



Reporting Period: 1st Jan 2021 - 31st Dec 2021

Organisation: biogen systems limited

Industry Sector: Manufacture of machinery and equipment n.e.c.

Methodology: Greenhouse Gas Protocol Corporate Standard: Location-based

Total Reported Greenhouse Gas Emissions and Intensity Ratios

tonnes of carbon dioxide equivalent emissions (tCO₂e)

Scope	Total (tCO ₂ e)	tCO ₂ e / £ million revenue	tCO ₂ e / tonne
Scope 1	12.924	0.000	0.000
Scope 2	5.023	0.000	0.000
Scope 3	266.144	0.000	0.000
All Scopes	284.091	0.000	0.000

Total Greenhouse Emissions by Scope



Emissions disaggregated by source

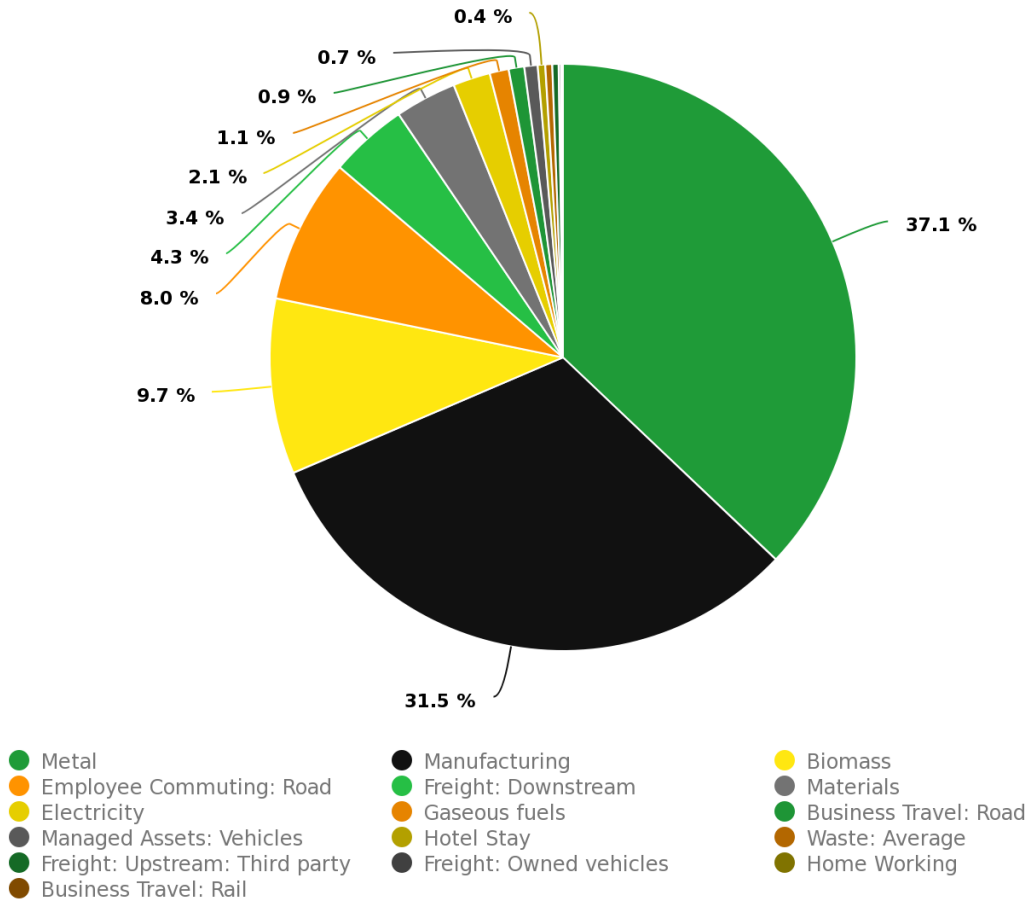
tonnes of carbon dioxide equivalent emissions (tCO₂e)

