CLIMATE NEUTRALITY PLAN

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Language version:	English
Reference filename:	CNP Template_COM_en_210224.xls

Information about this file:

Installation name:	ΕΡΓΟΣΤΑΣΙΟ ΚΑΜΑΡΙΟΥ
Unique Installation Identifier:	GR000000000000059
Reference date of the CNP:	30/4/2024

If your competent authority requires you to hand in a signed paper copy of the climate-neutrality plan, please use the space below for signature:

30/4/2024
Date

Αλέξανδρος Ψηλός
Name and Signature of legally responsible person

GUIDELINES AND CONDITIONS

General Information on this Template

1 Directive 2003/87/EC, as amended most recently by Directive 2023/959/EU (hereinafter "the EU ETS Directive") requires Member States to allocate allowances for free to installations based on Community-wide and fully-harmonised rules (Article 10a(1)). The Directive can be downloaded from: https://eur-lex.europa.eu/eli/dir/2003/87/2023-06-05

2 These Free Allocation Rules (hereinafter "the FAR") are contained in the Commission Delegated Regulation (EU) 2019/331. The FAR can be downloaded from http://data.europa.eu/eli/reg_del/2019/331/oj

3 Article 10a(5) of the EU ETS Directive, together with Article 22b of the FAR, stipulates that the level of free allocation shall be reduced by 20 % if operators of installations whose greenhouse gas emission levels are higher than the 80th percentile of emission levels for the relevant product benchmarks (in 2016/2017) have not established a climate-neutrality plan (CNP) by May 2024 in accordance with Article 10b(4).

4 Furthermore, Article 10b(4) grants an additional 30% of free allocation to district heating in certain Member States, provided they also establish a CNP and that an investment volume equivalent to the value of that additional free allocation is invested to significantly reduce emissions before 2030

5 Pursuant to Article 10b(4), of the EU ETS Directive the Commission adopted the Implementing Regulation (EU) 2023/2441 (hereinafter "the CNP Regulation"), which specifies the minimum content and format of the CNP. The Regulation can be downloaded from: https://eur-lex.europa.eu/eli/reg_impl/2023/2441/oj

6 This is a template for the CNP and has been developed on behalf of the Commission by its consultants (Umweltbundesamt GmbH Austria). The views expressed in this file represent the views of the authors and not necessarily those of the European Commission.

7 **This is the final version of the CNP template, version of 21 February 2024.**

How to use this file

7 Automatic calculation (to be found in the menu Formula/Calculation options) must be turned on.
It is recommended that you go through the file from start to end. There are a few functions which will guide you through the form which depend on previous input, such as cells changing colour if an input is not needed (see colour codes below).
In several fields you can choose from predefined inputs. For selecting from such a "drop-down list" either click with the mouse on the small arrow appearing at the right border of the cell, or press "Alt-CursorDown" when you have selected the cell. Some fields allow you to input your own text even if such a drop-down list exists. This is the case when drop-down lists contain empty list entries.

8 Colour codes and fonts:

Black bold text:	This is text describing the input required.
Smaller italic text:	This text gives further explanations.
	Yellow fields indicate mandatory inputs. However, if the topic is not relevant for the installation, no input is required.
	Light yellow fields indicate that an input is optional.
	Green fields show automatically calculated results. Red text indicates error messages (missing data etc).
	Shaded fields indicate that an input in another field makes the input here irrelevant.
	Grey shaded areas should be filled by Member States before publishing customized version of the template.
	Light grey areas are dedicated for navigation and hyperlinks.

9 Navigation panels on top of each sheet provide hyperlinks for quick jumps to individual input sections.

10 This template has been locked against data entry except for yellow fields. However, for transparency reasons, no password has been set. This allows for complete viewing of all formulae. When using this file for data entry, it is recommended to keep the protection in force. The sheets should only be unprotected for checking the validity of formulae. It is recommended to do this in a separate file.

11 In order to protect formulae against unintended modifications, which usually lead to wrong and misleading results,
it is of utmost importance NOT TO USE the CUT & PASTE.
If you want to move data, first COPY and PASTE them, and thereafter delete the unwanted data in the old (wrong) place.

12 Data fields have not been optimized for numerical and other formats. However, sheet protection has been limited so as to allow you to use your own formats. In particular, you may decide about the number of decimal places displayed. The number of places is in principle independent from the precision of calculation. In principle the option "Precision as displayed" of MS Excel should be deactivated. For more details, consult MS Excel's "Help" function on this topic.

13 **DISCLAIMER: All formulae have been developed carefully and thoroughly. However, mistakes cannot be fully excluded.
As described above, full transparency for checking the validity of calculations is ensured. Neither the authors of this file nor the European Commission can be held liable for eventual damages resulting from wrong or misleading results of the provided calculations.
It is the full responsibility of the user of this file (i.e. the operator of an ETS installation) to ensure that correct data is reported to the competent authority.**

Member State specific information:

This Report must be submitted to your Competent Authority to the following address:

Detail address to be provided by the Member State

Information sources:

EU Websites:

EU-Legislation:	http://eur-lex.europa.eu/en/index.htm
EU ETS general:	https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en

Other Websites:

<to be provided by Member State>

Helpdesk:

<to be provided by Member State, if relevant>

Further guidance as provided by the Member State:

A. CLIMATE NEUTRALITY PLAN VERSIONS

I List of climate-neutrality plan versions

This sheet is used for tracking the actual version of the climate-neutrality plan. Each version should have a unique version number, and a reference date.

Depending on the requirements of the Member State, it is possible that the document is exchanged between competent authority and operator with various updates, or that the operator alone keeps track of the versions. In any case, the operator should keep in his files a copy of each version of the climate-neutrality plan.

The status of the climate-neutrality plan at the reference date should be described in the "status" column. Possible status types include, "working draft", "submitted to the competent authority (CA)", "returned with remarks", etc.

At several locations this document makes reference to external files. Please note that any information contained in such still forms an integral part of the CNP.

Version no.	Reference date	Status at reference date	Chapters where modifications have been made. Brief explanation of changes
1	30/4/2024	submitted to competent authority	

II Effectiveness evaluation periods

Periods at which the effectiveness of the climate neutrality plan is evaluated regarding greenhouse gas emissions reductions:						5 Years
Year of next effectiveness evaluations:	2029	2034	2039	2044	2049	

B. INSTALLATION DATA

I Consent to use the data contained in this file

The information contained in this file will be used by the competent authority for determining the fulfilment of the climate neutrality plan conditionality of free allocation pursuant to Article 10b of the EU ETS Directive and Article 22b of the FAR Regulation. Furthermore this information might be notified to the European Commission in part or as a whole, if requested so, for the purpose of scrutinising the national implementation measures pursuant to Article 11(1) of the EU ETS Directive.

Please confirm consent to use information contained in this climate neutrality plan.

The operator of this installation confirms that this plan may be used by the competent authority and the European Commission.

The system boundaries and types of greenhouse gases covered by historical emissions, emissions levels and specific targets are consistent with the greenhouse gas emissions permit of the installation and the requirements laid down in the Monitoring and Reporting Regulation (EU) 2018/2066 (MRR) and in the FAR. This also applies when applying for additional allocation for district heating pursuant to Article 22b of the FAR.
The scope of emissions do not include any carbon removals or emission reductions outside the system boundaries of the installation and acquired via carbon offset credits.

