How can IETF develop and deliver a credible pathway to achieving carbon neutrality?

Workshop series 1: Carbon emissions measurement

Internet Engineering Task Force

21 September 2022

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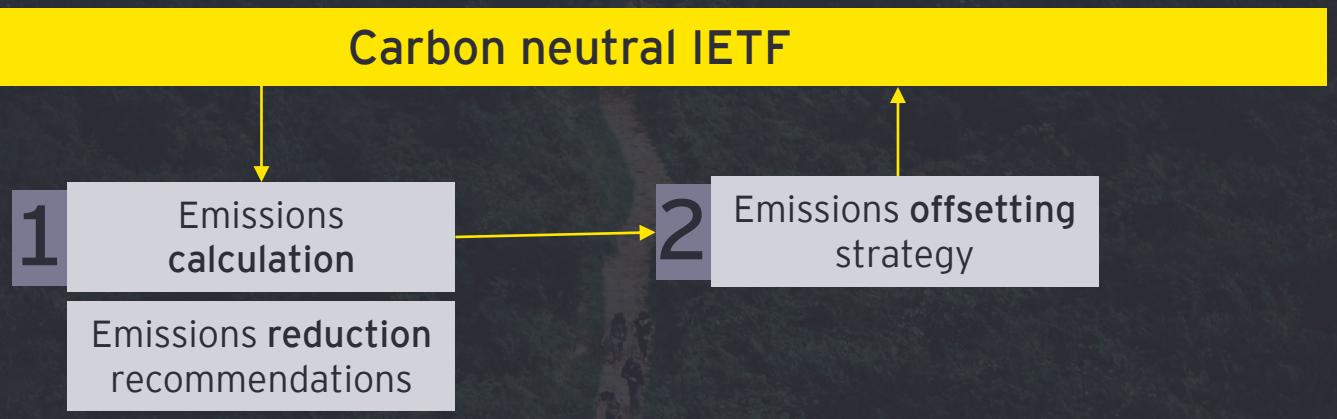
Agenda



Purpose:

main emissions sources, standards considered while developing the calculator, and provide a walkthrough of the calculator

Agenda:

1. Emissions sources
2. Standards considered
3. Overview of approach
4. Next steps

Emissions sources

The below table sets out the emissions sources relevant to IETF, and which sources were included in the emissions calculator.

Emission Source	Included?
Business travel (air)	Included
Business travel (train)	Included
Business travel (car/taxi/rideshare)	Included
Business travel (bus/coach)	Included
Business travel (ferry)	Excluded - assumed immaterial
Hotel stay	Included
Event venue (electricity, gas, water)	Included
Food & Catering	Included
Waste	Included - food waste only
Work from Home	Included

Standards considered

GHG Protocol: Corporate Accounting and Reporting Standard (Revised)	The GHG Protocol initiative is a partnership of businesses, NGOs, governments, and others convened by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) This standard was originally released in 1998, and revised in 2011. It is used by companies and other organisations worldwide as guidance for preparing a GHG emissions inventory.
GHG Protocol: Corporate Value Chain (Scope 3) Standard	Released in 2011, the Corporate Value Chain (Scope 3) Standard is a supplement to the above GHG Protocol Corporate Standard. It is the only internationally accepted method for companies to account for their Scope 3 value chain emissions. The standard allows companies to assess their entire value chain emissions impact and identify where to focus reduction activities.
GHG Protocol: Technical Guidance for Calculating Scope 3 Emissions	Released in 2013, this guidance is a further supplement to the Corporate Value Chain (Scope 3) Standard. It provides detailed calculation methods for all 15 Scope 3 emissions categories, and guidance on selecting the most appropriate methods.

