SSN Offsetting Workshop

23 January 2020

Welcome

Jenny Fausset, SSN

SSN Sustainable Scotland Network

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QUESTIONS RECEIVED

- I need some guidance in terms of offsetting for public bodies? Are we allowed to do this? Do we include it in our annual reporting? Has anyone else done it and what is the guidance?

- Has anyone out there (particularly Local Authorities) already looked at opportunities for commercial forestry on owned land and/or assessed their land area for offsetting

QUESTIONS RECEIVED

- I've been asked by our Members to investigate whether there might be an opportunity for us to operate our own carbon-offsetting scheme, potentially along commercial lines.
- It would also be good to explore how organisations which do not own their estate and do not have any landholdings could potentially tap into a national offsetting scheme, i.e. put capital into sequestration projects of other organisations/local authorities and account for this in their footprint

QUESTIONS RECEIVED

- We are currently preparing our next 5 year climate change plan, due to be published March 2020. I am looking for advice or pointing in the right direction on offsetting.

- Addressing our Business Travel emissions is very difficult due to the nature of our core business. Offsetting has been raised. Could you please advise on Offsetting and when it should be used, offsetting schemes etc.

Setting the Scene

Professor Dave Reay (Chair)
Professor of Carbon Management & Education
University of Edinburgh

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Agenda

9.00am - Arrival and registration

9.30am - Welcome

9.35am - Setting the Scene

9.45 am - Getting to grips with the Terminology & Concepts

10.45am - Break

11.00am - Certification Programmes

11.30am - Carbon Management Strategies & Offsetting

12:15pm - Closing Remarks & Next Steps

12.30pm - Close

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Getting to grips with the terminology and concepts

Dr Matthew Brander
UoE Business School

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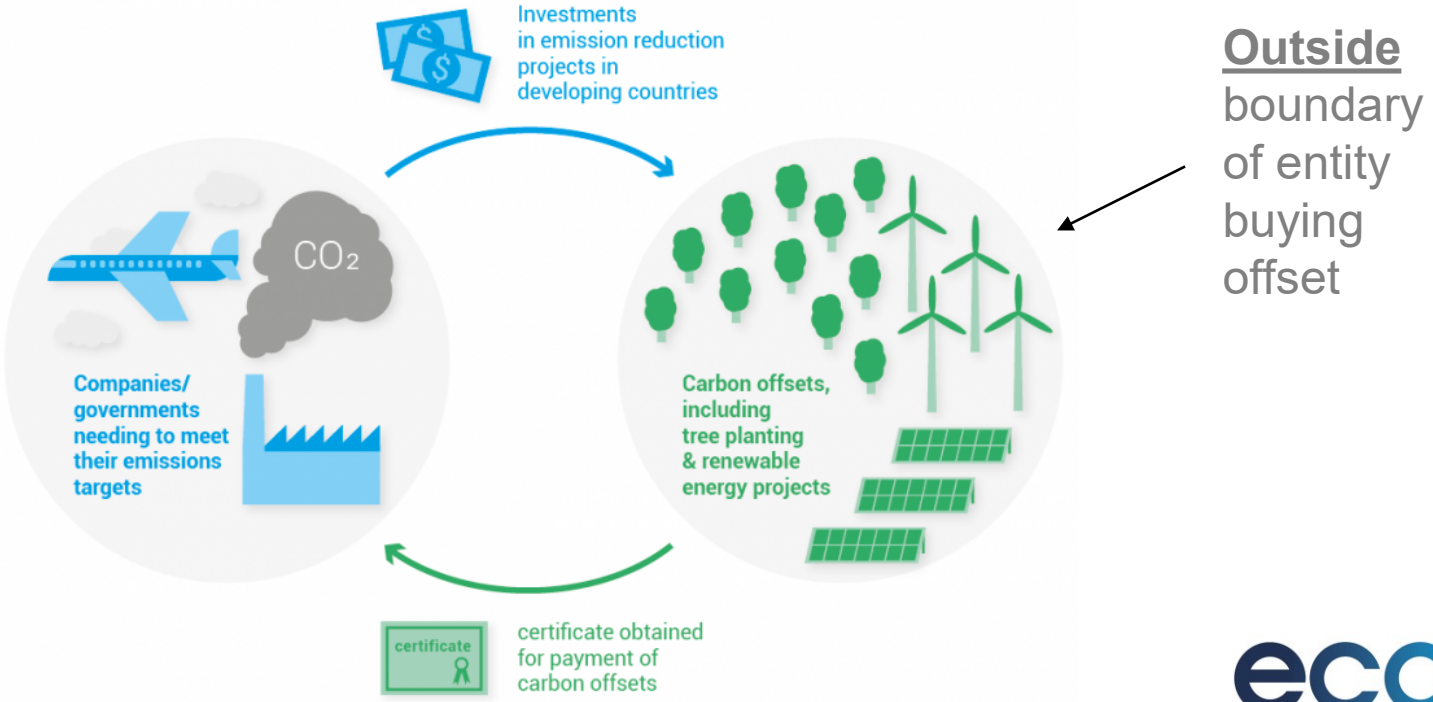
Issues

1. **Key concepts:**
   a. Offsetting;
   b. 'Emissions' and 'removals';
   c. Voluntary and compliance offsets
2. **Challenge 1: When/whether to use offsets?**
   a. **Cost**
   b. **'Moral hazard'**
   c. **Scottish territorial target**
3. **Challenge 2: Paris Agreement and additionality**
4. **REGOs**

Key concepts: offsetting

- **Offset:** An emission reduction or removal enhancement that occurs outside the GHG inventory boundary of an entity, and which is used to compensate for emissions occurring within the entity's GHG inventory boundary.



