## Part III.8 - Supplementary information sheet for the notification of an evaluation plan June 2023.

Member States should use this form for the notification of evaluation plans pursuant to Article 1(2)(a) of Regulation (EU) No 651/2014<sup>1</sup>, and in the case of a notified aid scheme subject to an evaluation as provided for in the relevant Commission Guidelines.

Please refer to the Commission Staff Working Document "Common Methodology for the Evaluation of State Aid" for guidance on drawing up an evaluation plan.

#### 1. Identification of the aid scheme to be assessed

#### 1) Title of aid scheme:

Aid program establishing the indirect cost compensation mechanism for industrial sectors and sub-sectors considered to be exposed to a significant risk of carbon leakage during the period 2021-2030.

- 2) Does the evaluation plan concern
  - a) a scheme subject to the assessment referred to in Article 1(2)(a) of Regulation (EU) No 651/2014?
  - b) X a scheme notified to the Commission under Article 108(3) TFEU?
- 3) Scheme reference (to be completed by the Commission):

4) Please list any existing ex-ante evaluations or impact assessments for the aid scheme and ex-post evaluations or studies conducted in the past on predecessors of the aid scheme or on similar schemes. For each of those studies, please provide the following information: (a) a brief description of the study's objectives, methodologies used, results and conclusions, and (b) specific challenges that the evaluations and studies might have faced from a methodological point of view, for example data availability that are relevant for the assessment of the current evaluation plan. If appropriate, please identify relevant areas or topics not covered by previous evaluation plans that should be the subject of the current evaluation. Please provide the summaries of such evaluations and studies in annex and, when available, the internet links to the documents concerned:.

The European Commission services have carried out a detailed impact assessment<sup>3</sup> at the level of the Member States as a whole. It includes relevant information for Spain. Moreover, Spain has previous experience of this aid scheme due to the implementation of the Royal Decree (RD)1055/2014, of 12 December. It created a mechanism to offset the costs of indirect greenhouse gas emissions for companies in certain industrial sectors and sub-sectors

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Commission Regulation No 651/2014 of 17 June 2014 declaring certain categories of <sup>aid compatible</sup> with the internal market in application of Articles 107 and 108 of the Treaty (OJ L 187, 26.6.2014, p. 1).

<sup>&</sup>lt;sup>2</sup> SWD(2014) 179 final, 28.5.2014.

<sup>&</sup>lt;sup>3</sup> SWD (2020) 190 final

exposed to a significant risk of "carbon leakage", and approved the regulatory bases for the granting of subsidies for the 2014 and 2015 financial years.

This mechanism was articulated in the Directive 2003/87/EC of 13 October 2003 (to establish a scheme for greenhouse gas emission allowance trading within the Community) and the Directive 2009/29/EC of 23 April 2009 amending Directive 2003/87/EC (to improve and extend the greenhouse gas emission allowance trading scheme of the Community). The European Union allowed each Member State, according to its national budget, compensates these indirect costs. Specifically, electricity costs overrun due to auctioning of  $\mathcal{CO}_2$  for industries in certain sectors or sub-sectors deemed to be exposed to a significant risk of 'carbon leakage' (offshoring) due to costs related to greenhouse gas emissions passed on electricity prices. This mechanism is regulated by the Commission Communication (2012/C 158/04) on Guidelines for certain State aid measures in the context of the greenhouse gas emission allowance trading scheme,

Therefore, the purpose of RD 1055/2014 was to avoid as far as possible that a beneficiary would expose to a significant risk of "carbon leakage", if its third country competitors do not face the same CO<sub>2</sub> costs in electricity prices and if such beneficiary cannot pass on these costs in product prices without losing significant market share.

The beneficiaries should be private sector companies, whether or not included in the emissions trading scheme, validly constituted at the time of submitting the application, and carrying out one or more activities in the sectors or producing the products listed in Annex II of COM (2012/C 158/04). However, the latest lists of sectors and products approved by the European Commission would be included in each annual calls.

#### 2. Objectives of the aid scheme to be assessed4

2.1 Please provide a description of the aid scheme specifying the needs and problems the scheme intends to address and the intended categories of beneficiaries, for example size, sectors, location, indicative number.

The programme is part of the Energy Union governance mechanism, which aims to ensure that Europe has secure, affordable and climate-friendly energy. Regulation (EU) 2018/1999 on the governance of the Energy Union and Climate Action lays the foundations for reliable, inclusive, cost-efficient, transparent and predictable governance of this Energy and Climate Union. This legislation aims to ensure the achievement of the general and specific objectives agreed for 2030 as well as in the long term, in accordance with the commitments made with the Paris Agreement. Five priority areas of work are established:

- Energy security
- o Internal energy market
- Energy efficiency
- Decarbonisation
- o Research, innovation and competitiveness

In order to achieve the aforementioned objectives, the European Union adopted the Directive 2003/87/EC for establishing a scheme for greenhouse gas emission allowance trading within the Community (hereafter referred to as the ETS). The ETS has evolved through three phases

In addition to providing an overview of the objectives and eligibility rules of the scheme, the purpose of this section is to assess how the eligibility and exclusion rules of the scheme can be used to determine the effect of the aid. In some cases, the precise eligibility rules may not be known in advance. In such cases, the best available forecasts should be provided.

(phase 1: 2005-2007; phase 2: 2008-2012; and phase 3: 2013-2020). It is currently in phase 4 covering the period 2021-2030. An update of the parameters for the second part of phase 4 is planned for 2025.

Its transposition into Spanish law was implemented through Law 1/2005, of 9 March, which regulates the greenhouse gas emission allowance trading scheme. Based on the sixth additional provision, the compensation of indirect costs is provided for (RD 1055/2014) at the joint proposal of the Ministries of Industry, Trade and Tourism; of Economic Affairs and Digital Transformation; and for Ecological Transition and the Demographic Challenge, with the creation of a compensation mechanism for significant indirect costs attributable to greenhouse gas emissions.

The RD 655/2017 amended the previous one (RD 1055/2014) as a consequence of the approval of the Directive (EU) 2018/410 (which amended Directive 2003/87/EC to enhance cost-effective emission reductions and facilitate investments in hypercarbon technologies, as well as Decision (EU) 2015/1814, to improve and extend the EU Emissions Trading Scheme for the period 2021-2030). It was transposing to the Spanish legal system through Law 9/2020.

The European Commission's Communication COM (2020) 6400 (Guidelines for certain State aid measures in the context of the greenhouse gas emission allowance-trading scheme beyond 2021) updates the former guidelines for the decade 2021 to 2030. It takes into account the specificities of European small and medium-sized enterprises, in line with the SME strategy for a sustainable and digital Europe, and aligns them with the new climate change targets for 2030:

- At least 32% share of renewable energy.
- o 32.5% improvement in energy efficiency
- o And a 40% reduction in greenhouse gas emissions (compared to 1990).

The EU allows each Member State (according to its national budget and in accordance with the new Guidelines) to compensate indirect costs for industries in certain sectors or subsectors. These sectors should be exposed to a significant risk of carbon leakage (i.e. relocation of their production activity to other, more emission-friendly territories) due to costs related to greenhouse gas emissions charged on electricity prices.

It is intended to continue the compensation mechanism through the Programme under evaluation, which takes the form of a grant for compensation of costs incurred and borne in the scope from 2021 to 2030, through the implementation of calls between 2023 and 2031.

The following annual budget distribution is foreseen:

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Budget (million €)	630	950	1022	1012	1001	990	979	968	958
Reference CO price <sub>2</sub> (€/tCO <sub>2</sub> e)	54,06	83,59	90	90	90	90	90	90	90

The increase in the budget compared to previous years is due to the increase in the reference price of EU greenhouse gas emission allowances (EUA), i.e. the average of the daily price on a European futures market with delivery on 31 December of the year preceding the year of the call. In the 2022 call, this price was equal to  $25.07 €/tCO_2$  e. For the 2023 call, the price will be equal to  $54.06 €/tCO_2$  e, while for the 2024 call this reference has been increased to 83.59  $€/tCO_2$  e. For the following calls it is not yet possible to calculate the reference price, but a price of 90  $€/tCO_2$  e is assumed. All other parameters used to calculate the eligible cost are

assumed constant, and the annual reduction rate of 1.09% is applied (this does not take into account that some product references have higher or lower reduction rates).

The Programme evaluation plan is formulated from an integral perspective and aims to identify and measure the positive and negative effects, both in terms of design, results and impact. The aim is to know and measure the degree of achievement of the Programme's objectives, to generate knowledge about the entire implementation process, in order to improve the definition and management of future actions, and to measure the effects and impact of the Programme on the companies benefiting from the subsidy.

