

Elkem ASA

Scope 3 GHG emissions calculation methodology 2021



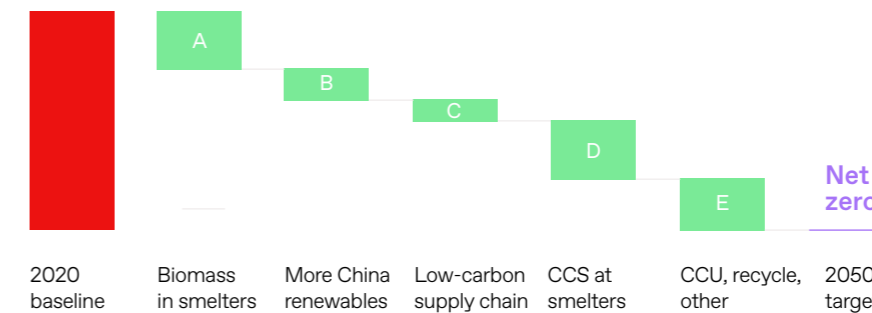
Accounting for our emissions is key to reaching our climate targets

Elkem is committed to reduce emissions in line with the Paris agreement. Elkem's ambition is to reduce the company's fossil carbon footprint by increasing renewable carbon sources and developing innovative production processes.

To be able to reach our ambitions of reducing our footprint, we first need to start with understanding and analysing our emission sources. This report comprise an overview of Elkem's scope 3 emissions. This gives us a scientific fundament to work on efforts to reduce our emissions.

More information about our targets to reduce our scope 1, 2 and 3 emissions can be found in the climate roadmap from 2021. [Take a look ↗](#)

Our roadmap to climate neutrality



By 2031, we will:

- Reduce absolute emissions* by 28% - baseline 2020
- Delivering 39% improvement in product footprint**
- By 2050: Achieve full carbon-neutral production (zero fossil emissions) globally.

* Total global fossil CO₂ emissions, scope 1 and 2

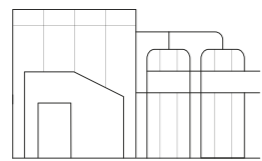
** Main product average fossil CO₂ emissions, scope 1-3 (to gate).



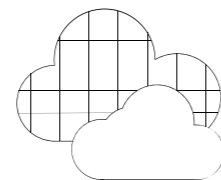
About Elkem

Elkem is one of the world's leading suppliers of silicon-based advanced material solutions shaping a better and more sustainable future. The company develops silicones, silicon products and carbon solutions by combining natural raw materials, renewable energy, and human ingenuity. Elkem helps its customers create and improve essential innovations like electric mobility, digital communications, health, and personal care as well as smarter and more sustainable cities.

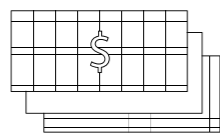
At the core of Elkem is people and safe sustainable operations conducted responsibly and with excellence. Elkem shall be an attractive employer and at the forefront of environmentally friendly operations within our industry.



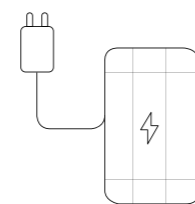
Operations:
30 plants worldwide



Total Scope 1+2+3 emissions 2021:
11.5 million tonnes



Revenue 2021:
33.7 billion NOK



> 80% of production based on
renewable electricity



Organisational boundary

When reporting the greenhouse gas emissions (GHG), Elkem defines its organisational boundary on an operational control basis, and our scope 1, 2 and 3 emissions are reported accordingly.

Scope 3 is the term used to describe the indirect GHG emissions resulting from activities in our value chain, but outside of our operational control, according to the GHG protocol.

