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Federal Ministry
for Economic Affairs and Climate Action (BMWK)

Directive on the funding of climate-neutral production processes in industry through Carbon Contracts for Difference

(Funding guideline for Carbon Contracts for Difference – FRL KSV)

from 11 March 2024

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1. PREAMBLE

The European Climate Law stipulates that the EU must become climate neutral by 2050. According to the Federal Climate Protection Act, greenhouse gas emissions must be reduced by at least 65% by 2030 and by at least 88% by 2040 compared to 1990 levels, and climate neutrality must be achieved by 2045. In view of the national climate neutrality target and the requirements of the European Union's emissions trading system for the electricity sector and hard-to-abate industry (EU ETS), only just over two decades remain for the transformation of industry to climate neutrality.

The overall economic costs of climate change, which are partly caused by today's prevailing production processes, are not yet fully priced into production costs worldwide. As a result, climate-damaging production processes are often even more favourable for companies than climate-friendly ones. In fact, climate-friendly production is often so cost-intensive that companies cannot switch to it because they would otherwise be at too great a cost disadvantage in competition. Investments in climate-friendly production processes are therefore at least highly risky and are still too often not made today, especially because they affect plants with a technical lifespan of several decades.

This is where climate protection contracts based on the concept of carbon contracts for difference (CO_2) come in. They are designed to offset the additional costs incurred by companies from hard-to-abate sectors as a result of the construction (capital expenditure, or CAPEX for short) and operation (operational expenditure, or OPEX for short) of more climate-friendly plants compared to conventional plants. This enables companies to switch to more climate-friendly production. Climate protection contracts thus make new technologies marketable. Risks and ultimately costs become more predictable, which also enables financing based on equity and debt capital in climate-friendly technologies. As a result, the transition to macroeconomic climate neutrality in the industrial sector is already being tackled and a contribution is being made to ensuring that greenhouse gas emissions are not shifted abroad in line with the Paris Agreement. Climate protection contracts therefore not only lead to a reduction in emissions in the supported industries - the funding programme aims to directly save around 350 megatonnes of CO_2 equivalents by 2045. They also incentivize the development and implementation of the necessary technologies and infrastructures in Germany right now. This is not only an important step for Germany as a center of innovation and for achieving Germany's climate targets. The innovations triggered by the climate protection contracts will also advance the decarbonisation of industry worldwide.

At the same time, the Federal Government ensures that funding is efficient and that overcompensation is avoided. Climate protection contracts take special account of this through various regulations. If the effective CO_2 price exceeds the contract price stipulated in the climate protection contract during the term of the agreement, the state subsidy not only ends, it also turns into a payment obligation on the part of the subsidy aid beneficiary to the state. This reduces the burden on the state budget.

Finally, the climate protection contracts complete the package of regulatory measures (such as the Greenhouse Gas Emissions Trading Act, Energy Efficiency Act, Federal Immission Control Act) and the existing funding programmes. This creates a reliable framework for the transition to a climate-neutral, competitive economy.

Overall, climate protection contracts therefore create a secure investment framework for companies and initiate the transformation in Germany at an early stage. However, the state not only bears the economic risk for climate protection, which is necessary for society as a whole, but also shares in the economic opportunities of switching to climate-friendly technologies. This mechanism makes climate protection contracts a modern and efficient instrument for climate protection and subsidy policy.

2. DEFINITIONS

The following terms are used in this funding guideline:

2.1 **Absolute greenhouse gas emission reductions:** The reduction in greenhouse gas emissions in tonnes of CO_2 equivalents achieved by operating the production system in the transformative production process compared to the reference system for the same planned or actually realized production volume. For the purposes of this funding guideline, a distinction can be made between planned absolute greenhouse gas emission reductions and actually realized absolute greenhouse gas emission reductions.

2.2 **Other funding:** Funding received by the aid beneficiary for the same eligible investments, expenditure and costs outside these funding guidelines, provided that these qualify as aid within the meaning of Article 107(1) of the Treaty on the Functioning of the European Union (TFEU) or as centrally managed Union funds that are not directly or indirectly subject to German control.

2.3 **Offer:** Offer to conclude the climate protection contract.

2.4 **Granting authority:** The granting authority is the BMWK. The BMWK reserves the right to entrust the administration of the funding measure to a project management organization in accordance with Number 44 (3) of the Federal Budget Code (BHO) ("Beleihung") or to appoint it as an administrative assistant. The project management organization will be announced in the Federal Gazette. In the case of a "Beleihung", the project management organization performs the tasks of the granting authority.

2.5 **Biomass:** All organic matter of biological origin that is not of fossil origin. In particular, this includes the biodegradable fraction of products, waste and residues of biological origin from agriculture, forestry, other forms of land use and related industries, including fisheries and aquaculture. It also includes the biodegradable fraction of waste, including industrial and domestic waste of biological origin, and organic matter of biological origin resulting from technical transformation or previous utilisation, as well as raw materials and energy carriers produced from biomass.

2.6 **Low-carbon hydrogen**: Hydrogen whose energy content stems from biomass, biogas, landfill gas or sewage gas or from non-renewable sources and which fulfils the technical assessment criteria applicable in accordance with Commission Delegated Regulation (EU) 2021/2139[1] to demonstrate

[1] Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity is considered to contribute significantly to climate change mitigation or adaptation and for determining whether that economic activity avoids significant harm to any of the other environmental objectives (OJ L 442, 9.12.2021, p. 1). L 442, 9.12.2021, p. 1), last amended by Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022 amending Delegated Regulation (EU) 2021/2139 as regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific disclosure requirements for those economic activities (OJ L 188, 15.7.2022, p. 1).

its significant contribution to climate protection and the avoidance of significant adverse effects. With regard to the reduction of greenhouse gas emissions, the minimum threshold for life cycle greenhouse gas emission savings of 73.4% compared to a fossil fuel comparator must be achieved. According to Delegated Regulation (EU) 2021/2139, this reduction must be demonstrated against a comparative value of 94 g CO_2 -equivalent/MJ. Hydrogen whose energy content stems from biomass, biogas, landfill gas or sewage treatment plant gas must fulfil the requirements of Directive (EU) 2018/2001[2] for biofuels, bioliquids and biomass fuels; the life cycle greenhouse gas emission savings are calculated in accordance with the methodology set out in Directive (EU) 2018/2001. For hydrogen whose energy content stems from non-renewable sources, the life-cycle greenhouse gas emission savings shall be calculated in accordance with the methodology established by Commission Delegated Regulation (EU) 2023/1185[3]. Where the EU has developed relevant requirements and methodologies for assessing greenhouse gas emission savings for hydrogen whose energy content stems from non-renewable sources, as provided for in Article 8(5) of the Commission proposal (COM/2021/803 final/2)[4] , these shall apply. As soon as the Directive of the European Parliament and of the Council on common rules for the internal markets in renewable gases, natural gas and hydrogen (recast) of 23 November 2022 (COM/2021/803 final/2) has entered into force on the basis of the Commission proposal, the types of hydrogen that are eligible for funding under the update of the National Hydrogen Strategy are to be defined in the funding call.

2.7 **Energetic use of biomass:** Any use of biomass where the main purpose of the use is the production of energy and the energy is actually used to provide either heat, electricity or power.

2.8 **Funding call:** Announcement by the granting authority of a competitive bidding process with a fixed funding budget. As a rule, two funding calls should be published per calendar year.

2.9 **Bidding procedure:** A competitive procedure initiated by a funding call from the granting authority, in which interested companies can submit an application for funding and conclude a climate protection contract.

2.10 **Green surplus revenue:** The surplus revenue that the aid beneficiary can generate by achieving higher prices for the sale of products manufactured using the subsidized climate-friendly production process than for products manufactured using conventional production processes.

2.11 **Green hydrogen:** Hydrogen produced from water by electrolysis and for the production of which the electricity used was generated exclusively from renewable energy carriers, whereby the production of this electricity must meet the requirements of Commission Delegated Regulation (EU)

[2] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the funding of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82), as last amended by Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the funding of energy from renewable sources and repealing Directive (EU) 2015/65/EC. Directive of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC with regard to the funding of energy from renewable sources and repealing Council Directive (EU) 2015/652 (OJ L, 2023/2413, 31.10.2023).
[3] Commission Delegated Regulation (EU) 2023/1185 of 10 February 2023 supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council by establishing a minimum threshold for greenhouse gas savings from recycled carbon fuels and a methodology for determining greenhouse gas savings from renewable liquid or gaseous transport fuels of non-biogenic origin and from recycled carbon fuels (OJ L 157, 20.6.2023, p. 20).
[4] Proposal for a Directive of the European Parliament and of the Council concerning common rules for the internal markets in renewable gases, natural gas and hydrogen (recast) of 23 November 2022 (COM/2021/803 final/2).

2023/1184[5]. The life cycle greenhouse gas emission savings shall be calculated in accordance with the methodology established by Commission Delegated Regulation (EU) 2023/1185[6]. With regard to the reduction of greenhouse gas emissions, the minimum threshold for life cycle greenhouse gas emission savings of 70 % compared to a fossil fuel comparator must be achieved. According to Delegated Regulation (EU) 2023/1185, this reduction must be demonstrated against a comparative value of 94 g CO_2 equivalent/MJ.

2.12 **Operational start:** Date of the first intended use or partial use of the subsidized facilities after completion of a trial operation. Trial operation is the temporary operation of a facility to test its operational capability prior to the first intended use of the subsidized facilities and therefore does not constitute the operational start of the project.

2.13 **Process heat**: Heat that is required for technical processes for the manufacture, further processing or refinement of products and can be transferred for this purpose via steam, air, water, oils or other carriers.

2.14 **Reference system:** The dominant production technology for the respective product at the time of the funding call, which is used to determine the greenhouse gas emission reductions from the funded plant constellation and for the dynamisation of the energy carrier costs. If a reference system is used that does not relate to a product, the selection of the reference system is determined by the project's production technology.

2.15 **Relative greenhouse gas emission reduction:** The absolute greenhouse gas emission reduction of the project divided by the absolute greenhouse gas emissions of the reference system. For the purposes of these funding guideline, a distinction can be made between planned relative greenhouse gas emission reductions and actually realized relative greenhouse gas emission reductions.

2.16 **Secondary energy carriers:** Electricity and energy carriers produced from fossil raw materials.

2.17 **Collateral:** Bank guarantees and bank sureties.

2.18 **Specific greenhouse gas emission reduction:** The difference between the greenhouse gas emissions of the reference system and the remaining residual emissions of the production system operated in the transformative production process in accordance with Number 7.1(e) per ton of product manufactured.

2.19 **Material use of biomass**: Any use of biomass other than energetic use and processing into materials intended for use as fuel or other means of energy production.

2.20 **System boundaries:** System configuration for carrying out all key production steps required to manufacture all intermediate products and the product, which are carried out at the sites covered by the climate protection contract.

[5] Commission Delegated Regulation (EU) 2023/1184 of 10 February 2023 supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council by establishing a Union methodology laying down detailed rules for the production of liquid or gaseous renewable fuels of non-biogenic origin for transport (OJ L 157, 20.6.2023, p. 11).

[6] Commission Delegated Regulation (EU) 2023/1185 of 10 February 2023 supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council by establishing a minimum threshold for greenhouse gas savings from recycled carbon fuels and a methodology for determining greenhouse gas savings from renewable liquid or gaseous transport fuels of non-biogenic origin and from recycled carbon fuels (OJ L 157, 20.6.2023, p. 20).

2.21 **Transformative production process:** A production process that is characterized by fundamental technological changes to conventional production processes, entails a significant need for investment in new technologies that are not yet established on the market or set the market price and substitutes fossil fuels or raw materials with climate-friendly energy carriers or raw materials (such as electricity, hydrogen, biomass). A production process is also transformative if technologies are used to capture and store carbon dioxide (CO_2) over the long term or to bind or recycle it. A production process that is not operated in an energy- and resource-efficient manner and does not contribute to the climate neutrality of the industry is not transformative.

