COST OF CARBON CALCULATOR

FREQUENTLY ASKED QUESTIONS

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Query	Response
If operating a district heating network, would the gas associated with that be listed in the Heat & Steam field?	Yes, it would be included in the 'Scope 2 - Heat & steam - district heating' field.
What should be input for a gas network which claims zero emissions using a gas PPA?	All calculations have been calculated on a location basis. A PPA is a procurement mechanism, and therefore would only impact market-based emissions. It is also a Scope 1 emission which isn't impacted by current GHG Protocol market-based guidance. We would expect the total gas emissions of the network to be included in your gross emissions within the calculator.
For an electricity PPA, would we input into Renewable Energy or include in the electricity figure?	Renewable Energy field
The costs for decarbonising purchased electricity appear to be around double that of gas. Does the cost for purchased electricity assume that we would be installing our own renewable electricity generation?	Yes, the assumption is onsite installation of renewable electricity generation, rather than waiting for the grid to decarbonise.
Where is all the energy data stored? Is it on the university server or on the calculator platform?	This is a standalone tool. The user would be required to input energy data related to your institutions' scope 1, 2 and 3 emissions which would typically be available on your institution's servers. The external data used (6th Carbon Budget and Future Energy Scenarios) to create the business case models that sit behind the calculator are available online.
Why has water been joined with Procurement/Supply Chain? Is there another way to split out water to capture it separately (we know our water and wastewater scope 3 emissions, but still working on our supply chain ones)	This is aligned with the Standardised Carbon Emissions Framework (SCEF). We would suggest including the emissions you have already and add an estimate for the emissions category that is not currently available. Energise will look into splitting out Water from Procurement & Supply Chain in the next version

	of the calculator which is expected to be released in the Summer of 2024.
Is there a way to model business travel for both aviation and surface transport?	Energise will look into providing the option to split travel between surface transport and aviation in the next version of the calculator which is expected to be released in the Summer of 2024. Until this time, they should be aggregated.
Please explain the Renewable Electricity cell from the High Level sheet and how this influences the model in further detail than the answer provided in the existing FAQ's?	The pathways modelled assume the combination of various activities within national policy on Net Zero. This includes an assumption that even electricity use supplied by Renewable Energy will need to be made more efficient. The calculation is therefore indicating the assumed costs of energy conservation measures.
Should the Programme Implementation % inputs be based on the level of emissions reduction or investment provided?	The programme implementation % inputs is based on the levels of emissions reduced. Energise will update the column title by including a note to explain this relates to emissions.
What Scope 3 emissions have been included?	The calculator includes Scope 3 Upstream emissions categories, e.g. electricity and gas upstream emission, business travel, and supply chain. It does not include downstream emissions such as downstream emissions from leased buildings and vehicles, sold products, franchises and investments. This is because it was left out by design as it was felt that these categories can significantly vary by institution and therefore would make the tool inaccurate.
Is it possible to include downstream leased assets as (we for example) are basing our assessments on this on their scope 1 and 2 only - perhaps it could be translated from scope 1 and 2 calculations?	This needs to be explored by Energise with AUDE, BUFDG, and EAUC to see if there is a possibility that this could be incorporated into the calculator. Perhaps it can be amended for the querist individually to suit their individual needs.
What is the difference in "Fuel & Energy used to transport to the institution" and "Transportation of goods to the institution" and why does the second one have costs associated?	Please refer to the SCEF for detailed description on the difference between the two categories. 'Transportation of good to the institution'

	includes costs related to products purchased between a company's tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by the reporting company). This includes inbound logistics, outbound logistics (e.g., of sold products), and transportation and distribution between a company's own facilities (in vehicles and facilities not owned or controlled by the reporting company).
Can you summarise assumptions for costs for Natural Gas decarbonisation, as they seem very low for changing to heat networks or heat pumps? **Could this be compared to costs from PSDS funding information?**	Please refer to the Natural Gas model. It should be noted that heat pump costs are modelled as those in addition to the like for like replacement costs (mirroring the approach within PSDS). The modelling assumes that, in line with typical financial practice, the organisation has made a provision for end of life of major assets/heating systems and that this fund plus the Net Zero element will align to the total. It is also worth noting that the figures in the calculator are only the "primary" costs of Net Zero (as detailed in the report and the calculator) and do not include costs for other impacts of undertaking the work which for some organisations is a larger cost than the cost of the Net Zero action itself. Benchmarking is currently being undertaken to evaluate the reason for the widespread within the sector as figures are available for actual work varying from c. £3k per tonne to c. £30k per tonne which sit both sides of the modelled answer in the calculator when you allow for the expectation of an existing fund for the replacement of assets at the end of their useful life.
At my university, there is a question as to whether we need to procure external consultants to produce a detailed cost forecast for a full decarbonisation programme or if we can rely on the model provided here. **Does the panel have any advice on how to put**	This tool provides early-stage cost estimations for a proposed transition to Net Zero based on the targets selected. The calculator is a yardstick tool to assist financial planning. Finalised costs should be developed within your institution based on the understanding gained from using

together a business case based on this tool to convince the executive team?	the calculator, and how different scenarios impact the outcomes.
The cost of CO_2 reduction for business travel is specified in the tool at £6,645.70/tonne (cell L37 of the High Level sheet). What I'd like to know is the details of how this value is derived?	The cost to decarbonise each of the emissions categories is mentioned in the Weighted Costs for Decarbonisation tables included in the Cost of Net Zero report. These figures are made up of the sum of the abatement costs of implementing various decarbonisation actions that will help to achieve decarbonisation for that emissions area. Each of those actions have been given a proportional % weighting based on our analysis of a number of factors including behavioural and market trends on the adoption and uptake of these measures and the impact of these measures on reducing emissions for that particular category. We've referred to the 6th Carbon Budget and FES for some of the assumptions that have gone into this. Energise are working on a benchmarking exercise to clarify the approach taken and show the detail that sits 'under the bonnet' which will explain the marginal cost figures for all the emissions categories used.

Energise

THANK YOU FOR BEING A FORCE FOR GOOD.

Keep up the good work!