Key concepts: ‘emission reduction’ and ‘removal enhancement’

Distinction between:

- **Emission reduction:** Reduction in emissions relative to a baseline (e.g. wind turbines replace coal electricity generation)

- **Removal enhancement:** Increase in removal of CO_2 from the atmosphere relative to a baseline (e.g. planting more trees increases amount of sequestration)

- **Both can be types of offset**

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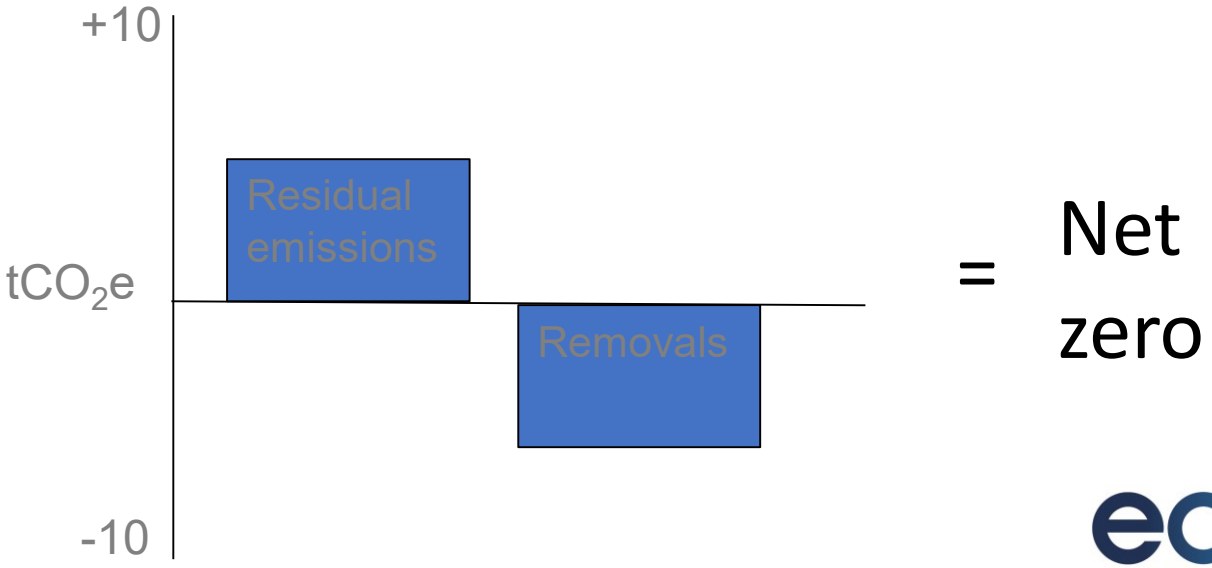
Key concepts: 'Offsetting' and 'net zero within boundary'

Distinction between:

- **Offsetting** = i.e. reductions/removals **outside** the GHG inventory boundary of an entity
- **Net zero within boundary** = Residual emissions are compensated by removals **within** the boundary.



Key concepts: ‘Voluntary’ and ‘compliance’ markets

‘Compliance’ offset = Entity is required to manage emissions/buy offsets by law.

E.g. in EU ETS

‘Voluntary’ offset = Entity is managing emissions/buying offsets voluntarily

E.g. for Easyjet

EasyJet to offset carbon emissions from all its flights

Airline will also relaunch its package holiday business in wake of Thomas Cook collapse

▲ An easyJet plane takes off at Lille-Lesquin airport. Photograph: Philippe Huguen/AFP/Getty Images

Any Questions?

Challenge 1: When/whether to use offsets?

a. Cost
b. ‘Moral hazard’
c. Scottish territorial target

Cost?

TABLE 1
Transacted Voluntary Carbon Offset Volume, Value, and Weighted Average Price by Project Category, 2017 and 2018

	2017			2018		
	VOLUME $MtCO_2e$	AVERAGE PRICE	VALUE	VOLUME $MtCO_2e$	AVERAGE PRICE	VALUE
FORESTRY AND LAND USE	16.6	$3.4	$63.4M	50.7	$3.2	$171.9M
RENEWABLE ENERGY	16.8	$1.9	$31.5M	23.8	$1.7	$40.9M
WASTE DISPOSAL	3.7	$2.0	$7.4M	4.5	$2.2	$10.0M
HOUSEHOLD DEVICES	2.3	$5.0	$11.8M	6.1	$4.8	$29.5M
CHEMICAL PROCESSES/ INDUSTRIAL MANUFACTURING	2.6	$1.9	$4.9M	2.5	$3.1	$7.9M
ENERGY EFFICIENCY/ FUEL SWITCHING	1.1	$2.1	$3.3M	2.8	$2.8	$7.8M
TRANSPORTATION	0.1	$2.9	$0.2M	0.3	$1.7	$0.5M

Notes: 2017 figures are based on 1,041 transactions for a total volume of 43.2 $MtCO_2e$. 2018 figures are based on 1,568 transactions for a total of 90.7 $MtCO_2e$. These figures do not include responses that didn't provide price data.

https://www.ecosystemmarketplace.com/carbon-markets/

‘Moral hazard’?

1. ‘Lock-in’ to high carbon pathway

2. Not right to continue emitting and pay someone else (often in developing country) to reduce emissions

3. Cheat neutral: https://www.youtube.com/watch?v=I6zpnVW134k

Scottish territorial target

- Buying voluntary offset credits from another country **doesn't help Scotland achieve its emission reduction target**

- Unlikely Scottish Government will allow/promote the use of international offset credits?

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Any Questions?

