



Rolls-Royce Power Systems AG

Maybachplatz 1
88045 Friedrichshafen
Germany
T +49 7541 9091

CBAM Additional Information

Reporting obligations in the transitional phase

In the **transitional phase between October 2023 and – December 2025**, the CBAM report of importers contains the following:

- a) Total **quantity of goods imported** during the preceding quarter
- b) Total **embedded direct and indirect emissions, related to the imported goods**
- c) The **carbon price due in the country of origin** for the embedded emissions

The report during this first phase is to be submitted **quarterly**.

The European Commission announced that during the three first quarterly CBAM reports (Q4 of 2023 and Q1&2 of 2024), CBAM good importers may **report embedded emission based on [default values published by the European Commission](#)** without a quantitative limit. Based on this requirement, we structured our initial data request to you, **requesting only the minimum information** required by us to submit our first CBAM report using 100% default values (Sheet a) Initial data request - of the excel data request template).

Further, from **Q3 of 2024 and until the end of 2025**, declarants can continue to **report emissions based on estimates but only for complex goods** (see definition below) and with a **limit of 20% of the total embedded emissions per report**. The use of default values for the determination of embedded emissions would qualify as an “estimate”. Therefore, RRPS will be required to **submit CBAM reports based on actual data** still this year. In preparation, we ask our suppliers to already prepare for the installation specific data provision required from Q3 of 2024 (Sheet b) Advanced data request - of the excel data request template).

Period	Quantity of goods imported	Embedded direct and indirect emissions
Q4 2023 – Q2 2024	per tonne	100 % default values
Q3 2024 – Q4 2025	per tonne	<u>Simple goods:</u> 100% actual embedded emissions <u>Complex goods:</u> 20% default values, 80% actual embedded emissions
Q1 2026 - onwards	per tonne	100% actual embedded emissions

Board of Management: Dr. Jörg Stratmann (President and CEO), Dr. Thelse Godewerth, Dr. Andreas Strecker.
Chairwoman of the Supervisory Board: Jasmin Staiblin. Domicile: Friedrichshafen. Register Court: Ulm, Nr. 1 No. HRB 721 056.
Bank Details: Deutsche Bank AG Stuttgart: (all currencies) SWIFT/BIC DEUTDE33XXX, IBAN DE24 6007 0070 0166 1115 00.
Commerzbank AG Friedrichshafen: (EUR) SWIFT/BIC COBADEFFXXX, IBAN DE10 6514 0072 0172 0077 00.
UniCredit Bank AG Friedrichshafen: (EUR) SWIFT/BIC HYVEDEMM473, IBAN DE67 6002 0290 0352 1702 67.
V.A.T. No. DE 253916018

Data request for installation operators and CBAM product suppliers

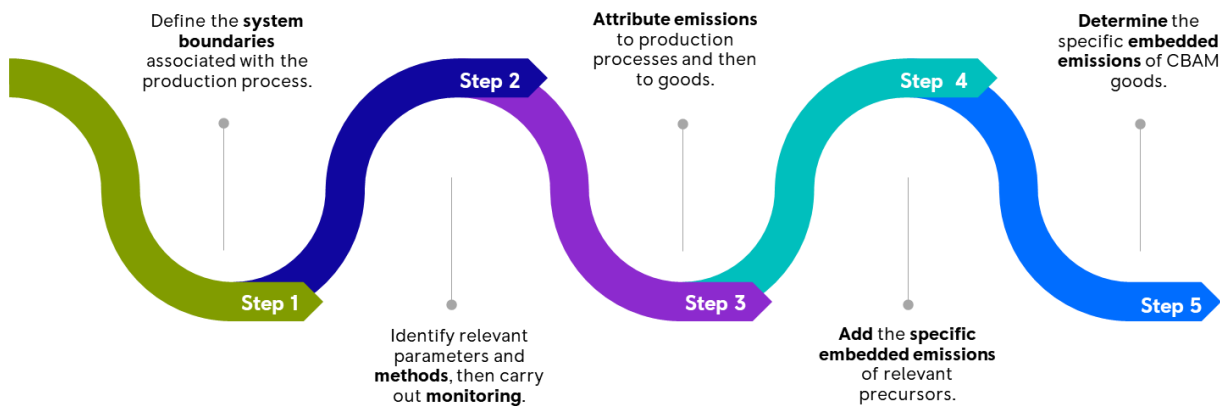
To ensure that direct and indirect **specific embedded emissions** (SEE) are reported in line with the EU reporting requirements, Rolls-Royce Power Systems AG shared the data request template.

