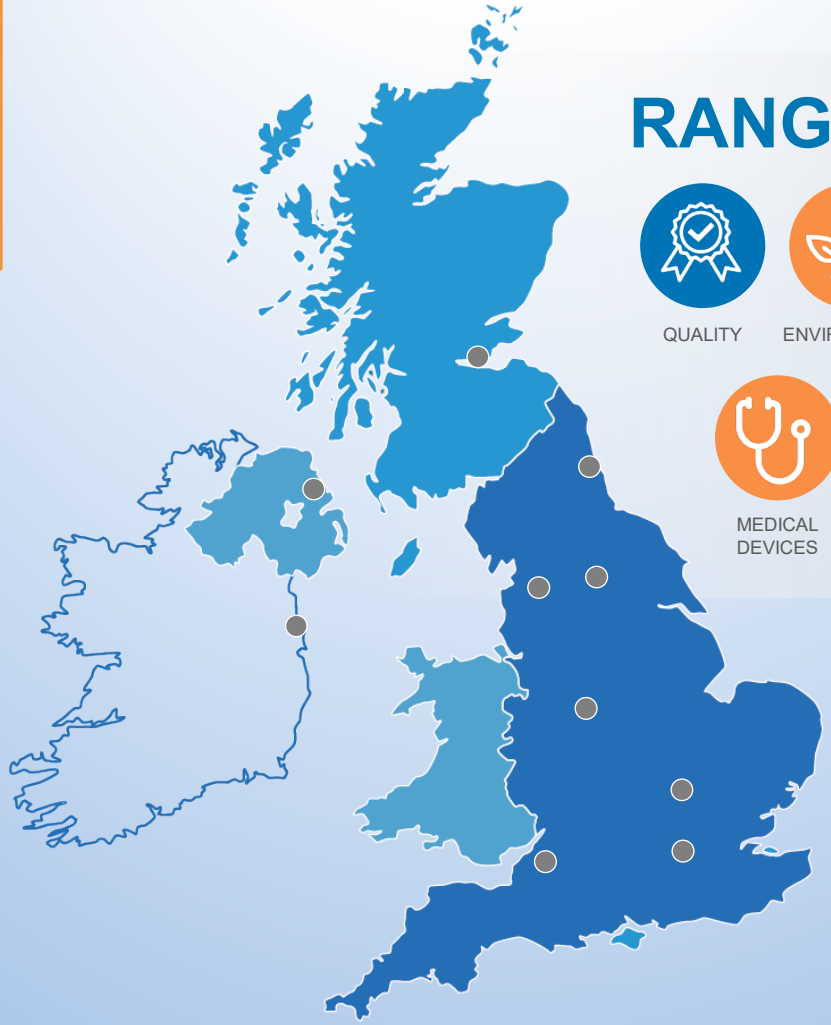

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Q&A

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