#### Needs and problems to be solved by the programme

The increase in energy costs caused by the payment of emission allowances, which electricity companies charge to electro-intensive companies, could lead to a phenomenon known as the risk of carbon leakage, i.e. the relocation of a set of electro-intensive industries from EU territory and, consequently, from Spanish territory to territories with laxer emission allowance regulations and, therefore, lower energy costs.

#### Beneficiaries:

The characteristics of the applicants are summarised in the table below:

## REQUIREMENTS COMMON TO ALL BENEFICIARY COMPANIES (LARGE AND SMES)

**Private sector legal entities**, whether or not included in the EU Emissions Trading Scheme. Be **validly constituted** at the time of submitting the application.

They must carry out one or more activities, or manufacture products for marketing and business benefit, in the sectors listed in Annex I of the call, considered to be at risk of carbon leakage.

Have **accredited productive activity** aimed at commercialisation and business profit during the **previous fiscal year**.

To have incurred indirect emissions costs of  ${\it CO}_2$  emissions, due to indirect costs incurred in electricity supply costs for production processes.

#### REQUIREMENTS FOR LARGE BENEFICIARY COMPANIES

Insofar as they **are obliged to carry out an energy audit**, in accordance with article 2 of RD 56/2016, with regard to energy audits.

Annex I of Royal Decree 309/2022 establishes the eligible activities considered at risk of carbon leakage, i.e. electro-intensive industrial sectors that could relocate their activity to territories with more lax emissions policies, included in the call for aid.

2.2 Indicate the objectives of the scheme and its intended effects, both at the level of the beneficiaries targeted and in terms of the objective of common interest.

#### Problems to be solved by the programme

Reducing the negative economic and environmental consequences of increased energy costs caused by the payment of emission allowances.

In order to address the problems described above, the programme sets out the different objectives:

#### General objectives of the programme

Avoiding the relocation of own production activity from those sectors most exposed to a significant risk of carbon leakage to third countries that are not subject to the ETS due to the increase in energy costs caused by the emission allowances of  ${\it CO}_2$  emissions allowances passed on to electro-intensive companies.

## 2.3 Indicate possible negative effects on aid beneficiaries and the economy at large that could be directly or indirectly associated with the aid scheme<sup>5</sup>.

They have been identified as the main possible negative effect:

As the Programme is designed at national level and resources are not distributed by Autonomous Community, applications for participation in the Programme may have an uneven territorial representation. This could contribute to stimulating regional imbalances on the supply side.

#### 2.4 Indicate:

#### a) the annual budget programmed under the scheme:

Public investment	Private investment
The annual budget is set out in the table below. It will consist of aid distributed to beneficiary companies according to their eligible costs, with a maximum aid intensity limited to 75%.	The remaining amount of the emissions costs (at least 25%) will have to be borne by the companies.

The programme is endowed with the following annual budget distribution:

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Budget (million €)	630	950	1022	1012	1001	990	979	968	958

The maximum amount of aid that may be granted to all beneficiaries each year shall not exceed the budget ceiling stipulated for that year and shall be apportioned among all beneficiaries.

A maximum aid intensity limited to 75% of the indirect emission costs incurred by the beneficiary will be fixed.

The aid intensity may be increased up to the ceiling of the value added to ensure adequate protection against the risk of carbon leakage, which shall be 1.5%.

Examples of negative effects are regional and sectoral biases, and the crowding out of private investment induced by the aid regime.

#### b) the expected duration<sup>6</sup>

The Royal Decree 309/2022, of 3 May, constitutes the regulatory framework for the grants. This document establishes the scope of application from 2021 to 2030, with the implementation of calls between 2022 and 2031.

#### c) aid instruments:

The programme is oriented towards the achievement of the general objective, based on an action in the form of a subsidy, and the establishment of certain obligations for the beneficiary companies. The activities proposed in the programme are applied for all beneficiary companies, regardless of their characteristics. Likewise, it applies not only for large companies (at least 250 employees) but also for companies with a turnover exceeding 50 million euros and, at the same time, a balance sheet exceeding 43 million euros.

In accordance with European regulations, companies must carry out an energy audit report to propose specific improvement actions such as the following:

Avoiding the relocation of production activity in those sectors most exposed to a significant risk of carbon leakage to third countries that are not subject to the ETS.

#### Actions common to all beneficiary companies<sup>7</sup>

- 1.1 Implementation of initiatives aimed at reducing its energy consumption.
- 1.2 Realisation of initiatives aimed at reducing its carbon footprint
- 1.3 Adaptation of production to GHG emission reduction standards

#### Actions for companies with energy audit report8

- 2.1 Implementation of the relevant investment recommendations of the audit report, to the extent that the amortisation period of such investments does not exceed three years and their investment costs are proportionate.
- 2.2 Investment of a significant part, of at least 50 per cent of the amount of such support, in projects leading to substantial reductions of greenhouse gas emissions from the installation.
- 2.3 Realisation of investments in installations for self-consumption from renewable sources or through other similar investments or actions.

#### d) Eligible costs

Eligible costs are determined by the production of certain products of the beneficiary companies belonging to the sectors and subsectors specified for the year of the call.

<sup>&</sup>lt;sup>6</sup>Aid schemes as defined in Article 1(2)(a) of Regulation (EU) No 651/2014 are excluded from the scope of the Regulation six months after its entry into force. After examination of the evaluation plan, the Commission may decide to extend the application of the Regulation to such schemes. Member States are invited to indicate precisely the intended duration of the scheme.

<sup>&</sup>lt;sup>7</sup> Compliance with the obligations established in article 5 of Royal Decree-Law 20/2018, of 7 December.

<sup>&</sup>lt;sup>8</sup> Obligation to fulfil alternatively one of the obligations within a period not exceeding three years from the granting of the aid.

The maximum aid intensity criteria are established using two different formulas depending on whether the electricity consumption efficiency benchmarks apply to the products manufactured by the beneficiary or not.

Where the electricity consumption efficiency benchmarks are applied to products manufactured by the beneficiary, the maximum aid that can be paid per installation as a result of costs incurred in the year of the call will be equal to

$$A_t^{max} = A_i \times C_t \times P_{t-1} \times E \times AO_t$$

Where:

 $A_i$  aid intensity expressed as a fraction.

is the market-based CO2 emission factor applicable to year t and expressed in Tco2/MWh. Which shall have the value of 0.53 Tco2/MWh.

*P*<sub>t-1</sub> is the forward price of EU allowances in year t-1, expressed in units €/Tco2. Forward price of EU allowances: in euro, the average of the daily one-year forward prices of EU allowances, referred to as DEUE (at the time closed offer prices) for delivery in December of the year in which the costs are incurred, observed on any EU carbon exchange between 1 January and 31 December of the year preceding (year t-1) the year in which the costs are incurred (year t).

is the applicable electricity consumption efficiency reference value for a given product expressed in MWh/tprod.

For products that have an efficient power consumption reference value, as indicated in table 1, the following rule applies:

E = Efficient Reference Value 2021 \* (1 - annual reduction rate)

Where:

In the year 2021, i=0

From 2022 to 2030, i=1...9, respectively.

Products with electricity and fuel interchangeability, according to the values indicated in Table 2, shall apply the following model:

 $E = PM \times FElt / 0.376$ 

Where:

PM: is the reference emission parameter per tonne manufactured of product according to the values in Table 2, expressed in Tco2/product.

IEF: is the fraction of indirect emissions over the reporting period, expressed as a percentage, calculated as the ratio of indirect emissions to the sum of the total of total direct emissions and indirect emissions.

IEF = Indirect emissions/direct emissions + indirect emissions

Y 0.376: is the European average emission intensity and expressed in Tco2/mwH.

 $AO_t$ 

is the actual production in year t.

• Where the reference values for efficient electricity consumption do not apply to products manufactured by the beneficiary, the maximum aid that may be paid per installation as a result of costs incurred in the year of the call shall be equal to

$$A_t^{max} = A_i \times C_t \times P_{t-1} \times EF \times AEC_t$$

Where:

 $A_i$  is the reference value for alternative electricity consumption. It is the percentage of actual electricity consumption, as determined by Communication 2021/C 528/01, together with the reference values for efficient electricity consumption. It corresponds to the average reduction effort required by the application of the electricity consumption efficiency benchmarks. It applies only to those products in the eligible sectors where there is no energy efficiency benchmark. This alternative electricity consumption efficiency benchmark will be reduced from 2022 onwards, by 1.09% per year.

 $AEC_t$  is the actual electricity consumption in year t expressed in MWh.