Generally, for the quarterly report, we ask installation operators to provide **average data** representative for a full year (either calendar or fiscal). Installation operators may also choose an alternative reporting period (minimum duration of 3 months), if the installation participates in an eligible monitoring, reporting and verification (MRV) system (more details [here](#) on p. 26).

Below, we provide helpful background information, that will help you understand the monitoring and reporting requirements for you as an installation operator producing CBAM goods or as a CBAM good supplier, who shall request the data from their CBAM good producer/installation operator.

The determination of specific embedded emissions (SEE) is a multi-step process

The sector goods in scope of the CBAM are identified using the **Combined Nomenclature (CN) classification system**. Direct and indirect emissions of a CBAM goods (including emissions of precursors, as long as they fall under the scope of CBAM) have to be reported.



1. Define system boundaries

Before beginning with determining the SEE of a product, the installation operator shall **identify the system boundaries** associated with the production process of the CBAM good(s). The regulation differentiates between simple and complex goods:

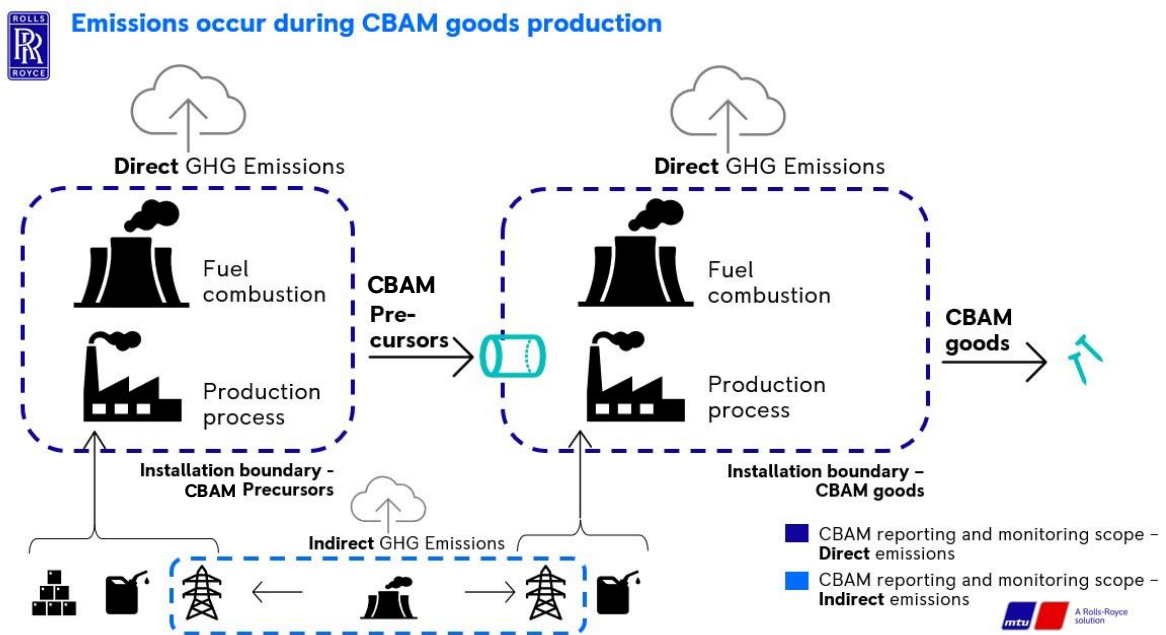
Simple goods:

Goods produced from fuels and raw materials considered to have zero embedded emissions under CBAM.

Complex goods:

Goods produced from other CBAM goods (either simple or other complex goods). At RRPS mainly complex goods.