Please confirm that the emissions entered comply with the conditions described above.

The operator of this installation confirms the conformity of the system boundaries of emissions.

II Identification of the Installation(s)

1 About the operator

(a)	**Operator Name**	AE ΤΣΙΜΕΝΤΩΝ ΤΙΤΑΝ
(b)	**Member State**	Greece
(c)	**Emissions trading permit number**	member state/CA prefix: GR_08-07_f121623/2386 - 17/12/2020
(d)	**Competent Authority**	Υ.Π.Ε.Ν / Δ/ΝΣΗ ΚΛΙΜ. ΑΛΛΑΓΗΣ & ΠΟΙΟΤΗΤΑΣ ΑΤΜΟΣΦ / ΤΜΗΜΑ Μ.Α.Μ.Ε
(e)	**Is the climate neutrality plan submitted by a district heating company at company level?**	

Point (a) is only relevant for district heating companies in Bulgaria, Czechia, Latvia or Poland
If the climate neutrality plan is submitted at company level, historical emissions and targets are to be summed up over all installations covered by the climate neutrality plan and the totals are to be entered in sheets D_HistoricalEmissions and G_FallBackBM and H_OtherProcesses.

2 About your installation(s)

(a) Name of the installation and ID

i. Installation name:	ΕΡΓΟΣΤΑΣΙΟ ΚΑΜΑΡΙΟΥ
ii. Registry ID of the installation (as in NIMs):	59
iii. Unique ID:	GR0000000000000059

This is usually a natural number, i.e. a code different from the Permit identifier used in the Registry (EUTL).
For example, if the Registry ID is BE00000000123456, please enter here 123456. Together with the Member State selected under (c), this Registry ID (unique ID) will be displayed automatically in (f) below.

Include any Member State specific guidance on naming of installations.

(b) Address / location of the site of the installation

i. Address Line 1:	8 ΧΛΜ. ΛΕΩΦΟΡΟΥ ΜΑΓΟΥΛΑΣ - ΔΕΡΒΕΝΟΧΩΡΙΩΝ
ii. Address Line 2:	ΤΘ 18, 19200 ΕΛΕΥΣΙΝΑ
iii. City:	ΚΑΜΑΡΙ ΒΟΙΩΤΙΑΣ
iv. State/Province/Region:	
v. Postcode/ZIP:	
vi. Country:	Greece

The following table is only relevant for district heating companies in Bulgaria, Czechia, Latvia or Slovakia, that submit the climate neutrality plan at company level.
Please list all additional installations linked to and operated by the operator and covered by the climate neutrality plan

No.	Installation Name	Registry ID (as in NIMs)	Unique ID	Address	City	State/Pro-vince/Region	Postcode/ZIP	Country
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

III Contact details

Who can we contact about your climate neutrality plan?
It will help us to have someone who we can contact directly with any questions about your climate neutrality plan. The persons you name should have the authority to act on behalf of the operator.

(a)	**Authorised representative:**	**Title:**	Κ.
		First Name:	ΑΛΕΞΑΝΔΡΟΣ
		Surname:	ΨΗΛΟΣ
		Job title:	ΔΙΕΥΘΥΝΤΗΣ ΕΡΓΟΣΤΑΣΙΟΥ ΚΑΜΑΡΙΟΥ
		Organisation name (if different from the operator):	
		Telephone number:	0030-2105537712
		Email address:	a.psilos@titan.gr
(b)	**Primary contact:**	**Title:**	Κα
		First Name:	ΒΑΣΙΛΙΚΗ
		Surname:	ΜΑΤΘΑΙΟΥ
		Job title:	ΜΗΧΑΝΙΚΟΣ ΠΡΟΣΤΑΣΙΑΣ ΠΕΡΙΒΑΛΛΟΝΤΟΣ
		Organisation name (if different from the operator):	
		Telephone number:	0030-2105537727
		Email address:	v.matthaiou@titan.gr

C. INSTALLATION DESCRIPTION

I List of sub-installations

1 Product benchmark sub-installations

Please select here all relevant product benchmark sub-installations, consistent with the ones provided in the baseline data report.

Please also list here any sub-installations that are planned to start operating after the submission of the CNP.

Where a sub-installation is planned to start operating or to cease operations after the submission of the CNP, please select the relevant period from the drop-down list, respectively. In case no entries are made, it is assumed that the sub-installation is already existing and will remain operational at least until 2050.

No.	Product type	Starting	Cessation?	CL exposed?	CBAM?	Unit
1	Grey cement clinker	<= 2023	None	TRUE	TRUE	tonnes
2						
3						
4						
5						
6						
7						
8						
9						
10						

2 Sub-installations with fall-back approaches

Please select here all relevant sub-installations with fall-back approaches, consistent with the ones provided in the baseline data report.

Please also list here any sub-installations that are planned to start operating after the submission of the CNP.

Where a sub-installation is planned to start operating or to cease operations after the submission of the CNP, please select the relevant period from the drop-down list, respectively. In case no entries are made, it is assumed that the sub-installation is already existing and will remain operational at least until 2050.

According to the Annex of the CNP Regulation, you may provide specific emissions in later sheets of this template relative to other units than the default units of the relevant activity, where more appropriate. For instance, you may want to provide specific emissions for a heat benchmark sub-installation per tonne of (aggregated) production, instead of per TJ.

Please enter the relevant unit of production in column N. If no entries are made there, the default units of TJ will be used for the heat and fuel benchmark sub-installations. For process emissions the default units will be tonnes of (aggregated) production.

No.	Sub-installation type	Relevant?	Starting	Cessation?	CL exposed?	CBAM?	Unit
11	Heat benchmark sub-installation, CL, non-CBAM	FALSE			TRUE	FALSE	
12	Heat benchmark sub-installation, non-CL, non-CBAM	FALSE			FALSE	FALSE	
13	Heat benchmark sub-installation, CBAM	FALSE			TRUE	TRUE	
14	District heating sub-installation	FALSE			FALSE	FALSE	
15	Fuel benchmark sub-installation, CL, non-CBAM	FALSE			TRUE	FALSE	
16	Fuel benchmark sub-installation, non-CL, non-CBAM	FALSE			FALSE	FALSE	
17	Fuel benchmark sub-installation, CBAM	FALSE			TRUE	TRUE	
18	Process emissions sub-installation, CL, non-CBAM	FALSE			TRUE	FALSE	
19	Process emissions sub-installation, non-CL, non-CBAM	FALSE			FALSE	FALSE	
20	Process emissions sub-installation, CBAM	FALSE			TRUE	TRUE	

3 Other processes not covered by sub-installations

The CNP Regulation requires the system boundaries to cover all relevant emissions of the installation determined in accordance with the Monitoring & Reporting Regulation (EU) 2018/2066. This means that emissions may be relevant that are not eligible for free allocation, e.g. electricity production or non-safety flaring.

Therefore, please provide here a short description of each process not covered by sub-installations and enter the relevant units of production. For example, for electricity production, you may want to enter production expressed as "MWh" of net electricity produced.

Where a process is planned to start operating or to cease operations after the submission of the CNP, please select the relevant period from the drop-down list, respectively. In case no entries are made, it is assumed that the sub-installation is already existing and will remain operational at least until 2050.

The processes identified here will be treated similarly to all other sub-installations above in subsequent sheets concerning measures, investments, milestones, targets and impacts.