Eligible costs are determined based on the products manufactured by the beneficiary companies, based on the efficient reference values of the products they generate, where appropriate.

e) Summarise the eligibility criteria and the methods for selecting the beneficiaries of the aid. In particular, describe the following:

1-the methods used to select beneficiaries (e.g. scores),

#### **Characteristics of applicants**

The characteristics of the applicants are summarised in the table below:

## REQUIREMENTS COMMON TO ALL BENEFICIARY COMPANIES (LARGE AND SMES)

**Private sector legal entities**, whether or not included in the EU Emissions Trading Scheme.

Be validly constituted at the time of submitting the application.

They must carry out **one or more activities, or manufacture products for marketing and business benefit, in the sectors** listed in Annex I of the call, considered to be at **risk of carbon leakage**.

Have **accredited productive activity** aimed at commercialisation and business profit during the **previous fiscal year.** 

Having incurred indirect emission costs of  $CO_2$  in the immediately preceding year, due to indirect costs incurred in electricity supply costs for production processes.

#### REQUIREMENTS FOR LARGE BENEFICIARY COMPANIES

Insofar as they are obliged to carry out an energy audit, in accordance with Article 2 of Royal Decree 56/2016, regarding energy audits.

Annex I of Royal Decree 309/2022 of 3 May, which establishes the indirect cost compensation mechanism for industrial sectors and sub-sectors considered to be exposed to a significant

risk of carbon leakage during the period 2021-2030, sets out the eligible activities considered to be at risk of carbon leakage, i.e. electro-intensive industries that could relocate their activity to territories with more lax emissions policies, as set out in the Call Order.

#### 2- Indicative budget available for each group of beneficiaries.

The maximum amount of aid which may be granted to all beneficiaries as a whole shall not exceed the annual budget ceiling fixed for each financial year, which shall be apportioned among all beneficiaries.

A maximum aid intensity limited to 75% of the indirect emission costs incurred by the beneficiary will be fixed.

The aid intensity may be increased up to the value added ceiling to ensure adequate protection against the risk of carbon leakage, which shall be 1.5%.

#### 3-the likelihood of budget exhaustion for certain groups of beneficiaries:

In view of the nature of the present Aid Scheme, no budgetary exhaustion is foreseen for certain groups of beneficiaries. This consideration is based on the regulation 2020/6400 which allows each government to establish the method for granting aid, as well as on Royal Decree 309/2022 of 3 May which allows the Government to increase the initial budget on the basis of cyclical factors such as a high number of beneficiaries or increasing CO2 prices. This adjustment mechanism is of particular interest in aid schemes such as this one since, as stated in Article 6.2 of the Order of Bases, "The maximum overall amount allocated to the subsidies in the corresponding call for applications shall be apportioned among all the beneficiaries of the subsidies".

## 4-scoring standards, if used in the scheme and (f) criteria that the licensing authority will take into account when assessing applications.

As mentioned above, the article 6.2 of Royal Decree 309/2022 sets out the award scheme and the evaluation criteria. In this case it is not based on an eligibility threshold, i.e. all companies that meet the objective criteria for participation in the call will be selected as beneficiaries. However, not all companies will receive the same aid intensity, which is defined on the basis of the determination of the eligible costs.

Eligible costs are determined on the basis of the production of products of the beneficiary companies belonging to the sectors and sub-sectors specified above for the year of the call.

#### 5-) the aid intensity thresholds

The maximum aid intensity criteria laid down are applied with two different formulas depending on whether the electricity consumption efficiency benchmarks apply to the products manufactured by the beneficiary or not.

• If the electricity consumption efficiency benchmarks apply to products manufactured by the beneficiary, the maximum aid that may be paid per installation as a result of costs incurred in the year of the call shall be equal to

$$A_t^{max} = A_i \times C_t \times P_{t-1} \times E \times AO_t$$

Where:

 $A_i$  aid intensity expressed as a fraction.

 $C_t$  is the market-based CO2 emission factor applicable to year t and expressed in Tco2/MWh. Which shall have the value of 0.53 Tco2/MWh.

P<sub>t-1</sub> is the forward price of EU allowances in year t-1, expressed in units
€/Tco2. Forward price of EU allowances: in euro, the average of the daily one-year forward prices of EU allowances, referred to as DEUE (at the time closed offer prices) for delivery in December of the year in which the costs are incurred, observed on any EU carbon exchange between 1 January and 31 December of the year preceding (year t-1) the year in which the costs are incurred (year t).

E is the applicable electricity consumption efficiency reference value for a given product expressed in MWh/tprod.

For products that have an efficient power consumption reference value, as indicated in table 1, the following rule applies:
 E = Efficient Reference Value 2021 \* (1 - annual reduction rate)

Where:

In the year 2021, i=0

From 2022 to 2030, i=1...9, respectively.

Products with electricity and fuel interchangeability, according to the values indicated in Table 2, shall apply the following model:
 E = PM x FElt / 0,376

Where:

PM: is the reference emission parameter per tonne manufactured of product according to the values in Table 2, expressed in Tco2/product.

IEF: is the fraction of indirect emissions over the reporting period, expressed as a percentage, calculated as the ratio of indirect emissions to the sum of the total of total direct emissions and indirect emissions.

IEF = Indirect Emissions/Direct Emissions + Indirect Emissions

Y 0.376: is the European average emission intensity and expressed in Tco2/mwH.

 $AO_t$ 

is the actual production in year t.

• If the reference values for efficient electricity consumption do not apply to products manufactured by the beneficiary, the maximum aid that may be paid per installation as a result of costs incurred in the year of the call shall be equal to

$$A_t^{max} = A_i \times C_t \times P_{t-1} \times EF \times AEC_t$$

Where:

EF is the reference value for alternative electricity consumption. It is the percentage of actual electricity consumption, as determined by Communication 2021/C 528/01, together with the reference values for efficient electricity consumption. It corresponds to the average reduction effort required by the application of the electricity consumption efficiency benchmarks. It applies only to those products in the eligible sectors where there is no energy efficiency benchmark. This alternative electricity consumption efficiency benchmark will be reduced, from 2022 onwards, by 1.09% per year.

 $\mathcal{L}AEC_t$  is the actual electricity consumption in year t expressed in MWh.

Eligible costs are determined on the **basis of the products manufactured** by the beneficiary companies, based on the efficient reference values of the products they generate, where appropriate.

Implementation schedule: Are potential beneficiaries enrolled in the programme all at the same time or in phases?

According to article 10 of Royal Decree 309/2022, each call will be annual, between 2022 and 2031. In each call, the applicants of the programme are all enrolled in the same period.

This would therefore be a **programme whose implementation will be immediate** and not phased.

## 6- List specific constraints or risks that could affect the implementation of the scheme, its expected effects and the achievement of its objectives.

By carrying out a prospective exercise to analyse possible restrictions or specific risks, we have identified two moments in the implementation and a possible cyclical factor:

The call for proposals would be the first one, as it is the moment when the companies that are going to be subsidised are known and therefore it is the moment from which the information necessary to generate the comparison that will allow us to make the evaluation is established, based on this.

Another scenario contemplated in relation to participation is found in the distribution of beneficiaries in the NACE, as a consequence of the very configuration set out in Annex I of Royal Decree 309/2022, of 3 May, which establishes the indirect cost compensation mechanism for industrial sectors and subsectors considered to be exposed to a significant risk of carbon leakage during the period 2021-2030. This fact, although not expected, may lead to unequal behaviour in the different production sub-sectors.

Finally, we envisage a conjunctural change in the international context in which we find ourselves of growth and volatility of energy prices.

#### 3. Evaluation questions

3.1 Please indicate the specific questions that the evaluation should address by providing quantitative evidence of the impact of aid. Please distinguish between (a) questions related to the direct impact of the aid on the beneficiaries, (b) questions related to the indirect impacts and (c) questions related to the proportionality and appropriateness of the aid. Please explain how the evaluation questions relate to the objectives of the scheme:

This Evaluation Plan is focused on the direct impact of aid on the beneficiaries because the direct impact can most robustly be measured. Furthermore, the evaluation of the direct effects of the aid is crutial to provide valuable insight of distortions to be expected.

The analysis about the proportionality and adequacy of this aid scheme has been carried out in detail by the Commission in SWD(2020) 190 final: Impact assessment related to the Guidelines on certain State aid measures in the context of the system for greenhouse as emission allowance trading post 2021). As a result of this analysis, the Communication from the European Commission, COM (2020) 6400 (on Guidelines on certain State aid measures in the context of the greenhouse gas emission allowance trading scheme) limits the maximum annual aid ceiling. Moreover, this aid ceiling is progressively reduced each year by 9%. Likewise, these new guidelines include mechanisms that were not in place before.

