
UK Transmission Operator Carbon Product Calculator - Guidance Document

Overview

The UK Transmission Operator Carbon Product Calculator is designed to help suppliers of electrical equipment provide accurate data on whole life carbon emissions associated with their products. This is a joint initiative with the UK's three electricity transmission operators with a principle aim of promoting an industry wide, consistent approach to reducing whole life carbon for the infrastructure projects we design and build.

Key Sections

1. About the Product

- Include Full asset Name including Product code.

2. Materials and Transport

- **Materials:** Suppliers should input the weights of materials used in kg. Measured data is preferred, but estimates are acceptable. When embodied carbon factors can be obtained from specific suppliers (e.g. direct from the steel manufacturer), this should be used. If embodied carbon of materials cannot be obtained from suppliers, generic values can be populated.
- **Transport:** Suppliers should input transport distances and journey type for transporting materials to the manufacturing site. Generic values can be used if specific distances are unknown. These are:
 - 1. Global Supply (200km by road, 10,000km by sea)
 - 2. Continental Supply (1500km by road)
 - 3. National Supply (300km by road)
 - 4. Local Supply (50km by road)

3. Energy Use in Manufacture

- Suppliers should estimate the energy used to manufacture one unit of the product, including heat and electricity. Specific emissions factors should be used if known, otherwise, appropriate factors from a drop-down menu can be selected.

4. Delivery to Site

- Suppliers should input all legs and modes of transport for transporting the finished product to the project site. Generic values can be used if specific distances are unknown.

5. In-Use Emissions

- **Insulating Gas:** Input the Mass of Insulating gas used in the product (kg) as well as the guaranteed leak rate per year (in %)
- **Losses:** Calculate emissions associated with energy used to operate the product, including typical average energy consumption per year.

Further Information

Currently, this calculator is primarily for data collection and will not be used to differentiate suppliers in tenders. However, it is expected that suppliers will provide accurate data as a minimum requirement and the approach to carbon management will be continuously reviewed and communicated throughout the supply chain.

The Supply Chain Sustainability School offers free online resources for upskilling in areas such as Life Cycle Assessments, PAS 2080 Carbon Management, calculating carbon emissions, and setting reduction targets.