The GHG protocol - emission scopes

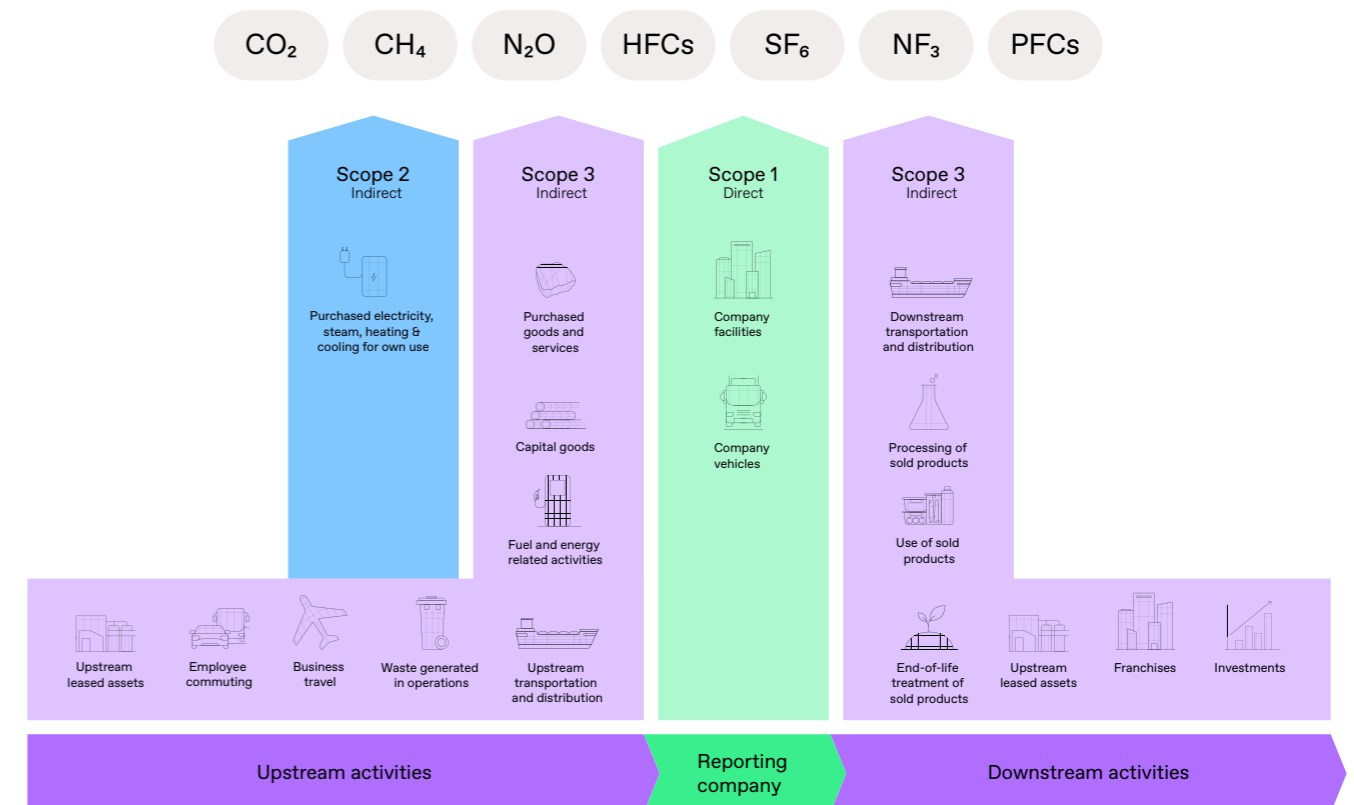
Scope 1 - All direct emissions that occur from sources that are controlled or owned by an organisation (e.g., emissions associated with fuel combustion in boilers, furnaces, vehicles).

Most of the direct CO₂-emissions from Elkem's production comes from the smelting process, where carbon (C) reacts with oxygen in quartz to produce silicon/ferrosilicon. GHG emissions are calculated based on third party certificates of carbon content in raw materials (coke and coal). CO₂ numbers from other sources, including heating and fuel, are based on standard conversion factors in accordance with the EU Emissions Trading Systems (EU ETS) Guidelines.

Scope 2 - Indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling. The electricity emission factors used in the calculation are provided by CEMAsys, a specialised consultancy firm, and are based on national gross electricity production mixes from the International Energy Agency's statistics developed for 2020.

Scope 3 - Indirect emissions are the result of activities from assets not owned or controlled by the reporting organisation, but that the organisation indirectly impacts in its value chain. Scope 3 emissions include all sources not within an organisation scope 1 and 2 boundary.

The Scope 3 Standard divides scope 3 emissions into upstream and downstream emissions, as pictured below.



CO ₂ emissions	2020	2021
Scope 1	2 387 915	2 334 868
Scope 2 – location based	906 286	901 058
Total Scope 1+2	3 294 201	3 235 926
Scope 2 – market based	2 703 866	2 825 996
Emissions from biobased sources (carbon neutral)	547 000	550 000
Total Scope 3	6 954 171	8 350 733
Category 1: Purchased goods and services	2 608 058	3 617 792
Category 2: Capital goods	595 442	759 389
Category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)	228 098	306 502
Category 4: Upstream transportation and distribution	269 415	209 275
Category 5: Waste generated in operations	12 633	12 393
Category 6: Business travels	2 215	1 081
Category 7: Employee commuting	12 566	12 950
Category 11: Use of sold products	733 083	1 005 964
Category 12: End of life treatment of sold products	2 492 661	2 425 426

Comments:

Scope 1:

- 2020: The numbers have been corrected and therefore deviate from the CDP report due to double counting.
- 2021: The numbers in the table have been corrected compared to the ESG report for 2021 due to double counting.