2.22 **Greenhouse gases:** Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2 O), sulphur hexafluoride (SF_6), nitrogen trifluoride (NF_3) as well as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) in accordance with Annex V Part 2 of the European Governance Regulation[7].

2.23 **Greenhouse gas emissions:** The anthropogenic release of greenhouse gases covered by Number 7.1(e) in tonnes of carbon dioxide equivalent, where one ton of carbon dioxide equivalent is one ton of carbon dioxide or the amount of another greenhouse gas with a global warming potential equivalent to one ton of carbon dioxide; the potential is determined in accordance with Commission Delegated Regulation (EU) 2020/1044[8], or any successor regulation adopted pursuant to Article 26(6)(b) of the European Governance Regulation.

2.24 **Surplus payments:** Payments made by the Aid beneficiary under the Climate Protection Contract in the event of a negative difference between the Base Contract Price pursuant to Number 7.1(a)(i) or the dynamised contract price pursuant to 7.1(a)(ii) and the effective CO price to the grantor.

2.25 **Union standard:** Any binding Union standard on the level of environmental protection to be achieved by individual companies, but not standards or targets set at Union level which are binding on Member States but not on individual companies.

2.26 **Start of the project:** The first firm commitment (e. g. order of equipment or start of construction work) that renders an investment irreversible, including the conclusion of a supply or service contract attributable to the execution of the project to be promoted by the applicant or a member of a consortium within the meaning of Number 5.2, as well as by affiliated companies within the meaning of Section 15 et seq. of the German Stock Corporation Act (Aktiengesellschaftsgesetz – AktG). The purchase of land or preparatory works such as obtaining permits or carrying out feasibility studies in advance are not considered to be the beginning of a project. In the case of acquisitions of non-affiliated companies within the meaning of Numbers 15 et seq. AktG, the start of the

[7] Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) Number 525/2013 of the European Parliament and of the Council (OJ L 328, 21.12.2018, p. 1), as last amended by Regulation (EU) 2023/857 of the European Parliament and of the Council of 19 April 2023 amending Regulation (EU) 2018/842 setting binding annual national targets for the reduction of greenhouse gas emissions for the period 2021 to 2030 as a contribution to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) 2018/1999 (OJ L 111, 26.4.2023, p. 1).

[8] Commission Delegated Regulation (EU) 2020/1044 of 8 May 2020 supplementing Regulation (EU) 2018/1999 of the European Parliament and of the Council with regard to global warming potential values and inventory guidelines and with regard to the Union inventory system, and repealing Commission Delegated Regulation (EU) No 666/2014 (OJ L 230, 17.7.2020, p. 1).

project is the time of acquisition of the assets directly associated with the acquired business premises. There is no project start within the meaning of these funding guidelines if a right of cancellation or a condition subsequent is agreed in a supply or service contract attributable to the execution in the event that the application is definitively rejected or a condition precedent is agreed in the event that the application is approved and the supply or service contract is not executed by the time is notified of the grant decision.

2.27 **Hydrogen derivatives:** Gaseous or liquid energy carriers and raw materials (e.g. methane, ammonia, methanol and synthetic fuels) based on green or low-carbon hydrogen.

2.28 **Intermediate products:** Products from key production steps that are necessary to manufacture the product and are relevant for its greenhouse gas accounting. Process heat is considered an intermediate product. Hydrogen and secondary energy carriers are not considered intermediate products. Hydrogen derivatives are not considered intermediate products if they are used for energy purposes.

3. LEGAL BASIS, FUNDING OBJECTIVE, PURPOSE OF THE GRANT , RESPONSIBILITY

3.1 The Federal Government grants subsidies for additional costs of transformative production processes based on climate protection contracts in emission-intensive sectors, in particular in accordance with these funding guidelines, the Federal Administrative Procedure Act, the German Civil Code, Sections 23 and 44 of the Federal Budget Code, taking into account the general administrative regulations issued for this purpose and in accordance with the Commission Communication, Guidelines on State Aid for Climate Action, Environmental Protection and Energy 2022[9] and the European Commission Decision of February 16, 2024, which are relevant to these funding guidelines.The grants are awarded by issuing a grant notification and concluding a climate protection contract under private law. The climate protection contract also regulates the possible surplus payments by the aid beneficiary.

3.2 Climate protection contracts should enable a rapid and continuous transformation of the industry towards climate neutrality by 2045 in a cost-efficient manner by

(a) funding the construction and operation of transformative production processes of particularly large industrial plants in hard-to-abate sectors, which lead to high greenhouse gas savings and which thus establish themselves on the market,

(b) the funding will indirectly build the infrastructure, lead markets, knowledge and expertise required for decarbonisation as a whole, and

(c) funding only processes with a high level of value chain integration that fit in with the German government's industrial and energy strategy and are also climate-friendly from a global perspective.

3.3 To achieve the objectives set out in Number 3.2 additional costs due to greenhouse gas emission reductions through low-emission production processes compared to the respective reference system are subsidized (purpose of the subsidy).

[9] Communication from the Commission, Guidelines on State aid for climate action, environmental protection and energy 2022 (OJ C 80, 18.2.2022, p. 1).

3.4 The granting authority is responsible for the procedure, the decision on the grant, the issuing of the grant notification ("Zuwendungsbescheid") and the conclusion of the climate protection contract. The granting authority may appoint a scientific advisory board to advise the granting authority on issues relating to the funding programme, notwithstanding the responsibilities set out in sentence 1. The scientific advisory board may only be composed of persons who do not have a conflict of interest with one or more potential or actual applicants or aid beneficiaries or companies affiliated with them within the meaning of Numbers 15 et seq. AktG and who have proven technical expertise with regard to transformative production processes or the incentive effect of funding programmes. Appointments are made in consultation with the Federal Ministry of Finance (BMF).

3.5 Unless expressly stipulated otherwise, the legal and administrative regulations referred to in these funding guidelines shall apply in the version valid at the time of the announcement of the respective funding call.

4. OBJECT OF THE FUNDING

4.1 According to the concept of CO_2 contracts for difference, climate protection contracts are intended to offset the additional costs incurred by companies from hard-to-abate sectors as a result of the construction of more climate-friendly plants or the conversion of plants to more climate-friendly plants (CAPEX) and their operation (OPEX) compared to plants with the best technology currently available.

4.2 Each climate protection contract has a term of 15 years. The contract term is defined in the climate protection contract and begins with the operational start of the project, at the latest 36 months after the grant notice becomes final. A different period of up to 48 months can be specified in the funding call. When setting the deadline in the funding call, the granting authority will take into account, in particular, the duration of approval procedures that must be carried out for the creation of the infrastructure for the implementation of transformative production processes, as well as the case that the infrastructure for the implementation of transformative production processes will probably only be established by the aid beneficiaries as part of the funded project. The granting authority may extend the deadline after the grant award has become final at the request of the aid beneficiary if the aid beneficiary demonstrates that it cannot start the subsidized project within the original deadline for reasons for which it is not responsible, in particular due to force majeure. If the project commences operations during the year, the contract term extends over 16 calendar years, i.e. the term of the climate protection contract covers the following periods in this case: firstly, the period from the actual operational start of the project up to and including 31 December of the calendar year in which the operational start occurs ("first partial year"), secondly, 14 complete calendar years following the first partial year and thirdly, the period, which starting on 1 January of the calendar year following the end of the 14 full calendar years, includes the days remaining of the 15 years from the operational start after deduction of the first partial year and the 14 full calendar years ("last partial year"; the first partial year and the last partial year together are the "partial years").

4.3 Only those industrial activities whose products provide equivalent or better functionality compared to products of the corresponding reference systems covered by Annex I to Directive

2003/87/EC[10] will be funded. Any subsequent amendments to Annex I of Directive 2003/87/EC will not be taken into account. Projects according to number 4.16 will not be funded.

4.4 Additional costs for the manufacture of products for which a reference system is defined in the funding call are eligible for funding. Additional costs and the determination of greenhouse gas emissions are only eligible for funding for the production quantities for which the aid beneficiary manufactures all intermediate products itself at the locations covered by the climate protection contract. The granting authority may specify this regulation in the funding call.

4.5 The production of hydrogen derivatives is generally eligible for funding as part of the subsidized projects. If hydrogen derivatives are transferred to a third party for utilisation, suitable evidence must be provided to show what the third party will use these hydrogen derivatives for. Only that portion of the hydrogen derivatives that is not used for energy utilisation or the production of substances for energy utilisation, even outside the funded facilities, is eligible for funding.

4.6 A project may involve the manufacture of several products that can be assigned to different reference systems if several products can be manufactured with one system or if there is a technological network on the basis of which several products are manufactured. A technological network exists if a technologically induced transfer of intermediate products is necessary with regard to the products to be manufactured and actually takes place. In the case of number 4.6 in the bidding procedure as the sum of its components. The amount of the annual grant or the surplus payment (number 4.8) is to be determined from the sum of the components of the project. Further details are set out in Annex 3.

4.7 Each individual production plant must be such that its reference system would be covered by the EU ETS in terms of its production capacity or rated thermal input in accordance with Annex I to Directive 2003/87/EC[11] .

4.8 The amount of the annual allowance or the surplus payment is calculated in accordance with the 7 in Number 7.

4.9 The hydrogen used must fulfil the requirements for green or low-carbon hydrogen. The granting authority may, if it considers this necessary for reasons of incentive effect, specify in the funding call the locations of electrolysis plants with a capacity of more than 10 MW for the purchase of

[10] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (OJ L 275, 25.10.2003, p. 32), as last amended by Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 on the establishment and operation of a market stability reserve. Directive of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 establishing and operating a market stability reserve for the Union greenhouse gas emission allowance trading scheme (OJ L 130, 16.5.2023, p. 134).

[11] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (OJ L 275, 25.10.2003, p. 32), as last amended by Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 on the establishment and operation of a market stability reserve. Directive of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 establishing and operating a market stability reserve for the Union greenhouse gas emission allowance trading scheme (OJ L 130, 16.5.2023, p. 134).

green hydrogen in order to ensure system and grid-friendly operation and at the same time to ensure that industrial hydrogen requirements are met on site, especially during the ramp-up phase of the hydrogen supply. Hydrogen produced from hydrogen derivatives will be treated as equivalent to green or low-carbon hydrogen, provided that it is equivalent to green or low-carbon hydrogen, meets the sustainability requirements from binding legal acts applicable at the time of the funding call and serves to introduce or expand transformative production processes. As an alternative to green or low-carbon hydrogen, hydrogen derivatives can also be used if they are equivalent to green or low-carbon hydrogen, meet the sustainability requirements from binding legal acts applicable at the time of the funding call and serve the introduction or expansion of transformative production processes. The funding call should restrict the use of certain types of hydrogen and hydrogen derivatives in compliance with the requirements of the National Hydrogen Strategy at the latest as soon as the Directive of the European Parliament and of the Council concerning common rules for the internal markets in renewable gases and natural gas and hydrogen (recast) of 23 November 2022 (COM/2021/803 final/2) has entered into force on the basis of the Commission's proposal.

4.10 The use of biomass for energy is only permitted if the applicant can prove that direct electrification is technically and economically unfeasible and that the use of hydrogen or hydrogen derivatives that are not produced from biomass, biogas, landfill gas or sewage gas is technically or economically foreseeable, and if the planned use of biomass is scalable in view of the limited biomass potential that is sustainably available. The granting authority will specify in the funding call how this evidence is to be provided, taking into account the state of the art. The use of biomass for energy purposes should be limited to residual and waste materials and to raw materials and energy carriers obtained from residual and waste materials. If the use of biomass is permitted, the aid beneficiary must provide evidence of the origin and source of the biomass used as part of the funding. Energy from biomass used must fulfil the requirements of the Biomass Ordinance, the Biomass Electricity Sustainability Ordinance and the sustainability requirements of Article 29 of Directive (EU) 2018/2001[12] and other EU legislation. Regardless of their categorization as large combustion plants, all plants for the use of biomass must comply with the emission limit value pursuant to Number 29(1)(1)(a) in conjunction with Number 3 of the 13th Ordinance on the Implementation of the Biomass Ordinance. § Number 3 of the 13th Ordinance on the Implementation of the Federal Immission Control Act. If the National Biomass Strategy sets different limits for the funding of combustion plants for the utilisation of solid biomass or further funding options, these apply accordingly to this funding guideline.