No.	Short name or ID	Description of the process	Starting	Cessation?	CL exposed?	CBAM?	Units
21					N.A.	N.A.	
22					N.A.	N.A.	
23					N.A.	N.A.	

D. HISTORICAL EMISSIONS

I Specific historical emissions

1 Product benchmark sub-installations

Please enter here the specific historical emissions (consistent with the attributed emission pursuant to the FAR rules and the MRR) for each product benchmark sub-installation for each year of the baseline period.

The average of the specific historical emissions during 2019-2023 will be used as the baseline for setting (intermediate) targets in sheets F to H.

The specific emissions shall be calculated by dividing the attributed emissions by the activity level in each year, both based on the corresponding rules of the FAR in consistency with the data entered in the baseline data report used for calculation of free allocation for 2026-2030.

Years in which the sub-installation did not operate should be left empty, including for cases of new sub-installation planned to start operating only after the submission of the CNP. In the case of the later, please provide an estimate of the specific emissions at the future start of operations.

No.	Product type	Unit	2019	2020	2021	2022	2023	Estimate
1	Grey cement clinker	t CO2e / t						
2								
3								
4								
5								
6								
7								
8								
9								
10								

2 Sub-installations with fall-back approaches

Please enter here the specific historical emissions (consistent with the attributed emission pursuant to the FAR rules and the MRR) for each fall-back benchmark sub-installation for each year of the baseline period, taking into consideration the guidance provided for product benchmark sub-installations above.

However, where other units of production levels than the units for the relevant activity level were chosen in section C.I.2 (note, that the default unit for process emissions is tonnes of production), the emissions shall be expressed relative to those relevant (aggregated) production levels. The attributed emissions should however still be calculated in accordance with the corresponding FAR rules, consistent with the data provided in the baseline data report.

No.	Sub-installation type	Unit	2019	2020	2021	2022	2023	Estimate
11	Heat benchmark sub-installation, CL, non-CBAM	t CO2e / TJ						
12	Heat benchmark sub-installation, non-CL, non-CBAM	t CO2e / TJ						
13	Heat benchmark sub-installation, CBAM	t CO2e / TJ						
14	District heating sub-installation	t CO2e / TJ						
15	Fuel benchmark sub-installation, CL, non-CBAM	t CO2e / TJ						
16	Fuel benchmark sub-installation, non-CL, non-CBAM	t CO2e / TJ						
17	Fuel benchmark sub-installation, CBAM	t CO2e / TJ						
18	Process emissions sub-installation, CL, non-CBAM	t CO2e / t						
19	Process emissions sub-installation, non-CL, non-CBAM	t CO2e / t						
20	Process emissions sub-installation, CBAM	t CO2e / t						

3 Specific emissions not covered by sub-installations

Please enter here the specific historical emissions (consistent with the attributed emission pursuant to the FAR rules and the MRR) for each process not covered by a benchmarked sub-installation for each year of the baseline period, taking into consideration the guidance provided for product benchmark sub-installations above.

Please ensure that the emissions are specific to the relevant units of production chosen in section C.I.3. The attributed emissions should be calculated in accordance with the corresponding FAR rules, consistent with the data provided in the baseline data report.

No.	Emission source description	Unit	2019	2020	2021	2022	2023	Estimate
21								
22								
23								

II Absolute historical emissions (optional)

1 Product benchmark sub-installations absolute emissions

Please enter here the historical absolute emissions, expressed as t CO2e, for each sub-installation for each year of the baseline period. Entries here are optional.

No.	Product type	Unit	2019	2020	2021	2022	2023	Estimate
1	Grey cement clinker	t CO2e						
2								
3								
4								
5								
6								
7								
8								
9								
10								

2 Sub-installations with fall-back approaches absolute emissions

Please enter here the historical absolute emissions, expressed as t CO2e, for each sub-installation for each year of the baseline period. Entries here are optional.

No.	Sub-installation type	Unit	2019	2020	2021	2022	2023	Estimate
11	Heat benchmark sub-installation, CL, non-CBAM	t CO2e						
12	Heat benchmark sub-installation, non-CL, non-CBAM	t CO2e						
13	Heat benchmark sub-installation, CBAM	t CO2e						
14	District heating sub-installation	t CO2e						
15	Fuel benchmark sub-installation, CL, non-CBAM	t CO2e						
16	Fuel benchmark sub-installation, non-CL, non-CBAM	t CO2e						
17	Fuel benchmark sub-installation, CBAM	t CO2e						
18	Process emissions sub-installation, CL, non-CBAM	t CO2e						
19	Process emissions sub-installation, non-CL, non-CBAM	t CO2e						
20	Process emissions sub-installation, CBAM	t CO2e						

3 Specific emissions not covered by sub-installations

Please enter here the historical absolute emissions, expressed as t CO2e, for each sub-installation for each year of the baseline period. Entries here are optional.

No.	Emission source description	Unit	2019	2020	2021	2022	2023	Estimate
21								
22								
23								

E. MEASURES, INVESTMENTS AND MILESTONES

I Measures

1 Measure description and reasons

Please list here all relevant planned measures (e.g. electrification of fossil-powered furnaces) until 2050, providing for each measure the following information:
- *the period during which the measure is planned to be taken. If a measure has impacts in more than one period, please select the period in which it will be first implemented,*
- *a short name or internal ID for each measure in order to facilitate making reference to each measure later in this template;*
- *a detailed description of each measure. It is possible to refer to an attached document file, if the description exceeds the space provided here (then please list the exact file name here and in sheet K_Comments)*

Measures should be entered as aggregated as possible. E.g. process optimisations over different periods can be entered as one measure with the period of the first optimisation.

No.	Period	Short name or internal ID	Detailed description
Ex 1	2031-2035	Hydrogen steel	Replacement of BF BOF with DRI using green hydrogen (further details see separate file 'CNP file.docx')
Ex 2	2026-2030	Measures 4B 5 to 7	Process optimisations over different periods starting from 2027
ME1	<= 2025	Alternative Fuels	Use of alternative fuels in current installation
ME2	<= 2025	Hydrogen produced through electrolysis	Installation of hydrogen production units, through electrolysis, for increase of energy efficiency and facilitation of Alternative Fuels consumption
ME3	<= 2025	Pre-Calciner	Pre-Calciner installation
ME4	2031-2035	Carbon Capture Technology	Plant will be retrofitted with state of the art Carbon Capture Technology
ME5			
ME6			
ME7			
ME8			
ME9			
ME10			

2 Enabling conditions and qualitative Impacts

Please provide for each measure identified under 1) above the following information.
- *a detailed description of enabling conditions and infrastructure needs (e.g. CO2 pipeline infrastructure, green hydrogen infrastructure, H2 costs below "x"€/MWh);*
- *a comprehensive reasoning for measure decision why the measures were chosen rather than other potential measures for decarbonisation;*
- *a qualitative assessment of the impacts of each measure (e.g. where this installation is the worldwide first to implement a certain decarbonisation technology, it demonstrates the feasibility of wider uptake by other installations). The quantitative assessment will be done later in the template in sheets F to H.*

It is possible to refer to an attached document file, if the description exceeds the space provided here (then please list the exact file name here and in sheet K_Comments)