To identify the applicable reporting boundaries, installation operators shall draw up a **list of all goods and CBAM precursors at their installation**¹, both produced at their installation and precursors obtained from outside the installation. The complete overview of products (aggregated goods) within the scope of each CBAM sector can be found in [Annex I of the CBAM regulation](#). Rolls-Royce Power Systems AG provides each identified installation operator/supplier with an individual overview of imported goods and their applicable CN-codes. The CN-codes are mapped to aggregated goods categories, for which joint production processes are to be defined for the purpose of monitoring. Please note that in some cases an aggregated goods category may be a precursor of its own category. This is specifically applicable for products of the Iron and Steel, Aluminium, and Fertilizer sector.

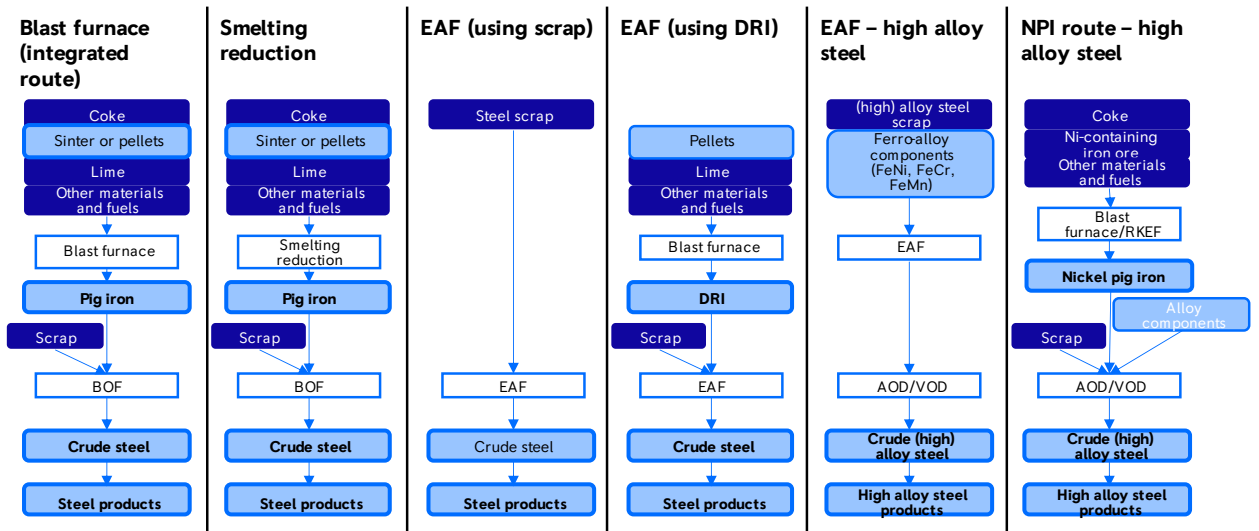


More specifically, the following system boundaries (light blue) apply for the Iron and steel/Aluminium sector.

¹ List of all goods and precursors to be filled out in the data request (sheet a) Initial data request)



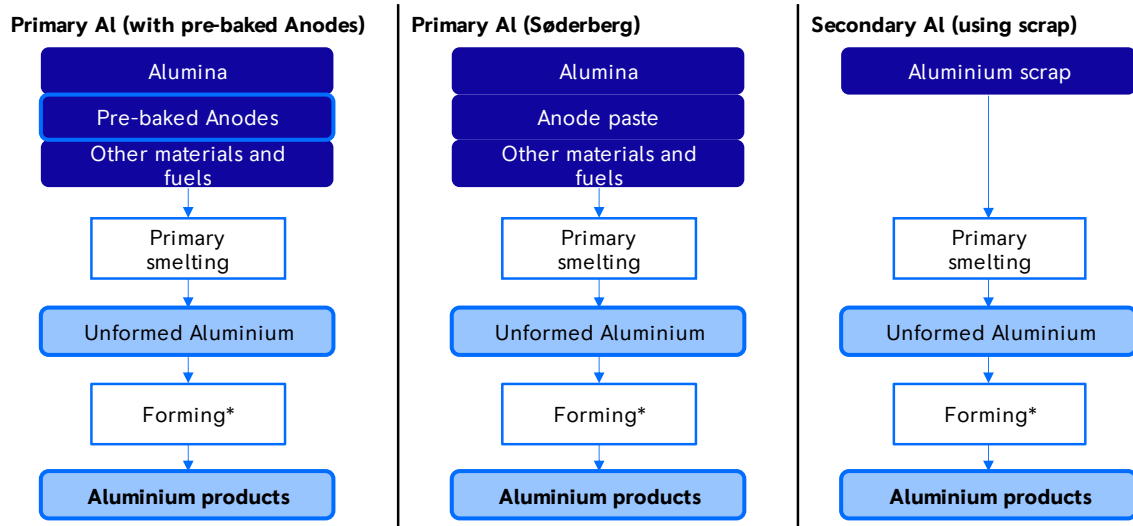
System boundaries and value chain for the production of iron or steel products



