

e·mis·sion fac·tor·s

/ə miSH(ə)n/ / faktərs/ Noun

In the context of climate change, the amount of greenhouse gas (GHG) emissions produced per unit of activity.

Emission factors can be used to calculate the carbon footprint of a company or product, measured in kg CO₂ equivalents (CO₂e) over a 100-year period. Emission factors are calculated by multiplying the activity by the corresponding emission factor. For example, the consumption of a certain amount of grid electricity would be multiplied by the corresponding emission factor in kg CO₂e/kWh to arrive at the total CO₂e for that activity. This process helps companies identify areas where they can focus their GHG emissions reduction efforts and make progress toward meeting sustainability and climate goals. Sphera has been collecting and expanding emission factors data for 35 years with the help of more than 100 in-house engineers and scientists with substantial experience in data acquisition, updating, quality control and expansion.

Here are three reasons why our commitment to quality and accuracy combined with deep engineering and methodological expertise makes us a trusted source for emission factors data:

A woman in a dark blue business suit is looking at a tablet computer. She is standing in a data center or server room, with rows of server racks visible in the background. The lighting is dim, with blue and purple hues, and some server lights are glowing. The overall atmosphere is professional and tech-oriented.

1. Our data is updated annually.

Sphera's best-in-class emission factors data is updated annually and based on the most up-to-date information validated by a team of experts. Our experts ensure the data reflects the latest research, current industry practices and regulatory requirements. DEKRA, one of the world's largest testing, inspection and certification (TIC) expert organizations, has set up and audited our distinct "continuous improvement process" to ensure software models are capable, data sources are adequate and experts are knowledgeable so that customers can rely on our data.

2. The data is derived from industry-accurate sources.

Sphera's data is based on process-based life cycle inventory data from a wide range of sources, including decades of industry expertise, official statistics and academic research. These sources make our emission factors data more comprehensive and reliable than the data that other providers offer. Our experts have a deep understanding of the technologies, sources and drivers of GHG emissions throughout the supply chain, which ensures that our emission data reflects current circumstances, best practices and regulatory requirements.

3. Sphera's emission factors data is country- and technology-specific.

The emissions of a product or material throughout its life cycle vary depending on the country it is produced in, and the technology used to produce it. Sphera is a trusted emission factor data partner for over 50 industry associations worldwide. For example, our Managed LCA Content provides energy data on 100% of Organization for Economic Cooperation and Development (OECD) countries and 80% of all countries where a relevant industry operates. Many original equipment manufacturers (OEMs) use our data in R&D in "quality gates" to qualify new product series before they go into production. Also, policy bodies such as the EU Directorate-General for the Environment and the EU Joint Research Centre rely on our emission factors data to create sustainability-oriented regulations and legal frameworks.

VDA Case Study



Challenges



Providing emission factors about large combustion plants that can be used to calculate or estimate the emissions of operations on a consistent basis



Providing publicly available, regular updates

Solutions

VDA introduced Sphera Sustainability Consulting to calculate combustion emission factors per type of fuel representing large combustion plants and well-to-tank emission factors for fuels and electricity.

Results



Library of emission factors covering more than 50 countries and regions



Regularly updated factors to provide consistent and comprehensive basis for environmental reporting



Compatibility with Sphera LCI data sets on energy supply



www.sphera.com

For more information contact us at:
<https://sphera.com/contact-us>

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About Sphera

Sphera is the leading provider of Environmental, Social and Governance (ESG) performance and risk management software, data and consulting services focusing on Environment, Health, Safety & Sustainability (EHS&S), Operational Risk Management (ORM), Product Stewardship and Supply Chain Risk Management (SCRM).