4.11 The material utilisation of biomass in a funded project is permitted. The granting authority will stipulate additional requirements in the funding call if this is provided for in the National Biomass Strategy.

4.12 The material and energy use of natural gas during the entire term of the climate protection contract in a subsidized project is only permitted if and to the extent that this is technically absolutely

[12] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the funding of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82), as last amended by Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the funding of energy from renewable sources and repealing Directive (EU) 2015/65/EC. Directive of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC with regard to the funding of energy from renewable sources and repealing Council Directive (EU) 2015/652 (OJ L, 2023/2413, 31.10.2023).

necessary. The granting authority will specify in the funding call how this evidence is to be provided, taking into account the global state of the art. Applicants must also submit a plan with their application that shows when and how the material and energy use of natural gas will be reduced during the term of the climate protection contract.

4.13 The use of the most environmentally harmful fossil fuels as defined in the Guidelines on State aid for climate, environmental protection and energy 2022[13] , such as hard coal, diesel, lignite, oil, peat and oil shale, for energy purposes is only permitted in the first ten years, calculated from the operational start of the subsidized project, and only to the extent that this is technically necessary. Number 4.12 remains unaffected by this.

4.14 Plants with otherwise unavoidable process emissions in which the greenhouse gas emission reductions are largely achieved through CCS or CCU are eligible for funding if the long-term storage or long-term product binding can be certified or the CCS or CCU measures are recognized as greenhouse gas emission reductions under the EU ETS and the connection to the necessary transport and storage infrastructures is adequately secured. The requirements set out in Commission Implementing Regulation (EU) 2018/2066[14] or corresponding requirements under EU law apply to the fulfilment of the obligation to provide evidence of the long-term storage/sequestration of carbon dioxide. With regard to the certification of long-term storage or long-term product binding, the respective current EU legal requirements apply. Insofar as the Carbon Management Strategy defines which process emissions are unavoidable and which plants with process emissions that are otherwise difficult to avoid are also to be subsidized by the state, this applies accordingly to this funding guideline.

4.15 The projects must fulfil the following minimum requirements:

(a) The project must have a minimum size of absolute average annual greenhouse gas emissions in the reference system. The minimum size is determined by the granting authority with the funding call. It is at least 10 kt CO_2 equivalents per calendar year.

(b) The project is compatible with the climate protection goals of the Federal Republic of Germany and the EU. This is particularly the case under the following conditions:

(i) From the third full calendar year at the latest within the term of the climate protection contract, the relative reduction in greenhouse gas emissions must be at least 60 % compared to the reference system.

(ii) A relative reduction in greenhouse gas emissions of at least 90 % compared to the reference system must be technically feasible with the technologies used, using appropriate energy carriers and raw materials, within the term of the climate protection contract and

[13] Communication from the Commission, Guidelines on State aid for climate action, environmental protection and energy 2022 (OJ C 80, 18.2.2022, p. 1).

[14] Commission Implementing Regulation (EU) 2018/2066 of 19 December 2018 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council and amending Commission Regulation (EU) No 601/2012 (OJ L 334, 31.12.2018, p. 1), as last amended by Commission Implementing Regulation (EU) 2022/1371 of 5 August 2022 correcting certain language versions of Implementing Regulation (EU) 2018/2066 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council 1), as last amended by Commission Implementing Regulation (EU) 2022/1371 of 5 August 2022 correcting certain language versions of Implementing Regulation (EU) 2018/2066 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council (OJ L 206, 8.8.2022, p. 15).

must be achieved in the last 12 months of the term of the climate protection contract (climate neutrality access criterion).

(iii) With the funding call, the granting authority may set higher thresholds for (i) and (ii) with the funding call.

(c) From the sixth full calendar year within the term of the climate protection contract, the planned relative greenhouse gas emissions reduction from the fifth full calendar year may not be undercut.

4.16 The following are not eligible

(a) projects that have already begun at the time the application is submitted (project start pursuant to Number 2.26). Projects for which the existence of the incentive effect has already been confirmed by the European Commission under state aid law or if the granting authority has authorised an early project start and determined eligibility for funding in accordance with these funding guidelines remain eligible for funding; or

(b) projects that are exclusively for the production of secondary energy carriers or hydrogen; or

(c) projects for which the maximum total funding amount under Number 7.4(b) is less than EUR 15 million; the granting authority may specify a different threshold in the funding call; or

(d) projects for which the maximum total funding amount under Number 7.4(b) exceeds the total amount of a funding call; or

(e) projects that serve exclusively to transport greenhouse gases; or

(f) projects that are exclusively for the geological storage of greenhouse gases; or

(g) projects that do not directly serve the manufacture of industrial products; or

(h) production in plants that are not operated on the territory of the Federal Republic of Germany; or

(i) production in plants that are not such that their reference system would be covered by the EU ETS in terms of capacity or rated thermal input in accordance with Annex I to Directive 2003/87/EC[15] ; or

(j) projects that cannot be continued after the end of the term of the climate protection contract without state funding; or

(k) projects that do not make a particular contribution to realizing the objectives of these funding guidelines; or

[15] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (OJ L 275, 25.10.2003, p. 32), as last amended by Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2003 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2023/1814 establishing and operating a market stability reserve for greenhouse gas emission allowance trading (OJ L 275, 25.10.2003, p. 32). Directive of the European Parliament and of the Council of 10 May amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2023/1814 establishing and operating a market stability reserve for the Union greenhouse gas emission allowance trading scheme (OJ L 130, 16.5.2023, p. 134).

(l) projects that are already being funded under the Climate Protection Contracts funding programme; or

(m) projects for which the applicant has already applied for funding under another funding programme of the European Union, the Federal Government or a federal state or which are already being funded under another funding programme, provided that the funding call stipulates this; the other requirements for other funding within the meaning of Number 2.2 remain unaffected; or

(n) the additional costs of systems that are already being funded under the climate protection contracts funding programme for another project; or

(o) projects that must be implemented in whole or in part due to legal requirements; or

(p) projects that fulfil the criteria set out in the funding call under Number 7.4(e) exceed the maximum total funding amount per project; or

(q) projects that lead to a significant impairment of the environmental objectives pursuant to Art. 17 of Regulation (EU) 2020/852[16] ; or

(r) projects that do not comply with the applicable Union standards; or

(s) projects that do not use at least best available techniques within the meaning of Directive 2010/75/EU[17] ("BAT") and for which it is not ensured that the emission levels of the project do not exceed values that would result from the use of BAT in the project; where emission levels associated with BAT have been set in implementing acts to Directive 2010/75/EU or in other binding directives, these levels shall apply for the purposes of BAT; where levels are expressed as ranges, the level at which the emission levels associated with BAT are first achieved by the project shall apply.

4.17 Funding is provided for the production portion of the systems and processes that can be attributed to a transformative production method. The granting authority can provide more detailed information on this in the funding call. By way of derogation from this, the granting authority may also provide for additional funding of operating costs for maximum shares of conventional production processes to be specified in the funding call, insofar as this is absolutely necessary for technological reasons.

5. BENEFICIARY

5.1 Companies within the meaning of Number 14 of the German Civil Code, including municipalities, municipally owned companies, municipal companies and municipal special-purpose associations, are eligible to apply if they are economically active ("Eligible applicants").

[16] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (OJ L 198, 22.06.2020, p. 13), as last amended by Corrigendum to Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088. 13), as last amended by Corrigendum to Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (Official Journal of the European Union L 198, 22 June 2020) (OJ L 142, 01.06.2023, p. 45).

[17] Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (recast).

5.2 Several eligible applicants may form a consortium if they intend to jointly manufacture one or more eligible products in Germany, provided that the total size of the consortium does not exceed the minimum size specified in Number 4.15(a) and there is a technological alliance of the manufacturing processes of the eligible product(s) ("consortium"). A technological network within the meaning of sentence 1 exists if a technology-related transfer of intermediate products is necessary with regard to the product(s) to be manufactured and actually takes place. Within the consortium, a member of the consortium must be appointed who submits the application for funding ("consortium leader") and who is authorised to serve notices on behalf of the consortium. Each member of the consortium is the aid beneficiary of the grant and a contracting party to the climate protection contract. The members of the consortium are jointly and severally liable for the obligations arising from the grant notification and the climate protection contract and for any surplus payments. Grants are paid to the consortium leader with discharging effect vis-à-vis the consortium members. For a syndicate, Scope 1 issues pursuant to Number 7.1(e) of all participating consortium members are considered joint Scope 1 emissions and the subsidised products of the entire value chain in the consortium are considered joint products. If intermediate products are reused within the consortium, they may also be transferred to non-members of the consortium in the meantime.

5.3 Applicants must be economically and technically capable of realizing the project to be funded. If these requirements are not met, taking into account the information provided in the application and the documents submitted, the application will be rejected.

5.4 Not authorised to apply:

(a) Legal entities that have received unlawful aid which has been declared incompatible with the internal market by a Commission decision (relating to individual aid or an aid scheme). Sentence 1 shall not apply if the total amount of the unlawful and incompatible aid, including the corresponding recovery interest, has been repaid in full or transferred to a blocked account;

(b) Companies in difficulty within the meaning of the European Commission guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty[18] . This includes companies that are subject to insolvency proceedings or that fulfil the conditions for the opening of insolvency proceedings at the request of creditors;

(c) Legal entities that have submitted or are obliged to submit a declaration of assets pursuant to Number 802c of the German Code of Civil Procedure or Number 284 of the German Fiscal Code;

(d) Legal entities against which the EU has imposed sanctions, such as companies that

(i) are explicitly mentioned in the legal acts imposing those penalties, or

(ii) owned or controlled by persons, entities or bodies subject to EU sanctions, or

(iii) are active in economic sectors against which the EU has imposed sanctions, insofar as the benefits would undermine the objectives of the sanctions in question.

[18] Communication from the Commission - Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty (OJ C 249, 31.7.2014, p. 1).

6. TYPE OF FUNDING AND SURPLUS PAYMENT OBLIGATION

6.1 Type of funding

(a) Grants are awarded by way of project funding in the form of non-repayable grants.

(b) There is no legal entitlement to the grant. The granting authority decides on the approval of applications at its own discretion and within the scope of the available budget funds.

6.2 Surplus payment obligation

The amount of the surplus payment obligation is determined by the granting authority on the basis of these funding guidelines and the climate protection contract.

7. SCOPE OF SUBSIDISATION, SURPLUS PAYMENTS AND REDUCTION OF PRODUCTION IN CONVENTIONAL REFERENCE PLANTS

7.1 Annual calculation

(a) The amount of the grants and the amount of the surplus payments are determined annually by calendar year, even if the project commences operations during the year, and are calculated as follows. Further details are set out in Annex 1, Numbers 1 and 2.

(i) The base contract price forms the basis for determining the amount of the grants and the amount of the surplus payments. The base contract price is the amount that the applicant estimates to cover additional costs compared to the reference system per ton of avoided greenhouse gas emissions ("base contract price**"**). When estimating the base contract price, applicants should bear in mind that other subsidies already approved are taken into account when calculating the subsidy cost efficiency in accordance with Number 8.3(f) are taken into account.

(ii) The base contract price is calculated in accordance with 7.2 a dynamisation component for the respective billing period ("**dynamised contract price**") is added to the base contract price. The base contract price is thus adjusted to the energy carrier amounts of the subsidised plant in the corresponding calendar year and the energy carrier amounts of the dynamised energy carriers. Dynamisation cushions the price risk of energy carriers and thus increases the efficiency of the subsidy.