Scope 3:

Category 8,9,10,13, 14 and 15 has been evaluated as not relevant. An explanation is provided for each category in the following report.

About this document

This document describes the calculation boundaries, methodologies, assumptions and key references used in the preparation of the 2021 scope 3 emissions reporting, as published in the ESG report 2021. The full report is available [here ↗](#)

Scope 3 emissions for our business are calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard), and with reference to the additional guidance provided in the GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (Scope 3 Guidance) as appropriate. Detailed description for the methodology for each category is given below.

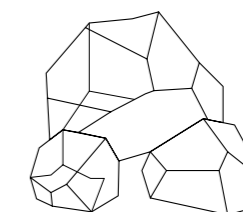
This document meets the disclosure requirements of Global Reporting Initiative (GRI) standard GRI 305 ('Disclosure 305-3 – Other indirect (Scope 3) GHG emissions'). These disclosures are also aligned with the recommendation from the Task Force on Climate-related Financial Disclosures (TCFD).

PwC has provided limited assurance of the 2021 ESG report, including in respect of the scope 3 emissions inventory for our business; a copy of PwC's independent assurance statement can be found at the end of the report.

Scope 3 GHG emissions 2021

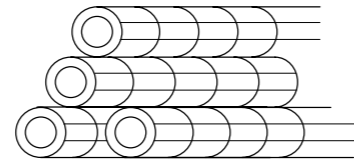


Purchased goods and service



Category description (GHG Protocol)	Upstream (i.e., cradle-to-gate) emissions from the extraction, production and transportation of goods and services purchased or acquired by the reporting company in the reporting year, where not otherwise included in categories 2 to 8.
Evaluation status (CDP)	Relevant.
Evaluation status rationale (CDP)	This is a material source of scope 3 emissions in Elkem's value chain.
Metric tonnes CO _{2e}	3 617 792
Percentage of emissions calculated	98%
Calculation boundaries (included)	Raw materials for all divisions and plants are included. Elkem owns 50% of Ferrovel in South Africa. Elkem has management control and hence we are reporting 100% of raw materials purchased. In total 98% of purchased raw materials are accounted for.
Exclusions	Packaging materials, spare parts, office supplies and other goods not defined as raw materials are not included as volumes and impact is neglectable compared to raw materials. Purchased goods and services for investment and re-investment projects are not included as they are accounted for in category 2.
Activity data	Received raw materials [MT or kg] for reporting year are the main source of information per item and supplier. The data is mainly collected from ERP systems. Minor plants are not yet included in corporate ERP systems, and they are reporting manually by excel.
Emission factors	Emission factors are mainly from the life cycle inventory database Ecolnvent, but a few supplier specific data are available and used in the calculations. Norsus (external LCA consultant) is used for choosing emission factors in cooperation with Elkem's raw material teams. Examples: <ul style="list-style-type: none"> • Magnesium: 30,404664 kg CO_{2e}/kg. • Coal USA: 0,135536 kg CO_{2e}/kg. • Coal Colombia: 0,08368 kg CO_{2e}/kg.
Methodology	Average data method is mainly used in combination with Supplier-specific method when available.
References	GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013 https://ghgprotocol.org/scope-3-technical-calculation-guidance

