Where does GHG Inventory and Carbon Neutrality fit into Net Zero ambitions?

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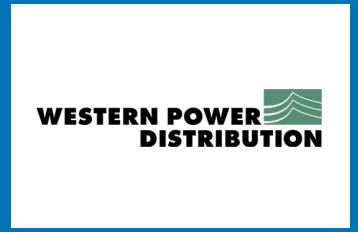

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KEY INFO

- 30 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.

LEARNING OBJECTIVES

- Key definitions
- Understanding of the terminology
- The journey to Net Zero
- How GHG inventory and Carbon Neutrality fit in
- Questions

Key Definitions

Carbon Neutrality

- This means taking steps to remove an equivalent amount of GHGs from the atmosphere as are being emitted through business activities.
- This is usually achieved through offsetting.

Key Definitions

Offsetting

- A carbon offset is a reduction or removal of emissions of carbon dioxide or other greenhouse gases made in order to compensate for emissions made elsewhere.
- Offsets are measured in tonnes of carbon dioxide equivalent (CO_2e)

Key Definitions

GHG Inventory

- A list of emission sources and the associated emissions quantified using standardised methods.
- Used for managing GHG risks and identifying reduction opportunities.

Carbon neutral vs net zero

The main difference between carbon neutral and net zero is the timeframe and how the target is reached.

- **Carbon neutrality** is a short-term state that most companies can achieve almost immediately by measuring their current emissions and using carbon offsets to compensate for them. It does not require any initial reduction of their emissions.
- **Net zero** is a long-term goal achieved only when a company has taken action to reduce the majority of its emissions. Offsets are only allowed for the small remainder of unavoidable emissions.
- **Think of carbon neutrality as the first step on the journey to net zero**

The road to Net Zero

- **The “race to zero” - but what does that really mean?**
  - We need to start with the basic science: the way carbon moves around the earth.
  - Known as the carbon cycle
  - Consists of sources which emit carbon and carbon “sinks” - anything which absorbs more carbon than it releases (e.g. plants, the ocean and soil).

The system has always naturally balanced itself out – but human intervention is throwing a spanner in the cycle.