(iii) The effective CO_2 price incurred for the transformative production process compared to the reference system is deducted from the base contract price or, in the case of dynamisation, from the dynamised contract price. The deduction cushions the risk of CO_2 costs and thus increases the efficiency of the subsidy.

(iv) The resulting difference is multiplied by the specific greenhouse gas emission reduction actually realized compared to the reference system and the realized production volume of the transformative production process.

(v) The result is the amount that the aid beneficiary receives from the grantor or - in the event of a negative difference between the base contract price or dynamised contract price and the effective CO_2 price - the surplus payment that the aid beneficiary pays to the grantor. If no greenhouse gas emission reduction is achieved in a calendar year, the amount paid out is zero euros (Annex 1, Number 1, paragraph 1).

(vi) Of the annual amount calculated in accordance with Number 7.1(a)(i) to (v), any other funding granted after the application has been submitted shall be paid in accordance with Number 7.5(c) shall be deducted. Insofar as other funding already approved at the time of submission of the application is increased after this time, sentence 1 shall apply accordingly to the amount by which the other funding has increased compared to the time of submission of the application. If the deduction is likely to lead to a permanent reduction in the grant, the maximum annual grant amount and the maximum total grant amount specified in the grant notification shall also be adjusted. Further details are set out in Annex 1.

(vii) Of the annual amount calculated in accordance with Number 7.1(a)(i) to (v), the granting authority may stipulate in the funding call that 60% of the project-specific additional green revenue be deducted on a sector- or product-specific basis if, in the opinion of the granting authority, the additional green revenue is unlikely to be sufficiently priced into the bids. The methodology for determining the green surplus will be announced by the granting authority in the funding call. Further details are set out in Annex 1.

(b) The effective CO_2 price is calculated from the CO_2 price in the EU ETS, the greenhouse gas emissions of the reference system in accordance with Number 7.1(d) and the greenhouse gas emissions of the project in accordance with Number 7.1(e) as well as the free allocations of EU ETS emission allowances for the subsidised project and for the reference system, and the greenhouse gas emission reductions actually achieved compared to the reference system. The calculation of the free allocations of EU ETS emission allowances must be carried out at the time of calculation on the basis of the currently applicable legal situation. In partial years, the free allocations of EU ETS emission allowances received by the subsidised project for the respective calendar year are to be taken into account on a pro rata basis in accordance with the duration of the partial year in the calendar year. The exact calculation of the effective CO_2 price is set out in Annex 1, Number 1, paragraph 2. The granting authority shall specify the price index for the annual calculation of the effective CO_2 price in the funding call. It may change the published price index with regard to the respective climate protection contract for objective reasons. This is possible in particular if the relevant price index is discontinued or the price index is no longer suitable for reflecting the CO_2 price. The affected aid beneficiaries must be informed immediately of any change.

(c) The reference system within the meaning of Number 2.14 is determined by the granting authority in the funding call, taking into account the provisions of the EU ETS. Article 2 of Commission Delegated Regulation (EU) 2019/331[19] applies to this; for plants with product benchmarks, Annex I of Directive 2003/87/EC in particular[20]. Any subsequent amendments

[19] Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 laying down EU-wide transitional provisions for the harmonization of free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council (OJ L 59, 27.2.2019, p. 8), as last amended by the corrigendum to Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 laying down EU-wide transitional provisions for the harmonization of free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council (OJ L 180, 4.7.2019, p. 31).

[20] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (OJ L 275, 25.10.2003, p. 32), as last amended by Directive (EU) 2023/959 of the European Parliament and of the

to Annex I of Directive 2003/87/EC are not taken into account. In addition to the indication of the specific greenhouse gas emissions related to the production volume, the reference system also includes the indication of the specific energy carrier amounts related to the production volume.

(d) The greenhouse gas emissions of the reference system are determined by the granting authority in the funding call and are calculated according to the benchmark values for the period 2021 to 2025 specified in the Annex to the Commission Implementing Regulation (EU) 2021/447[21]. If the greenhouse gas emissions of the reference system result from a combination of several benchmarks or if the application of fallback benchmarks for heat or fuel use is necessary, the granting authority makes the corresponding determinations. The specific energy carrier amounts of the reference system are determined by the granting authority in coherence with the specific greenhouse gas emissions. In the case of upstream reference systems that are specified in the funding call, the process emissions are communicated separately to the applicants when the funding call is published. The process emissions are to be added to the greenhouse gas emissions of the upstream reference system in accordance with the specifications of the funding call. The resulting total replaces the greenhouse gas emissions of the reference system of the project to be funded in the calculation.

(e) The greenhouse gas emissions of the project result from the greenhouse gas emissions of the subsidised plants (Scope 1 emissions), which are recorded in accordance with Annex I of Directive 2003/87/EC[22] for the industrial activities specified therein, and are calculated on the basis of the version of Commission Implementing Regulation (EU) 2018/2066[23] or corresponding EU legislation applicable at the time of the calculation. If plants are not mandatorily included in the EU ETS, sentence 1 applies accordingly. If a corresponding application in

Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 on the establishment and operation of a market stability reserve. Directive of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 establishing and operating a market stability reserve for the Union greenhouse gas emission allowance trading scheme (OJ L 130, 16.5.2023, p. 134).

[21] Commission Implementing Regulation (EU) 2021/447 of 12 March 2021 establishing adjusted benchmarks for the free allocation of emission allowances for the period 2021-2025 pursuant to Article 10a(2) of Directive 2003/87/EC of the European Parliament and of the Council (OJ L 87, 15.3.2021, p. 29).

[22] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (OJ L 275, 25.10.2003, p. 32), as last amended by Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 on the establishment and operation of a market stability reserve. Directive of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 establishing and operating a market stability reserve for the Union greenhouse gas emission allowance trading scheme (OJ L 130, 16.5.2023, p. 134).

[23] Commission Implementing Regulation (EU) 2018/2066 of 19 December 2018 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council and amending Commission Regulation (EU) No 601/2012 (OJ L 334, 31.12.2018, p. 1), as last amended by Commission Implementing Regulation (EU) 2022/1371 of 5 August 2022 correcting certain language versions of Implementing Regulation (EU) 2018/2066 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council (OJ L 206, 8.8.2022, p. 15).

accordance with sentence 2 is not possible, the granting authority will issue the necessary specifications.

(f) The modalities of grants and surplus payments are governed by Number 9 as well as the more detailed provisions of the grant notification and the climate protection contract.

7.2 Dynamisation of energy carrier costs

(a) The dynamisation of one or more energy carriers serves to reduce the price risk. This means that the applicant is better protected and can calculate with a lower risk premium; this also makes the subsidy more favourable for the state.

(b) When determining the reference system, the granting authority should specify one or more energy carriers in the reference system that are to be fully or proportionately dynamised. To this end, it shall state the specific requirements for the respective energy carriers of all eligible reference systems in the funding call. If one or more energy carriers of the respective reference system are dynamised and not all energy carriers used in the project are dynamised in accordance with Number 7.2(c) are dynamised, the energy carrier amounts dynamised in the reference system are reduced by the quantities of those energy carriers used in the project that are not dynamised in accordance with Number 7.2(c) are dynamised. The reduction is carried out in accordance with Annex 1 Number 2 paragraph 8.

(c) Taking into account the effect of an environmentally friendly operating decision, the granting authority will also stipulate in the funding call that one or more energy carriers used in the project for the manufacture of products and intermediate products will be fully or proportionately dynamised, provided that long-term supply or hedging contracts with fixed prices for these energy carriers are not offered or are only offered with considerable risk premiums to the extent necessary. If and insofar as it is determined that a dynamisation for secondary energy carriers, hydrogen or hydrogen derivatives will take place, the base prices and price indices determined by the granting authority will always be used for these energy carriers, even if the secondary energy carrier, hydrogen or hydrogen derivatives are produced within the funded project. In this case, the quantity of energy carriers required to produce the secondary energy carrier, hydrogen or hydrogen derivatives is not dynamised.

(d) The dynamisation takes into account the real development of prices for the energy carriers used as well as the greenhouse gas emission reduction of the project ("**dynamisation component**"). The granting authority can specify the maximum amount of energy requirement that can be taken into account per sector or, if required, per reference system or per technology in the funding call. The applicant may not exceed this amount in the application. The granting authority shall specify price indices and the base prices per dynamised energy carrier in the funding call. If no suitable price index is available for one or more energy carriers that specifically reflects the price movements of the respective energy carrier, the granting authority may specify one or more suitable substitute indices. If a preparatory procedure has been carried out prior to the bidding procedure, the granting authority may refrain from naming the base prices in the funding call and notify the base price separately to the companies that are authorised to participate in the bidding procedure following the outcome of the preparatory procedure. The granting authority may change the published price index with regard to the respective climate protection contract for objective reasons. This is possible in particular if the price index concerned is discontinued or the price index is no longer suitable for reflecting the market value of the indexed energy carrier. The latter may be the case in

particular if there are significant methodological changes in the calculation of the price index. The beneficiaries concerned must be informed immediately of any changes.

(e) If and insofar as dynamisation is provided for green hydrogen, the price level resulting from the applicable price index shall be increased by 3 %.

(f) If separate dynamisation is provided for green and low-carbon hydrogen, the price level resulting from the price index for green hydrogen is to be applied for low-carbon hydrogen from 2035 if the price level for green hydrogen is below the price level resulting from the price index for low-carbon hydrogen.

(g) Further details are set out in Annex 1.

7.3 Deviation from stated energy carrier amounts

(a) If an Aid beneficiary deviates by more than five percentage points in one or more calendar years from the targets specified in its application pursuant to Number 8.2(d) or according to number 7.9 in one or more energy carriers, it must apply for the prior approval of the granting authority. The application must fulfil the requirements specified in Number 8.2(d) to the extent that the planned change in the relative energy carrier amounts results in deviations from the application pursuant to Number 8.2(d) or the adjustments pursuant to Number 7.9. 7.9 arise. Deviations from the data specified in the application pursuant to number 8.2(d) or according to number 7.9 of one or more energy carriers by up to five percentage points are permitted without the approval of the granting authority, subject to the other requirements and specifications of this funding guideline and the climate protection contract.

(b) The granting authority may deny the application under Number 7.3(a) sentence 1 only if

(i) the requested derogation

(A) is due to force majeure, or

(B) results in additional greenhouse gas emission reductions within the subsidised project, or

(C) is based on significant technological improvements to the subsidised project, or

(D) is based on unforeseen price developments, or

(E) reacts to a shortage in the availability of certain energy carriers;

and

(ii) the requested derogation

(A) does not violate budgetary law and sufficient budgetary resources are available, and

(B) is consistent with energy policy objectives, and

(C) taking into account the interdependencies, does not cause any deterioration in the energy efficiency of the subsidised project or any deterioration in the flexibility of electricity use within the subsidised project, which is based in each case on a representation obligation on the part of the aid beneficiary;

and

(iii) which according to number 3.4 appointed in accordance with Number 3.4 approves the requested deviation.

(c) The adjustment of the energy carrier amounts may not result in a reduction of the amount of energy required in the application pursuant to Number 8.2(d) or according to number 7.9 must not fall below the absolute greenhouse gas emission reduction pathway specified in the application. The granting authority may deviate from this with the approval of the body responsible pursuant to Number 3.4 the approval of the advisory board appointed in accordance with Number 3.4, provided that the requested deviation is not due to a fault of the aid beneficiary, in particular due to force majeure or delayed provision of infrastructure, and the minimum requirements in accordance with Number 4.15(b) are complied with.

(d) If the granting authority approves the requested deviation, the calculation of the grant or surplus payment is based on the information in the application in accordance with Number 7.3(a).

(e) The maximum annual funding amount and the maximum total funding amount are determined by adjusting the energy carrier amounts within the project on the basis of this Number 7.3 will not change.

(f) The application according to number 7.3(a) sentence 1 may only be submitted once per calendar year by an aid beneficiary.