Regarding potential windfall gains, the aid scheme regulation provide for corrective measures to ensure that they do not occur. A significant part of the aid proceeds to large companies must be used for investments in the following three areas: (1) improving energy efficiency, (2) increasing the % of renewable energy or (3) reducing emissions. Therefore, the final aid that actually ends up in the company's accounting is very small compared to the compensated costs.

Therefore, the following questions guide the Evaluation Plan. These questions may be revised in the future as the calls evolve.

To what extent has the relocation of production from beneficiary companies to third countries (not subject to the EU ETS) been reduced?

- Has the **production** of eligible products increased? Has it increased in all sectors or only in some? Has it increased in both large or SMEs?
- How has the turnover of companies changed since their participation in the call? Has it increased in all sectors or only in some? Has it increased in both large or SMEs?
- How has the consumption of electricity from conventional sources by companies changed since their participation in the call? Has it changed in all sectors equally? Has the change been greater in some sectors?
- How has the consumption of electricity from self-consumption by companies changed since their participation in the call? Has it increased in all sectors or only in some? Has it increased in both large or SMEs?

How has the Gross Value Added of companies changed in relation to the benchmark sector? Has it increased in all sectors or only in some? Has it increased in both large or SMEs?

The question for indirect impacts would be: **Have aid beneficiaries been affected in size?** Specifically:

How has the number of employees of the companies varied in relation to the reference sector? Has it increased in all beneficiary sectors or only in some? Has it increased in both large or SMEs?

The following question (Have the beneficiaries of the aid been affected differently in their location or of their subsidiaries?) has been discarded as in this programme the location of the company does not play any role. It is recalled that the aid is granted on the basis of the electricity costs incurred by the companies. The electricity costs borne by the companies are the same throughout Spain regardless of where they are located. They vary according to the company (e.g Endesa, Iberdrola, TotalEnergies, etc.) with which the electricity supply is contracted. Each electricity trading company offers different promotions and discounts.

#### 4. Indicators

4.1. Please use the following table to describe which indicators will be built to measure outcomes of the scheme, as well as the relevant control variables, including the sources of data, and how each result indicator corresponds to the evaluation questions. In particular, please mention (a) the relevant evaluation question, (b) the indicator, (c) the source of data, (d) the frequency of collection of data (for example, annual, monthly, etc.), (e) the level at which the data is collected (for example, firm level, establishment level, regional level, etc.), (f) the population covered in the data source (for example, aid beneficiaries, non-beneficiaries, all firms, etc.):

The proposed indicators aim to address the direct impact on beneficiaries, namely the effect that participation in the call has had on their situation.

Evaluation question: Has the production of eligible products increased?							
Indicator	Unit of Measurem ent	Source	Frequency	Level	Population		
I <sub>1</sub> -PRODUCTION  Numerator: Actual production in the year preceding the year in which the aid is to be granted, broken down by eligible products* at Prodcom code level.  Denominator: Total eligible and ineligible products produced	Tonnes of product produced per year	Verificatio n report which is signed by an Emissions Trading Scheme (ETS) accredited verifier.	in year t (e.g data year 2022), determined ex post in year t+1 (call 2023).	Company facility	All applicants (both beneficiaries and non-beneficiaries). In order to be eligible to apply, it is essential to have submitted the verification report.		

#### Evaluation question: How has the turnover of companies changed since their participation in the call? **Unit of** Frequency Indicator Source Level **Population** Measurement I<sub>2</sub> -Income from **Net Turnover Numerator:** Net Turnover for the Audit year preceding the report year in which the verified **ANNUAL** aid is called at the by an level of the facility auditor of the applicants in year t registered **Applicants** submitting the (data submitting in the audit report. Company 2022), the audit Official Euros facility **Denominator:** Net determined report Register turnover for the ex post in of year preceding the year t+1 Statutory year in which the Auditors (call 2023). total aid of the (ROAC in applicants Spanish). submitting the audit report is called up.

## Evaluation question: How has the consumption of electricity from conventional sources by companies changed since their participation in the call?

Indicator	Unit of Measuremen t	Source	Frequency	Level	Population
Interpretation Interp	MWh	Verificatio n report which is signed by an Emissions Trading Scheme (ETS) accredited verifier.	actual electricity consumption of the installation (including electricity consumption necessary for the production of eligible outsourced products) in year t, determined ex post in year t+1.	Compan y facility	All applicants (both beneficiaries and non- beneficiaries) . In order to be eligible to apply, it is essential to have submitted the verification report.

## Evaluation question: How has the consumption of electricity from self-consumption sources by companies changed since their participation in the call?

Indicator	Unit of Measurement	Source	Frequency	Level	Population
In.2 - Electricity from SELF- CONSUMPTION  Numerator: Electricity from self-consumption in the year preceding the year in which the aid for the installation is called.  Denominator: Total electricity consumption, both electricity consumed from conventional sources and electricity generated by the company.	MWh	Verification report which is signed by an Emissions Trading Scheme (ETS) accredited verifier in the Official Register of Statutory Auditors (ROAC).	ANNUAL  In year t (data 2022), determined ex post in year t+1 (call 2023).	Company facility	All applicants (both beneficiaries and non-beneficiaries). In order to be eligible to apply, it is essential to have submitted the verification report.

Evaluation question: How has the Gross Value Added of enterprises changed in relation to the benchmark sector?								
Indicator	Unit of Measurement	Source	Frequency	Level	Population			
I <sub>3</sub> - GROSS VALUE ADDED <sup>9</sup>								
Numerator: Gross Value Added in the year preceding the year in which the aid is called up at the site of the company applying for aid at gross level, excluding value depreciations, of the applicants submitting the audit report.  Denominator: Gross value added in the year preceding the year in which the aid is granted for the total of the NACE to which the aid applicant belongs on a gross level, excluding value depreciations.	Euros	Audit report verified by an auditor registered in the Official Register of Statutory Auditors (ROAC).	ANNUAL  In year t (data 2022), determined ex post year t+1	Company facility	Applicants submitting the audit report			

<sup>&</sup>lt;sup>9</sup> It shall be calculated with reference to the concepts of the General Accounting Plan, approved by Royal Decree 1514/2007, as turnover, plus capitalised production, plus other operating income, plus or minus changes in stocks, minus purchases of goods and services excluding personnel costs, minus other taxes on products linked to turnover that are not deductible and minus duties and taxes linked to production. Alternatively, it may be calculated from gross operating surplus by adding personnel costs. Excluded from value added are both income and expenses classified as financial or extraordinary in company accounts.

**INDIRECT EFFECTS-** Evaluation question: Have aid beneficiaries been affected in size? How has the number of employees of the companies varied in relation to the reference sector? Has it increased in all beneficiary sectors or only in some? Has it increased in both large or SMEs?

Indicator	Unit of Measurement	Source	Frequency	Level	Population
I <sub>1.3</sub> - NUMBER OF EMPLOYEES Numerator: Total number of employees (not broken down by type of qualification) of the installation. Denominator: Number of employees of the enterprise and/or of NACE to which the	Number	IT application questionnaire (company declaration of responsibility)	ANNUAL in year t, determined ex post in year t+1. Data as at 31 December.	Company	All applicants (both beneficiaries and non-beneficiaries). In order to be eligible to apply, it is essential to have submitted the verification report.
enterprise belongs.					

## 4.2 Please explain why the chosen indicators are the most relevant for measuring the expected impact of the scheme:

- 1-Production: If production increases in Spain, there is less risk of carbon leakage due to the transfer of companies' production to countries with less strict rules. The increase in production is linked to their production capacity in our country since they must have a significant investment in production facilities (machinery, skilled human resources, materials, etc.).
- 2-Turnover: This is complementary to production when considering the variation of inventories and the time lag in revenues. If turnover increases in Spain, there is less risk of carbon leakage due to companies moving their business to countries with less strict rules.
- 3-Electricity consumption: Industry seeks to electrify its processes to reduce its carbon emissions. Therefore, the more production is carried out in Spain, the higher the electricity consumption of the facilities should be. However, it is necessary to take into account the implementation of energy efficiency measures. Thanks to energy efficiency, significant reduction in consumption are possible. During the evaluation, the net effect will be taken into account.

- 4- Electricity self-consumption: An increase in self-consumption is the result of making investments in the installation that reduce the risk of relocation of the company.
- 5- GVA: It is complementary to production and turnover. It measures the real capacity of each company to generate wealth in Spain. It considers the net income of the company and the sales margin.
- 6- Number of employees: The more employment generated in Spain, the less risk of relocating production. Given wage costs, those companies that are committed to generating employment in a country are less likely to relocate their production.