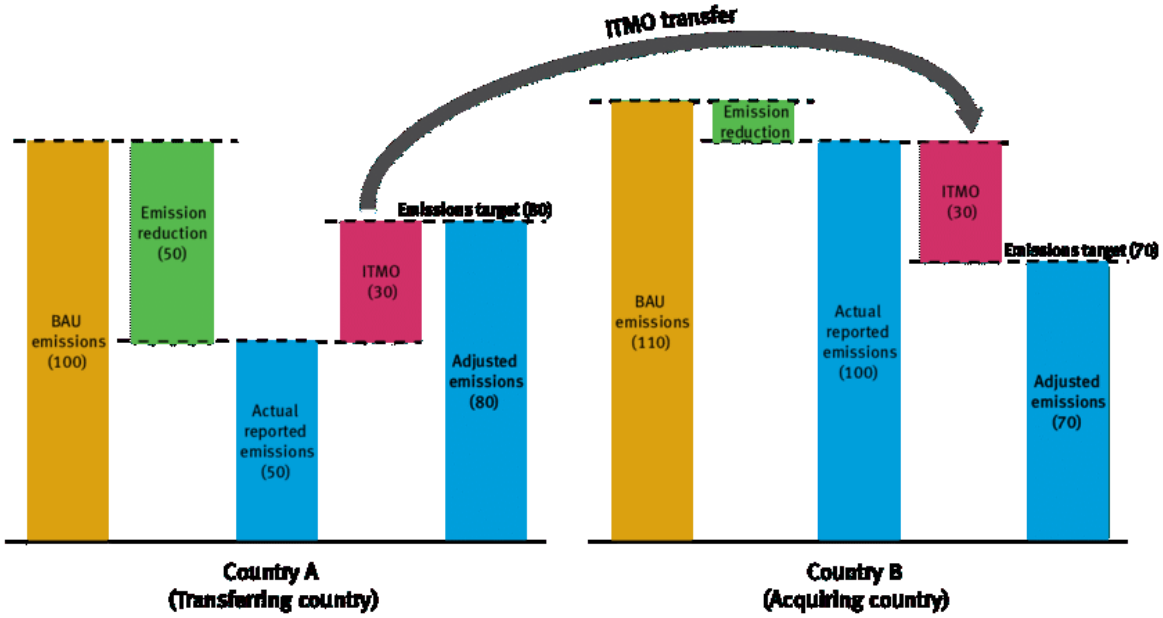
Challenge 2: Paris Agreement and additionality

- **'Additionality'** = reduced level of emissions would not have happened anyway
- With Paris Agreement (almost) **all countries will have to reduce emissions…**
- …So buying **offsets just lets the government of host country 'off the hook'** from emission reductions (it would have had to do anyway)…

= no additionality

Challenge 2: Paris Agreement and additionality

- **Solution = 'Corresponding adjustment'**
- Host government adjusts their GHG inventory **so not taking credit for offsets** that are used in other countries…



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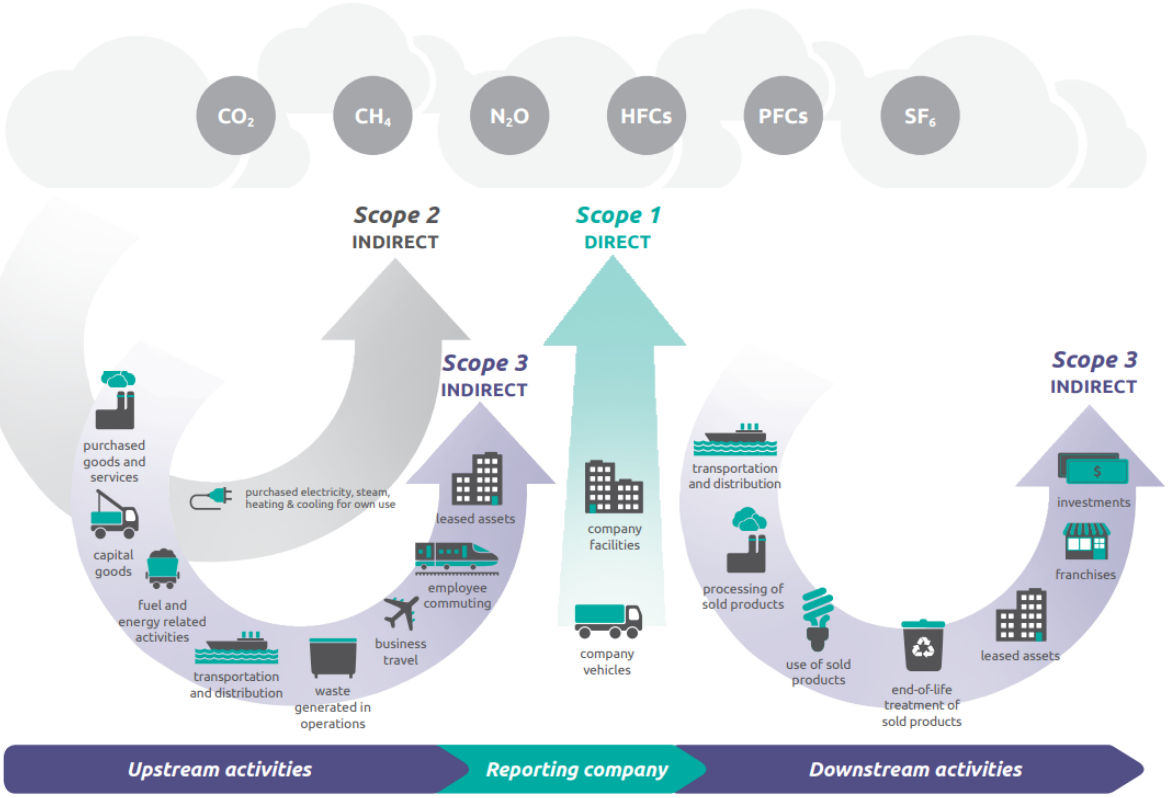
Renewable Energy Guarantees of Origin