Standards considered (continued)

Australian Climate Active Carbon Neutral Standard for Events	This voluntary standard is an Australian government initiative, released in 2020 to help organisations manage greenhouse gas emissions and achieve carbon neutrality. It provides best-practice guidance on how to measure, reduce and report emissions data for event activities in Australia. The standard is based on the GHG Protocol standards above, and various ISO standards.
United States Environmental Protection Agency (EPA) - Greenhouse Gas Inventory Guidance: Indirect Emissions from Events and Conferences	Released in 2018 by the US EPA, this is guidance to help calculate scope 3 emissions resulting from events and conferences. It is based on the GHG Protocol standards above, and was developed to expand upon the GHG Protocol to align more closely with EPA-specific GHG calculation methodologies and emission factors.

High level overview of approach

Emissions are calculated by taking activity data (e.g. distance travelled in kilometres), and multiplying this by an emission factor.

An emission factor is a coefficient that describes the rate at which a given activity releases greenhouse gases into the atmosphere.

The calculator uses the latest available emission factors for each emissions source. Most of the emission factors used were developed by the United Kingdom Department for Environment, Food & Rural Affairs (DEFRA) and Department for Business, Energy & Industrial Strategy (DBEIS), to allow for measurement consistency and comparability across time.

ACTIVITY DATA x EMISSION FACTOR = EMISSIONS

The Calculator is built to account for various levels of data granularity per emissions source.

Emission factors are based on activity i.e. (CO_2e/unit of activity data)

The emissions measurement process will allow IETF to accurately track its emissions over time, and work towards achieving carbon neutrality

Calculation methodology

Would participants be comfortable with providing more granular travel-related data to ensure more accurate emissions can be calculated?

The below table sets out the minimum data required to calculate emissions for each emission source. There are various levels of data granularity required to achieve effective calculations throughout.

Scope 3 Emission Source	Minimum data required	Data required for more accurate calculations
Business travel (air)	origin country city where meeting is being held	starting city (city, country) end city (city, country) class of service return or one-way trip
Business travel (train)	type of distance travelled (within the city; within the country; between countries) return or one way trip	distance travelled (one way) (km) type of rail (national rail; international rail; light rail; tube; unknown) return or one-way trip
Business travel (car)	distance travelled (total distance travelled across the meeting days) (vehicle KMs)	size of car (small; medium; large; unknown) fuel type (petrol; diesel; hybrid; LPG; unknown) distance travelled (total distance travelled across the meeting days) (vehicle KMs)

Calculation methodology (continued)

Would participants be comfortable with providing more granular travel-related data to ensure more accurate emissions can be calculated?

Scope 3 Emission Source	Minimum data required	Data required for more accurate calculations
Business travel (taxi/rideshare)	taxi travel distance (total distance travelled across the meeting days) (passenger KMs)	n/a
Business travel (bus)	distance travelled one way (km) return or one way trip	n/a
Business travel (coach)	distance travelled one way (km) return or one way trip	n/a
Hotel stay	number of hotel stay nights (per person)	number of hotel stay nights (per person) country of hotel stay

Calculation methodology (continued)

Would participants be comfortable with providing more granular travel-related data to ensure more accurate emissions can be calculated?

Scope 3 Emission Source	Minimum data required	Data required for more accurate calculations
Event venue (electricity, gas, water)	country of event number of hours event space was used approximate size of event space used for the meeting (m^2)	n/a
Food & Catering (consumption)	number of meals consumed	n/a
Food & Catering (waste)	percentage of food expected to be wasted (0%; 5%; 10%; 20%; 30%) method to dispose of food waste (combustion; composting; landfill; anaerobic digestion)	n/a
Work from Home	number of full-time equivalent (FTE) working hours (throughout the year) number of participants joining meetings online	n/a

Next steps

Carbon neutral IETF

1. Emissions **calculation** process
2. Emissions **reduction** process
3. Emissions **offsetting** strategy

Next workshop on 1/2 November to:

- Define a credible approach to offsets that is suitable for IETF. This will be done through:
  - Describing offset markets
  - Describing offset characteristics, and providing options to IETF for participant feedback

Q&A

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