The inclusion of other indicators such as (1) imports and exports, (2) whether it is a subsidiary of a foreign company, (3) shareholder control, (4) CO2 or electricity price evolution, etc., was analysed. However, they have been discarded due to the impossibility of obtaining data with sufficient level of disaggregation. As the "Evaluation Plan Assessment Fiche" rapporteur mentions, a key requisite is the availability granular data.

#### 5. Methods envisaged for carrying out the evaluation

5.1 In light of the evaluation questions, please describe the envisaged methods to be used in the evaluation to identify the causal impact of the aid on the beneficiaries and to assess other indirect impacts. In particular, please explain the reasons for choosing those methods and for rejecting other methods (for example, reasons related to the design of the scheme):

The comparison group come from secondary sources. Thus, it provides information regarding general trends of industries towards the objectives pursued by the programme (avoiding industry offshoring given the high cost of electricity generation because electricity generation is subject to the Emissions Trading System).

#### Determination of the method from the operational rules

When designing prospective impact evaluations, the answer to the operational questions largely determines the most appropriate impact evaluation method for a certain programme.

- Available resources: Does the programme have sufficient resources to be implemented at scale and reach all eligible beneficiaries? This aid scheme prorates the available aid among all beneficiaries, so that all eligible beneficiaries receive aid.
- Eligibility criteria: Who is eligible to receive programme benefits? Is the programme allocation based on an threshold, or is it available to all? All companies that apply and meet the eligibility requirements will receive aid. The eligibility requirements are set out in Articles 2 and 6 of the annual call for proposals. Specifically: (1) to manufacture a industrial product included in Annex 1, (2) to market the product they manufacture (3) to have electricity consumption from an electricity trader (if 100% is self-consumption they cannot be beneficiaries), (4) not to be in crisis as defined by the EC, (5) not to have an order for recovery of aid, (6) to comply with the payment deadlines (30 days) established in Law 3/2004 if the amount of the aid is greater than 30k€, (7) if they are large companies and have previously applied for this aid, comply with obligations defined as A (apply energy audit recommendations), B (invest at least 50% of the aid received in reducing GHG emissions) and C (at least 30% of electricity consumption must come from renewable sources).

• Timing of implementation: Are potential beneficiaries enrolled in the programme all at the same time or in phases? At the same time on a competitive basis.

The rules for enrolment of programme participants will be the main parameter to consider when selecting the impact assessment method. Therefore, the design of the method should be adapted to the context of the programme's operational rules.

On this occasion considering that:

- The programme has limited resources.
- The programme is available to all facilities that meet the objective criteria.
- This is an immediate implementation.

The impact assessment method for this evaluation is the Difference-in-Differences (DD) method <u>with secondary sources contrast</u>. Therefore, the proposed analysis is homoscedasticity and heteroscedasticity because we looked at the evolution of the beneficiary group.

- The contrast with secondary sources allows us to establish the general behavioural trends of the industry to which the company belongs. This membership allows us, on the one hand, to relate its expected behaviour and, on the other, to attribute to the programme behaviours that are different from the context in which the company finds itself.
- The comparison group is made up of indicators that measure aspects related to the programme objectives pertaining to the industry and/or sectors of activity specific to the participating company to be compared.
- The key assumption to consider is that, if the programme did not exist, the results of the participant groups and of the data provided by the secondary sources would have evolved in parallel over time (assumption of common or parallel trends).
- Finally, it requires baseline and outcome monitoring data and other characteristics for both participants and secondary sources.
- Secondary sources build a comparison group with identical conjunctural characteristics to the beneficiary enterprise.

Firstly, it is important to point out that we are dealing with a non-random allocation of treatment and, therefore, the beneficiaries are selected based on the above-mentioned criteria. For this aid scheme, the key criteria is belonging to one of the sixteen NACE stipulated as compulsory in the Annex I.

Quasi-experimental methods require further assumptions in order for the comparison group to provide a valid estimate of the counterfactual. In the case of the method proposed in this Plan, it relies on the assumption that changes in the outcomes in the comparison group provide a valid estimate of the change in the counterfactual in the treatment group outcomes.

To this end, annual data on key information for the analysis of all applicants will be available from 2021 (call 2022) onwards. This information is requested in the aid scheme regulations and must have been provided at the time of application. With this information, the trend followed by both groups in the pre-programme period is compared. If the results are similar, or if the trend is the same or similar, we can say that the difference after the programme is valid and the change in the trend in the treatment group is due to the programme.

It is proposed to analyse the trend of the indicators in the year 2021 to find out whether their evolution has been approximately parallel, i.e. whether the rate of change of the indicators of

the treatment group has been approximately the same as that of the comparison group.

If the trends of the companies in the comparison group (data from the sector to which the beneficiary company belongs) were not parallel to those of the treatment group (programme beneficiaries) prior to the call, the comparison group should be reconsidered. This monitoring of parallel trends will be done over the time horizon analysed, in order to be able to estimate whether there are differences in the evolution and, if necessary, to take the appropriate measures with the companies of the comparison group that evolve differently. The decision rule in this case will be to remove the company from the comparison group and continue with the remaining companies.

The most common way to account for observable differences is to use linear regression. Linear regression seeks to control for the influence of the observed variables on the results obtained for each of the endogenous variables.

Through regression, an analysis of variance should be performed on both groups, treatment and comparison, in order to observe how they evolve and whether they follow similar or parallel trends. To do this, the heteroscedasticity (the error variance is different for each value of x) and homoscedasticity (the error variance is the same for each value of x) of the models should be observed, in order to compare and assess the trends of both groups.

Therefore, multiple regression will allow explaining the behaviour of the endogenous variables of the model, using the information provided by the values taken by the set of explanatory or exogenous variables.

Specifically, for each of the groups, the following plan should be estimated:

#### TREATMENT GROUP

 At the initial point of implementation in 2022, it corresponds to the indicators for which information is available in the previous period The model we will use to analyse the aid target is the following:

$$Y_{t=0, \ LEAKAGE \ FROM \ facilities} = B \ I_{11t} + B \ I_{22t} + B \ I_{33t} + B \ I_{44t} + B \ I_{55t} + + + + + + + U_t$$

$$\forall \ t \in \{0,7,11\}$$

where 10:

And it is leakage of facilities

I are: Production; Turnover; Gross Value Added, etc.

t time of data collection.

#### **COMPARISON GROUP**

The comparator group shall be **built by selecting indicators measuring information from the sector to which the aid beneficiaries belong.** 

<sup>&</sup>lt;sup>10</sup> (For more information see Table of indicators)

#### How the impact assessment method is applied

The impact assessment is intended to assess the effects of the aid scheme on enterprises (and, particularly on their industrial facilities)

• Impact on the offshoring of industrial production.

The DD method relates the treatment and comparison group before and after the intervention. Furthermore, in this case the differences between the variables will be observed over the given evaluation periods (years2021, 2027 and 2030) in order to be able to analyse the evolution of the treatment group.

To do this, the difference between the values of the endogenous variable, treatment group, (Y facility leakage) and the information obtained from the control group, exogenous variables, is calculated. Finally, the counterfactual is calculated as shown in the graph below.

- From the Call, the information collected from the treatment group and the information from the comparators will be used to analyse whether they have evolved in a similar way.
- The information collected during the year 2027 will make it possible to analyse the evolution of the variables of interest in both groups.

In October 2027, the following data will be analysed:

- 2022 call to compensate for costs incurred in 2021
- 2023 call to compensate for costs incurred in 2022
- 2024 call to compensate for costs incurred in 2023
- 2025 call to compensate for costs incurred in 2024
- 2026 call to compensate for costs incurred in 2025

In October 2032, the following data will be analysed:

- 2027 call to compensate for costs incurred in 2026
- 2028 call to compensate for costs incurred in 2027
- 2029 call to compensate for costs incurred in 2028
- 2030 call to compensate for costs incurred in 2029
- 2031 call to compensate for costs incurred in 2030

#### Calculations required for the impact assessment

- Baseline 2023: t<sub>0</sub>
- 2027: t<sub>1</sub> (4 years after the baseline, it will allow to know the outcome of the programme's evolution process).

The increase that occurred between t and  $t_0$  will be the effect produced by the call on each of the groups and its difference will allow us to quantify the impact, i.e. what the programme has produced among the beneficiaries.

Therefore, based on the information gathered for the outcome evaluation, the impact evaluation will be carried out.