No.	Detailed description of enabling conditions	Reasons for measure decision	Qualitative impacts
ME1	Subject to availability of alternative fuels streams for using in the existing installation	Substitution of fossil fuels with biomass for reducing CO2 emissions	Replacing fossil fuels in the kiln with alternative fuels and CO2 reduction
ME2	Availability of Hydrogen production units.	Reducing of SHC and improve performance of RK and consequently reduction of CO2 emissions	Improvement of kiln energy efficiency
ME3	Pre - Calciner technology.Subject to availability of alternative fuels streams for using in the Pre-calciner.	Increase of alternative fuels substitution up to 60% and reducing of SHC	Replacing fossil fuels in the kiln with alternative fuels and CO2 reduction
ME4	Infrastructure for Carbon Capture technology.Subject to regulations and permitting.	Carbon Neutrality	Carbon neutrality
ME5			
ME6			
ME7			
ME8			
ME9			
ME10			

3 Categorisation of measures

Please attribute each measure to one or more of the following types of GHG savings or decarbonisation technologies, as applicable:
- *(i) switch to low- or zero-emission technologies*
- *(ii) energy efficiency and energy savings*
- *(iii) switch from fossil fuels to:*
  - *(1) hydrogen*
  - *(2) electricity*
  - *(3) biomass fulfilling the sustainability and greenhouse gas savings criteria referred to in Article 38(5) of Implementing Regulation (EU) 2018/2066*
  - *(4) alternative fuels from waste streams*
  - *(5) other sources of renewable energy*
- *(iv) resource efficiency, including reduced consumption of materials and recycling*
- *(v) carbon capture utilisation and storage*
- *(vi) other*

No.	(i) switch to low- or zero-emission technologies	(ii) energy efficiency and energy savings	(iii) (1) hydrogen	(iii) (2) electricity	(iii) (3) sust. Biomass	(iii) (4) to alternative fuels	(iii) (5) other sources of renewable energy	(iv) resource efficiency, etc.	(v) carbon capture utilisation and storage	(vi) other
ME1	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE
ME2	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
ME3	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE
ME4	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE
ME5										
ME6										
ME7										
ME8										
ME9										
ME10										

II Investments

1 Investment

Please list here all investments providing the following information.
- *the year in which the investment is planned to be taken (where appropriate, investments may be combined as 5-year averages will be calculated under point 2. below);*
- *a short name or internal ID for each investment in order to facilitate making reference to each investment later in this template;*
- *the corresponding investment costs in mio. € (best estimate at the time of preparing the CNP). This value should be expressed as the one-off investment costs, annualising will be done automatically under point 2) below;*
- *a detailed description of each investment. It is possible to refer to an attached document file, if the description exceeds the space provided here (then please list the exact file name here and in sheet K_Comments)*

No.	Year	Short name or internal ID	Costs in M€	Detailed description of investments
Ex 1	2032	New electric furnaces	150	Purchase and installation of electric furnaces (further details see separate file 'CNP file.docx')
IN1	<= 2025	Alternative Fuels	[redacted]	Use of alternative fuels in current installation
IN2	<= 2025	Hydrogen produced through electrolysis	[redacted]	Installation of hydrogen production units, through electrolysis, for increase of energy efficiency and facilitation of Alternative Fuels consumption
IN3	<= 2025	Pre-Calciner	[redacted]	Pre-Calciner installation
IN4	2035	Carbon Capture Technology	[redacted]	Plant will be retrofitted with state of the art Carbon Capture Technology - Own funding spent
IN5				
IN6				
IN7				
IN8				
IN9				
IN10				

2 Investments annualised Euros

The annualised Euros per year for each five-year period are automatically calculated based on the inputs under point 1) above

Period	<= 2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Annualised M€	N.A.	[redacted]				

III Milestones

Please list here all milestones providing the following information:
- *the year in which the milestone is planned to be reached;*
- *a detailed description of each milestone;*
- *the relevant measure for each milestone. Please select them from the drop-down list or, where more than one measure is relevant, enter corresponding information in the form of "ME1, ME3", etc.*

It is possible to refer to an attached document file, if the description exceeds the space provided here (then please list the exact file name here and in sheet K_Comments)
Milestones shall be commensurate to the targets entered in the following sheets.

No.	Period	Detailed description of the milestones	Measure(s)
Ex 1	2031-2035	Final investment decision taken (further details see separate file 'CNP file.docx')	ME1: New electric furnaces
Ex 2	2031-2035	Dismantling of old furnaces (further details see separate file 'CNP file.docx')	ME1: ME3
MI1	<= 2025	Increased use of Alternative Fuels, already implemented	ME1: Alternative Fuels
MI2	<= 2025	Increase of energy efficiency and facilitation of Alternative Fuels consumption, already implemented	ME2: Hydrogen produced through
MI3	<= 2025	Increased use of Alternative Fuels	ME3: Pre-Calciner
MI4	2031-2035	Carbon Neutrality	ME4: Carbon Capture Technology
MI5			
MI6			
MI7			
MI8			
MI9			
MI10			
MI11			
MI12			
MI13			
MI14			
MI15			
MI16			
MI17			

E. MEASURES, INVESTMENTS AND MILESTONES

I Measures

1 Measure description and reasons

Please list here all relevant planned measures (e.g. electrification of fossil-powered furnaces) until 2050, providing for each measure the following information:
- *the period during which the measure is planned to be taken. If a measure has impacts in more than one period, please select the period in which it will be first implemented;*
- *a short name or internal ID for each measure in order to facilitate making reference to each measure later in this template;*
- *a detailed description of each measure. It is possible to refer to an attached document file, if the description exceeds the space provided here (then please list the exact file name here and in sheet K_Comments).*

Measures should be entered as aggregated as possible. E.g. process optimisations over different periods can be entered as one measure with the period of the first optimisation.

No.	Period	Short name or internal ID	Detailed description
Ex 1	2031-2035	Hydrogen steel	Replacement of BF/BOF with DRI using green hydrogen (further details see separate file 'CNP file.docx')
Ex 2	2025-2030	Measures AB 5 to 7	Process optimisations over different periods starting from 2027
ME1	<= 2025	Alternative Fuels	Use of alternative fuels in current installation
ME2	<= 2025	Hydrogen produced through electrolysis	Installation of hydrogen production units, through electrolysis, for increase of energy efficiency and facilitation of Alternative Fuels consumption
ME3	<= 2025	Pre-Calciner	Pre-Calciner installation
ME4	2031-2035	Carbon Capture Technology	Plant will be retrofitted with state of the art Carbon Capture Technology
ME5			
ME6			
ME7			
ME8			
ME9			
ME10			

2 Enabling conditions and qualitative impacts

Please provide for each measure identified under 1) above the following information:
- *a detailed description of enabling conditions and infrastructure needs (e.g. CO2 pipeline infrastructure, green hydrogen infrastructure, H2 costs below "x€/MWh");*
- *a comprehensive reasoning for measure decision why the measures were chosen rather than other potential measures for decarbonisation;*
- *a qualitative assessment of the impacts of each measure (e.g. where this installation is the worldwide first to implement a certain decarbonisation technology, it demonstrates the feasibility of wider uptake by other installations). The quantitative assessment will be done later in the template in sheets F to H.*

It is possible to refer to an attached document file, if the description exceeds the space provided here (then please list the exact file name here and in sheet K_Comments).