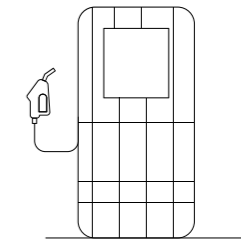
Capital goods



Category description (GHG Protocol)	Upstream (i.e., cradle-to-gate) emissions from the production of capital goods purchased or acquired by the reporting company in the reporting year.
Evaluation status (CDP)	Not relevant.
Evaluation status rationale (CDP)	Capital goods is a category that is considered not relevant for Elkem because historically our expenditure vary from year to year based on projects, reinvestment and expansions. We monitor the category and are looking into efforts on reducing the emissions.
Metric tonnes CO _{2e}	759 389
Percentage of emissions calculated	100%
Calculation boundaries (included)	100% of capex is accounted for, both reinvestments and investments for expansions. Elkem has taken a conservative approach and both direct and indirect cost is included in the calculations. VAT is not included (as this varies from country to country and is dependent on import/domestic purchase).
Exclusions	None.
Activity data	Aggregated capex figures for Elkem ASA from the corporate finance reporting system (Hyperion).
Emission factors	EPA (U.S. Environmental Protection Agency) Greenhouse Gas Emission Factors for US Industries and Commodities are used: <ul style="list-style-type: none"> Concrete: 4,58 kg CO_{2e}/USD 2018. Steel: 1,089 kg CO_{2e}/USD 2018.
Methodology	Average spend-based method from WBCSD; Guidance for Measuring & Reporting Corporate Value Chain GHG Emissions in the Chemical Sector: If data on the composition of capital goods or their emission factors is not available, companies shall assume the capital good is made out of 25% concrete and 75% steel. Elkem has assumed total capex is made out of concrete (25%) and steel (75%).
References	WBCSD; Guidance for Measuring & Reporting Corporate Value Chain GHG Emissions in the Chemical Sector https://www.wbcsd.org/contentwbc/download/2831/35596/1 Ingwersen, W. AND M. Li. Supply Chain Greenhouse Gas Emission Factors for US Industries and Commodities. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-20/001, 2020. Supply Chain GHG Emission Factors for US Commodities and Industries v1.1

Fuel-and-energy-related activities

(not included in Scope 1 or 2)



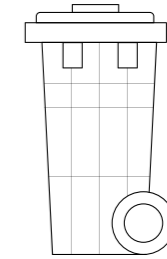
Category description (GHG Protocol)	Emissions related to the production of fuels and energy purchased and consumed by the reporting company in the reporting year that are not included in scope 1 or scope 2. The calculation of emissions from electricity not included in scope 1 and 2 includes well to tank and emissions associated with grid losses.
Evaluation status (CDP)	Relevant.
Evaluation status rationale (CDP)	This is a material source of scope 3 emissions in Elkem's value chain.
Metric tonnes CO _{2e}	306 502
Percentage of emissions calculated	100%
Calculation boundaries (included)	All plants in Elkem based on reported scope 1 and 2.
Exclusions	None.
Activity data	Activity data for the total scope 2 Elkem ASA is included in the calculation. This is mainly electricity, natural gas, diesel and steam.
Emission factors	A combination of emission factors from The Department of Environment, Food and Rural Affairs, DEFRA 2021 and IEA 2021 is used to have a holistic reporting. Examples: <ul style="list-style-type: none"> Natural gas: 0,43443 kg CO_{2e}/kg Diesel, stationary: 0,62874 kg CO_{2e}/litre Electricity China: 0,178451 kg CO_{2e}/kWh
Methodology	Average data method.
References	DEFRA: Greenhouse gas reporting: conversion factors 2021 - GOV.UK (www.gov.uk) (LINK: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021) IEA (2021)

Upstream transportation and distribution



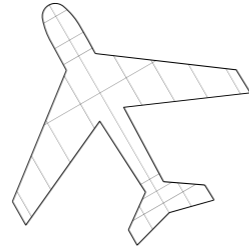
Category description (GHG Protocol)	Emissions from the transportation and distribution of products purchased by the reporting company in the reporting year between a company's tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by the reporting company); transportation and distribution services purchased by the reporting company in the reporting year, including inbound logistics, outbound logistics (e.g. of sold products); and transportation and distribution between a company's own facilities (in vehicles and facilities not owned or controlled by the reporting company).
Evaluation status (CDP)	Relevant.
Evaluation status rationale (CDP)	This is a material source of scope 3 emissions in Elkem's value chain.
Metric tonnes CO _{2e}	209 275
Percentage of emissions calculated	Approx. 98%
Calculation boundaries (included)	Inbound and outbound where Elkem is responsible for transport. The calculations include bulk vessels, container ships, truck and air freight.
Exclusions	Inbound and outbound Elkem Silicones Brazil. This is not material amount of transported goods.
Activity data	17% of the reported emissions in this category is data from carriers. The remaining emissions is based on shipped volumes registered in Elkem's ERP systems and Transport Management Systems, leg distance and transportation mode.
Emission factors	Emission factors are chosen based on transportation mode. Different emission factors have been chosen for different countries.
Methodology	Fuel-based method when available from carrier and Distance-based method on the remaining. Elkem has used supplier specific data on average consumption of bunkers volume per vessel type and leg, when available. For the rest of the transportation distance-based method is used on transported tonnage for the reported year. For sea transport where all data is not available the major legs have been calculated with carrier tools. The remaining shipments are included by extrapolation based on tonnage.
References	GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013 https://ghgprotocol.org/scope-3-technical-calculation-guidance

