

GHG Inventory 2023 data

GHG reporting scope

Using the INEOS science base, the group footprint is calculated per calendar year according to the GHG Protocol. When consolidating GHG data, INEOS excludes offices on the grounds of materiality and follows the Financial Control approach as defined in the GHG Protocol. As such, we fully consolidate data from subsidiaries, proportionally consolidate data from joint operations and joint ventures at equity share, and do not consolidate data from associates or minor investments. In addition, we fully consolidate data from leased ships where INEOS is the lessee.

The operational boundaries of the GHG inventory cover all process emissions, material emissions from stationary and mobile combustion, flaring and emissions from purchased energy.

INEOS GHG footprint

GHG data are sourced from all INEOS sites within the scope defined above, using operational data, emission factors and recognised tools such as the GHG Protocol CHP tool. The quality of the GHG inventory is ensured with internal data consolidation with feedback loops.

[kt CO ₂ -eq]	2023	2022	2019
Scope 1 emissions			
Carbon dioxide (CO ₂)	12,234.90	14,012.31	15,204.15
Other GHG emissions ^a :			
Methane (CH ₄)	80.39	94.94	68.95
Nitrous oxide (N ₂ O)	31.44	26.22	41.68
Hydrofluorocarbons (HFC)	21.36	39.40	22.21
Perfluorocarbons (PFC)	0.00	0.00	9.39
Sulphur hexafluoride (SF ₆)	0.45	0.99	0.00
Nitrogen trifluoride (NF ₃)	0.00	0.00	0.00
Exported energy to third parties ^b	1,203.27	1,249.65	1,304.43
Scope 2 emissions^c			
Market-based emissions	5,614.04	6,067.47	7,597.72
Location-based emissions	4,513.10	5,068.31	6,008.46
Total emissions excluding exported energy^d	17,982.58	20,241.33	22,944.10
Total emissions including exported energy	19,185.84	21,490.98	24,248.53
Additional data			
Captured CO ₂ ^e	173.92	244.67	258.92
Biogenic CO ₂ from fuels	24.44	28.57	13.03
Biogenic CO ₂ from imported energy	175.40	311.40	243.21
Offsets	-	-	-

Table notes

- Other GHG emissions are converted to CO₂-eq using the 100-year Global Warming Potential (GWP) factors from IPCC's sixth assessment report (AR6) in 2023 and 2022, and fifth assessment report (AR5) in previous years. Historical data are not recalculated with AR updates due to immaterial contribution of other GHGs to our inventory; CH₄ and N₂O emissions were 2,698 t and 115 t respectively in 2023, while other GHG data are collected only in tCO₂-eq due to lower materiality.
- Emissions on energy exported to third parties are reported as a separate subcategory of scope 1; all emissions in this category are considered as CO₂ since the contribution of other GHGs is negligible (<0.01%).
- The scope 2 figure is based on gross energy purchase with negligible contribution of other GHGs (<0.01%); highest quality available emission factors are used as per the hierarchy in the GHG protocol.
- Total emissions are calculated using the market-based scope 2 figure.
- Transferred CO₂ mainly covers captured carbon sold to third parties.

GHG reporting validation

We refer to the "independent limited assurance report by KPMG", included in our sustainability report.