Category	All Scopes	Scope 1	Scope 2	Scope 3
Biomass				
Wood pellets	27.458	7.988	0.000	19.470
Business Travel: Rail				
International rail	0.016	0.000	0.000	0.016
Business Travel: Road				
Car: owned	2.445	1.966	0.000	0.479
Electricity				
Electricity: UK grid	5.826	0.000	4.247	1.579
Employee Commuting: Road				
Car: not owned by business	21.597	0.000	0.000	21.597
Car: owned	1.066	0.000	0.777	0.289
Freight: Downstream				
Freight: Air: Average K&N	7.458	0.000	0.000	7.458
Freight: Sea: Average K&N	4.820	0.000	0.000	4.820
Freight: Owned vehicles				
Van Class I (up to 1.305 tonnes)	0.365	0.293	0.000	0.071
Freight: Upstream: Third party				
Freight: HGV -- All rigids	0.981	0.000	0.000	0.981
Gaseous fuels				
Propane	2.989	2.676	0.000	0.313
Home Working				
Electricity: UK grid	0.291	0.000	0.000	0.291
Hotel Stay				
Hotel stay: Germany (Southern region)	0.079	0.000	0.000	0.079
Hotel stay: UK	1.112	0.000	0.000	1.112
Managed Assets: Vehicles				
Managed Assets: Van Class I (up to 1.305 tonnes)	2.069	0.000	0.000	2.069
Manufacturing				
Manufacturing: Average	89.474	0.000	0.000	89.474
Materials				
Cable: Electronic: Industrial average	6.822	0.000	0.000	6.822
Rubber: General	2.805	0.000	0.000	2.805
Metal				

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Average metal	105.355	0.000	0.000	105.355
Waste: Average				
Average Waste	1.064	0.000	0.000	1.064

Emissions by Source



Emissions disaggregated by facility

tonnes of carbon dioxide equivalent emissions (tCO₂e)

Facility	Total (tCO ₂ e)	Scope 1	Scope 2	Scope 3
Baardas	35.092	9.954	0.000	25.138
Chester Manufacturing	248.496	2.676	5.023	240.796
UK Service	0.504	0.293	0.000	0.210

Total emissions disaggregated by main greenhouse gases

tonnes of carbon dioxide equivalent emissions (tCO₂e)

	Total	t CO ₂	t CH ₄	t N ₂ O
Scope 1	12.924	4.907	0.002	0.026
Scope 2	5.023	4.972	0.019	0.032
Scope 3	266.144	20.278	0.003	0.233
All Scopes	284.091	30.157	0.024	0.292

tCO₂ – tonnes of carbon dioxide

tCH₄ – tonnes of methane

tN₂Oe – tonnes of nitrous oxide

Benchmark Report: Emissions intensity against industry benchmark

Year	tCO ₂ e Scope 1+2 Intensity	Industry Benchmark tCO ₂ e Scope 1+2 Intensity (per million \$ turnover)	Scope 1+2 Operational Rating	Rank
2021		99.513	0.000%	1:40