‘Scope 2’ emissions are from purchased electricity (or other energy, e.g. heating and cooling)



Source: GHG Protocol – Value Chain Standard: https://ghgprotocol.org/standards/scope-3-standard

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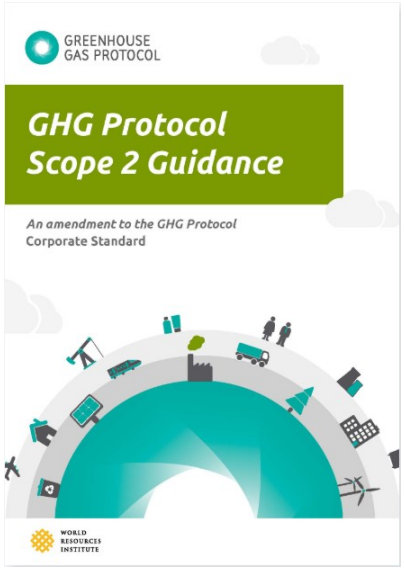
Renewable Energy Guarantees of Origin

There are two different methods for calculating grid electricity:

1. **Locational grid average:** Total emissions from all generation/total electricity generated (e.g. 0.25kg CO_2/kWh for the UK)

2. **Market-based Method:** Contractual arrangement via Renewable Energy Certificates, Guarantees of Origin, or other contract. User can claim the attributes associated with renewable generation (e.g. 0 kgCO_2/kWh)



Renewable Energy Guarantees of Origin

Market-based method – Two problems:

1. **Additionality:** Purchasing renewable energy certificates (RECs) etc. is highly unlikely to increase amount of renewable generation, because:
   - Large amounts of existing 'attributes' available (from existing capacity)
   - Price is too low to drive additional supply (£0.20/MWh)

2. **Accuracy of GHG accounts:** Reporting '0' for scope 2 emissions does not reflect responsibility for emissions.

Renewable Energy Guarantees of Origin

More recent standards/guidance moving away from market-based method:

- Revision of **ISO 14064-1: Downgrades market-based method** (Does NOT recommend the market-based method ('shall' or 'should') but does permit ('may'))
- Streamlined Energy and Carbon Reporting Guidance (SECR): **Only locational method required** and if using market-based then disclose additionality.
- More info: https://cbcc.business-school.ed.ac.uk/impact-and-collaboration/renewable-energy-purchasing/

Any Questions?

Break

10:45 – 11:00

Quality standard

- Almost all official offset projects are now verified by a third-party standard. These standards are supposed to ensure that offsets exhibit a set of features
  - **Verifiability** – there is a robust audit trail.
  - **'Additionality'** – the carbon savings are additional to what would have happened anyway.
  - **'Leakage'** avoided – emissions are not just moved elsewhere.
  - **Impermanence avoided** – carbon savings will be sustained over time.
  - **Double-counting should not occur**—reductions are only claimed once.

Carbon Management Strategies and Offsetting

Clare Wharmby
Innovation Manager, ECCI

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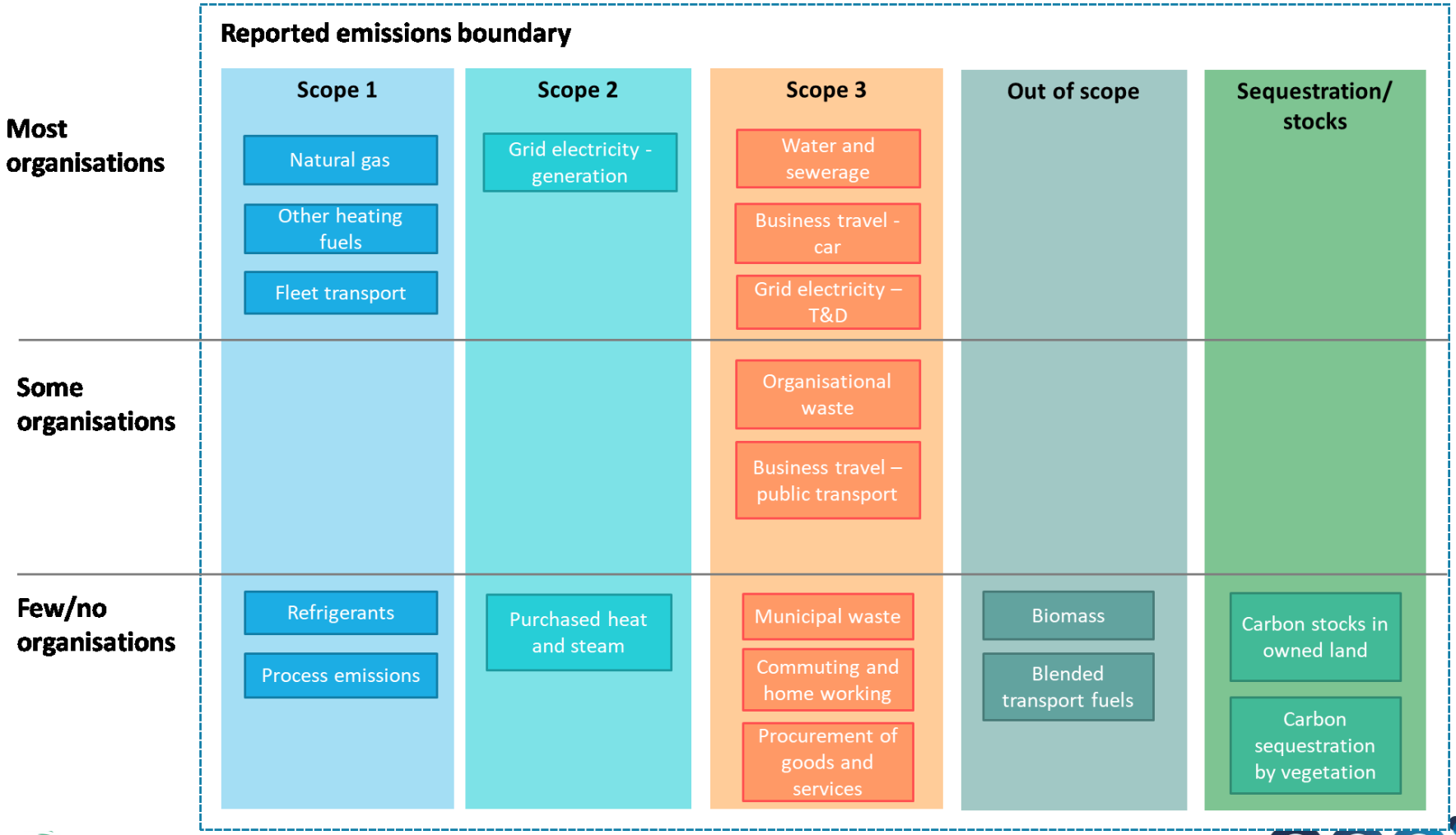
Carbon management in the Scottish Public Sector