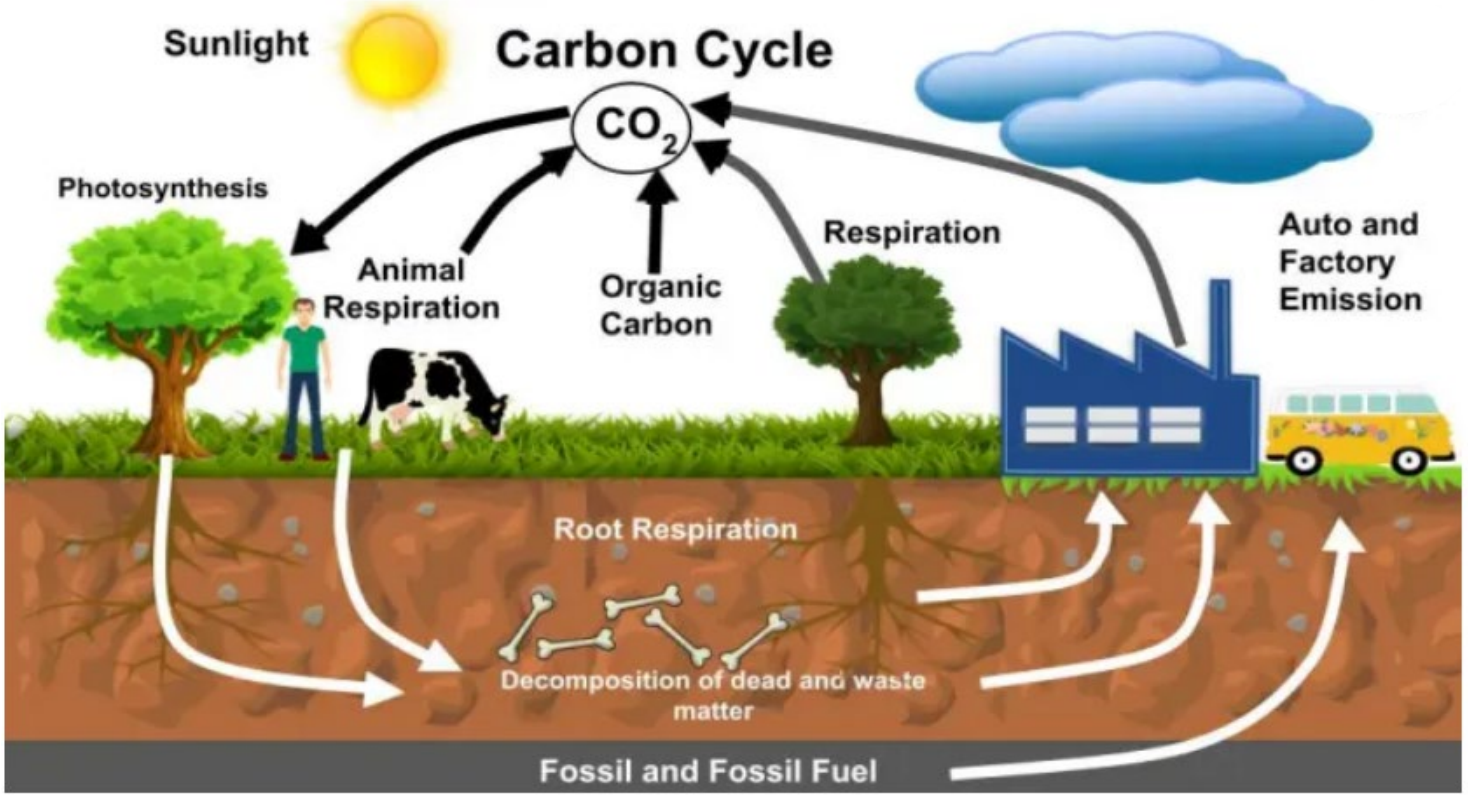
The road to Net Zero

- Our activity has created an imbalance between the amount of greenhouse gases (GHGs) released into the atmosphere and the amount of carbon that can be absorbed by our natural sinks.
- This has resulted in a net accumulation of GHGs in the atmosphere, which is warming our planet and driving anthropogenic* climate change.
- To stop the warming, we need to reach a balance between anthropogenic emissions sources and removals.

A state known as net zero emissions.

* **anthropogenic** - environmental change caused or influenced by people, either directly or indirectly

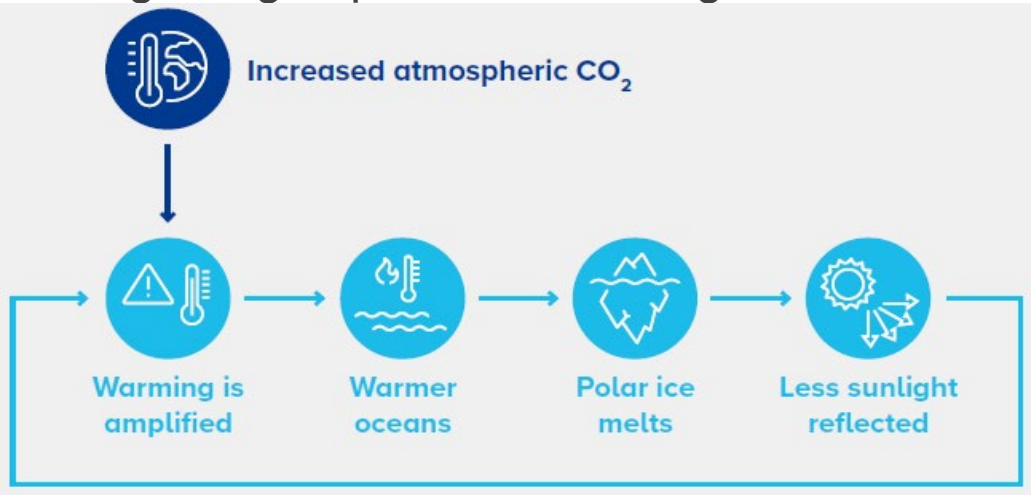
The road to Net Zero – Carbon Cycle



Why is Net Zero important

- We are at a critical juncture in needing to restore the earth's delicately balanced carbon cycle.
- We are witnessing an increase in both the frequency and severity of climate-related disasters, as well as the beginning of permanent changes to our environment.
- Feedback loops:

  climate change causing a cyclical chain reaction that results in even more climate change



Net Zero

Even if we can manage to cut emissions, we can't stop there: the carbon in the atmosphere will not return to pre-industrial levels.

