

Reporting criteria: Greenhouse gas emissions and water withdrawl

This document describes the method, principles and assumptions used to calculate Rotork's greenhouse gas (GHG) emissions inventory, specifically:

- Scope 1 'direct' GHG emissions
- Scope 2 'indirect' location-based (LB) GHG emissions
- Scope 2 'indirect' market-based (MB) GHG emissions

It also describes the method, principles and assumptions used to calculate Rotork's total annual water withdrawal.

Overarching Methodology

Rotork aligns to the Greenhouse Gas Protocol - Corporate Accounting and Reporting Standard and references the GHG Protocol Scope 2 Guidance documents. We aim to ensure the following principles of reporting and accounting:

- Relevance: Rotork's GHG inventory shall appropriately reflect the GHG emissions and serve the decision-making needs of users – both internal and external to the company
- Completeness: Rotork will account for and report on all GHG emissions from source, sinks and activities within the inventory boundary, disclosing and justifying any exclusions
- Consistency: Rotork will ensure the use of consistent methodologies to allow for meaningful performance tracking of emissions and clearly document any changes which may affect the data, inventory boundary, methods or any other relevant factor
- Transparency: Rotork will, at all times, provide a clear audit trail to address all relevant issues in a factual and coherent manner. Appropriate references to the accounting and calculation methodologies and data sources will be disclosed throughout the process and any relevant assumptions disclosed
- Accuracy: Rotork will aspire to achieve sufficient
 data accuracy to enable users to make decisions with
 assurance as to the data's integrity and ensure that all
 GHG emissions quantification is neither over nor under
 actual emissions, and that uncertainties are reduced as far
 as reasonably practicable

Organisational Boundaries

Rotork's GHG emissions reporting is based on the operational control approach, covering owned and leased assets, as defined by the Greenhouse Gas Protocol. Rotork's operational boundary covers 70 global sites across 30 different countries (primarily Europe, Asia Pacific and the Americas) with over 3,000 employees. Rotork is a global provider of mission-critical intelligent flow control products and services, specialising in actuator assembly. Rotork manages and reports its GHG emissions at a Group level.

No site or geographical exclusions are made to our boundaries.

Reporting Period and Frequency

Rotork calculates and reports its scope 1 and 2 GHG emissions and environmental metrics (including water withdrawal) using a full year's data for the period of 1st January to 31st December. The reporting process starts in January with the GHG emissions and water withdrawal calculations ready for February. In line with the annual report period, environmental data reported by calendar year, usually published in March.

The baseline for scope 1 and 2 GHG emissions is calendar year 2020. Rotork may recalculate and re-baseline its GHG emissions if and when:

- The scope of emissions boundary changes
- Structural changes occur in the company that change the inventory boundary (mergers, acquisitions, divestments)
- The methodology for emission calculation changes and it can be implemented retrospectively without compromising the accuracy and quality of the data

In instances where data quality and accuracy can be improved retrospectively and the change is deemed material, Rotork will include the updated figures in subsequent annual reporting. Rotork deems a material change as one which returns a variance of greater than or equal to 5%. Any restatement will be accompanied with an explanation for the changes.

Rotork reports its quantity of GHG emissions in tonnes of carbon dioxide equivalent (CO_2e) and water withdrawal in cubic meters (m^3). The CO_2e figure includes carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6), which have not been reported separately. This reporting mechanism allows Rotork to inform internal and external stakeholders on the impact of Rotork's activities on climate change.

Reporting System

Rotork uses its internal Environmental App to record its environmental data, a database housed internally on Rotork's system that acts as an audit tool for all environmental data for a given year. An internal Power BI report is used to then calculate and report its GHG emissions and water withdrawal. These GHG emissions calculations are checked by our consultant, SLR Consulting.