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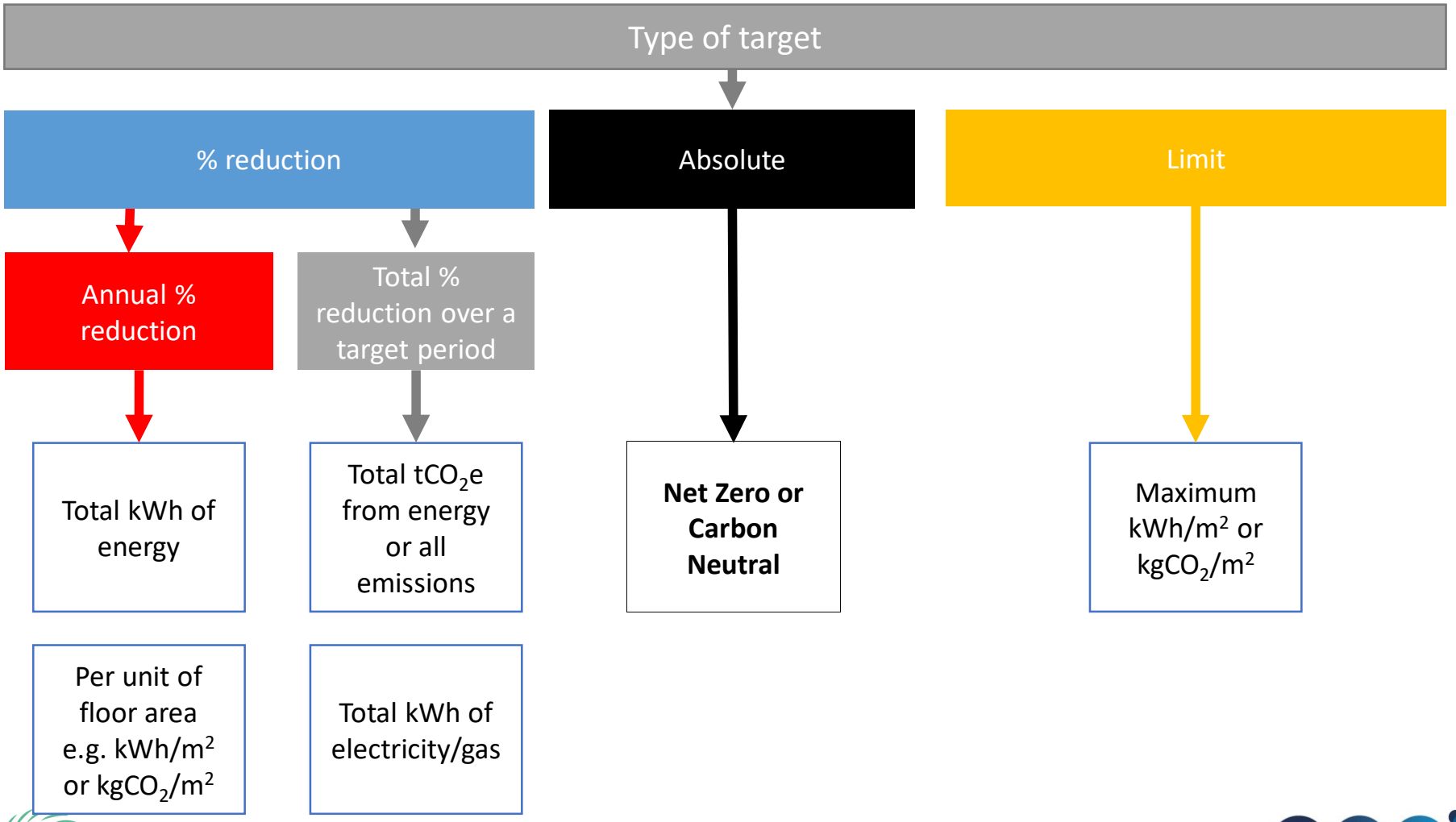
Scottish Public Sector targets



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Welsh Public sector ambition

The ambition:
Welsh public sector to become carbon neutral by 2030

Clarity on scope and a proposed pathway to decarbonisation later in the year

Welsh Government

Require a system to demonstrate real progress in emission reduction

Opportunities to achieve efficiencies, provide important signals to the Welsh supply chain, further stimulating the decarbonisation of goods and services, created and used in Wales and building resilience for the longer term.