7.4 Maximum funding amount

(a) The grant notification specifies the respective maximum annual funding amount and the maximum total funding amount.

(b) The maximum total funding amount corresponds to the sum of the maximum annual funding amounts.

(c) The maximum annual subsidy amount is calculated on the basis of the base contract price. A term is added to the base contract price that appropriately takes into account the potential additional budget requirement due to the dynamisation of the energy carriers of the reference system and the project as well as any fluctuations in the effective CO_2 price.

(d) Further details are set out in Annex 1.

(e) The funding call may stipulate that the maximum total funding amount under Number 7.4(b) per project is limited to a certain percentage of the funding volume specified in the funding call.

7.5 Prohibition of cumulation, offsetting and state aid ceilings

(a) If the aid beneficiary receives other funding for the project that is not equivalent to funding under this funding guideline in accordance with Number 4.16(m) the granting authority shall, as part of the annual calculation of the grant and the surplus payment pursuant to Number 7.1 ensure that there is no overcompensation. Otherwise, number 7.1(a).

(b) The granting authority shall publish a list of those grants that are deemed to be other grants within the meaning of these funding guidelines together with the funding call. This is

a minimum list that does not release the applicants from the obligation to carry out an independent review with regard to the receipt of other funding, whereby the applicants may request confirmation of their respective review results from the granting authority.

(c) From the number 7.1 and number 9.2 any other funding approved after submission of the application shall be deducted. Insofar as other funding already approved at the time the application is submitted is increased after this time, sentence 1 shall apply accordingly to the amount by which the funding has increased compared to the time the application was submitted. The deduction must be made in the calendar year following the calendar year in which the other funding was paid out or otherwise granted. If a deduction is not possible or not possible in full because the grant awarded on the basis of the other funding exceeds the amount of the grant calculated for the respective calendar year or an excess payment is to be made by the aid beneficiary, the granting authority must reclaim grants already paid on the basis of the climate protection contract in the amount of the non-deductible other funding, limited to the amount of all grants previously paid to the aid beneficiary on the basis of the climate protection contract. Otherwise, any amounts not deducted or reclaimed must be deducted in subsequent calendar years.

(d) Insofar as hydrogen is used in a project that is produced by electrolysis plants of an affiliated company of the aid beneficiary within the meaning of Numbers 15 et seq. AktG, the other funding paid out or otherwise granted in respect of these electrolysis plants by an affiliated company of the aid beneficiary within the meaning of Numbers 15 et seq. AktG shall be recognized accordingly in accordance with Number 7.1(a)(vi) and number 7.5(c) deducted. Further details, in particular the amount of the deduction and the required evidence, can be regulated in the funding call and the climate protection contract.

7.6 EU state aid law

If the European Commission has set a maximum limit for the funding of a project, the total funding of this project, including the funding based on these funding guidelines, may not exceed this maximum limit.

7.7 Suspension of payment obligations

At the request of the aid beneficiary, the granting authority shall terminate the mutual payment obligations in connection with the grant or surplus payment for the remaining term of the climate protection contract with effect from the end of three years, calculated from the end of the calendar year in which the application was submitted by the aid beneficiary, if the aid beneficiary has made a surplus payment to the grantor under the climate protection contract in a calendar year. The aid beneficiary may only submit the application in the calendar year following the surplus payment.

7.8 Reduction of production in conventional reference plants

If the aid beneficiary or an affiliated company within the meaning of Numbers 15 et seq. AktG, operates one or more plants in Germany at the time of application that are subject to the same reference system or - in the case of projects that relate to several reference systems - the same reference systems as one or more subsidised plants ("**conventional reference plant**"), the aid beneficiary must reduce production in the conventional reference plants by a total of at least 90% of the production capacity of the subsidised plants during the term of the climate protection contract. More detailed regulations are set out in the climate protection contract.

7.9 Postponement of the start of surgery

(a) If the actual operational start of the project differs from the planned operational start of the project, the costs specified in Number 8.2(d) at the request of the Aid beneficiary in accordance with the postponement of the operational start by the Granting authority pursuant to Number 7.9(c) adjusted. The application must be submitted after the operational start date and at the latest by the end of 31 December of the calendar year in which the operational start date of the project falls. The granting authority should decide on the application in accordance with sentence 1 within two months of receipt.

(b) If the start of operations is postponed by one or more complete calendar years, the application must contain a corresponding postponement of the information provided when the application was submitted in accordance with Number 8.2(d) must be made in the application. If the postponement of the start of operations by one or more complete calendar years does not take place, the application in accordance with number 7.9(a) sentence 1, the changes in the absolute planned values for greenhouse gas emission reductions, the production volume and the energy carrier amounts for each energy carrier in the project and the planned values derived from these for the specific greenhouse gas emission reductions in relation to the product, the relative greenhouse gas emission reductions, the specific energy carrier amounts in relation to the product and the relative energy carrier amounts must be presented in a sufficiently precise time frame (e.g. to the nearest month). The values stated in accordance with sentence 2 must not contradict the information in the application in accordance with number 8.2(d)

(c) The granting authority shall approve the application in accordance with Number 7.9(a) sentence 1 if the requirements of Number 7.9(b) sentence 3 are met. In this case, it will amend the planned values on the basis of the application in relation to the complete calendar years and, in the case of an operational start during the year, also in relation to the partial years within the term of the climate protection contract. For this purpose, the granting authority adjusts the values specified in Number 7.9(b) sentence 2 and determines the plan values derived from them, which are specified in Number 7.9(b) sentence 2, in accordance with the specifications in Annex 1 Number 5.

(d) If the application is not made within the period provided for in the third sentence of Number 7.9(a) or if the condition set out in the third sentence of Number 7.9(b) is not met, the authority shall, at its discretion, adjust the values specified in the second sentence of Number 7.9(b) in accordance with the deviation of the actual operational start of the project from the planned operational start of the project and determine the planned values derived therefrom, which are specified in Number 7.9(b) sentence 2, in accordance with the specifications in Annex 1 Number 5. The values determined in accordance with sentence 1 must not contradict the information in the application in accordance with Number 8.2(d) are contradictory.

(e) In the cases of number 7.9(c) and number 7.9(d) no adjustments are made to the subsidised project defined in the climate protection contract.

(f) The maximum annual funding amounts shall be determined in the case of Number 7.9(a) sentence 1 or in the case of number 7.9(d) shall be adjusted in accordance with Annex 1 Number 3. The maximum annual funding amounts specified in the notice of grant pursuant to Number 7.4(b) shall not be increased as a result.

(g) Number 4.2 remains unaffected.

(h) If an aid beneficiary wishes to deviate by more than five percentage points in one or more calendar years from the relative requirements of one or more energy carriers adjusted in accordance with this number, number 7.3 shall apply.

(i) If the operational start of the project in accordance with Number 7.9 is postponed, the minimum requirement according to number 4.15(b)(i) must be fulfilled at the latest from the fourth full calendar year within the term of the climate protection contract; the requirement to comply with the minimum path for the absolute greenhouse gas emission reduction pursuant to number 9.5(a)(i) remains unaffected by this.

8. BIDDING PROCEDURE

8.1 Procedure

(a) The granting authority organizes bidding procedures in which applicants submit their applications for one or more projects. The bidding procedures are initiated by funding calls.

(b) In order to increase the effective achievement of the funding objectives, the granting authority may, in consultation with the European Commission, restrict bidding procedures in the funding call to certain sectors in accordance with Annex I of Directive 2003/87/EC[24] or technologies or specify in the funding call that the funding volume is to benefit at least one or more projects from one or more sectors ("limited bidding procedure") if

(i) a cross-sectoral bidding procedure would not achieve one of the following objectives, which can be specified in funding calls, with the same effectiveness:

(A) a sector- or technology-specific objective enshrined in Union law,

(B) the special funding of demonstration projects,

(C) the targeted funding of sectors or innovative technologies that have the potential to make an important and cost-effective contribution to climate protection and comprehensive decarbonisation in the long term, or

(ii) it can be assumed that a more selective approach leads to lower climate protection costs, or

(iii) the amount of bids that different groups of companies are likely to submit differs significantly (more than 10 %); in this case, groups of companies with comparable costs must compete with each other.

[24] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (OJ L 275, 25.10.2003, p. 32), as last amended by Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 on the establishment and operation of a market stability reserve. Directive of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 establishing and operating a market stability reserve for the Union greenhouse gas emission allowance trading scheme (OJ L 130, 16.5.2023, p. 134).

(c) A bidding procedure, including a limited bidding procedure, may only take place if it is to be expected that not all applicants will be awarded a full contract in this procedure, so that there is no risk of competition being impaired.

(d) A limited bidding procedure is only permissible if sufficient competition and the greatest possible technological openness are ensured.

(e) In particular, the funding call sets out the implementation of a bidding procedure, a possible limitation of the bidding procedure, the funding conditions, the funding volume, the evaluation scheme for assessing the bids (see Number 8.3), the deadline for submitting bids, the forms and documents to be used when submitting applications and the procedural rules for the bidding process.

(f) In the funding call, the granting authority sets a maximum price for all bids, for bids from applicants in a specific sector, for bids from applicants using a specific technology or for bids from applicants whose project can be assigned to a specific reference system. The maximum prices should be set in such a way that, based on current price expectations, surplus payments can be expected over the course of the funding period and the projects can probably continue to be operated without state funding after the end of the term of the climate protection contract. Deviating maximum prices require the approval of the European Commission or the joint approval of the Federal Chancellery and the BMF. Bids with specific funding costs (number 8.3(f)Annex 2 Number 1 Paragraph 1) above the maximum price specified in the funding call will be excluded from the bidding process.

(g) The granting authority publishes the funding call in the Federal Gazette.

8.2 Applications

(a) Applications must be submitted using the forms provided by the granting authority and completed in full in accordance with the requirements set out in the funding call.

(b) Applications subject to a condition, for example auxiliary applications, are not admissible and will be rejected.

(c) Applications must include all information and documents required for the review, the decision on the eligibility requirements and the evaluation of the bids.

(d) For each calendar year and, in the case of a planned operational start during the year, additionally for the partial years within the period specified in Number 4.2 for each calendar year and, in the case of a planned operational start during the year, additionally for the partial years within the term of the climate protection contract to be determined in accordance with Number 4.2, calculated from the operational start of the project planned by the applicant. This results from the planned specific greenhouse gas emission reduction in relation to the product and the planned production volume, which the applicant must also state in the application. If the project involves the manufacture of several products that are to be allocated to different reference systems, the planned absolute greenhouse gas emission reduction for the entire project must be stated. The specific greenhouse gas emissions related to the products must only be stated if this is technically possible. For each calendar year and, in the case of a planned operational start during the year, additionally for the partial years within the period specified in number 4.2 for each calendar year and, in the case of a planned operational start during the year, additionally for the partial years within the term of the climate protection contract to be determined in accordance with Number 4.2,

calculated from the operational start of the project planned by the applicant, the respective planned absolute energy carrier amount of each energy carrier of the project in the application. This results from the respective planned specific energy carrier requirement in relation to the product and the planned production volume. The applicant must state the planned specific energy carrier requirement in relation to the production volume in the application. If the project involves the manufacture of several products that are to be allocated to different reference systems, the planned absolute energy carrier amount for the entire project must be stated. The specific energy carrier amounts in relation to the products must only be stated if this is technically possible. If an upstream reference system is used for the project, the application must also state the planned input quantity of the upstream product of the project. In addition, the planned relative energy carrier amounts must be stated in the application. Relative energy carrier amounts are defined as the share of an energy carrier in the total energy requirement. The quantities of secondary energy carriers, hydrogen or hydrogen derivatives used must be stated in the application, irrespective of whether they are produced in the project itself or purchased externally. If secondary energy carriers or hydrogen are produced in the project itself, the quantities of energy carriers required for the production of these secondary energy carriers and hydrogen are not to be taken into account when specifying the energy carrier amounts in the application. If hydrogen derivatives are produced in the project itself, the quantities of energy carriers required to produce the hydrogen derivatives must also be stated separately when specifying the energy carrier requirements in the application*. In the* case of a planned operational start of the project during the year, sufficiently specific information must be provided for the last full calendar year and for the last partial year in accordance with the requirements of the granting authority.