Source: [European Commission, 2023](#)



System boundaries and value chain of aluminium products



* Forming includes all types of downstream processing: Alloying, casting, extrusion, rolling, etc.

Source: [European Commission, 2023](#)

More details on relevant production processes that should be included for the purpose of monitoring and reporting can be found [here](#).

2. Identify relevant parameters and carry out monitoring

Relevant reporting metrics for installation operators from the Iron and steel/Aluminum sector are;

CBAM sector	Iron and steel
Production unit of goods	Tonnes (metric), reports separately for each type of sector goods, by installation or production process in the country of origin
Associated activities	Producing, melting or refining iron or steel or ferrous alloys; manufacture of semi-finished and basic steel products
Relevant greenhouse gas	Carbon dioxide (CO ₂)
Direct emissions	Tonnes (metric) of CO ₂ e
Indirect emissions	Quantity of electricity consumed (MWh). Source and emissions factor used to calculate the indirect emissions in tonnes (metric) of CO ₂ or CO ₂ e <i>To be reported separately during transitional period.</i>
Unit for embedded emissions	Tonnes CO ₂ e emissions per tonne of goods, reported separately for each type of goods, reported for each type of goods, by installation in the country of origin

Source: [European Commission, 2023](#)

CBAM sector	Aluminium
Production unit of goods	Tonnes (metric), reports separately for each type of sector goods, by installation or production process in the country of origin
Associated activities	Producing unwrought aluminium for alumina, or secondary raw materials (aluminium scrap), by metallurgical, chemical or electrolytic means; manufacture of semi-processed and finished aluminium products
Relevant greenhouse gas	Carbon dioxide (CO ₂) and perfluorocarbons (CF ₄ and C ₂ F ₆)
Direct emissions	Tonnes (metric) of CO ₂ e
Indirect emissions	Quantity of electricity consumed (MWh). Source and emissions factor used to calculate the indirect emissions in tonnes (metric) of CO ₂ or CO ₂ e <i>To be reported separately during transitional period.</i>
Unit for embedded emissions	Tonnes CO ₂ e emissions per tonne of goods, reported separately for each type of goods, reported for each type of goods, by installation in the country of origin

Source: [European Commission, 2023](#)

It is advised to set up a written monitoring methodology documentation (MMD). The MMD shall compile all emissions sources that require monitoring throughout the year as well as all measurement tools, reading intervals, all data sources for standard values and formulas for specific-embedded emission calculations to be performed. The guiding principle of such MMD shall enable external verifiers and other parties to comprehend the monitoring activities carried out on site-level as well as enabling operating staff to carry out the monitoring consistently and at a standardized quality. Guidance on how to set up an MMD can be found in section 6.4 of the [Guidance Document on CBAM Implementation for Installation Operators outside the EU](#).

3. Emission attribution

The emission reporting requirements in the transitional period require the separation of direct and indirect emissions.