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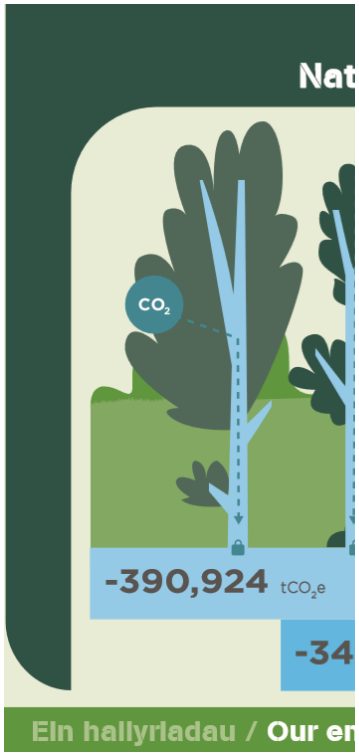
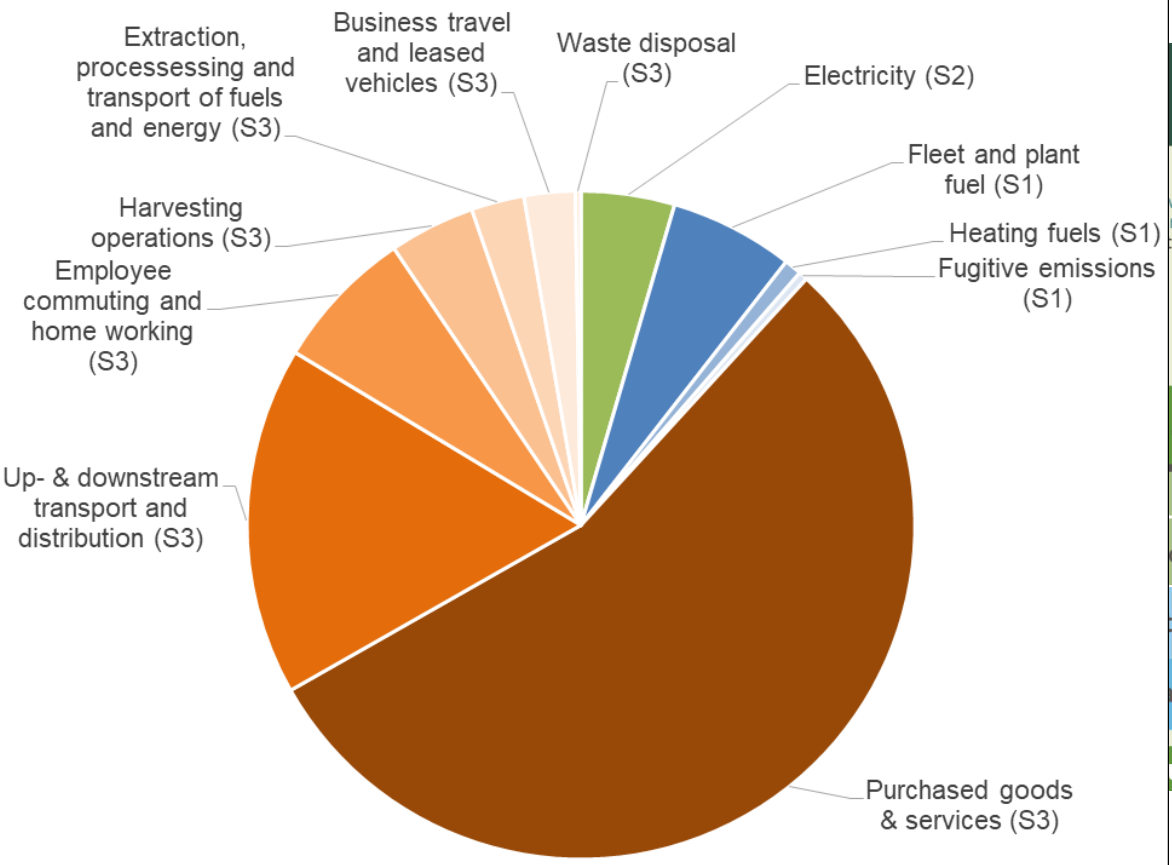
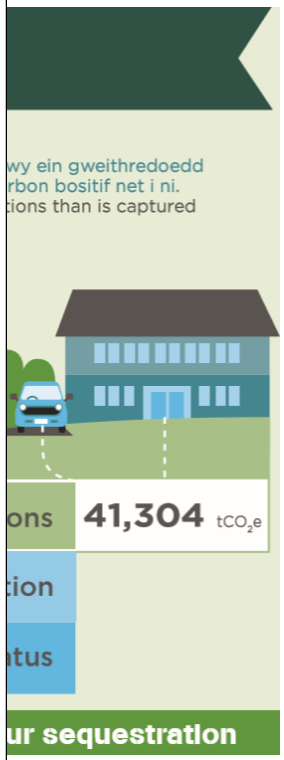
Carbon Positive Project: Natural Resources Wales