Sustainability Reporting Criteria rotork

Key Metrics and Definitions

GHG emissions are reported in the Annual Report in line with the GHG Protocol guidelines:

METRIC	Scope and Calculation Methodology
Scope 1 GHG Emissions (Direct GHG Emissions from sources controlled or owned by Rotork, generated from Rotork's boilers, air-conditioning units, fleet vehicles, paint plants, drying equipment, furnaces and generators)	
Stationary Fuel Combustion	Scope : Stationary combustion across all of Rotork's sites, covering natural gas, LPG and 100% mineral diesel.
	Methodology: Data sourced from a combination of meter readings and supplier invoices are uploaded to the Rotork Environment App on a monthly basis. Should data be absent, Rotork manually calculates a proxy number for the consumption type for the relevant period, using site area comparisons. Subsequent total values are multiplied by corresponding emissions factors as defined by the UK's Department for Environment, Food and Rural Affairs (DEFRA).
	One of the sites in Canada (Edmonton) receives natural gas invoices with consumption detailed in GJ. In order to convert GJ to m³, the consumption units are multiplied by 26.85 as per the following Canadian guidance website: GJ and m³: Understanding Natural Gas Measurements – EnergyRates.ca
	Organisational Boundary: All sites operated by Rotork, where stationary combustion of fuels takes place.
Mobile Fuel Combustion	Scope: Fuels used in company-owned vehicles (100% mineral diesel, diesel (average fuel blend), LPG and Petrol (average biofuel blend).
	Methodology: For the majority of owned fleet, emissions are calculated via distances (km) travelled by petrol, diesel, plug-in hybrid and battery electric vehicles, using the 'average-sized' transport mode option for the relevant fuel type. Data is sourced from a combination of supplier invoices, travel expense reports, fleet management reports and odometer readings are uploaded to the Rotork Environment App on a monthly basis. Should data be absent, an odometer reading is taken as soon as possible and pro-rated back to the required date, to account for missing mileage / km data, whilst removing any personal mileage which may or may not be present. Subsequent totals are multiplied by corresponding emissions factors as defined by the UK's Department for Environment, Food and Rural Affairs (DEFRA).
	Organisational Boundary: All sites operated by Rotork, where mobile combustion of fuels takes place.
Fugitive Emissions	Scope: Refrigerant gases used for building air-conditioning. Methodology: Actual information sourced from replenishment records from suppliers / contractors topping up assets at Rotork facilities (invoices / specification sheets) is uploaded to the Rotork Environment App. Values are multiplied by corresponding emissions factors as defined by the UK's Department for Environment, Food and Rural Affairs (DEFRA). Organisational Boundary: All sites where Rotork is directly responsible for the maintenance of air-conditioning assets.
On-site Generated Renewable Energy	Scope: Electricity generated on-site via solar panels. Methodology: Actual electricity data sourced from on-site meter readings is uploaded to the Rotork Environment App. GHG Emissions associated with on-site generated solar energy amounts to 0.
	Organisational Boundary: All sites operated by Rotork generating renewable electricity.

METRIC

Scope and Calculation Methodology

Scope 2 Location-Based (LB) and Market-Based (MB) GHG Emissions (Indirect GHG Emissions occurring from the generation of purchased electricity, steam, heat and cooling)

Purchased Stationary Electricity

Scope: Electricity imported into Rotork sites to power facilities.

Methodology: Actual electricity data sourced from a combination of meter readings and invoices are uploaded to the Rotork Environment App. Should data be missing, estimations are made either via the creation of proxy data through comparisons with sites of similar sizes and functions, or by measuring accurate usage from earlier / later on in the year and providing a figure on a pro-rate basis.

Location-based: GHG emissions from electricity consumption reflecting the average emission intensity of local electricity grids serving Rotork's facilities as provided by DEFRA (UK), the International Energy Agency (IEA) or sub-grid factors provided by the US Environmental Protection Agency (EPA) or other appropriately-sourced sub-grid factors where available e.g. National Greenhouse Accounts Factors (NGAF) for Australian sites and Energia Abierta for Chile.

Market-based: GHG emissions from electricity consumption reflecting the on-site green contractual arrangements, certification (e.g. RECs) and tariffs to procure renewable or low-carbon energy and residual mix country factors provided by AIB (Association of Issuing Bodies European Residual Mix) and appropriate sub-grid factors by geography (NGAF; US Green-E). Although there is a contractual commitment to purchase certificates, many sites have not had their certificates retired within the reporting period.

Rotork uses a location-based factor for its market-based factors in some countries where a specific market-based factor is not available. This is the case in Canada, Brazil, Mexico, New Zealand, South Africa, Thailand, Hong Kong, South Korea, China (except Suzhou), Indonesia, Japan, Turkey and Saudi Arabia.

Organisational Boundary: All sites operated by Rotork.