Intensity – Organisation's emissions per million \$ turnover

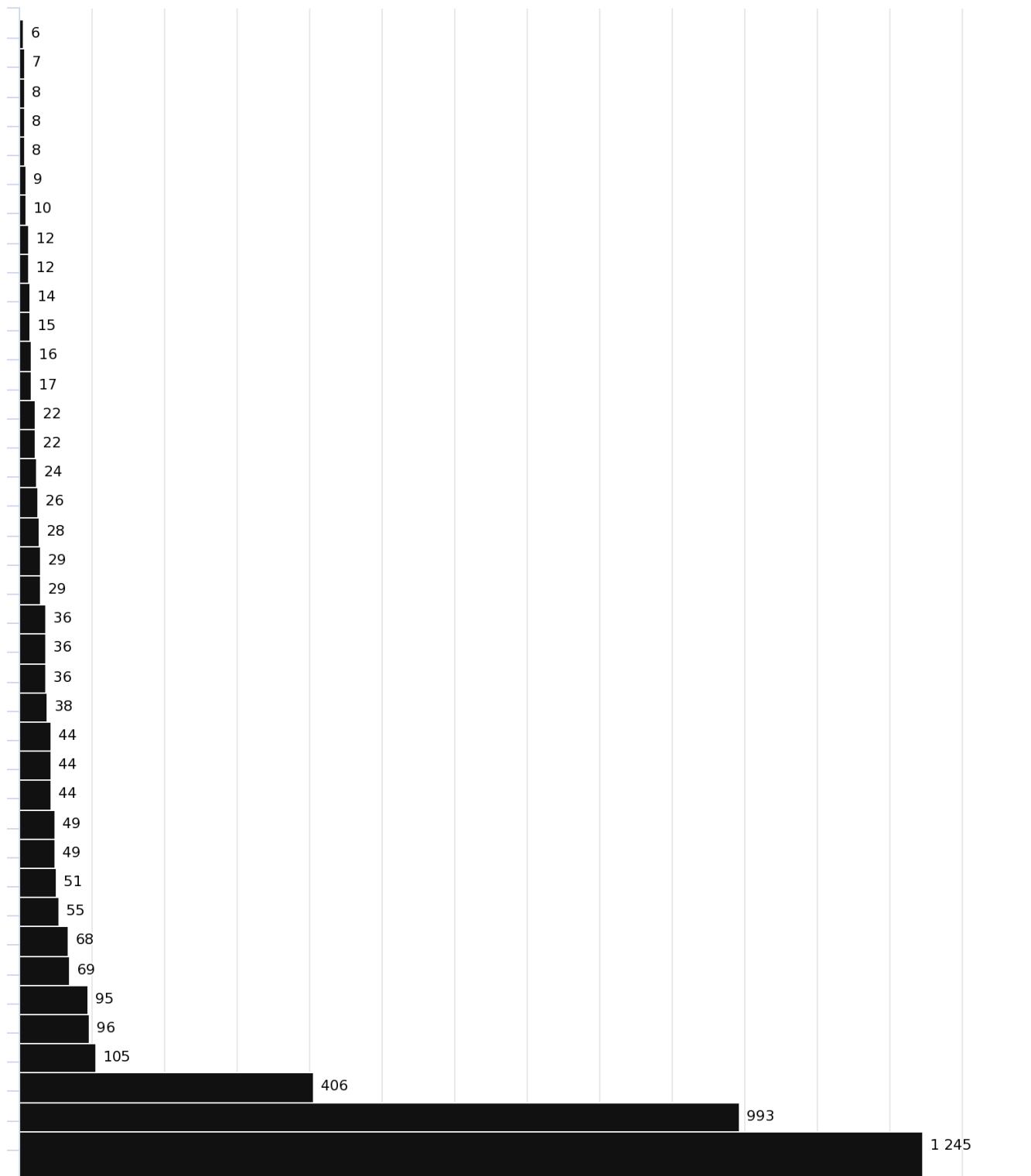
Operational Rating – Ratio of your organisation's Scope 1+2 intensity compared with the industry average benchmark

Rank – Ranking of your organisation's Scope 1+2 intensity within the group of organisations in your industry

FTE – Full Time Equivalent employee

m² – Square metre of floorspace (Gross Internal Area, GIA)

Tonnes CO2e per million turnover



tCO2e - tonnes of carbon dioxide equivalent;

FTE - Full Time Equivalent Employees - one FTE is one person working for one year;

Scope - description of types of direct / indirect emissions defined by the GHG Protocol;

Intensity Ratio - a measure of GHG emissions per unit measure of productivity such as revenue, employees, number of products made etc.;

WTT - Well to Tank - this describes the Scope 3 emissions associated with transporting fuel from its origin to the site where it is turned into energy.