Waste generated in operations



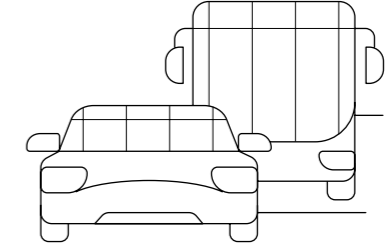
Category description (GHG Protocol)	Emissions from third-party disposal and treatment of waste generated in the reporting company's owned or controlled operations in the reporting year. This category includes emissions from disposal of both solid waste and wastewater. Only waste treatment in facilities owned or operated by third parties is included in scope 3. This category includes all future emissions that result from waste generated in the reporting year.
Evaluation status (CDP)	Relevant.
Evaluation status rationale (CDP)	This is a material source of scope 3 emissions in Elkem's value chain.
Metric tonnes CO _{2e}	12 393
Percentage of emissions calculated	100%
Calculation boundaries (included)	All solid process waste is included in calculations.
Exclusions	External water and gas treatment at silicones plants.
Activity data	Detailed reporting of waste streams to suppliers in ESD France (Roussillon and St.Fons). The rest of Elkem the activity data is quarterly environmental reporting from the plants. 100% of solid waste is accounted for.
Emission factors	ESD France (Roussillon and St.Fons) are using ADEME Emission factors for the different waste streams. The rest of Elkem is calculated based on DEFRA Emission Factors 2021. Examples DEFRA: Non-hazardous waste/ Incineration: 21,294 kg CO _{2e} /ton waste Commercial and industrial waste / Landfill: 467,046 kg CO _{2e} /ton waste
Methodology	Waste-type-specific method and Average data method according to GHG Protocol.
References	GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013 https://ghgprotocol.org/scope-3-technical-calculation-guidance ADEME: https://www.bilans-ges.ademe.fr/documentation/UPLOAD_DOC_FR/index.htm DEFRA: Greenhouse gas reporting: conversion factors 2021 - GOV.UK (www.gov.uk)

Business travel



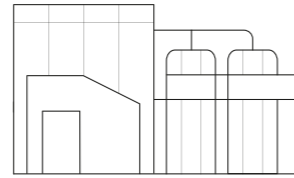
Category description (GHG Protocol)	Transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by the reporting company).
Evaluation status (CDP)	Relevant.
Evaluation status rationale (CDP)	This category is not material source of scope 3 emissions for Elkem but can be influenced.
Metric tonnes CO _{2e}	1 081
Percentage of emissions calculated	100%
Calculation boundaries (included)	Air travel.
Exclusions	Emissions from bus, rail, car travels and hotel stays are not included.
Activity data	Business travels booked via travel agency. This is company practice in Norway and France, and this covers 32% of Elkem's personnel; Full Time Equivalent (FTE).
Emission factors	Emissions related to Elkem's air travels are obtained from the travel agencies. ICAO emission calculator is used in Norway.
Methodology	Distance-based method. Data from travel agencies in Norway and France covers 32% of FTE. Total emissions are calculated by extrapolating to 100% FTE.
References	GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013; https://ghgprotocol.org/scope-3-technical-calculation-guidance ICAO Carbon Emissions Calculator: https://www.icao.int/environmental-protection/CarbonOffset

Employee commuting



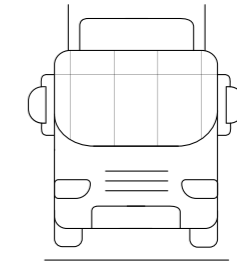
Category description (GHG Protocol)	This category includes emissions from the transportation of employees between their homes and their worksites.
Evaluation status (CDP)	Relevant.
Evaluation status rationale (CDP)	This category is not material source of scope 3 emissions for Elkem but can be influenced.
Metric tonnes CO _{2e}	12 950
Percentage of emissions calculated	100%
Calculation boundaries (included)	All employees included.
Exclusions	None.
Activity data	Distance from home address to work with a +/-5 km margin.
Emission factors	Examples: <ul style="list-style-type: none"> • Car 0,3 kg CO_{2e}/km. • Public transport and motorcycle 0,1 kg CO_{2e}/km.
Methodology	Distance-based method. Conservative approach is used for the calculation, assuming all employees are travelling to every workday. It is also assumed employees are using car unless otherwise specified. Mapping of approximate travelling distance [km] based on home address is done for 52% of Elkem's FTE. Total emissions are calculated by extrapolating to 100% FTE.
References	GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013; https://ghgprotocol.org/scope-3-technical-calculation-guidance