No.	Detailed description of enabling conditions	Reasons for measure decision	Qualitative impacts
ME1	Subject to availability of alternative fuels streams for using in the existing installation	Substitution of fossil fuels with biomass for reducing CO2 emissions	Replacing fossil fuels in the kiln with alternative fuels and CO2 reduction
ME2	Availability of Hydrogen production units.	Reducing of SHC and improve performance of RK and consequently reduction of CO2 emissions.	Improvement of kiln energy efficiency
ME3	Pre - Calciner technology.Subject to availability of alternative fuels streams for using in the Pre-calciner.	Increase of alternative fuels substitution up to 60% and reducing of SHC	Replacing fossil fuels in the kiln with alternative fuels and CO2 reduction
ME4	Infrastructure for Carbon Capture technology.Subject to regulations and permitting.	Carbon Neutrality	Carbon neutrality
ME5			
ME6			
ME7			
ME8			
ME9			
ME10			

3 Categorisation of measures

Please attribute each measure to one or more of the following types of GHG savings or decarbonisation technologies, as applicable:
- *(i) switch to low- or zero-emission technologies*
- *(ii) energy efficiency and energy savings*
- *(iii) switch from fossil fuels to:*
  - *(1) hydrogen*
  - *(2) electricity*
  - *(3) biomass fulfilling the sustainability and greenhouse gas savings criteria referred to in Article 38(5) of Implementing Regulation (EU) 2018/2066*
  - *(4) alternative fuels from waste streams*
  - *(5) other sources of renewable energy*
- *(iv) resource efficiency, including reduced consumption of materials and recycling*
- *(v) carbon capture utilisation and storage*
- *(vi) other*

No.	(i) switch to low- or zero-emission technologies	(ii) energy efficiency and energy savings	(iii) (1) hydrogen	(iii) (2) electricity	(iii) (3) sust. Biomass	(iii) (4) to alternative fuels	(iii) (5) other sources of renewable energy	(iv) resource efficiency, etc.	(v) carbon capture utilisation and storage	(vi) other
ME1	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE
ME2	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
ME3	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE
ME4	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE
ME5										
ME6										
ME7										
ME8										
ME9										
ME10										

II Investments

1 Investment

Please list here all investments providing the following information:
- *the year in which the investment is planned to be taken (where appropriate, investments may be combined as 5-year averages will be calculated under point 2 below);*
- *a short name or internal ID for each investment in order to facilitate making reference to each investment later in this template;*
- *the corresponding investment costs in mio. € (best estimate at the time of preparing the CNP). This value should be expressed as the one-off investment costs, annualising will be done automatically under point 2) below;*
- *a detailed description of each investment. It is possible to refer to an attached document file, if the description exceeds the space provided here (then please list the exact file name here and in sheet K_Comments)*

No.	Year	Short name or internal ID	Costs in M€	Detailed description of investments
Ex 1	2032	New electric furnaces	150	Purchase and installation of electric furnaces (further details see separate file 'CNP file.docx')
IN1	<= 2025	Alternative Fuels	[redacted]	Use of alternative fuels in current installation
IN2	<= 2025	Hydrogen produced through electrolysis	[redacted]	Installation of hydrogen production units, through electrolysis, for increase of energy efficiency and facilitation of Alternative Fuels consumption
IN3	<= 2025	Pre-Calciner	[redacted]	Pre-Calciner installation
IN4	2035	Carbon Capture Technology	[redacted]	Plant will be retrofitted with state of the art Carbon Capture Technology - Own funding spent
IN5				
IN6				
IN7				
IN8				
IN9				
IN10				

2 Investments annualised Euros

The annualised Euros per year for each five-year period are automatically calculated based on the inputs under point 1) above

Period	<= 2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Annualised M€	N.A.	[redacted]				

III Milestones

Please list here all milestones providing the following information:
- *the year in which the milestone is planned to be reached;*
- *a detailed description of each milestone;*
- *the relevant measure for each milestone. Please select them from the drop-down list or, where more than one measure is relevant, enter corresponding information in the form of "ME1, ME3", etc.*

It is possible to refer to an attached document file, if the description exceeds the space provided here (then please list the exact file name here and in sheet K_Comments)
Milestones shall be commensurate to the targets entered in the following sheets.

No.	Period	Detailed description of the milestones	Measure(s)
Ex 1	2031-2035	Final investment decision taken (further details see separate file 'CNP file.docx');	ME1: New electric furnaces
Ex 2	2031-2035	Dismantling of old furnaces (further details see separate file 'CNP file.docx')	ME1: ME2
MI1	<= 2025	Increased use of Alternative Fuels, already implemented.	ME1: Alternative Fuels
MI2	<= 2025	Increase of energy efficiency and facilitation of Alternative Fuels consumption, already implemented.	ME2: Hydrogen produced through
MI3	<= 2025	Increased use of Alternative Fuels	ME3: Pre-Calciner
MI4	2031-2035	Carbon Neutrality	ME4: Carbon Capture Technology
MI5			
MI6			
MI7			
MI8			
MI9			
MI10			
MI11			
MI12			
MI13			
MI14			
MI15			
MI16			
MI17			

MI18			
MI19			
MI20			
MI21			
MI22			
MI23			
MI24			
MI25			
MI26			
MI27			
MI28			
MI29			
MI30			

IV Measures and investments prior to submission of the CNP (optional)

Optionally, you may list and describe all measures and investments already implemented prior to the submission of the climate-neutrality plan

1	ME 1 already implemented
2	ME 2 already implemented
3	ME 3 already implemented
4	
5	
6	
7	
8	
9	
10	

F. Targets & Impacts ProdBM

I Quantitative impact assessment product BM sub-installations

1 Sub-installation with product benchmark: Grey cement clinker

The name of the product benchmark sub-installation is displayed automatically based in the inputs in sheet "C_InstallationDescription"

(a) Specific emission targets

Please enter here the intermediate targets, expressed as specific emissions consistent with the historical emissions (baseline), for the end of each five year period. Additionally absolute emission targets can be entered optionally.

The baseline is automatically calculated based on the input of historical emissions in sheet D_HistoricalEmissions.

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets	0,836	t CO2e / t						0,000
ii. Absolute emission targets	1,369,224	t CO2e						

(b) Relative emission targets

The reduction of specific emissions relative to the baseline (average historic emissions or estimate in sheet D) and the relevant benchmark value are automatically calculated, based on the inputs for the specific emission targets under point (a) above.

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
i. Relative to baseline value	0,8357						0%
ii. Relative to relevant BM value	0,6930						0%

(c) Split of specific emission reduction by measure and investment

Please select from the drop-down list each measure that has an impact on the targets specified above for this sub-installation.

For each measure please select from the drop-down list the relevant investments. Where no investment is related to the measure, e.g. only process optimisation, please select "no investments". Where more than one investment relates to a certain measure, please enter corresponding information in the form of "IN1, IN4", etc.

Subsequently, please provide for each period the percentage to which each measure and investments contributes to the specific emission reduction displayed under i. The sum of all measures should equal 100% (consistency check under iv.), in which case the total emission reduction displayed under iii. equals the specific reduction under i.

Following the entries made in sections C.I and E.I.1, years prior to the period in which the measures are implemented or prior and after the sub-installation is operational are greyed out.