The determination of **direct emissions** contains considerations of direct process emissions, measurable heat imports and exports, waste gas import and export as well as emissions related to electricity production.

$$\begin{aligned} AttrEm_{dir} = & Dir Em + Em_{H,import} - Em_{H,export} + WG_{corr,import} - WG_{corr,export} \\ & - Em_{el,produced} \end{aligned}$$

AttrEm_{dir}: Attributed direct emissions [t CO₂]

DirEm: Direct process emissions [t CO₂]

Em_{H,import}: Emissions associated with imported heat [t CO₂]

Em_{H,exported}: Emissions associated with exported heat [t CO₂]

WG_{corr,imported}: Emissions from imported waste gas [t CO₂]

WG_{corr,exported}: Emissions from exported waste gas [t CO₂]

Em_{el,produced}: Emissions associated with produced electricity [t CO₂]

Indirect emissions contain considerations of emissions associated with the electricity consumed.

$$AttrEm_{indirect} = E_{el,cons} \times EF_{el}$$

AttrEm_{indirect}: Attributed indirect emissions [t CO₂]

E_{el,cons}: Consumed electricity [MWh or TJ]

EF_{el}: Emission factor for electricity [t CO₂/MWh or t CO₂/TJ]

For determination of emissions from electricity received from the **grid** the following rules apply:

1. The **default approach** to determine the emissions is the use of the default emission factor (*EF_{el}*) provided by the European Commission and representative for the electricity grid of the country of origin. (The values will be made available to reporting declarants through the CBAM Transitional Registry).
2. If another *EF_{el}* of the country's electricity grid based on publicly available data is deemed more suitable, it may be used alternatively to 1.

An actual EF_{el} provided by the electricity supplier can be applied in case of **power purchase agreements or on-site electricity production** (provided it is determined according to the approach as outlined in section 6.7.3.2 of the [Guidance Documents on CBAM implementation for Installation Operators outside the EU](#)). Please note that market-based instruments (e.g. Guarantees of Origin or other green certificates for renewable energy) are not allowed for the determination of a specific emission factor.

More detailed guidance on the determination of an installation's direct and indirect emissions can be found [here](#).

4. Emissions of precursors

While the installation operator reports on direct and indirect emissions on site level, the embedded emissions of precursors (that are not produced on-site and, hence, are not already within the determination of emissions on site level) must be added to the reporting of CBAM goods which use those in their production. This shall be done in the same manner as for the CBAM products produced on site of one's installation.

In case no information on emissions of precursors is available, one can make use of the [default values](#) provided by the European Commission for the transitional period.

5. Determine the SEE of CBAM goods

Under 3. and 4. the attributed emissions were determined. In the last step, the specific embedded emissions are determined based on the production volumes.

For **simple goods** specific embedded emissions are calculated based on installation emissions divided by the quantity of simple CBAM goods produced:

$$SEE_g = \frac{AttrEm_g}{Prod_g}$$

SEE_g : Specific embedded emissions of a CBAM good (direct or indirect) [tCO₂e / t]

$AttrEm_g$: Attributed emissions of a CBAM good at the installation (direct or indirect) [tCO₂e]

$Prod_g$: Amount of goods produced at the installation [t] (e.g. AL_g)



Calculating the emissions of simple final aluminum goods

Direct emissions	Consumption (t)	EF (t CQe/t)	Emissions (t CQe)
From electrodes	69 000	3.664	252 816
From natural gas	12 219	2.693*	32 902
From PFCs			25 282
Total Process 1 (primary aluminum)			311 000
From natural gas	1962	2.693	5 283
Total Process 2 (final aluminum products)			5 283
Total			316 283

Indirect emissions	Consumption (MWh)	EF (t CQe/MWh)	Emissions (t CQe)
Process 1	3 000 000	0.410	1 230 000
Process 2	105 000	0.410	43 050
Total			1 273 050

Production levels		Mass ratio of precursor (t/t)	Direct SEE	Indirect SEE
Process 1 (Unwrought aluminum ingot and slabs)				
Ingots	80 000			
Slabs	120 000			
Unwrought aluminum	Total 200 000		1.555	6.150
Process 2 (Aluminum products)				
Precursor	Slabs 120 000	1.062	1.651	6.531
Process 2	113 000		0.047	0.381
Aluminum products			1.698	6.912

$$SEE_g = \frac{AttrEm_g}{AL_g}$$

*NCV = 48 GJ/t, EF = 56.1 t CO2/ TJ



Calculating the emissions of simple final aluminum goods – include process 2

Direct emissions	Consumption (t)	EF (t CQe/t)	Emissions (t CQe)
From electrodes	69 000	3.664	252 816
From natural gas	12 219	2.693*	32 902
From PFCs			25 282
Total Process 1 (primary aluminum)			311 000
From natural gas	1962	2.693	5 283
Total Process 2 (final aluminum products)			5 283
Total			316 283