5.2 Describe precisely the identification strategy for the assessment of the causal impact of aid and the assumptions underlying the strategy. Describe in detail the composition and relevance of this group.

All facilities that apply for the call and meet the eligibility requirements (basically, belonging to the sectors of activity listed in Annex I of Royal Decree 309/2022 and proving business activity during the year prior to the call) will be considered beneficiaries of the aid. Thus, the call budget call is prorated among all of them according to the electricity costs they have incurred in the year prior to the call.

In the light of this situation, we foresee two scenarios: the situation in which no one applies for the programme, and the situation in which all the companies that apply are beneficiaries, as determined by Royal Decree 309/2022 of 3 May. In the event that no company applies for the Call, it would be necessary to look at the evaluation of its design and, above all, the design of the implementation, taking into account the necessary requirements set out in both Royal Decree 309/2022, of 3 May, and the Order of the Call. Before this hypothetical situation, it would be necessary to carry out a survey on a representative sample obtained by selecting the elements of the population that make up the companies that meet the NACE (National Classification of Economic Activities) set out in Royal Decree 309/2022, of 3 May. This would allow us to carry out a good analysis of what has gone wrong and what should be done to be able to continue the programme in successive calls for applications.

The next case envisaged would be that at least one facility applies and becomes a beneficiary of the programme. In this situation, based on the NACE<sup>11</sup> of the beneficiary companies and their most relevant characteristics, information relating to the objectives of the aid line pertaining to the industry of the beneficiary companies will be selected from secondary sources and compared with this information, and the methodology for impact assessment will be applied. However, this hypothetical situation has not arisen given that practically the same number of companies (212) have applied for both the 2022 and 2023 calls.

# 5.3 Explain how the envisaged methods address a possible selection bias. Can it be stated with sufficient certainty that the observed differences in the performance of aid beneficiaries are due to the aid?

The methodological proposal of the Evaluation Plan considers approaching the impact assessment by quasi-experimental methods as the allocation is not random. Facilities are subject to a number of selection criteria in order to be eligible for support.

Having two groups that are similar in all respects ensures that the counterfactual estimate approximates the true value of the outcome in the absence of treatment, and that once the programme has been implemented, the impact estimates do not suffer from selection bias.

On this basis, the identification of an appropriate comparison group will be key to controlling selection bias. To this end, it is proposed to analyse the information on the different indicators (secondary data) in comparison with the treatment group. If the rate of variation of the indicators is not the same between the treatment and comparison group, the comparison group should be reformulated.

Through regression, an analysis of variance should be performed on both groups, treatment and comparison, in order to observe how they evolve and whether they follow similar or parallel trends. To do this, the heteroscedasticity (the error variance is different for each value of x) and homoscedasticity (the error variance is the same for each value of x) of the models should be observed, in order to compare and assess the trends of both groups.

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<sup>&</sup>lt;sup>11</sup> Statistical classification of economic activities in the European Community, abbreviated as NACE (CNAE in Spanish)

5.4 If relevant, explain how the envisaged methods intend to address specific challenges related to complex schemes (e.g. those implemented in a regionally differentiated way, or those using several aid instruments).

The only differentiation contemplated in this aid scheme is between large companies (those with more than 250 employees and/or a turnover of more than 50 million euros per year) and SMEs. Large companies should meet the additional requirement referred to in article 5.2 of Royal Decree 309/2022 of 3 May. In other words, large companies are obliged to carry out an energy audit and comply with obligations defined as A (apply energy audit recommendations), B (invest at least 50% of the aid received in reducing GHG emissions) and C (at least 30% of electricity consumption must come from renewable sources).

Therefore, both types of beneficiaries have the same aid limits, set at 75%. However, as stated in article 5 of Royal Decree 309/2022 of 3 May, beneficiaries obliged to carry out an energy audit must additionally comply with one of the following actions:

- A: Implement the relevant investment recommendations of the audit report, to the
  extent that the payback period of such investments does not exceed three years and
  their investment costs are proportionate.
- B: Invest a significant part, of at least 50 per cent of the amount of such support, in projects that lead to substantial reductions of greenhouse gas emissions from the installation.
- C; Reduce the carbon footprint of its electricity consumption, so that at least 30 percent
  of its electricity consumption is supplied from carbon-free sources, excluding the
  national mix and justified through direct or indirect forward instruments, through
  guarantees of origin, through investments in renewable self-consumption facilities or
  through other similar investments or actions.

Beyond this differentiation, the present aid does not envisage any other specific challenges.

#### 6. Data collection

6.1 Report on the mechanisms and sources for the collection and processing of data on aid beneficiaries and the envisaged comparative scenario<sup>12</sup>. Describe all relevant information related to the selection phase: data collected on aid applicants, data submitted by applicants, results of the selection. Please also explain any possible difficulties related to data availability.

As the "Evaluation Plan Assessment Fiche" rapporteur mentions, a key requisite is the availability granular data on both beneficiaries and non-beneficiaries. To this end, the idiosyncrasies of this aid scheme must be taken into account because its operation and, consequently, data collection is very different that conventional competitive calls. In this aid scheme, a control group cannot be formed with eligible companies who are non-beneficiaries, based on our long experience since 2015 as managing body of this aid scheme. All companies that meet the established requirements for this scheme aid are going to apply and to be beneficiaries as well. As they meet the call requirements, they will apply and will receive this aid. In other words, this scheme aids to all companies that fulfilled the requirements and also proceed to submit their application properly. Thus, all valid applications shall have the status of beneficiaries.

<sup>&</sup>lt;sup>12</sup>Note that the evaluation may require the collection of both historical data and data that will become progressively available during the roll-out of the aid scheme. Identify the sources of both types of information. Both types of data should preferably be collected from the same source to ensure consistency over time.

The questions arises are:

- 1) Who could be the non-beneficiaries of this scheme? On the one hand, companies that submit an application with errors that cannot be rectified. Our long experience as managing body tells us that this scenario hardly ever occurs. During the correction phase (amendment of said documentation), companies can correct possible errors in the application submitted. On the other hand, companies that do not submit for some reason an application.
- 2) Why could a company not apply? First, if it is not aware of the existence of this aid scheme. Given that (1) the scope of application of this scheme is very specific (industrial companies of a certain size, mostly belonging to highly representative business associations and mostly knowing ETS requirements) and (2) it is a long-time scheme since its creation in 2015, the lack of understanding is not a relevant factor. Through the business associations (both national and regional level), the managing body carries out an active dissemination of this aid scheme. Moreover, the subsidied sectors have very powerful business associations with which this management body has regular meetings to discuss their sectoral concerns.

Second, if the company is not willing to pay for the required verification report and administrative cost only if these application costs could be higher than the aid that they can receive. Nevertheless, the cost of this verification report as well as other administrative costs are not considered high and only in the case of very small companies could it affect. Companies applying for aid for electro-intensive consumers (another aid scheme) already have the verification report required under this aid scheme. Therefore, it is our understanding that all companies that meet the eligibility criteria will apply.

In this regard, it is important to recall that this scheme is based on the compensation of additional electricity costs that industrial companies should incurred when they need to buy electricity to power companies. Power companies must purchase emission allowances on the market to generate electricity and, therefore, they pass on the price of these allowances to their customers (industrial companies, private consumers, etc.). Only certain industrial companies can benefit from this scheme in order to be reimbursed part of the money they have paid for the electricity purchased from the power companies. The Commission have established who the eligible industrial companies are. These specific companies should fulfil the following two conditions. Firstly, they should have a high electricity consumption and secondly, they must be at risk of carbon leakage (due to their international trade exposure).

When drawing up the Spanish evaluation plan, we have analysed in detail the Commission staff working document SWD(2020) 190 final Impact Assessment and its related annexs such as "Combined retrospective evaluation and prospective impact assessment support study on Emission Trading System (ETS) state aid guidelines" updated by ADE and Compass Lexecon. This impact assessment makes a comparison of the different industrial sectors to assess their inclusion in this kind of aid scheme. For example, in Spain the cement sector should be included but at the EU level it is not relevant and, therefore, it is not a beneficiary sector of this scheme. We understand that the inter-sectorial analysis have been carried out in the aforementioned SWD (2020) 190 final.

On the basis of the above, secondary data sources will be used to provide data and information on the evolution of outcomes of interest in the branch of activity/productive sector of the beneficiary firms.

On the other hand, industrial companies, particularly in the sectors covered by the programme (Petroleum refining, chemistry, metallurgy, hydrogen, fiberglass, etc.), are very reluctant to provide any activity data, even for statistical purposes. The needed data to assess this aid scheme are confidential (tonnes of production or electricity consumption) because they have a key impact on their competitiveness. Moreover, these are sectors where there are very few companies with a high market share. Therefore, the only way to obtain them is in the application questionnaire for all applicants.