The consistency check under v. will prompt an error message in the following cases:

- *no targets are set before a cessation or targets are set after a cessation;*
- *impacts are entered for years where there are either no targets set or the targets are equal to the baseline, i.e. reduction under i. equals zero;*
- *the impacts do not add up to 100%.*

		Reference value t CO2e / t	2025 t CO2e / t	2030 t CO2e / t	2035 t CO2e / t	2040 t CO2e / t	2045 t CO2e / t	2050 t CO2e / t
i. Specific reduction (target versus baseline)		0,8357						
ii. **Measure**	**Investment**		**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Ex.1 ME1: Process optimisations over different periods	IN1, IN3			100%	100%	30%	20%	
Ex.2 ME2: New furnace	IN2: New furnace					70%	80%	100%
1 ME1: Alternative Fuels	IN1: Alternative Fuels							
2 ME2: Hydrogen produced through electrolysis	IN2: Hydrogen produced throug							
3 ME3: Pre-Calciner	IN3: Pre-Calciner							
4 ME4: Carbon Capture Technology	IN4: Carbon Capture Technolo							
5								
6								
7								
8								
9								
10								
iii. Reduction compared to baseline (100% = values under i.)								
iv. Consistency check (= iii. / i.)			100%	100%	100%	100%	100%	100%
v. Consistency check (error message)								

(d) Any further comments

2 Sub-installation with product benchmark:

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

		Reference value	2025	2030	2035	2040	2045	2050
i. Specific reduction (target versus baseline)								
ii. **Measure**	**Investment**		**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Ex.1 ME1: Process optimisations over different periods	IN1, IN3			100%	100%	30%	20%	
Ex.2 ME2: New furnace	IN2: New furnace					70%	80%	100%

iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

3 Sub-installation with product benchmark:

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value	2025	2030	2035	2040	2045	2050
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

4 Sub-installation with product benchmark:

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value	2025	2030	2035	2040	2045	2050
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050

iii.	Reduction compared to baseline (100% = values under i.)							
iv.	Consistency check (= iii. / i.)							
v.	Consistency check (error message)							

(d) Any further comments

5 Sub-installation with product benchmark

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value	2025	2030	2035	2040	2045	2050
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

6 Sub-installation with product benchmark

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value	2025	2030	2035	2040	2045	2050

i.	Specific reduction (target versus baseline)							
ii.	Measure	Investment	2025	2030	2035	2040	2045	2050
1.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
iii.	Reduction compared to baseline (100% = values under i.)							
iv.	Consistency check (= iii. / i.)							
v.	Consistency check (error message)							

(d) **Any further comments**

7 Sub-installation with product benchmark:

(a) **Specific emission targets**

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) **Relative emission targets**

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) **Split of specific emission reduction by measure and investment**

	Reference value	2025	2030	2035	2040	2045	2050
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
1. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) **Any further comments**

8 Sub-installation with product benchmark:

(a) **Specific emission targets**

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) **Relative emission targets**

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) **Split of specific emission reduction by measure and investment**

	Reference value	2025	2030	2035	2040	2045	2050
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

9 Sub-installation with product benchmark

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value	2025	2030	2035	2040	2045	2050
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

10 Sub-installation with product benchmark

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

		Reference value	2025	2030	2035	2040	2045	2050
I	Specific reduction (target versus baseline)							
II	Measure	Investment	2025	2030	2035	2040	2045	2050
III.	Reduction compared to baseline (100% = values under I.)							
IV.	Consistency check (= III. / I.)							
V.	Consistency check (error message)							

(d) **Any further comments**

G. Targets & Impacts Fall-backs

I Quantitative impact assessment fall-backs

1 Fall-back sub-installation: Heat benchmark sub-installation, CL, non-CBAM — not relevant

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets		t CO2e / TJ						
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value t CO2e / TJ	2025 t CO2e / TJ	2030 t CO2e / TJ	2035 t CO2e / TJ	2040 t CO2e / TJ	2045 t CO2e / TJ	2050 t CO2e / TJ
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

2 Fall-back sub-installation: Heat benchmark sub-installation, non-CL, non-CBAM — not relevant

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets		t CO2e / TJ						
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value t CO2e / TJ	2025 t CO2e / TJ	2030 t CO2e / TJ	2035 t CO2e / TJ	2040 t CO2e / TJ	2045 t CO2e / TJ	2050 t CO2e / TJ
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050

iii.	Reduction compared to baseline (100% = values under i.)							
iv.	Consistency check (= iii. / i.)							
v.	Consistency check (error message)							

(d) Any further comments

---

3 Fall-back sub-installation: **Heat benchmark sub-installation, CBAM** | **not relevant**

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets		t CO2e / TJ						
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value t CO2e / TJ	2025 t CO2e / TJ	2030 t CO2e / TJ	2035 t CO2e / TJ	2040 t CO2e / TJ	2045 t CO2e / TJ	2050 t CO2e / TJ
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]				[illegible]	[illegible]	[illegible]
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

---

4 Fall-back sub-installation: **District heating sub-installation** | **not relevant**

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets		t CO2e / TJ						
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value t CO2e / TJ	2025 t CO2e / TJ	2030 t CO2e / TJ	2035 t CO2e / TJ	2040 t CO2e / TJ	2045 t CO2e / TJ	2050 t CO2e / TJ
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

---

5 Fall-back sub-installation: Fuel benchmark sub-installation, CL, non-CBAM — not relevant

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets		t CO2e / TJ						
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value t CO2e / TJ	2025 t CO2e / TJ	2030 t CO2e / TJ	2035 t CO2e / TJ	2040 t CO2e / TJ	2045 t CO2e / TJ	2050 t CO2e / TJ
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

---

6 Fall-back sub-installation: Fuel benchmark sub-installation, non-CL, non-CBAM — not relevant

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets		t CO2e / TJ						
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value t CO2e / TJ	2025 t CO2e / TJ	2030 t CO2e / TJ	2035 t CO2e / TJ	2040 t CO2e / TJ	2045 t CO2e / TJ	2050 t CO2e / TJ
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

---

7 Fall-back sub-installation: Fuel benchmark sub-installation, CBAM — not relevant

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets		t CO2e / TJ						
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value t CO2e / TJ	2025 t CO2e / TJ	2030 t CO2e / TJ	2035 t CO2e / TJ	2040 t CO2e / TJ	2045 t CO2e / TJ	2050 t CO2e / TJ
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

8 Fall-back sub-installation

Process emissions sub-installation, CL, non-CBAM	not relevant

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets		t CO2e / t						
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value t CO2e / t	2025 t CO2e / t	2030 t CO2e / t	2035 t CO2e / t	2040 t CO2e / t	2045 t CO2e / t	2050 t CO2e / t
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
BM1: Process optimisation [illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BM2: [illegible]	[illegible]						
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

9 Fall-back sub-installation

Process emissions sub-installation, non-CL, non-CBAM	not relevant

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets		t CO2e / t						
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value t CO2e / t	2025 t CO2e / t	2030 t CO2e / t	2035 t CO2e / t	2040 t CO2e / t	2045 t CO2e / t	2050 t CO2e / t
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
BM1: Process optimisation [illegible]	[illegible]		100%	100%	[illegible]	[illegible]	[illegible]
BM2: [illegible]	[illegible]				[illegible]	[illegible]	[illegible]

iii.	Reduction compared to baseline (100% = values under i.)							
iv.	Consistency check (= iii. / i.)							
v.	Consistency check (error message)							