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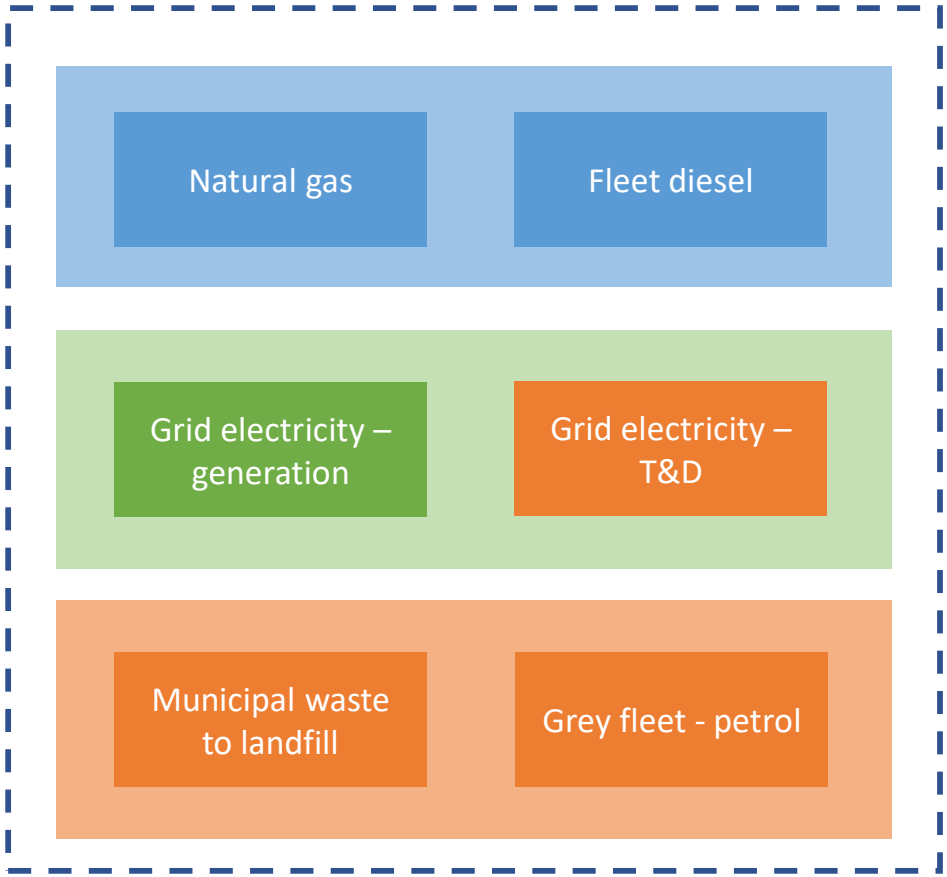
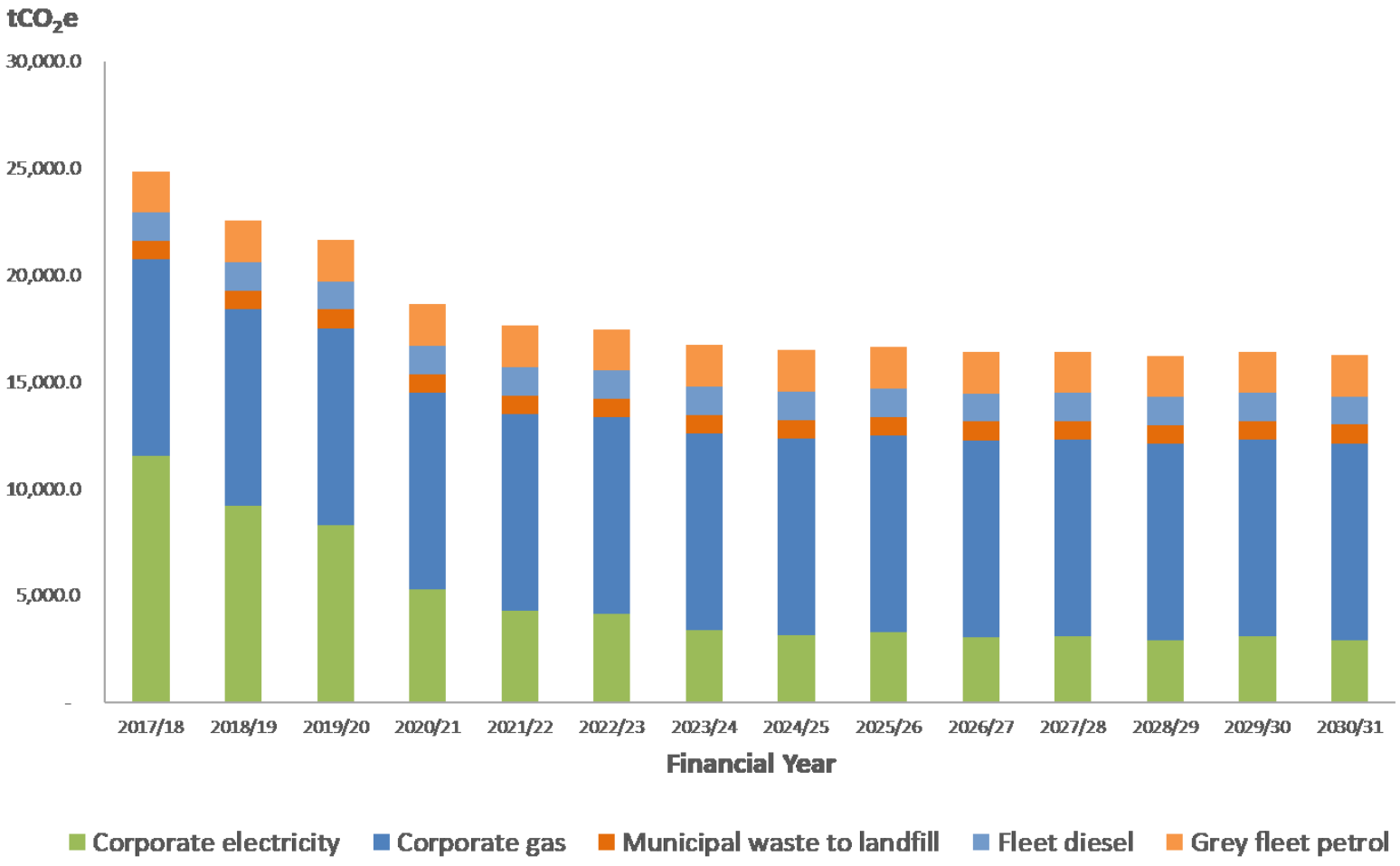
Example of organisation A