Upstream leased assets



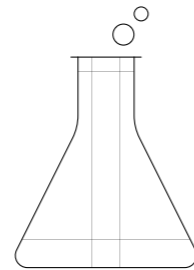
Category description (GHG Protocol)	This category includes emissions from the operation of assets that are leased by the reporting company in the reporting year and not already included in the reporting company's scope 1 or scope 2 inventories. This category is applicable only to companies that operate leased assets (i.e., lessees). For companies that own and lease assets to others (i.e., lessors), see category 13 (Downstream leased assets).
Evaluation status (CDP)	Not relevant.
Evaluation status rationale (CDP)	Only 5% of Elkem's total non-current assets are leased assets. These assets are not separated from Elkem owned business operations. Therefore, the leased assets (upstream and downstream) are included in Elkem's total Scope 1 and 2 reporting and is not relevant for scope 3.
Metric tonnes CO _{2e}	-
Percentage of emissions calculated	-
Calculation boundaries (included)	-
Exclusions	-
Activity data	-
Emission factors	-
Methodology	-
References	-

Downstream transportation and distribution



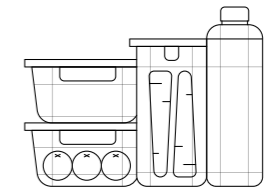
Category description (GHG Protocol)	This category includes emissions that occur in the reporting year from transportation and distribution of sold products in vehicles and facilities not owned or controlled by the reporting company. Outbound transportation and distribution services that are purchased by the reporting company are excluded from category 9 and included in category 4 (Upstream transportation and distribution) because the reporting company purchases the service. Category 9 includes only emissions from transportation and distribution of products after the point of sale.
Evaluation status (CDP)	Not relevant.
Evaluation status rationale (CDP)	Elkem sells the majority of their products including transportation cost. These emissions are included in category 4.
Metric tonnes CO _{2e}	-
Percentage of emissions calculated	-
Calculation boundaries (included)	-
Exclusions	-
Activity data	-
Emission factors	-
Methodology	-
References	-

Processing of sold products



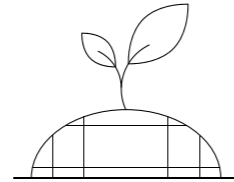
Category description (GHG Protocol)	Category 10 includes emissions from processing of sold intermediate products by third parties (e.g., manufacturers) subsequent to sale by the reporting company. Intermediate products are products that require further processing, transformation, or inclusion in another product before use, and therefore result in emissions from processing subsequent to sale by the reporting company and before use by the end consumer.
Evaluation status (CDP)	Not relevant.
Evaluation status rationale (CDP)	Based on the WBCSD; Guidance for Measuring & Reporting Corporate Value Chain GHG Emissions in the Chemical Sector, category 10: Chemical companies are not required to report scope 3, category 10 emissions, since reliable figures are difficult to obtain due to the diverse application and customer structure. Based on Corporate Value Chain (Scope 3) Accounting and Reporting Standard chapter 6.4: In certain cases, the eventual end use of sold intermediate products may be unknown. For example, a company may produce an intermediate product with many potential downstream applications, each of which has a different GHG emissions profile, and be unable to reasonably estimate the downstream emissions associated with the various end uses of the intermediate product. In such a case, companies may disclose and justify the exclusion of downstream emissions from categories 9, 10, 11, and 12 in the report.
Metric tonnes CO _{2e}	-
Percentage of emissions calculated	-
Calculation boundaries (included)	-
Exclusions	-
Activity data	-
Emission factors	-
Methodology	-
References	-

Use of sold products



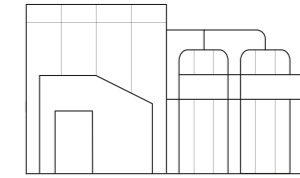
Category description (GHG Protocol)	This category includes emissions from the use of goods and services sold by the reporting company in the reporting year. A reporting company's scope 3 emissions from use of sold products include the scope 1 and scope 2 emissions of end users. End users include both consumers and business customers that use final products.
Evaluation status (CDP)	Relevant.
Evaluation status rationale (CDP)	This is a material source of scope 3 emissions in Elkem's value chain.
Metric tonnes CO _{2e}	1 005 964
Percentage of emissions calculated	100%
Calculation boundaries (included)	All Elkem Carbons external sales is included and 100% is accounted for. Elkem owns 50% of Ferroveld in South Africa. Elkem has management control and hence we are reporting 100% of sold products.
Exclusions	Silicon, ferrosilicon and silicones are not included, since it is intermediates and is used in many different applications and products. Based on the WBCSD; Guidance for Measuring & Reporting Corporate Value Chain GHG Emissions in the Chemical Sector, category 11: Chemical companies should not include indirect use-phase emissions in the inventory, unless the end use of chemical products is known. Based on Corporate Value Chain (Scope 3) Accounting and Reporting Standard chapter 6.4: In certain cases, the eventual end use of sold intermediate products may be unknown. For example, a company may produce an intermediate product with many potential downstream applications, each of which has a different GHG emissions profile, and be unable to reasonably estimate the downstream emissions associated with the various end uses of the intermediate product. In such a case, companies may disclose and justify the exclusion of downstream emissions from categories 9, 10, 11, and 12 in the report.
Activity data	-
Emission factors	-
Methodology	-
References	-