Indirect emissions	Consumption (MWh)	EF (t CQe/MWh)	Emissions (t CQe)
Process 1	3 000 000	0.410	1 230 000
Process 2	105 000	0.410	43 050
Total			1 273 050

Production levels		Mass ratio of precursor (t/t)	Direct SEE	Indirect SEE
Process 1 (Unwrought aluminum ingot and slabs)				
Ingots	80 000			
Slabs	120 000			
Unwrought aluminum	Total 200 000		1.555	6.150
Process 2 (Aluminum products)				
Precursor	Slabs 120 000	1.062	1.651	6.531
Process 2	113 000		0.047	0.381
Aluminum products			1.698	6.912

$$SEE_g = \frac{AttrEm_g}{AL_g}$$

*NCV = 48 GJ/t, EF = 56.1 t CO2/ TJ

For **complex goods**, the sum of all specific emissions of precursors are added into the calculation:

$$SEE_g = \frac{AttrEm_g}{Prod_g} + \sum_{i=1}^n m_i \times SEE_i$$

SEE_g : Specific embedded emissions of a CBAM good (direct or indirect) [tCO₂e / t]

$AttrEm_g$: Attributed emissions of a CBAM good at the installation (direct or indirect) [tCO₂e]

$Prod_g$: Amount of goods produced at the installation [t] (e.g. AL_g)

m_i : Number of precursors per goods produced

SEE_i : Specific embedded emissions (direct or indirect) of the precursors [tCO₂e]



Calculating the emissions of complex final aluminum goods including precursors

Direct emissions	Consumption (t)	EF (t CQe/t)	Emissions (t CQe)
From electrodes	69 000	3.664	252 816
From natural gas	12 219	2.693*	32 902
From PFCs			25 282
Total Process 1 (primary aluminum)			311 000
From natural gas	1962	2.693	5 283
Total Process 2 (final aluminum products)			5 283
Total			316 283

Indirect emissions	Consumption (MWh)	EF (t CQe/MWh)	Emissions (t CQe)
Process 1	3 000 000	0.410	1 230 000
Process 2	105 000	0.410	43 050
Total			1 273 050

Production levels	Mass ratio of precursor (t/t)	Direct SEE	Indirect SEE
Process 1 (Unwrought aluminum ingot and slabs)			
Ingots	80 000		
Slabs	120 000		
Unwrought aluminum	Total 200 000	1.555	6.150
Process 2 (Aluminum products)			
Precursor	Slabs 120 000	1.062	1.651
Process 2	113 000	0.047	0.381
Aluminum products		1.698	6.912

$$SEE_g = \frac{AttrEm_g}{AL_g} + \sum_{i=1}^n m_i \times SEE_i$$

*NCV = 48 GJ/t, EF = 56.1 tCO₂/TJ

Carbon pricing in jurisdictions other than the EU

To avoid double taxation, any carbon price already due in a jurisdiction outside of the EU shall be reported. A carbon price that was due on a product in the country of its production, allows for a reduction of the CBAM obligation in the definitive period from 2026. However, **the reporting of carbon prices due outside of the EU is already mandatory in the transitional period.**

The effective carbon price is to be considered for reporting. This means that any applicable rebates, such as any free allocation, must be considered for reporting. The carbon price due in the installation operator’s jurisdiction must be allocated in a similar manner to the CBAM goods, and the attributed emissions as laid out above. Accordingly, also the carbon price due of all CBAM precursors purchased must be reported. To gather the relevant information, installation operators shall reach out to their suppliers/product producers. Please note, that if the producer of the precursor does not provide you with the required information, the carbon price due must be assumed to be zero. The effective carbon price shall be expressed in Euros per tonne of CBAM good².

The complete overview on reporting rules and data requirements concerning the carbon price due are found in [Article 7 of the Implementing Regulation](#).

² Exceptions apply for CBAM goods that are not monitored and reported in a different unit than tonnes.