

# Greenhouse Gas (GHG) Emissions

Methodology Statement



### 1. Introduction

This document is a summary of the methodology used in compiling the emissions data for Aker Solutions. The core of building our data process is based on the GHG Protocol Corporate Accounting and Reporting Standard and other supplementary reference and guidance documents.

## 2. Organizational Boundaries

The defined boundaries are Aker Solutions' direct control and administration per reporting year end. The consolidation of GHG emissions is based on the Operational Control approach.

For 2023, Aker Solutions GHG reporting does not include the Subsea segment as it is not within the operational control per year end. Instead, emissions data from this new joint venture known as OneSubsea is reported in scope 3, category 15, adjusted for ownership share (20 percent).

## 3. Operational Boundaries

- Scope 1: Direct emissions from the use of fuel, gas, refrigerants and welding gas on Aker Solutions' operational sites, yards and offices and by all Aker Solutions-owned vehicles, including leased equipment under our operational control.
- Scope 2: Indirect emissions from the use of electricity/heating/cooling consumed at our operational sites. Emissions are accounted for based on the electricity consumption in each location. The CO₂e emissions from electricity are reported as location-based emissions using location-specific emissions factors, market-based emissions with market-based factors complemented with location-based factors in the cases the aforementioned were not available. As we encourage the use of renewable electricity, we purchase electricity attribute certificates (EACs) and utilize a market-based approach in our calculations reporting scope 2 emissions including EACs as well, which is considered our main accounting method.
- Scope 3: Indirect emissions from the value chain that include the major emissions sources of Aker Solutions; consolidated according to Table 1.

## 4. Data Collection Tools

- Synergi Life: scope 1 & 2, scope 3 (categories 3, 5, 12)
- Company Enterprise Resource Planning (ERP): scope 3 (categories 1, 2, 4, 7)
- Company databases, surveys, and archive: scope 3 (categories 6, 9, and 11)
- Emissions data platform



#### 5. Sources of Emissions Factors

- Scope 1: DEFRA (2023), EcoInvent v3.9. In the 2023 emissions calculations there was an update on the acetylene, biodiesel blend and biofuel emissions factors to represent the emissions of the fuels used in the reporting year
- Scope 2 Location-based: EcoInvent v3.9
- Scope 2 Market-based: Association of Issuing Bodies (2022), EcoInvent v3.9
- Scope 2 District heating and cooling: Service Providers
- Scope 3: Exiobase 3.9 (2019), EcoInvent v3.9, DEFRA (2023), EPD program operators (EPD Norge, IBU), EN 16258:2012
- Out of scope emissions: DEFRA (2023)

#### 6. Calculations

Aker Solutions is reporting all relevant scope emissions separately in metric tons of CO<sub>2</sub> equivalents. The calculated CO<sub>2</sub>e emissions represent all greenhouse gases covered by the UNFCCC/Kyoto Protocol, aggregated and converted to CO<sub>2</sub>e emissions from our operations or our value chain. Conversion of units of measure is performed according to the fuel properties as described in the emissions factor databases and the most common average values per fuel.

Calculations for scope 1 and scope 2 emissions including the conversion factor between units are done automatically in the Synergi Life reporting tool, licensed from DNV. Fuel and electricity data are reported locally either via meter readings at the sites or via invoicing of purchased electricity and fuels. Each location provides environmental data monthly for the premises and activities controlled by Aker Solutions.

The following table lists all the scope 3 categories that are included in the inventory, with a description of the calculation method, the exclusions in each category and the source of emissions factors. The categories that are not included are not relevant to Aker Solutions' activities and business model.