End of life treatment of sold products



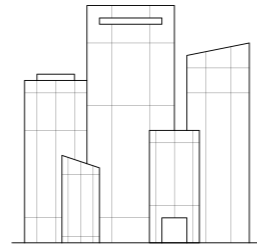
Category description (GHG Protocol)	Emissions from the waste disposal and treatment of products sold by the reporting company in the reporting year at the end of their life.
Evaluation status (CDP)	Relevant.
Evaluation status rationale (CDP)	This is a material source of scope 3 emissions in Elkem's value chain; however the calculated amount has a very large uncertainty.
Metric tonnes CO _{2e}	2 425 426
Percentage of emissions calculated	100%
Calculation boundaries (included)	Products produced by Elkem Silicones Division (ESD).
Exclusions	All Elkem Carbon products are excluded as they are all accounted for on category 11 or in Elkem's scope 1. All silicon and ferrosilicon products are excluded as they are containing deminimis values of carbon and is used in a wide range of products which we have limited knowledge of their end of life. Based on Corporate Value Chain (Scope 3) Accounting and Reporting Standard chapter 6.4: In certain cases, the eventual end use of sold intermediate products may be unknown. For example, a company may produce an intermediate product with many potential downstream applications, each of which has a different GHG emissions profile, and be unable to reasonably estimate the downstream emissions associated with the various end uses of the intermediate product. In such a case, companies may disclose and justify the exclusion of downstream emissions from categories 9, 10, 11, and 12 in the report.
Activity data	Purchased amount of carbon containing raw materials (methanol, methyl chloride etc.) in ESD.
Emission factors	GWP methane: 28 kg CO _{2e} /kg (IPCC 5th Assessment Report).
Methodology	Elkem is basing the calculation on carbon content method . The amount of carbon is conservatively estimated based on carbon content in purchased raw materials for the reporting year and assuming all carbon ends up as products. According to WBCSD Guidance for Measuring & Reporting Corporate Value Chain GHG Emissions in the Chemical Sector declared emissions are based on 80% landfill/20% incineration. In landfills, 50% of the carbon is assumed to be converted to methane and 50% to CO ₂ . In landfills, 50% of the carbon is assumed to be converted to methane and 50% to CO ₂ . 100% accounted for.
References	GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013; https://ghgprotocol.org/scope-3-technical-calculation-guidance WBCSD; Guidance for Measuring & Reporting Corporate Value Chain GHG Emissions in the Chemical Sector, 2013 https://www.wbcscd.org/contentwbc/download/2831/35596/1

Downstream leased assets



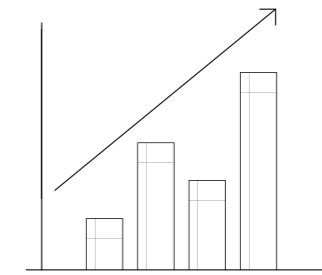
Category description (GHG Protocol)	Emissions from the operation of assets owned by the reporting company (lessor) and leased to other entities in the reporting year, not included in scope 1 and scope 2 reported by lessor.
Evaluation status (CDP)	Not relevant.
Evaluation status rationale (CDP)	Only 5% of Elkem's total non-current assets are leased assets. These assets are not separated from Elkem owned business operations. Therefore, the leased assets (upstream and downstream) are included in Elkem's total Scope 1 and 2 reporting and is not relevant for scope 3.
Metric tonnes CO _{2e}	-
Percentage of emissions calculated	-
Calculation boundaries (included)	-
Exclusions	-
Activity data	-
Emission factors	-
Methodology	-
References	-

Franchises



Category description (GHG Protocol)	Emissions from the operation of franchises in the reporting year, not included in scope 1 and scope 2 reported by franchisor.
Evaluation status (CDP)	Not relevant.
Evaluation status rationale (CDP)	Elkem does not engage in franchises activities therefore this category is not relevant.
Metric tonnes CO _{2e}	-
Percentage of emissions calculated	-
Calculation boundaries (included)	-
Exclusions	-
Activity data	-
Emission factors	-
Methodology	-
References	-