(e) In particular, the following information and documents must be provided:

(i) a project description that includes at least the following:

(A) a technical description of the project with details

(1) on the technical feasibility and technological pathway for decarbonising the process, including a conceptual and quantitative description of how greenhouse gas emissions are saved and the minimum requirements under Number 4.15(b) are achieved,

(2) to achieve the minimum size according to number 4.15(a),

(3) at the planned time of the start of operations,

(4) the extent to which it is a transformative production process in accordance with Number 2.21 is involved,

(5) to illustrate the system boundaries and system delimitation in compliance with the provisions laid down in this funding guideline and in the funding call,

(B) information on the locations of the production plants covered by the project and whether each individual production plant is such that its reference system

would be covered by the EU ETS in terms of its production capacity or rated thermal input in accordance with Annex I to Directive 2003/87/EC[25] ,

(C) presentation of the economic and operational feasibility and the expertise required to implement the project to be funded,

(D) a milestone plan up to the operational start of the project, showing which milestones will be reached 12 months and 24 months after the grant decision becomes final,

(E) information on the transferability of the technological concept of the plants to be funded to other plants of the applicant and other legal entities,

(F) a comparative presentation of the project with the applicable best available techniques within the meaning of Number 4.16(s) ,

(ii) a quantitative presentation of the remaining emissions, including specific energy carrier amounts and greenhouse gas emissions under different operating modes of the plant to be promoted,

(iii) proof of sufficient creditworthiness,

(iv) a financing plan with details of own and external funds,

(v) proof of a security (number 2.17) in the amount of 0.1 % of the maximum total funding amount calculated by the applicant (financial prequalification). The security shall cover any claims of the funding body in connection with the contractual penalty pursuant to Number 12.2(a)(i) secured. The granting authority shall return the security without delay,

(A) if the applicant has not been awarded a contract for its bid or if the commitment period specified in the funding call for the project referred to in Number 8.2(e)(xv) has expired; or

(B) if the operational start of the applicant's subsidized project takes place within 36 months of the grant decision becoming final. If the funding call pursuant to Number 4.2 a different deadline has been specified in the funding call in accordance with Number 4.2 the deadline has been extended after the grant notification has been issued, this deadline shall apply instead of the 36 months; or

(C) if the Applicant pays a contractual penalty in accordance with Number 12.2(a)(i) on the basis of a corresponding contractual penalty provision in the climate protection contract,

[25] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (OJ L 275, 25.10.2003, p. 32), as last amended by Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 on the establishment and operation of a market stability reserve. Directive of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 establishing and operating a market stability reserve for the Union greenhouse gas emission allowance trading scheme (OJ L 130, 16.5.2023, p. 134).

(vi) an agreement between the applicant and the responsible works council or the responsible parties to the collective agreement, which shows that the applicant is pursuing a viable concept for maintaining the site and developing employment in relation to the transformative production process. If no such agreement can be attached to the application, the applicant must justify this in writing to the granting authority and attach the concept and a statement from the works council or the parties to the collective agreement to the application. If there is no works council at the applicant's company and the applicant is not bound by a collective agreement, the applicant must submit a viable concept for maintaining the location and developing employment in relation to the transformative production process,

(vii) information on other funding already approved or applied for the project,

(viii) a declaration confirming that the project has not yet commenced at the time the application is submitted (commencement of the project pursuant to Number 2.26),

(ix) details of other parties obliged to provide information and to cooperate within the meaning of Number 10.2(f),

(x) the declarations on data processing,

(xi) the declaration of facts relevant to the subsidy,

(xii) the declaration of non-existence of reasons according to number 5.4,

(xiii) a declaration that the applicant is aware of the requirements of antitrust law and that these requirements have not been or will not be violated either in the course of the bidding procedure in question or in general with regard to bidding procedures under these funding guidelines; the granting authority may stipulate further requirements in this regard in the funding call,

(xiv) a declaration confirming that all necessary foreign trade and merger control authorizations for the activities of the applicant or, in the case of a consortium, the consortium members have been obtained,

(xv) a declaration that the applicant is satisfied with the content and completion of the programme referred to in Number 8.5(c) completed and, where applicable, agreed, and submits an offer to conclude the climate protection contract with this content. The binding period for this offer is six months, unless otherwise stipulated in the funding call,

(xvi) a declaration confirming that the project does not comply with Number 4.16(o) must be implemented in whole or in part due to legal requirements,

(xvii) a declaration confirming that the project will not have a significant negative impact on the environmental objectives pursuant to Article 17 of Regulation (EU) 2020/852[26] , and

[26] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (OJ L 198, 22.06.2020, p. 13), as last amended by Corrigendum to Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088. 13), as last amended by Corrigendum to Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (Official Journal of the European Union L 198, 22 June 2020) (OJ L 142, 01.06.2023, p. 45).

(xviii) a declaration confirming that the project complies with the applicable Union standards.

The granting authority may, at its discretion, request further documents and evidence as well as the examination and confirmation of documents, for example by an auditor appointed by it. The costs are to be borne by the applicant.

(f) The project to be funded must be defined in the application by the applicant or, in the case of a consortium, by the consortium leader. If the project defined in accordance with sentence 1 consists of several products, the respective products must be named individually in the application. The project realised by the applicant or, in the case of a consortium, by the consortium, may not exceed a maximum of 8.2(e)(i) submitted with the application under Number 8.2(e)(i), the project realised by the applicant may not deviate from the project defined in sentence 1 without the approval of the granting authority. In particular, the transformative production process chosen by the applicant at the time of the application, or by the consortium leader in the case of a consortium, may not change during the course of the realization of the project defined in sentence 1. Deviations authorised in this funding guideline or in the model climate protection contract remain unaffected.

(g) An applicant may be excluded from participation in the bidding procedure by the granting authority if the information provided by the applicant in the application for participation in the bidding procedure is false or deviates significantly from the information provided by the applicant in the preparatory procedure in accordance with Number 8.6 has made. This is particularly the case if the deviations are not attributable to the funding call or to changes to the Climate Protection Contracts funding programme, in particular changes to these Funding Guidelines and the model climate protection contract after the announcement of the implementation of the preparatory procedure in the Federal Gazette.

(h) The relevant date for the assessment and examination by the granting authority of applications submitted in a bidding procedure is the expiry of the material exclusion period (Number 8.3(c)). If this funding guideline refers to a different date, this date is decisive.

8.3 Examination and evaluation of bids

(a) The granting authority will review the applications in accordance with the provisions set out in these funding guidelines and in the respective funding call. The bids are awarded in the order in which they are evaluated within the scope of the funding volume applicable to the respective funding call. The maximum funding amount of the respective projects is used as the basis for determining the respective funding volume required. In the event of a tie, the decision will be made by drawing lots, unless all applications with the same number of points can be awarded a grant. The funding volume applicable to the respective funding call may be slightly exceeded by a maximum of five per cent, provided this is possible under budgetary law and a bid could otherwise not be awarded.

(b) Applications that are wholly or partially aimed at funding the same project are not admissible within one funding call. If several applications are aimed in whole or in part at funding the same project, only the last application submitted will be considered and evaluated. All other applications submitted earlier will be rejected. If applications are received at the same time, the decision will be made by drawing lots.

(c) Applications that are not submitted in the form specified by the granting authority by the deadline specified in the funding call (material cut-off deadline) or that do not contain the

information and documents requested or - in the case of an additional request - subsequently requested, will be rejected.

(d) Bids are evaluated on the basis of the following criteria:

(i) Conveying cost efficiency and

(ii) relative reduction in greenhouse gas emissions.

(e) The criterion of relative greenhouse gas emission reduction is weighted in accordance with Annex 2. Further details are set out in Annex 2.

(f) The criterion of funding cost efficiency is based on the calculation of specific funding costs. The specific funding costs are the sum of the base contract price and the cost efficiency of other funding, provided that the other funding has already been approved at the time of application.

(i) To determine the cost-effectiveness of other funding, the discounted sum is divided by the discounted planned absolute greenhouse gas emission reduction during the term of the climate protection contract determined in accordance with the provisions of this funding guideline. The interest rate required for the calculation pursuant to sentence 1 shall be specified by the granting authority in the funding call.

(ii) To assess the funding cost efficiency, this is compared with the maximum prices set by the granting authority (cf. Number 8.1(f)) are standardized. Annex 2 defines the calculation methodology.

(g) The relative greenhouse gas emission reduction according to Number 8.3(d)(ii) is calculated as the sum of the planned greenhouse gas emissions of the project divided by the greenhouse gas emissions of the reference system for the planned production volume, based on the period up to the end of the fifth year, calculated from the operational start of the project . This takes account of the target under the Climate Protection Act to reduce greenhouse gas emissions by at least 65% by 2030.

(h) The criterion of relative greenhouse gas emission reduction is transformed by a comparative value and weighting factor specified by the granting authority in the funding call. This transformed criterion is multiplied by the score for the funding cost efficiency. The exact procedure is governed by Annex 2. The granting authority ensures that the transformed criterion is between 0.8 and 1.2 when determining the comparative value and the weighting factor.

(i) The bidding process is static and pay-as-bid, so that successful applicants receive the grant on the basis of the base contract price they have applied for.

(j) The granting authority works together with the German Emissions Trading Authority (DEHSt) to review applications.

(k) The funding call may stipulate that only a certain percentage of the funding volume specified in the respective funding call can be allocated to projects that are assigned to the same sector. The sectors and the allocation of a project to a sector are specified in the funding call. If the maximum total funding amount of a project, taking into account the respective maximum total funding amount of the projects that are assigned to this project in the order specified in Number 8.3(a) sentence 2 in the same sector, exceeds the threshold value spec-

ified in the funding call in accordance with sentence 1, this project from the respective sector shall be included in the evaluation in accordance with Number 8.3(a) shall not be taken into account. If several reference systems apply to a project that are to be allocated to different sectors in accordance with the provisions of the funding call, the project as a whole shall be allocated to the sector that has the highest averaging factor in accordance with Annex 3, Number 1, paragraph 2.

(l) If the granting authority intends to reject an application because no transformative production process is involved, it will commission a report from an expert assessor before making a final decision on the project's eligibility for funding. The expert opinion must be submitted within two weeks. The expert assessor must have proven professional expertise in issues relating to the decarbonisation of industry and must not have a conflict of interest with one or more potential or actual applicants or aid beneficiaries or companies affiliated with them within the meaning of Numbers 15 et seq. AktG (German Stock Corporation Act). The granting authority may impose the costs on the applicant.

8.4 Grant notification

The granting authority awards the grant to successful applicants by means of a grant notification, which is issued simultaneously with the award of the contract in favour of the successful bid in the bidding process.

8.5 Climate protection contract

(a) The climate protection contract is concluded when the granting authority awards the contract in favour of the applicant's bid in accordance with Number 8.2(e)(xv) and thus accepts the offer. The climate protection contract serves to further define the grant relationship based on the grant award notice. The climate protection contract also contains provisions on the aid beneficiary's surplus payments.

(b) The funding authority will publish a sample climate protection contract in accordance with the requirements of this funding guideline with the funding call. For reasons of equality of competition, the model climate protection contract will only be adapted if this is absolutely necessary due to the special features of the aid beneficiary.

(c) The applicant may send the sample climate protection contract, completed and, if necessary, adapted by the applicant, to the granting authority for a non-binding review within a period specified in the funding call before the expiry of the material exclusion period for bids. The granting authority will inform the applicant of its assessment up to one week before the expiry of the material cut-off deadline for bids.

(d) The climate protection contract also contains provisions for the event that the subsidized plants are to be transferred to a third party. In this case, it must be ensured in particular that surplus payments continue to be made to the funding provider and that the purchaser fulfils the requirements and obligations of the aid beneficiary under this funding guideline, the funding call and the climate protection contract.