- We need to take emissions out of the air
- This means removing billions of tonnes of CO_2 a year to get to a net zero future.
- To bring carbon levels down, we need to support our sinks and create new ones.
- Manmade approaches - engineering ways of capturing CO_2 and storing it permanently underground - but it is extremely expensive

Making net zero targets a reality

Action isn't happening fast enough and so we hear it referenced as the "race" to net zero.

- Many countries and corporations are making public pledges to work to a Net Zero target of 2050
- Targets are important for bringing us together and guiding policy decisions, we can't afford to conflate goals with guarantees.
- A climate action strategy must be done both accurately and transparently.
- So – where do we start?

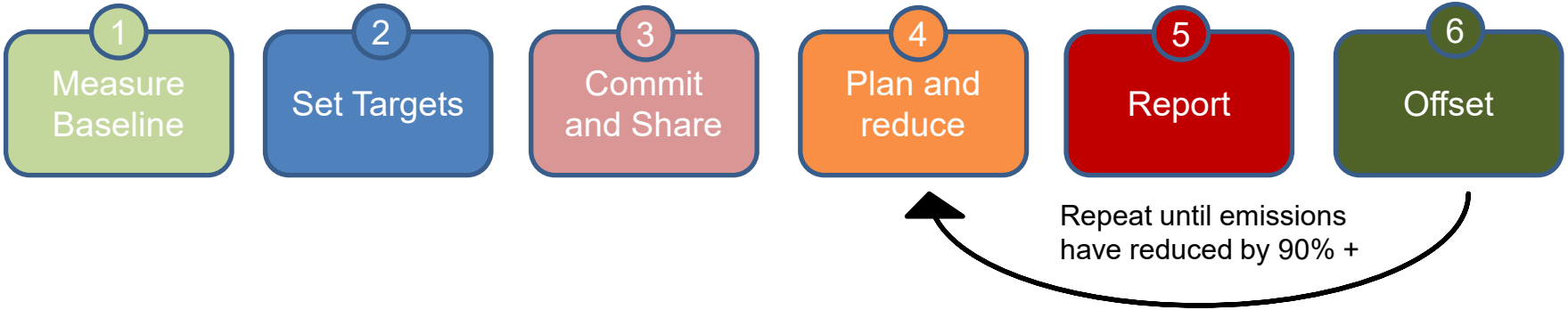
Climate Action Strategy

If a company wants to strive for a net zero path, they must:

- achieve science-based reduction targets (using the SBTi's Corporate Net-Zero Standard) and remove residual emissions.
- some emissions simply cannot be avoided or reduced
- This journey will begin with becoming carbon neutral - offsetting all emissions from the very start.

So how do GHG Inventory and Carbon neutrality fit into our journey.

Steps to Net Zero



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Steps to Net Zero

PAS2060

THE JOURNEY TO BECOMING CARBON NEUTRAL

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

The standard process is composed of 4 key stages:

Measure

Reduce

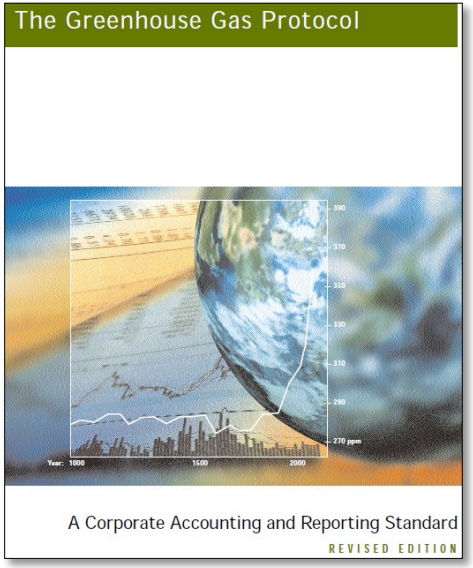
Offset

Document & verify

As with any journey – we have to know where we're starting from.