(d) Any further comments

10 Fall-back sub-installation

Process emissions sub-installation, CBAM	not relevant

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets		t CO2e / t						
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value							

(c) Split of specific emission reduction by measure and investment

	Reference value t CO2e / t	2025 t CO2e / t	2030 t CO2e / t	2035 t CO2e / t	2040 t CO2e / t	2045 t CO2e / t	2050 t CO2e / t
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

H. Targets & Impacts other processes

I Quantitative impact assessment other processes

1 Other processes:

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

(c) Split of specific emission reduction by measure and investment

	Reference value	2025	2030	2035	2040	2045	2050
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

2 Other processes:

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

(c) Split of specific emission reduction by measure and investment

	Reference value	2025	2030	2035	2040	2045	2050
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050

iii. Reduction compared to baseline (100% = values under i.)								
iv. Consistency check (= iii. / i.)								
v. Consistency check (error message)								

(d) Any further comments

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3 Other processes*

(a) Specific emission targets

	Baseline	Unit	2025	2030	2035	2040	2045	2050
i. Specific emission targets								
ii. Absolute emission targets		t CO2e						

(b) Relative emission targets

	Reference value	2025	2030	2035	2040	2045	2050
i. Relative to baseline value							
ii. Relative to relevant BM value	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

(c) Split of specific emission reduction by measure and investment

	Reference value	2025	2030	2035	2040	2045	2050
i. Specific reduction (target versus baseline)							

ii. Measure	Investment	2025	2030	2035	2040	2045	2050
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]				N.A.	[illegible]	[illegible]
iii. Reduction compared to baseline (100% = values under i.)							
iv. Consistency check (= iii. / i.)							
v. Consistency check (error message)							

(d) Any further comments

I. SUMMARY

I General information about the CNP

(a) About the operator

Operator Name	AE ΤΣΙΜΕΝΤΩΝ TITAN	
Member State	Greece	
Emissions trading permit number	member state/CA prefix	GR_06-07_/121623/2386 - 17/12/2020
Competent Authority	Υ.Π.Ε.Ν./ Δ/ΝΣΗ ΚΛΙΜ. ΑΛΛΑΓΗΣ & ΠΟΙΟΤΗΤΑΣ ΑΤΜΟΣΦ./ ΤΜΗΜΑ Μ.Α.Μ.Ε	
CNP submitted by DH company at company level		

The operator of this installation confirms that this plan may be used by the competent authority and the European Commission.
The operator of this installation confirms the conformity of the system boundaries of emissions.

(b) About the installation(s)

No.	Installation Name	Registry ID (as in NIMs)	Unique ID	Address	City	State/Province/Region	Postcode/ZIP	Country
1	ΕΡΓΟΣΤΑΣΙΟ ΚΑΜΑΡΙΟΥ	59	GR000000000000059	8 ΧΛΜ.	ΚΑΜΑΡΙ			Greece
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

II Historical emissions

No.	Product type	Unit	2019	2020	2021	2022	2023	Estimate
1	Grey cement clinker	t CO2e / t						0,000
2								
3								
4								
5								
6								
7								
8								
9								
10								
11	Heat benchmark sub-installation, CL, non-CBAM	TJ						
12	Heat benchmark sub-installation, non-CL, non-CBAM	TJ						
13	Heat benchmark sub-installation, CBAM	TJ						
14	District heating sub-installation	TJ						
15	Fuel benchmark sub-installation, CL, non-CBAM	TJ						
16	Fuel benchmark sub-installation, non-CL, non-CBAM	TJ						
17	Fuel benchmark sub-installation, CBAM	TJ						
18	Process emissions sub-installation, CL, non-CBAM	t CO2e						
19	Process emissions sub-installation, non-CL, non-CBAM	t CO2e						
20	Process emissions sub-installation, CBAM	t CO2e						
21								
22								
23								

III Specific targets relative to the relevant benchmark and to the baseline value

(a) Specific targets relative to the relevant benchmark values

No.	Product type	BM value	2025	2030	2035	2040	2045	2050
1	Grey cement clinker	0,6930						0%
2								
3								
4								
5								
6								
7								
8								
9								
10								
11	Heat benchmark sub-installation, CL, non-CBAM							
12	Heat benchmark sub-installation, non-CL, non-CBAM							
13	Heat benchmark sub-installation, CBAM							
14	District heating sub-installation							
15	Fuel benchmark sub-installation, CL, non-CBAM							
16	Fuel benchmark sub-installation, non-CL, non-CBAM							
17	Fuel benchmark sub-installation, CBAM							
18	Process emissions sub-installation, CL, non-CBAM							
19	Process emissions sub-installation, non-CL, non-CBAM							
20	Process emissions sub-installation, CBAM							
21								
22								
23								

(b) Specific targets relative to the average specific emissions during the baseline

No.	Product type	Baseline	2025	2030	2035	2040	2045	2050
1	Grey cement clinker	0,8357						0%
2								
3								
4								
5								
6								
7								
8								
9								
10								
11	Heat benchmark sub-installation, CL, non-CBAM							

12	Heat benchmark sub-installation, non-CL, non-CBAM							
13	Heat benchmark sub-installation, CBAM							
14	District heating sub-installation							
15	Fuel benchmark sub-installation, CL, non-CBAM							
16	Fuel benchmark sub-installation, non-CL, non-CBAM							
17	Fuel benchmark sub-installation, CBAM							
18	Process emissions sub-installation, CL, non-CBAM							
19	Process emissions sub-installation, non-CL, non-CBAM							
20	Process emissions sub-installation, CBAM							
21								
22								
23								

III Gantt charts for measures, investments & milestones

(a)	Measures	<= 2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
1	ME1: Alternative Fuels						
2	ME2: Hydrogen produced through electrolysis						
3	ME3: Pre-Calciner						
4	ME4: Carbon Capture Technology						
5							
6							
7							
8							
9							
10							

(b)	Investments	<= 2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
1	IN1: Alternative Fuels						
2	IN2: Hydrogen produced through electrolysis						
3	IN3: Pre-Calciner						
4	IN4: Carbon Capture Technology						
5							
6							
7							
8							
9							
10							

(c)	Milestones	<= 2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
1	MI1: Increased use of Alternative Fuels, already implemented.						
2	MI2: Increase of energy efficiency and facilitation of Alternative						
3	MI3: Increased use of Alternative Fuels						
4	MI4: Carbon Neutrality						
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

IV Details for measures, investments & milestones

(a) Measures

No.	Period	Short name or internal ID	Detailed description
ME1	<= 2025	Alternative Fuels	Use of alternative fuels in current installation
ME2	<= 2025	Hydrogen produced through	Installation of hydrogen production units, through electrolysis, for increase of energy efficiency and facilitation
ME3	<= 2025	Pre-Calciner	Pre-Calciner installation
ME4	2031-2035	Carbon Capture Technology	Plant will be retrofitted with state of the art Carbon Capture Technology
ME5			
ME6			
ME7			
ME8			
ME9			
ME10			