8.6 Preparatory procedure

(a) The granting authority may carry out a preparatory procedure prior to the bidding process in order to obtain information for the bidding process and to give applicants the opportunity to ask questions about the bidding process. It shall publicise the implementation of a preparatory procedure, including the procedural regulations, in the Federal Gazette.

(b) Applicants who have not participated in the preparatory procedure or have not submitted the requested information in full or on time are excluded from participation in the subsequent bidding procedure (material exclusion period).

(c) If a preparatory procedure has been carried out, the granting authority may refrain from publishing the funding call in the Federal Gazette in accordance with Number 8.1(g) and instead publish the call for funding only on the funding programme website.

Information events and public consultation processes

In addition to the information provided, the granting authority may hold information events to clarify technical issues relating to the Climate Protection Contracts funding programme. Before establishing methodological regulations for the Climate Protection Contracts funding programme, the granting authority may conduct public consultation procedures.

8.7 Exclusion

An applicant may be excluded from an ongoing bidding procedure and future bidding procedures if it or a company affiliated with it within the meaning of Numbers 15 et seq. AktG, has entered into contracts with other applicants in connection with the application for grants under this funding guideline or has coordinated behavior that has the object or effect of preventing, restricting or distorting competition in accordance with a legally binding decision by the antitrust authorities pursuant to Number 1 of the Act against Restraints of Competition (GWB) or Article 101 TFEU. If the antitrust authority's decision is to be entered in the Competition Register pursuant to Number 2 (2) sentence 1 of the Competition Register Act, the exclusion from current and future bidding procedures can be provided for as long as the entry in the Competition Register exists. If the competition authority's decision does not have to be entered in the Competition Register, the exclusion from current and future bidding procedures can be provided for a maximum of six months from the date on which the competition authority's decision becomes final.

9. CALCULATION METHOD, PAYMENT AND SURPLUS PAYMENTS

9.1 Monitoring concept

The aid beneficiary must submit a monitoring concept for the determination and reporting of greenhouse gas emissions, energy consumption data and the key production parameters of the subsidized project at the start of operations. Further details are set out in the climate protection contract.

9.2 Calculation method

(a) The grants to the aid beneficiary or the surplus payments to the grantor are made on a calendar year basis after a calculation procedure has been carried out. If the project commences operations during the year, the term of the climate protection contract extends over 16 calendar years. In this case, the calculation is still based on calendar years.

(b) The granting authority carries out the calculation procedure. For this purpose, the aid beneficiary must submit the calculated and verified greenhouse gas emissions of the funded project (realised greenhouse gas emissions), the free allocations of EU ETS emission allowances for the funded project (realised free allocation), the energy consumption data (actual measured requirements for the energy carriers of the funded project) and the key production parameters (realised production volume and, where relevant, input quantities of input materials and preliminary products) in an emissions and energy efficiency report by 30 April of the following year ("calculation data"). If a project comprises the manufacture of several products that are to be allocated to different reference systems, the respective production quantities, the actual measured requirements for the energy carriers of the funded project and the free allocations realised for the reference systems covered must be reported separately. The calculation figures relate to the previous calendar year (if applicable, during the year); in partial years, they only relate to the period of the partial year within the term of the climate protection contract. In the case of an operational start of the project during the year, calculation data must be provided for a period of 16 calendar years; in this case, the report for the last partial year must include the calculated and verified greenhouse gas emissions and the key production parameters for the last 12 months within the term of the climate change mitigation agreement in addition to the information according to sentence 2.

(c) In the emissions and energy efficiency report in accordance with 9.2(b) the data determined, verified and reported in implementation of the TEHG must be used as far as possible. The aid beneficiary must agree to the forwarding of this data by DEHSt to the granting authority in the climate protection contract. Proof of the consent given to DEHSt to pass on the data must be submitted with the calculation details. Insofar as according to number 9.2(b) calculation information that goes beyond the data reported in the implementation of the TEHG must be submitted (e.g. additional data or data during the year) or the subsidized plant does not fall within the scope of the TEHG, the calculation and reporting must be carried out in accordance with the provisions of the TEHG, Commission Implementing Regulation (EU) 2018/2066[27] and Commission Delegated Regulation (EU) 2019/331[28] or corresponding provisions of Union law, as amended. If a corresponding application in accordance with sentence 4 is not possible, the granting authority shall issue the necessary requirements. In the cases of sentences 4 and 5, the information on greenhouse gas emissions, energy consumption and production parameters must have been verified in advance by an

[27] Commission Implementing Regulation (EU) 2018/2066 of 19 December 2018 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council and amending Commission Regulation (EU) No 601/2012 (OJ L 334, 31.12.2018, p. 1), as last amended by Commission Implementing Regulation (EU) 2022/1371 of 5 August 2022 correcting certain language versions of Implementing Regulation (EU) 2018/2066 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council (OJ L 206, 8.8.2022, p. 15).

[28] Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 laying down EU-wide transitional provisions for the harmonization of free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council (OJ L 059, 27.2.2019, p. 8), as corrected by Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 laying down EU-wide transitional provisions for the harmonisation of free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council (OJ L 059, 27.2.2019, p. 8), as corrected by Corrigendum to Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 laying down EU-wide transitional arrangements for the harmonization of free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council (OJ L 180, 4.7.2019, p. 31).

expert verification body appointed by the granting authority (e.g. verification body pursuant to Number 21 TEHG). If there are doubts about the quality of the reported data in the cases referred to in sentence 1 in individual cases, the granting authority may request the verification and confirmation of certain information by an expert inspection body appointed by it.

(d) The granting authority must carry out the calculation procedure no later than three months after receipt of the complete calculation data and inform the aid beneficiary of the result of its calculations, in particular the amount of the annual grant or the surplus payment, taking into account any advance payments made. By way of exception, the granting authority may extend the period for carrying out the calculation procedure to a maximum of four months. The granting authority must justify the extension of the calculation procedure to the aid beneficiary in writing.

(e) The granting authority is entitled to request further information.

(f) Grants and surplus payments by the aid beneficiary are due within 30 days of notification of the result of the calculation. Payments shall be made subject to a possible change in the result of the calculation in accordance with Number 9.3.

(g) Further details on the calculation procedure can be regulated in the model climate protection contract.

9.3 Subsequent changes

If data submitted in the calculation procedure is corrected by the DEHSt as part of the review, subsequent changes are made to the free allocations for the subsidized project or the price data of the price indices specified in the funding call is corrected, the calculation of the grant or surplus payment must be based on this data. In this case, a calculation procedure that has already been carried out must be carried out again within three months of receipt of the amended data by the granting authority on the basis of the amended data in accordance with sentence 1. The granting authority shall inform the aid beneficiary of the result of the recalculation procedure carried out in accordance with sentence 2, taking into account any grant and surplus payments already made. Number 9.2(f) shall apply accordingly.

9.4 Payments on account

(a) At the request of the aid beneficiary, the granting authority may grant an advance payment per quarter if the aid beneficiary provides security for any reimbursements plus interest.

(b) Interest of five percentage points above the base interest rate shall be charged annually from the date of payment on any instalment payments made in excess.

9.5 **Exclusions**

(a) A grant is not awarded in a calendar year,

(i) if the information provided at the time of application pursuant to 8.2(d) or according to number 7.9 (minimum pathway for the absolute greenhouse gas emission reduction) for that calendar year is fallen short of by more than 10 per cent; or

(ii) if the person referred to in Number 8.2(d) or according to number 7.9 (minimum pathway for the use of hydrogen) for this calendar year is undercut by more than 10 %.

If the aid beneficiary was not responsible for the lower absolute reduction in greenhouse gas emissions or the lower utilisation of hydrogen, in particular due to force majeure or delayed provision of infrastructure, the funding will continue to be granted in accordance with the grant notification and the climate protection contract; or

(iii) if the aid beneficiary intentionally or through gross negligence uses energy carriers in a calendar year whose use is not permitted under the provisions of these funding guidelines (in particular Number 4.9, 4.10, 4.12, 4.13), the funding call or the climate protection contract; or

(iv) if the aid beneficiary is unable to provide the evidence required under the provisions of this funding guideline, the funding call or the climate protection contract with regard to the energy carriers used in the funded project due to wilful intent or gross negligence.

(b) No grants will be awarded for the remaining term of the climate protection contract if

(i) the relative reduction in greenhouse gas emissions compared to the reference system is not at least 60% by the third full calendar year after the start of operations at the latest. This does not apply if the aid beneficiary can demonstrate to the granting authority that the minimum value could not be achieved for reasons for which it is not responsible, in particular due to force majeure or delayed provision of infrastructure. Insofar as the granting authority pursuant to Number 4.15(b)(iii) has set a higher threshold value, this value shall apply to sentence 1; or

(ii) in five calendar years within the term of the climate protection contract, which do not have to be consecutive, from the operational start of the funded project, the aid beneficiary fulfils the requirements set out in the application in accordance with Number 8.2(d) or in accordance with number 7.9 specified in the application or adjusted in accordance with Number 7.9. This does not apply if the aid beneficiary can demonstrate to the granting authority that the minimum value could not be achieved for reasons for which it is not responsible, in particular due to force majeure or delayed provision of infrastructure. More detailed rules for calculating the deviation are set out in Annex 1 Number 5 paragraph 12 and Annex 3 Number 1 paragraph 7.

9.6 Reimbursement of the grant if the subsidized system is decommissioned

In principle, subsidized plants may not be permanently decommissioned during the term of the climate protection contract. If subsidized plants are to be permanently decommissioned before the end of the term of the climate protection contract, this requires the prior approval of the funding authority. In the event of final decommissioning of the subsidized plants, the aid beneficiary of the subsidy must reimburse the subsidy granted to the funding authority. The granting authority may limit this reimbursement to 5% or more of the maximum total grant amount, provided this is absolutely necessary to avoid undue hardship, also taking into account the sale value of the plants and the profitability of the aid beneficiary.

10. EVALUATION, CONTROL AND TRANSPARENCY

10.1 Evaluation, control and review

(a) In order to comply with the obligations under state aid, grant and budgetary law and to monitor success, the granting authority will carry out a review on the basis of the criteria

set out in Number 3.2 and the indicators and criteria selected for this purpose, the granting authority will carry out an accompanying target achievement- , impact and efficiency review of this funding guideline in accordance with the administrative regulations number 11a of Number 44 BHO in conjunction with number 2.2 of Number 7 BHO. An external evaluation may be commissioned.

(b) The granting authority carries out a performance review of the projects implemented.

(c) The effectiveness and efficiency of the funding guideline is continuously evaluated on the basis of the bidding procedures and funding programme carried out.

10.2 Information and audit rights

(a) The applicant and the aid beneficiary are each subject to comprehensive information and co-operation obligations, which extend to all phases of the application, grant and surplus payment as well as their success monitoring and evaluation. If the granting authority has a legitimate interest, it may also request information and details in connection with this funding programme from the aid beneficiary after termination of the climate protection contract.

(b) The applicant and the aid beneficiary must notify the granting authority immediately and without being asked of any changes to facts relevant to the decision on the grant and surplus payment and to the facts relevant to the grant at every stage of the application, during the grant period and until the final decision is issued.

(c) The applicant and the aid beneficiary must provide the granting authority, the Federal Audit Office, the auditing bodies of the European Union and their authorised representatives ("information aid beneficiaries") with information upon request, allow them to inspect all of the company's books, documents and data, and permit audits, so that the information relevant to the disbursement (also on the basis of random checks independent of suspicion) can be checked, irregularities clarified, notification obligations fulfilled and the funding of decarbonisation projects, in particular in connection with the hydrogen market ramp-up, can be evaluated and improved for the future ("Information purposes"). Further details can be regulated in the model climate protection contract.

(d) The aid beneficiary must keep all documents relevant to the grant and all documents relevant to the surplus payment for at least ten years after the end of the term of the climate protection contract and submit them in the event of an audit.