This aid scheme is directly managed directly by the Ministry of Industry, Trade and Tourism (any agency is involved). The expenditure control of a Ministry is very strict and there are no a priori formulas to encourage the participation of enterprises in answering the evaluation questions. Every expenditure requires multiple accounting controls and a solid legal basis, which makes it impossible to reward companies participating in the control group. For all these reasons, the most cost-effective method is considered to be in the aid application form through audit reports verified by an independent and ENAC<sup>13</sup>-accredited third party (such as Applus, Aenor, SGS, etc.) every year for all applicants. Since the applicants are practically the same each year, it is possible to compare the time series.

Common to the different types of evaluation in this integrated approach (design evaluation, outcome evaluation and impact evaluation), each information need is associated with a specific data collection. In any case, the following information collection milestones are proposed:

- At the time of the application for the programme in 2022, information on the applicant facilities from the previous year will have been provided. This data shall be used to analyse the evolution of the group of beneficiaries of the programme.
- From the start of the programme, it is planned to obtain the necessary data every four years. Accordingly, we will use the following values for the variable t in the formulas for calculating the indicators for these time milestones:

The value t=0 corresponds to the beginning of the implementation of the Programme. At this point in time, during the 2022 call, we will collect data for year 2021.

For t=1, it corresponds to the data corresponding to the first part of phase 4.

For t=2, it corresponds to the end of the programme implementation, during the end of the year 2031, providing information for 2030.

#### Data collection: our starting point

Once the information has been collected from the facilities, it is necessary to process the data in order to generate the information required by the Evaluation Plan (both results and impact evaluations). Thus, the information provided by companies corresponds to the first level indicators.

Based on this first level indicators, we will define other indicators with aggregated information. Thanks to this aggregated indicators, we will measure the scope of the Programme as well as its key achievements.

In order to compare the data provided by the facilities, it is necessary to carry out a statistical standardisation.

#### **Data standardisation**

Normalisation is a process used in statistics to compare data from different samples or populations and is expressed as the number of standard deviations a given value takes with respect to its sample or population mean.

For this purpose, on the basis of the values  $X_j^i$  e  $y_j^i$  -values will be used as an example hereafter  $X_i^i$  -values obtained directly by companies and, where appropriate, with mean  $\mu$  and

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<sup>&</sup>lt;sup>13</sup> ENAC= National Accreditation Entity

standard deviation  $\sigma$  obtained from the data collected at t=0, is calculated by subtracting the mean from the value collected and dividing the result by the standard deviation, as follows:

$$N = \frac{X_j^i - \mu}{\sigma}$$

The result will be a dimensionless value between 0 and 1 that will allow us to compare and operate with indicators of different nature, necessary for the evaluation.

#### **Data quality management**

Once the implementation of the Programme has been completed, we will carry out an analysis of the data quality in order to verify the information provided by the facilities.

#### The envisaged comparative scenario

For the establishment of the intended comparative scenario, the objective is to identify a comparison group that is as similar as possible to the beneficiaries of the programme.

Given the characteristics of this iad programme, the following possibilities are envisaged for carrying out the impact assessment depending on the situations encountered:

Situation 1: No grouping is present

In this situation, there would be no need for an impact assessment and therefore no need to select a counterfactual.

Situation 2: There are no non-beneficiary groups, all are beneficiaries.

- -Treatment group: companies benefiting from the programme (participating in one or more clusters).
- -Comparison group: secondary sources public institutions such as INE (Spanish National Statistics Office), and EUROSTAT, mainly providing data and information on the evolution of the branch of activity and/or productive sector (depending on the availability of data) of the beneficiary company.

In addition, it should be noted that:

- In order to mitigate the effect of non-response throughout the evaluation project among participants, the regulations specify the obligation to provide information for the evaluation.

#### Data relating to the selection phase

The 2022 call has been launched. A total of 212 applications were registered. 1 application was duplicated for the same facility. Thus, 211 applications were validly submitted and, therefore, all of them received grants.

#### Potential difficulties of data availability

With regard to the possibility of the existence of difficulties in the data availability, as we have stated above, the scarcity of information provided by the official institutions (e.g Spanish Statistical Office and Eurostat) is contemplated, mainly due to the cadence of data collection. It has been detected that some indicators useful for the elaboration of the counterfactual are scheduled to be disseminated periodically by the aforementioned institutions for two years. In view of these situations, the evaluations will be carried out with the available data and, as new data are incorporated, they will be useful in the following waves of evaluations (for more information see section 7 "Proposed evaluation calendar").

# 6.2 Report the frequency of data collection relevant to the assessment. Are observations available at a sufficiently disaggregated scale, i.e. at the level of individual enterprises?

As stated in the section 4 Indicators, the frequency of data collection is annual and the level of data collection is the company's facility.

6.3 Indicate whether access to the data needed to conduct the assessment could be hindered by laws and regulations governing data confidentiality, and how these difficulties would be addressed. List other potential challenges to data collection and how these would be overcome.

The Law 9/2017, of 8 November, on Public Sector Contracts, transposes into Spanish law the Directives of the European Parliament and of the Council 2014/23/EU and 2014/24/EU, of 26 February 2014. It reflects the need for not only contracting Public Administrations but also private sector to comply with Organic Law 3/2018, of 5 December, on the Protection of Personal Data and guarantee of digital rights.

This is the legal framework in which we are going to act. Therefore, there is no problem of access to the necessary data given that the selected indicators comply with the aforementioned regulations.

#### Other possible data collection challenges.

As mentioned above, the construction of the counterfactual will be based on data from secondary sources from official agencies. In this sense, one of the possible challenges is the use of these data, taking into account the time lags between the data and the moments of publication of these sources. In this sense, a selection has been made of secondary sources that contain the required information, as well as the periods of publication of these data. With this information we will be able to make forecasts of data availability.

6.4 Please indicate whether surveys of aid beneficiaries or of other undertakings are foreseen and whether complementary sources of information are intended to be used.

There are no plans to carry out studies of aid beneficiaries or other companies. However, the use of complementary sources of information is foreseen, specifically, in the data collection process for the elaboration of the counterfactual we will use official data sources such as the National Statistics Office (INE) or Eurostat.

#### 7. Proposed timetable for the evaluation

7.1. Please indicate the proposed timeline of the evaluation, including milestones for data collection, interim reports and involvement of stakeholders. If relevant, please provide an annex detailing the proposed timeline.

As stated in the EC document "Common methodology for the evaluation of State aid", the evaluation should be considered as an on-going evaluation, to be carried out while the aid scheme is still in operation. An ex post evaluation, carried out only after the scheme has been implemented, is not recommended.

Once the projects have been launched, it is expected that the results can be verified at the outset of the evaluation. Most of the projects will include actions whose effects can be observed immediately.

Taking into account the deadlines foreseen for the development of the actions, a basic outline of the evaluations would be as follows:

#### PHASE 1: EVALUATION OF RESULTS AND IMPACT

- The evaluation of results aims to identify and analyse the outputs of the action, which
  are obtained directly through the materialisation of the activities.
   It will be of interest to identify and analyse the impact of the intervention. That is,
  whether the planned outputs and changes have evolved in an enabling environment.
- Having several waves of evaluation will make the **impact analysis** more accurate and will also facilitate the identification of **factors for sustainability.**
- The collection of information in this phase will be based on the data collected through the call for proposals.
- Subsequently, information will be collected on the activity carried out by the companies.

## PHASE 2: PREPARATION OF THE FINAL OUTCOME AND IMPACT ASSESSMENT REPORT

2027

It is proposed to communicate the results of the evaluation both internally and externally. It will also be of interest to publicise both the interim evaluation reports and the final report on the results. The 2027 analysis will be done with data of the years 2021, 2022, 2023, 2024 and 2025. The two-year time lag is due to the fact that this aid scheme is managed directly by a Ministry. If a Ministry has to contract an independent body to carry out the evaluation, the legal procedure to make the contract effective takes at least 9 months. In addition, the time of the evaluation contract must be added (at least 5 months; 3 months for execution and 2 months for the Ministry's verification).

#### PHASE 3: DISSEMINATION OF EVALUATION RESULTS

2032

It is proposed to communicate the results of the evaluation both internally and externally. It will also be of interest to publicise both the interim evaluation reports and the final report on the results. The 2032 analysis will be done with data of the years 2026, 2027, 2028, 2029 and 2030. The two-year time lag is due to the fact that this aid scheme is managed directly by a Ministry. If a Ministry has to contract an independent body to carry out the evaluation, the legal procedure to make the contract effective takes at least 9 months. In addition, the time of the evaluation contract must be added (at least 5 months; 3 months for execution and 2 months for the Ministry's verification).