Emission	Main	Emission Factor
Source	Calculations	Source
Category 1 Purchased goods and services	Category 1 emissions are calculated according to a hybrid method combining spend-based data from the reporting year (accounting for approximately 88 percent of calculated emissions), supplier specific emission factors sourced from Environmental Product Declarations (EPDs) and emission factors from life cycle inventory databases (accounting for approximately 12 percent of calculated emissions). The emission calculations include all (100 percent) external vendor data for the reporting year and are based on the actual delivery of the items procured in the reporting year. Suppliers comprising of 86 percent of the annual spend data were classified based on the main industry classification of each supplier according to the NACE (Statistical classification of economic activities in the European Community) and by geography, calculated with emission factors reflecting the same. The remaining 14 percent of suppliers were classified in a common category and were included in the inventory with the application of an average spend-based factor. Overall, the spend data used in category 1 is defined as the annual spend data from external vendors through the Profit & Loss statement (P&L). Staff payroll, travel, temporary employment activities, CapEx and main logistic spend data are excluded to avoid double counting, as these are accounted for in other scope 3 categories or are not relevant for emissions reporting.	Exiobase 3.9 (2019), EcoInvent v3.9, EPD program operators, (EPD Norge, IBU)
	Methodology: Hybrid method.	
Category 2 Capital goods	Capital goods emissions are reported according to the organization's CapEx data for the reporting year. The CapEx data used for the emission reporting consist of the fixed assets of 2023. The relevant projects are classified based on the type of economic activity and project location and are calculated by spend-based method.	Exiobase 3.9 (2019)
	Methodology: Spend-based method.	



Emission	Main	Emission Factor
Source	Calculations	Source
Category 3 Fuel and energy related activities	Upstream energy related emissions are calculated using activity data from scope 1 and 2, with the upstream emission factors from life cycle inventory databases.  Aker Solutions calculates category 3 emissions from the sum of the upstream fossil and biogenic fuel emissions, upstream emissions of purchased electricity and transmission and distribution losses.	Ecolnvent v3.9, DEFRA (2023)
Category 4	Methodology: Average data method.  Emissions are calculated from the third-party	DEFRA (2023)
Upstream transportation	transportation services purchased by Aker Solutions in the reporting year, including inbound and outbound logistics. The activity data are provided by our logistic suppliers on distance, weight, and transport mode information to Aker Solutions segments. For addressing further data gaps, the spend-based methodology is used.	DEI IVA (2023)
	<b>Methodology:</b> Distance-based and spend-based method.	
Category 5 Waste generation in operations	Waste generation is registered in all locations per waste type. For the emission calculation the emission factors are applied according to the waste treatment activity. Data is provided by waste contractors, facilities management and actual measurement.	DEFRA (2023)
	Methodology: Waste-type-specific method.	
Category 6 Business travel	Aker Solutions' policy for employees is to order travel services through a third-party provider. Business travel emissions are calculated based on distance and mode of transport provided by the service provider.  Methodology: Distance-based method.	DEFRA (2023)
Category 7	Emissions are calculated based on estimations for	DEFRA (2023)
Employee commuting	employee commuting and average data for commuting patterns. The calculations are derived from activity data gathered through employee surveys. The average ratio of remote working and the relevant emissions is included in the calculations.	52. 131 (2020)
	Methodology: Distance-based method.	



Emission	Main	Emission Factor
Source	Calculations	Source
Category 9 Downstream transportation	Downstream transportation emissions are accounted for based on the maritime operations during installation and commissioning phase of projects. The activity data for the marine operations are provided in daily reports by third party service providers.	EN 16258:2012
	Methodology: Fuel-based method.	
Category 11 Use of sold products	Emissions from the use of sold products category originate from Aker Solutions' products delivered in the reporting year and result from direct consumption of fuel or electricity in the use phase and throughout the product's lifetime. The emission factors used are representative for each location. This category includes use phase emissions from new build and modification projects. In the modification projects, emissions are based on the new equipment provided, and exclude equipment that was repaired or reused. Emissions are assessed based on the planned consumed electrical load data, under normal operation conditions. Any electrification phase is also accounted for according to the contractual years.	EcoInvent v3.9
	Methodology: Direct use-phase emissions.	
Category 12 End-of-life treatment of sold products	Emissions are accounted based on the waste generation from decommission projects in Aker Solutions and the estimated disposal rates are from national average statistics.  Methodology: Waste-type-specific method.	DEFRA (2023)
Category 15	Category 15 includes emissions from the new	Provided by
Investments	OneSubsea joint venture. The emissions are allocated based on the 20 percent investment for scope 1 & scope 2.	Investee company
	Methodology: Investment-specific approach.	