Purchased Heating, Cooling and Steam

Scope: GHG emissions from the usage of heat, cooling and steam within business operations.

Methodology: Actual data sourced from invoices is uploaded to the Rotork Environment App on a monthly basis. Emissions are calculated via multiplication by the local supplier specific tariff. Both the location-based and market-based methodologies rely on the same emissions factor.

Organisational Boundary: All sites operated by Rotork where steam and district heating / cooling is procured.

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METRIC Scope and Calculation Methodology

Water Withdrawal

(Operational activities, e.g. paint processes, cleaning of products and pressure testing of Rotork's products; and domestic and sanitary requirements)

Water Withdrawal

Scope: Total water withdrawal within business operations.

Methodology: Actual water withdrawal data sourced from a combination of meter readings and supplier invoices are uploaded to the Rotork Environment App on a monthly basis and, if necessary, converted to cubic meters (m³). Should data be absent, Rotork manually calculates a proxy number for the consumption type for the relevant period, using FTE comparisons.

Organisational Boundary: All sites operated by Rotork.

Methodology and Approach

All data is obtained from relevant sources on a site-by-site basis.

Site data for floor area (m²), employee counts (FTE) and building purposes are sourced from internal property records, updated several times each year. This allows site-to-site comparisons and estimations for sites where data is lacking.

This year, as part of our ambition to improve data quality, we created the Environment App audit tool to ensure direct data capture and an improved focus on contributing data items and their associated emissions. All relevant Rotork employees have been trained internally on data capture principles with the Group HSE team ensuring all data checks are conducted throughout the annual period. A smart-metering pilot project will improve the process in 2025, supporting Rotork's transition away from manual data uploads.

Data owners submit data sources as evidence when they upload the performance data to allow for review of information and internal quality assurance.

Data Hierarchy

In some cases, sites are not able to acquire actual data for all periods concerned. In such instances, we will gap-fill with appropriate estimates. Throughout our environmental reporting, we follow the hierarchy of data below:

- Actual data Wherever actual data is available, we will use it in calculations, either from meter readings or invoices
- 2. Accruals In few instances, some months of data may be missing prior to year-end reporting. In such cases, we will estimate missing timeframes manually by determining typical consumption to date per month and multiplying by the number of months where data could not be obtained
- 3. Extrapolations Where data is known to be relevant but not attainable (e.g. where Rotork are a small tenant), we will extrapolate. Rotork is responsible for energy at leased locations and can therefore make decisions as to when consumption takes place, i.e. it is within our operational control. In such instances, we will calculate using a comparison with other similar sites on the estate which report the same utility and which are of the same size (m² or FTE). Floor space is used to estimate on-site electricity and thermal energy, whereas FTE's are used to estimate water withdrawal. If the preferred data is unavailable, we will use the alternative of the two benchmarks.

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Data Validation Process

Individual sites are responsible for their own validation and integrity procedures over the data submitted monthly as part of reporting. Periodic data validation is performed by the Group HSE team, including data integrity, reported activity and supporting evidence checks. This includes trend analysis, comparison with prior year data, and sample testing. At the end of the reporting period, the emissions factors applied in the central Power BI Report are verified by our specialist consultants. If there is +10% variance in the data received, the site data owners are contacted to explain or correct erroneous data inputs.

Independent Assurance – Limited Level

DNV Business Assurance Services UK Ltd (DNV) have been appointed to undertake an Independent Limited Level of Assurance in accordance with the International Standard for Assurance Engagements 3000 (ISAE 3000) of selected sustainability metrics for the year ending 31st December 2024. The sustainability metrics are listed as follows:

- Total Scope 1 GHG emissions (tCO₂e)
- Total Scope 2 Location-based GHG emissions (tCO₂e)
- Total Scope 2 Market-based GHG emissions (tCO₂e)
- Total Water Withdrawal (m³)

Criteria and Description of Activities

All employees recording data in the Rotork Environment App are equipped with training materials and offered support and training sessions on how the system is used and how data is uploaded. They are notified that supporting evidence must always be provided to support each data input made on the system. The training materials are reviewed yearly.

Data inputs are manually verified by the Rotork Global HSE team to ensure all data uploads have supporting evidence and that the evidence is coherent with the information provided. If, during the periodic data validation, an evidence gap or inconsistency is found, the provider of such data is contacted and reminded of the requirement to provide evidence.

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Contact us now

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