2032

A schedule of the main milestones is shown below:

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Publication of the call										
Start of evaluation project, years of data generation										
Review and implementation of the monitoring and evaluation model										
First wave of data collection and evaluation					with data of years 2021, 2022, 2023, 2024 and 2025.					
Second wave of evaluation collection										with data of years 2026, 2027, 2028, 2029 and 2030.
Final deliverable: evaluation of results and impact										

Note: this is a time estimate that will need to be reviewed and revised as events evolve.

7.2 Indicate the date by which the final evaluation report shall be submitted to the Commission at the latest.

As stated in the evaluation planning calendar and without having the bases of the published calls, a final milestone is estimated for the year 2032, where the final deliverable of the evaluation of results and impact will be elaborated.

#### 7.3 Mention factors that might affect the envisaged timeline.

Possible disruptions in the implementation of the Programme may necessitate a new recalendarisation of the evaluation.

Partial annual information reports may be considered. They will serve to guide the final outcome and impact assessment, but are proposed as optional depending on the information analysis needs identified.

In addition, possible difficulties in the identification of secondary sources and the periodicity of publication of information could alter the development of the evaluation initially planned. This casuistry is analysed in greater detail in Section 5.

#### 8. The body conducting the evaluation

### 8.1 Provide specific information on the body that will carry out the assessment or, if not yet selected, the timetable, procedure and criteria for its selection.

The evaluation will be external and will be carried out by a team independent of the managing body.

The Contract may be tendered by open procedure and will be awarded in accordance with Law 9/2017, of 8 November, on Public Sector Contracts, transposing into Spanish law the Directives of the European Parliament and of the Council 2014/23/EU and 2014/24/EU, of 26 February 2014.

In accordance with the above regulations, quantifiable selection criteria may be established for the economic report, which will account for 51% of the total score, and a technical report, the evaluation of which may account for 49% of the score.

## 8.2 Report on the independence of the body carrying out the assessment, and how potential conflicts of interest in the selection process will be avoided.

An external evaluation is proposed to ensure the independence and quality of the findings, conclusions and recommendations.

Potential conflicts and interests are overcome through the application of current Spanish legislation, especially Royal Legislative Decree 1/2020, of 5 May, which approves the revised text of the Insolvency Act and Law 9/2017, of 8 November, on Public Sector Contracts, which transposes into Spanish law the Directives of the European Parliament and of the Council 2014/23/EU and 2014/24/EU, of 26 February 2014.

## 8.3 Indicate the relevant experience and skills of the agency conducting the assessment or how these will be ensured in the selection process.

The team required to carry out the evaluation should be made up of people with experience and expertise in public policy analysis (design, monitoring and evaluation), especially in impact evaluations, with specific experience and knowledge of the evaluation process and all the actors to be taken into account in the evaluation.

They should have experience in projects related to public administrations and in particular to industrial sector policies and the emissions trading scheme.

In particular, the working team required for the evaluation project should consist of a team of specialists who together ensure the following criteria:

- Experience in the design, formulation and evaluation of public policies.
- Experience in monitoring and follow-up of public policies or programmes, as well as in the elaboration of follow-up indicators.
- Experience in the design of methodologies and tools for collecting information, as well as in obtaining, managing fieldwork, processing and analysing information: surveys, databases, interviews, documentary sources, etc.
- Experience in the application of econometric models for impact assessment, sampling and data processing with statistical tools.
- Experience in drafting final reports, drawing conclusions, recommendations, good practices and lessons learned.

Specifically, it is proposed to have a project manager and two technical specialists within the working team.

#### **Project Manager (1):** The main functions to be performed are:

- Responsible for project management.
- Responsible for coordination, dialogue and liaison with the Directorate General.
- Maintaining relations with other external actors.
- Project planning in all its aspects.
- Identification of the right team members for the successful completion of each project task.
- Responsible for strategic and situational decision-making.
- Review and final validation of project deliverables.

<u>Team of technical experts (2):</u> It will be made up of 2 technicians who support the project manager.

### 8.4 Indicate what mechanisms the licensing authority will adopt to manage and monitor the conduct of the assessment.

The awarding authority is responsible for supervising and directing the tasks to achieve the objectives based on the specifications of the evaluation.

To this end, a coordinator will be identified by the independent entity, who will be responsible for liaising with the managing body and specifically with the person in charge of the contract.

In compliance with the above, the managing body will be responsible for ensuring compliance with the work required and offered in these specifications, supervising its execution, adopting the decisions and issuing the necessary instructions to ensure the correct performance of the agreed service, which must be complied with by the successful tenderer.

In general, the functions will be those derived from the management, verification, reporting and monitoring of the correct execution of the work, as well as giving conformity to the invoices presented and will act as the sole interlocutor on behalf of the Administration with the coordinator.

## 8.5 Provide information, even if only indicative, on the necessary human and financial resources that will be made available to carry out the assessment.

#### **Human resources**

The evaluation team shall be composed of at least:

- a) 1 Project Manager: He/she will carry out the tasks of planning, coordination and supervision of the work teams established for the proper development of the contract. He/she will act as interlocutor and liaison.
- (b) 2 technical specialists

#### **Financial resources**

The estimated value of the evaluation project will depend on the evolution of the implementation of the call. A tentative scenario is estimated, considering the years of the project, with a partial dedication of resources and variable fieldwork costs depending on the beneficiaries of the aid:

TOTAL TENDER BUDGET 110.700€ (VAT excluded)

Human resources	During th	ne 2 waves of the	project		
Number of years: 2 (2027 and 2032) Hours available per year:	Working	months per year BASE total	3	(on average)	
1800		hours	450*2=900	Hours	
Profile	Assign ed HR Dedication (%)		Total hours	Rate (excl. VAT) €	€/day inc.
Project Manager	1	40%	360	70,00 €	25.200
Project Manager  Technician 1	1 1	40% 100%	360 900	·	25.200 54.000

	110.700
Total, HR (excl. VAT)	€

#### 9. Publicising the evaluation

9.1 Report how the evaluation will be made public, e.g. by publishing the evaluation plan and the final evaluation report on a website.

The communication strategy should at least include **the publication of the evaluation and its executive summary**. Typically, the publication will be in digital format, on the web pages of the institution commissioning and managing the evaluation.

The subsequent use of the information contained in the evaluation should do according current Spanish legislation. Especially, Law 37/2007, of 16 November, on the re-use of public sector information, Organic Law 3/2018, of 5 December, on the Protection of Personal Data and the guarantee of digital rights and Law 19/2013, of 9 December, on transparency, access to public information and good governance.

- 9.2 Indicate how stakeholder involvement will be ensured. Indicate whether public consultations or other activities related to the assessment are foreseen.
- **Workshops** with representatives of stakeholders, networks of experts, business organisations, etc. Usually the team that has carried out the assessment can participate, so that they can present the results.
- Specific communication events per stakeholder group, as it allows to deepen specific interests related to the evaluation and its results.
- **Publication on institutional websites**, where in addition to the final evaluation report, additional, more communication-oriented explanatory material can be included. For example, videos, infographics or interviews can accompany the publication of the report.
- **Working meetings** with the team commissioning the evaluation, where doubts that may arise about the results of the evaluation can be clarified.
- 9.3 Specify how the results of the evaluation are intended to be used by the licensing authority and other bodies, e.g. for the design of successors to the scheme, or in similar schemes.

The subsequent use of the information contained in the evaluation may be used in accordance with current Spanish legislation, especially Law 37/2007, of 16 November, on the re-use of public sector information, Organic Law 3/2018, of 5 December, on the Protection of Personal Data and the guarantee of digital rights and Law 19/2013, of 9 December, on transparency, access to public information and good governance.

9.4 Indicate whether the data collected for evaluation purposes or used for evaluation will be made available for further studies and analyses, and if so, under what conditions.

Evaluation by subsequent studies and analyses will be available under the conditions allowed by Spanish law, in particular, the *Organic Law 3/2018 of 5 December on the Protection of Personal Data and guarantee of digital rights*.

9.5 Indicate whether the evaluation plan contains confidential information that should not be disclosed to the Commission.

No.

#### 10. Other information

10.1 Please provide below any other information you consider relevant to the assessment of the evaluation plan.

10.2 Refer to all documents attached to the notification and provide hard copies of the documents in question, or direct internet links to them.

No needed