No.	Detailed description of enabling conditions	Reasons for measure decision	Qualitative impacts
ME1	Subject to availability of alternative fuels streams for using in	Subsitution of fossil fuels with biomass for	Replacing fossil fuels in the kiln with alternative
ME2	Availability of Hydrogen production units.	Reducing of SHC and improve performance of	Improvement of kiln energy efficiency
ME3	Pre - Calciner technology.Subject to availability of alternative	Increase of alternative fuels substitution up to	Replacing fossil fuels in the kiln with alternative
ME4	Infrastructure for Carbon Capture technology.Subject to	Carbon Neutrality	Carbon neutrality
ME5			
ME6			
ME7			
ME8			
ME9			
ME10			

No.	(i) switch to low- or zero-emission technologies	(ii) energy efficiency and energy savings	(iii) (1) hydrogen	(iii) (2) electricity	(iii) (3) sust. Biomass	(iii) (4) to alternative fuels	(iii) (5) other sources of renewable energy	(iv) resource efficiency, etc.	(v) carbon capture utilisation and storage	(vi) other
ME1	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE
ME2	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
ME3	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE
ME4	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE
ME5										
ME6										

ME7										
ME8										
ME9										
ME10										

(b) Investments

No.	Year	Short name or internal ID	Costs in M€	Detailed description of investments
IN1	<= 2025	Alternative Fuels		Use of alternative fuels in current installation
IN2	<= 2025	Hydrogen produced through		Installation of hydrogen production units, through electrolysis, for increase of energy efficiency
IN3	<= 2025	Pre-Calciner		Pre-Calciner installation
IN4	2035	Carbon Capture Technology		Plant will be retrofitted with state of the art Carbon Capture Technology - Own funding spent
IN5				
IN6				
IN7				
IN8				
IN9				
IN10				

Period	<= 2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Annualised M€	N.A.					

(c) Milestones

No.	Period	Detailed description of the milestones	Measure(s)
MI1	<= 2025	Increased use of Alternative Fuels, already implemented.	ME1: Alternative Fuels
MI2	<= 2025	Increase of energy efficiency and facilitation of Alternative Fuels consumption, already implemented.	ME2: Hydrogen produced throu
MI3	<= 2025	Increased use of Alternative Fuels	ME3: Pre-Calciner
MI4	2031-2035	Carbon Neutrality	ME4: Carbon Capture Technolo
MI5			
MI6			
MI7			
MI8			
MI9			
MI10			
MI11			
MI12			
MI13			
MI14			
MI15			
MI16			
MI17			
MI18			
MI19			
MI20			
MI21			
MI22			
MI23			
MI24			
MI25			
MI26			
MI27			
MI28			
MI29			
MI30			

V Sub-installation data

1 Sub-installation with product benchmark: Grey cement clinker

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value	0,8357						0%
ii. Targets relative to relevant BM value	0,6930						0%

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline	0,8357						-0,836

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1	ME1: Alternative Fuels	IN1: Alternative Fuels	35%	23%				
2	ME2: Hydrogen produced throu	IN2: Hydrogen produced throug	1%	1%				
3	ME3: Pre-Calciner	IN3: Pre-Calciner	64%	76%				
4	ME4: Carbon Capture Technolo	IN4: Carbon Capture Technolog			100%	100%	100%	100%
5								
6								
7								
8								
9								
10								
		TOTAL	100%	100%	100%	100%	100%	100%

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1	ME1: Alternative Fuels	IN1: Alternative Fuels	-1%	-1%				
2	ME2: Hydrogen produced throu	IN2: Hydrogen produced throug	0%	0%				
3	ME3: Pre-Calciner	IN3: Pre-Calciner	-2%	-2%				
4	ME4: Carbon Capture Technolo	IN4: Carbon Capture Technolog			-100%	-100%	-100%	-100%
5								
6								
7								
8								
9								
10								
		TOTAL	-2%	-3%	-100%	-100%	-100%	-100%

2 Sub-installation with product benchmark:

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value	2025	2030	2035	2040	2045	2050

iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

3 Sub-installation with product benchmark:

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

4 Sub-installation with product benchmark:

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								

8								
9								
10								
		TOTAL						

5 Sub-installation with product benchmark:

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

6 Sub-installation with product benchmark:

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

7 Sub-installation with product benchmark:

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								

6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

8 Sub-installation with product benchmark:

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

9 Sub-installation with product benchmark:

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

10 Sub-installation with product benchmark:

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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4								
5								
6								
7								
8								
9								
10								
		TOTAL						

11 Fall-back sub-installation:

Heat benchmark sub-installation, CL, non-CBAM	not relevant

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

12 Fall-back sub-installation:

Heat benchmark sub-installation, non-CL, non-CBAM	not relevant

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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7								
8								
9								
10								
		TOTAL						

13 Fall-back sub-installation:

Heat benchmark sub-installation, CBAM	not relevant

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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5								
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7								
8								
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10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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7								
8								
9								
10								
		TOTAL						

14 Fall-back sub-installation:

District heating sub-installation	not relevant

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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5								
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7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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8								
9								
10								
		TOTAL						

15 Fall-back sub-installation:

Fuel benchmark sub-installation, CL, non-CBAM	not relevant

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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5								
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7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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9								
10								
		TOTAL						

16 Fall-back sub-installation:

	Fuel benchmark sub-installation, non-CL, non-CBAM						not relevant
	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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7								
8								
9								
10								
		TOTAL						

17 Fall-back sub-installation:

	Fuel benchmark sub-installation, CBAM						not relevant
	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value t CO2e / TJ	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
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5								
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7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
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10								
		TOTAL						

18 Fall-back sub-installation:

Process emissions sub-installation, CL, non-CBAM	not relevant

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
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8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
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8								
9								
10								
		TOTAL						

19 Fall-back sub-installation:

Process emissions sub-installation, non-CL, non-CBAM	not relevant

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
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8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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7								
8								
9								
10								
		TOTAL						

20 Fall-back sub-installation:

Process emissions sub-installation, CBAM	not relevant

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value							

	Reference value t CO2e / t	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
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10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

21 Other processes:

not relevant

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

	Reference value	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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5								
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7								
8								
9								
10								
		TOTAL						

22 Other processes:

not relevant

	Reference value	2025	2030	2035	2040	2045	2050
i. Targets relative to baseline value							
ii. Targets relative to relevant BM value	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

	Reference value	2025	2030	2035	2040	2045	2050
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	Investments	2025	2030	2035	2040	2045	2050
1								
2								
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4								
5								
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7								
8								
9								
10								
		TOTAL						

23 Other processes:

not relevant

	Reference value	2025	2030	2035	2040	2045	2050

i. Targets relative to baseline value							
ii. Targets relative to relevant BM value	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Reference value	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
iii. Absolute specific reduction versus baseline							

iv. Impact share of each measure (100% = value under point iii.)

	Measure	**Investments**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

v. Impact share of each measure (100% = reference value during baseline, point i.)

	Measure	**Investments**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		TOTAL						

I. ADDITIONAL DATA REQUIREMENTS BY THE MEMBER STATE

I To be defined by the Member State

K. COMMENTS AND FURTHER INFORMATION

I Documents supporting this report

Please list here all relevant documents which are submitted together with this plan

Please provide file name(s) (if in an electronic format) or document reference number(s) (if hard copy) below:

File name/Reference	Document description
ME 1.doc	Alternative Fuels
ME 2.doc	Hydrogen produced through electrolysis
ME 3.doc	Pre-Calciner
ME 4.doc	Carbon Capture Technology

II Free space for all kinds of supplemental information

In space below you can enter all information which was not suitable for input in other sheets and which you consider important for the competent authority