Organisation A has set a Net Zero target for these emissions by 2030

Forecast BAU emissions



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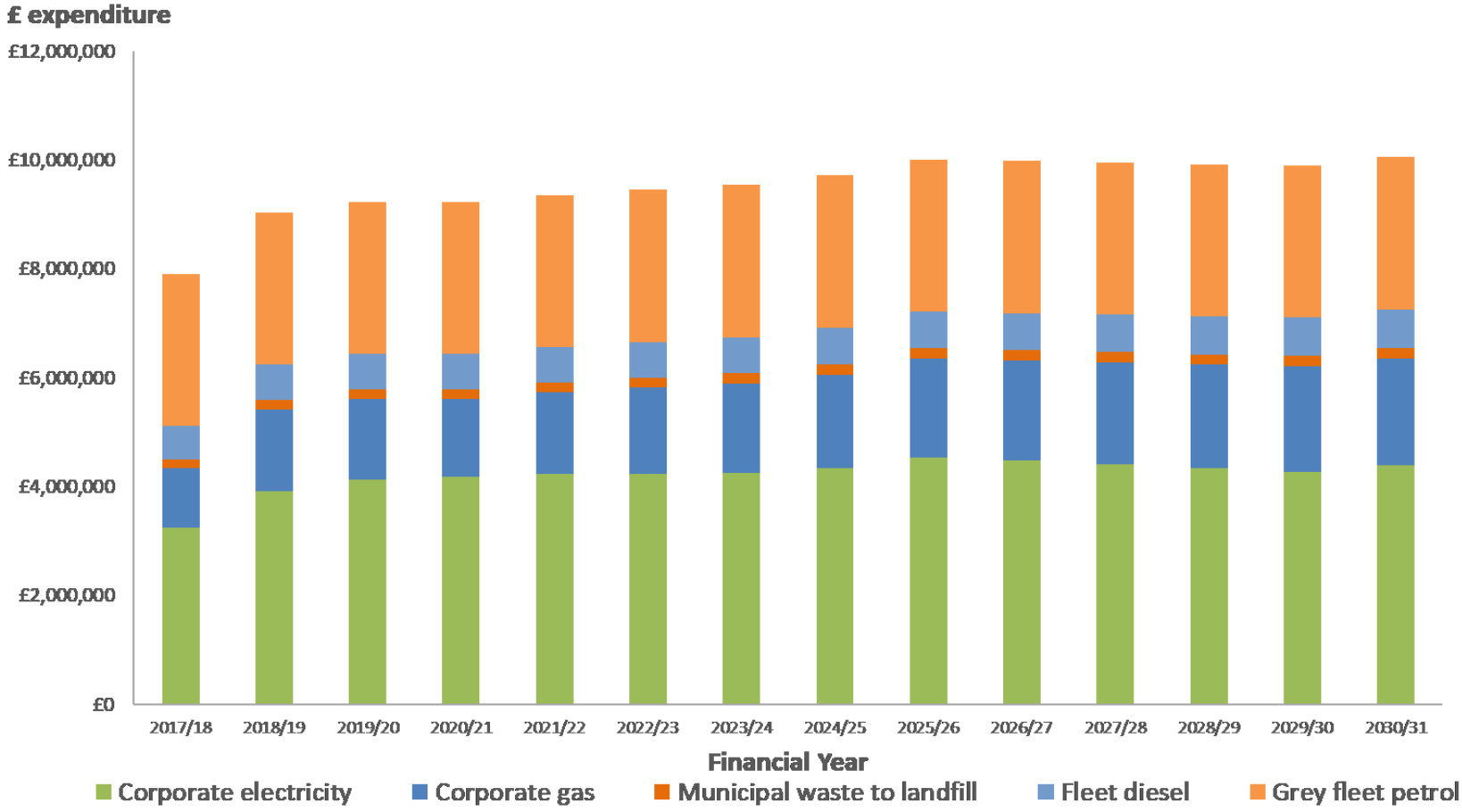
Forecast BAU cost



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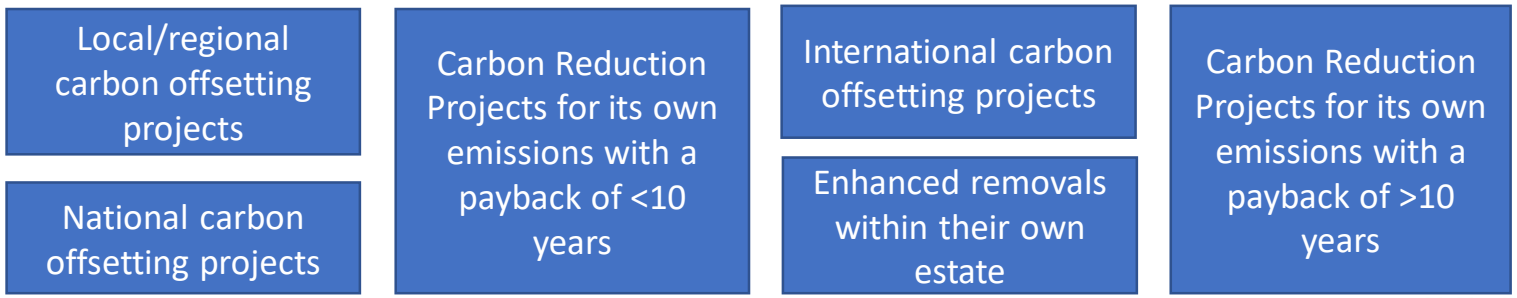
Any Questions?

Considerations for a carbon offsetting strategy

- At what stage does the organisation need to have a carbon offsetting strategy;
  A. Developed
  B. Published
  C. Implemented
- What should this strategy include?
- How should the organisation prioritise the following activities?



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Any Questions?

Closing Remarks & Next Steps

Professor Dave Reay (Chair)
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