Investments



Category description (GHG Protocol)	Emissions associated with the operation of the reporting company's investments (including equity and debt investments and project finance) in the reporting year, not already included in scope 1 or scope 2.
Evaluation status (CDP)	Not relevant.
Evaluation status rationale (CDP)	Elkem does not have any relevant investments without management control to account for, therefore not relevant.
Metric tonnes CO _{2e}	-
Percentage of emissions calculated	-
Calculation boundaries (included)	-
Exclusions	-
Activity data	-
Emission factors	-
Methodology	-
References	-



To the Board of Directors in Elkem ASA

Independent auditor's statement

We have undertaken a limited assurance engagement on Elkem ASA's GRI Index for 2021 and key performance indicators for the material topics presented in the GRI index.

- Elkem's GRI Index for 2021 is an overview of which sustainability topics Elkem considers material to its business and which key performance indicators Elkem uses to measure and report its sustainability performance, together with a reference to where material sustainability information is reported. Elkem's GRI Index for 2021 is available at <https://www.elkem.com/sustainability/esg-reporting>. We have examined whether Elkem has developed a GRI Index for 2021 and whether mandatory disclosures are presented according to the Standards published by the Global Reporting Initiative (www.globalreporting.org/standards) (criteria).
- Key performance indicators for sustainability are available and included in Elkem's ESG report for the period ending 31 December 2021, specifically in the sections "CO2 emissions and mitigation", "Other emissions to air", "Energy management" and "Waste management and circularity", "Water management", "Health and safety", "Human Rights", "Product governance" and "Supply chain management" of the chapter titled "ESG report". The indicators are also available in Elkem's GRI Index for 2021. Elkem has defined the key figures and explained how they are measured in the qualitative disclosures presented alongside the indicators in the annual report (criteria). We have examined the basis for the measurements and checked the calculations of the measurements reported in the ESG report.

Tasks and responsibilities of management

Management is responsible for Elkem's sustainability reporting and for ensuring that it is prepared in accordance with the criteria described above. Their responsibility includes designing, implementing and maintaining internal controls that ensure the development and reporting of the GRI Index and key performance indicators for sustainability.

Our independence and quality control

We are independent of the company in accordance with applicable laws and regulations and the Code of Ethics for Professional Accountants (IESBA Code) and with the ethical requirements that are relevant to our independent statement, and we have fulfilled our ethical obligations in accordance with these requirements and IESBA Code. We use ISQC 1 - Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements and maintains a comprehensive quality control system including documented policies and procedures of the ethical standards, professional standards and applicable legal and regulatory claim.

The Auditor's responsibilities

Our task is to express a limited assurance conclusion on Elkem's sustainability reporting based on the procedures we have performed and the evidence we have obtained. We have performed our work and will issue our statement in accordance with the Standard on Assurance Engagements ISAE 3000:

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Statsautoriserte revisorer, medlemmer av Den norske Revisorforening og autorisert regnskapsførerselskap



"Assurance engagements other than audits or review of historical financial information". A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

Our work involves performing actions to obtain evidence that Elkem's GRI Index for 2021 and key performance indicators for sustainability are developed in accordance with the Standards published by the Global Reporting Initiative and the criteria for reporting and measurement that are explained in relation to the key performance indicators for sustainability. The procedures selected depend on our judgment, including assessments of the risks that the sustainability reporting contains material misstatement, whether due to fraud or error. In making those risk assessments, we take into account the internal control that is relevant for the preparation of the sustainability reporting. The purpose is to design control procedures that are appropriate in the circumstances, but not to express an opinion on the effectiveness of internal control.

Our procedures include an assessment of whether the criteria used are appropriate, as well as an assessment of the overall presentation of the sustainability reporting. Our procedures include meetings with representatives from Elkem who are responsible for the material sustainability topics covered by the sustainability reporting; review of internal control and routines for reporting key performance indicators for sustainability; obtaining and reviewing relevant information that supports the preparation of key performance indicators for sustainability; assessment of completeness and accuracy of the sustainability reporting; and controlling the calculations of key performance indicators for sustainability based on an assessment of the risk of error.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that

- Elkem's GRI Index for 2021 is not, in all material respects, developed and presented in accordance with the requirements of the Standards published by The Global Reporting Initiative;
- Elkem's key performance indicators are not, in all material aspects, developed, measured and reported in accordance with the definitions and explanations provided in relation to the key performance indicators.

Oslo, 11 March 2022

PricewaterhouseCoopers AS

Anders Ellefsen

State authorized public accountant (Norway)

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