GHG Inventory

- A list of emission sources and the associated emissions quantified using standardised methods.
- Several methods – based on the Greenhouse Gas Protocol
- **ISO 14064-1:2018 -** specifies principles and requirements at organization level for quantification and reporting of GHG emissions
- **ISO 14064-3:2019 -** conducting or managing the validation and/or verification of greenhouse gas (GHG) assertions



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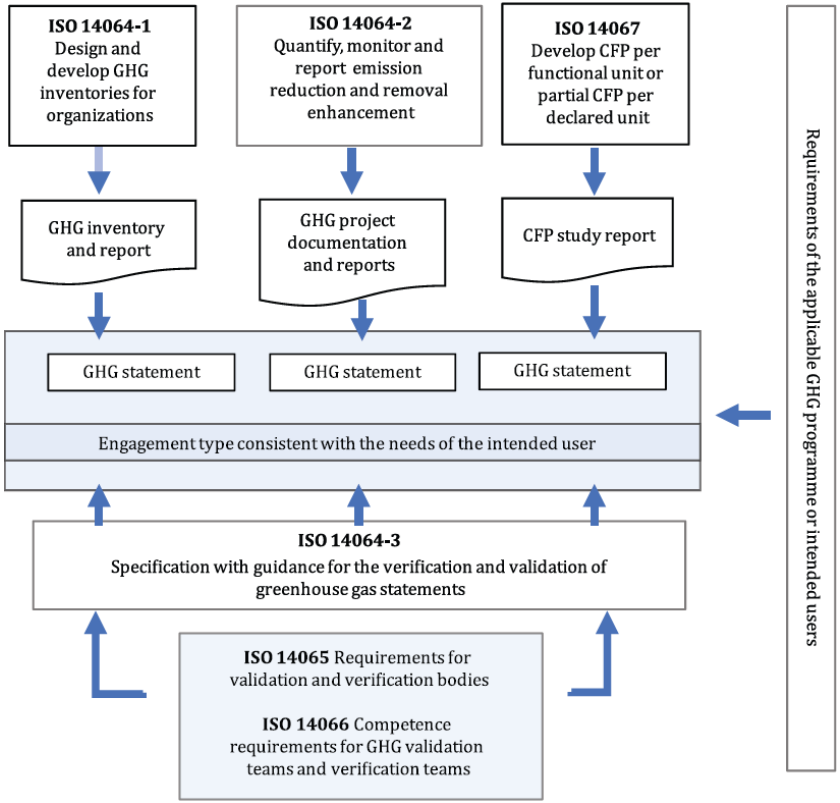
1
Measure Baseline



At what rate should we look to reduce our carbon emissions?

- Generally accepted that Science based targets are the desirable trajectory. (SBTI)
- Science-based targets provide companies with a clearly-defined path to reduce emissions in line with the Paris Agreement goals.
  - Limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C.

Sector	2050 emissions reduction target %
Forest, land and agriculture	72
Power	100
Cement	95
Iron and steel	93
Service buildings	99,6
Residential buildings	97,9

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3
Commit and Share

Be authentic and transparent and communicate your climate action strategy

- Share commitments with customers and stakeholders
- Seek 3rd party verification of GHG inventory & plans – use PAS2060
- Avoid ‘greenwash’ Using the accepted pathways and 3rd party verification will ensue authenticity and transparency.
- Clients will have the information they need to make a responsible choice.

- A carbon footprint is the basis for a comprehensive climate action strategy
- The next step is to plan to reduce these identified emissions – a carbon reduction plan.
  - Timescale for achieving carbon neutrality
  - Specific appropriate targets
  - The planned means of achieving and maintaining GHG reductions
  - Justification of the techniques and measures employed
  - Can be absolute or intensity (carbon/tonne of product etc).

As with all commitments – requirement to report on progress

- Within PAS 2060 – known as a Qualifying Explanatory Statement
- Requires public disclosure of all relevant documentation
  - Proof of emissions reduction
  - Carbon footprint report
  - Carbon Management Plan
  - Type of validation - 1st party, 2nd party of 3rd party.

Carbon neutrality - taking steps to remove an equivalent amount of GHGs from the atmosphere as are being emitted.

- Identify and document the relevant methodology used to achieve the offset
- Carbon credits verified by an independent 3rd party verifier
- Credits only issued after the emission reduction has taken place
- 'Retired' and stored in an independent registry – stop them being 'sold' multiple times.
- Offsetting total residual emission will allow carbon neutrality to be declared.


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What should your next steps look like?
If you're starting to think about how to achieve your sustainability, net zero and carbon neutrality objectives, book your place on our two day '***Understanding and Achieving Carbon Neutrality***' training course here.
BOOK HERE

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Q&A

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THANK YOU

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