305-1

To calculate Scope 1 emissions from natural gas, Linde uses the reported natural gas factors from each production plant (depending on the mix of hydrocarbons). If a specific natural gas factor is not available or known, Linde uses a chemical natural gas to CO_2 conversion factor from the Department for Environment, Food & Rural Affairs (DEFRA), from the Government of United Kingdom. For other fuels, Linde uses DEFRA factors to convert to CO_2 equivalents.

Emissions from transport are calculated based on actual kilometers driven for commercial and non-commercial vehicles, multiplied by average emission factors by vehicle type from the "Estimated U.S. Average Vehicle Emissions Rates per Vehicle by Vehicle Type using Gasoline and Diesel (Grams per mile)" from the U.S. Environmental Protection Agency, Office of Transportation and Air Quality, personal communication, Apr. 6, 2018.

Scope 1 GHG Emissions

	2018 Linde Pro Forma	2019 Linde	2020 Linde	2021 Linde
Scope 1	16,872,000	16,461,000	16,247,000	16,321,000

EN (8): Scope 1 GHG Emissions

Units: Metric Tons CO_2e

305-2 Energy indirect greenhouse gas (GHG) emissions (Scope 2)

Linde's Scope 2 GHG emissions in 2021 were 23.6 million metric tons CO_2e (market-based), which is a 5.7 percent increase from 2020. The largest electricity user is ASUs, which account for approximately 90 percent of all electricity used.

These emissions were calculated using the market-based approach. Linde continues to move to market-based emissions factors where possible. In some cases, market-based factors are higher than location-based factors. These have resulted in increases in Scope 2 emissions. Compared to 2020, Scope 2 emissions have increased, partly due in increased production.

Restatements are made in accordance with its GHG Recalculation policy. Linde has updated its Scope 2 emissions for 2018, 2019 and 2020.

Linde also calculated Scope 2 emissions for 2021 using the location-based approach, which applies IEA factors and eGRID emission factors in the U.S. Scope 2 emissions calculated with the location-based approach were 21.4 million metric tons CO_2e in 2021. The difference between market-based and location-based emissions are mostly due to certain plants where customers provide the electricity to Linde (which Linde purchases). Some of these plants have a very high market-based emissions factor compared to the location-based emissions factor.

Organizational Boundary

Linde reports on all electricity and its resulting Scope 2 emissions purchased by the company. Electricity for sites where Linde does not pay the utility bill is excluded from its reported electricity number as well as from the reported Scope 2; however, it is tracked internally for operational purposes and for Scope 3 reporting.

Calculation Methodology

The main methodology for calculating Scope 2 emissions from electricity is the market-based approach, using site-specific emissions factors by plant according to supplier contracts and utility bills where available. For sites where such market-based factors are not known, Linde uses the most recent location-based factors from the IEA and the EPA's eGRID factors for the U.S. See 102-48 on page 13 for information on restating Scope 2 emissions for 2018-2020 due to updates to market-based emissions factors.

Scope 2 GHG Emissions (Market-based)

	2018 Linde Pro Forma	2019 Linde	2020 Linde	2021 Linde
Scope 2	23,518,000	23,448,000	22,299,000	23,573,000

EN (9): Scope 2 GHG Emissions

Units: Metric Tons CO_2e