(e) The applicant and the aid beneficiary must agree that

(i) the persons designated by the aid beneficiaries of the information are authorised to enter the operating and business premises and the associated properties of the aid beneficiary of the grant within normal business hours in order to fulfil their duties,

(ii) the aid beneficiaries of information may pass on information and findings to other authorities in order to fulfil their tasks, with reference to the confidentiality of this information,

(iii) the information aid beneficiaries may publish data in anonymised or aggregated form, provided this does not infringe the legitimate interests of the aid beneficiary,

(iv) the aid beneficiaries of information may process information and findings for information purposes, link them to official data and store them on data carriers,

(v) the granting authority may compare the information with other authorities,

(vi) other authorities may provide information to the granting authority and also transmit data that is subject to state secrecy,

(vii) the funding is recorded in a centralised federal system (funding database) on the basis of Number 44 BHO in conjunction with the administrative regulations number 9.1 and 9.2 of Number 44 BHO.

(f) The information and co-operation obligations of this number 10.2to which the applicant and the aid beneficiary are subject also extend to the companies and enterprises affiliated with the applicant and the aid beneficiary under company law or in any other contractual form (in particular affiliated companies within the meaning of Numbers 15 et seq. of the German Stock Corporation Act) and their respective beneficial owners within the meaning of Number 3 of the German Money Laundering Act and legal representatives, subject to any further provisions in the grant notification or climate protection contract,

(i) who are in possession of information which, in the view of the Federal Government or the granting authority, is required for the application, grant, surplus payment or evaluation of the grant or surplus payment or whose cooperation is required for this purpose;

(ii) which the applicant or the aid beneficiary uses directly or indirectly to achieve the funding purpose defined in these funding guidelines;

(iii) to which the applicant or the aid beneficiary of the grant provides funding, whether directly or indirectly; or

(iv) from which the applicant or the aid beneficiary purchases energy or purchases energy for the aid beneficiary from third parties in connection with the project

(hereinafter referred to as "**other parties obliged to provide information and cooperate**").

(g) The applicant and the aid beneficiary must release employees, business partners, authorities (in particular the Federal Network Agency and DEHSt) and other parties obliged to provide information and cooperation from their confidentiality obligations towards the aid beneficiaries of the information with regard to the documents and information required for the fulfilment of the information purposes. They must endeavour to ensure that the requested information is made available to the aid beneficiaries of the information immediately and directly.

(h) The applicant and the aid beneficiary must ensure that the other parties obliged to provide information and cooperate fulfil the information and cooperation obligations arising from this funding guideline, the funding call and the climate protection contract in the same form as the applicant or the aid beneficiary themselves. Violations are deemed to be violations by the applicant or violations by the aid beneficiary.

(i) During the approval period, the aid beneficiary must inform the granting authority, without being asked, of any changes at the level of the other parties obliged to provide information and cooperate that are relevant to the funding and the surplus payment.

(j) The agreement to comply with the provisions of this Number 10.2 must be declared in the application.

10.3 Reporting

(a) The granting authority publishes the information required under state aid law in the European Commission's state aid transparency database[29] within six months of concluding a climate protection contract if the grant awarded exceeds EUR 100,000.

(b) The granting authority prepares annual reports[30] on the grants awarded under this funding guideline, which the Federal Republic of Germany submits to the European Commission and the BMWK submits to the German Bundestag on request.

10.4 Knowledge transfer plan

(a) The aid beneficiary must regularly and comprehensively inform the public and industry-related stakeholders about the use of the transformative production process in the course of knowledge transfer and thus contribute to its commercial scaling.

(b) Confidential information containing business or trade secrets of the aid beneficiary or other legal entities, the disclosure of which is prohibited by law or the disclosure of which could jeopardize public safety and order, may not be disclosed to the public, industry-related stakeholders or other third parties. This information must be reported to the granting authority. In agreement with the aid beneficiary and in compliance with data protection regulations, the granting authority may publish the information in anonymized and aggregated form or make it available to selected industry-related stakeholders.

(c) The granting authority may stipulate further information obligations.

11. SUBSIDY MATERIALITY

11.1 The grants awarded in accordance with these funding guidelines are subsidies within the meaning of Number 264 of the German Criminal Code and the German Subsidies Act (SubvG).

11.2 Before submitting the application, the authorised applicants shall be informed of the criminal liability for subsidy fraud and of their notification obligations pursuant to Number 3 SubvG and, in accordance with Administrative Regulation Number 3.4.6 on Number 44 BHO, the facts relevant to the subsidy in the specific case shall be specified in the form of a conclusive list. The information, including the list of facts relevant to the subsidy, must be included in the application form and must be accompanied by a confirmation from the applicant that they are aware of the criminal nature of the subsidy fraud and the facts relevant to the assessment of their application.

11.3 In the application and the annual submission of the calculation data in accordance with Number 9.2(b) the persons acting on behalf of the applicant and the aid beneficiary confirm that they are

[29] The public search function of the state aid transparency database is available at: https://webgate.ec.europa.eu/competition/transparency/public?lang=de.

[30] Council Regulation (EU) 2015/1589 of 13 July 2015 laying down detailed rules for the application of Article 108 of the Treaty on the Functioning of the European Union (OJ L 248, 24.9.2015, p. 9) and Commission Regulation (EC) No 794/2004 of 21 April 2004 implementing Council Regulation (EC) No 659/1999 laying down detailed rules for the application of Article 93 of the EC Treaty (OJ L 140, 30.4.2004, p. 1), as last amended by Commission Regulation (EU) 2016/2105 of 1 December 2016 amending Annex I to Regulation (EC) No 794/2004 as regards the application of Article 93 of the EC Treaty (OJ L 140, 30.4.2004, p. 1). L 140, 30.4.2004, p. 1), as last amended by Commission Regulation (EU) 2016/2105 of 1 December 2016 amending Annex I to Regulation (EC) No 794/2004 as regards the form to be used for the notification of State aid to the fisheries and aquaculture sector (OJ L 327, 2.12.2016, p. 19).

aware of the criminal offence of subsidy fraud and the notification obligations pursuant to Number 3 SubvG.

12. LEGAL CONSEQUENCES OF VIOLATIONS

12.1 Cancellation of the funding decision and extraordinary termination of the climate protection contract

(a) The cancellation of the grant notification is governed by Numbers 48 and 49 of the Administrative Procedure Act.

(b) Even after it has become incontestable, a grant notification should be withdrawn or revoked in whole or in part with effect for the past if

(i) the granting authority becomes aware that

(A) the aid beneficiary of the grant has committed a serious deception with regard to the conditions for the grant or has withheld information or is unable to provide the required evidence; or

(B) the aid beneficiary of the grant has attempted to obtain information that could have given it an improper advantage in the bidding process; or

(C) the aid beneficiary has negligently or intentionally provided misleading information that could have significantly influenced the award decision of the granting authority, or has attempted to provide such information; or

(D) the aid beneficiary of the grant has obtained the grant by providing incorrect or incomplete information.

(ii) the operational start of the subsidised project has not taken place at the latest 48 months after the grant decision has become final. Insofar as the granting authority extends the deadline pursuant to Number 4.2 after the grant award has become final, this period shall apply instead of the 48 months ; or

(iii) the subsidised project has not achieved a relative reduction in greenhouse gas emissions of at least 90% compared to the reference system in the last 12 months of the term of the climate protection contract due to intentional or negligent action on the part of the aid beneficiary . It is assumed that the aid beneficiary is responsible for the breach of this obligation. In the event that the grant notification is cancelled in accordance with this paragraph, the aid beneficiary must repay 10% of the total grant awarded to the aid beneficiary to the grantor. For each percentage Number that the project falls short of achieving the relative greenhouse gas emission reduction of 90%, the repayment amount pursuant to sentence 3 shall be increased by 2 percentage points. For each additional percentage Number that the project falls short of achieving the relative greenhouse gas emission reduction of 75%, the repayment amount pursuant to sentence 3 increases by a total of 4 percentage points. The repayment amount pursuant to sentence 3 is limited to the total grants awarded to the aid beneficiary.

(iv) the aid beneficiary of the grant has not or no longer used the grant for the intended purpose; or

(v) the aid beneficiary of the grant has not fulfilled conditions imposed on the basis of the grant award or has not fulfilled them within a set deadline, in particular has not submitted the prescribed proof of use in good time.

(c) Unless the circumstances mentioned under (i) to (v) have already been taken into account under Number 12.1(b) be withdrawn or revoked in whole or in part, also with effect for the past, even after it has become incontestable, if

(i) the aid beneficiary or another party obliged to cooperate and provide information fulfils its obligations under Number 10.2 of these funding guidelines; or

(ii) the Aid beneficiary provides calculation information in accordance with Number 9.2(b)9.2(b) does not submit complete information, does not submit it on time or submits it incorrectly; or

(iii) the aid beneficiary of the grant does not disclose to the granting authority any other funding applied for or approved at the time of application or after submission of the application; or

(iv) the requirements according to number 8.7 sentence 1 are met; or

(v) it is certain that the operational start of the subsidised project cannot take place within 48 months of the grant decision becoming final. In this case, the granting authority may cancel the grant award prior to the operational start of the funded project. If the granting authority extends the deadline in accordance with Number 4.2 has been extended, this shall apply. The forfeiture of any contractual penalties by the aid beneficiary remains unaffected by this; or

(vi) the climate protection contract becomes null and void or is terminated before the end of the agreed contract term; or

(vii) the subsidised plants in accordance with number 9.6 have been permanently decommissioned with the prior consent of the granting authority.

(d) As part of its decision to cancel the grant award, the granting authority must in particular weigh up the disadvantages that the cancellation of the grant award would entail for the grantor. Also in the cases of Number 12.1(b) the grant award may not be cancelled if the disadvantages for the funding body outweigh the disadvantages.

(e) The case of cancellation of the grant notification (withdrawal or revocation), including the cases referred to in paragraphs (b) and (c) as well as the case of a judicial cancellation of the grant decision, are also included in the climate protection contract as extraordinary grounds for termination.

12.2 Contractual penalty

(a) The climate protection contract specifies a contractual penalty to be paid by the aid beneficiary in the event that the aid beneficiary intentionally or negligently breaches one of the following obligations. Further case groups for the contractual penalty can be provided for in the model climate protection contract.

(i) The operational start of the subsidised project does not take place at the latest 36 months after the funding decision becomes final. If the funding call pursuant to Number 4.2 a different deadline has been specified in the funding call in accordance with Number 4.2 the

deadline has been extended after the grant notification has become final, this deadline shall apply instead of the 36 months; any further wilful omission after the expiry of one year, calculated from the expiry of the deadline, shall constitute a breach of duty.

(ii) The Aid beneficiary or another party obliged to provide information and cooperate shall fulfil its obligations to provide information and cooperate within the meaning of Number 10.2 after a warning has been issued; any further wilful failure to do so after the expiry of one month, calculated from the date of the warning issued, shall constitute a breach of duty.

(iii) The Aid beneficiary shall submit the annual calculation data pursuant to Number 9.2(b) in full, late or incorrectly after a warning has been issued; any further wilful omission after the expiry of one month in each case, calculated from the date of the warning issued, shall constitute a breach of duty.

(iv) The Aid beneficiary shall not disclose to the granting authority any other funding applied for or approved after the conclusion of the climate protection contract; any further wilful omission after the expiry of one month from the application for or approval of the other funding shall constitute a breach of duty.

(v) The Aid beneficiary violates a condition imposed on the basis of the grant notification after a warning has been issued; any further intentional action after the expiry of one month from the date of the warning constitutes a breach of duty.

(vi) Until the end of the term of the Climate Protection Contract, the Aid beneficiary shall fulfil the obligations set out in Number 7.8 after a warning has been issued; any further wilful failure to do so after the expiry of one month from the date of the warning shall constitute a breach of duty.

(vii) The Aid beneficiary deviates by more than five percentage points in any one calendar year from the targets specified in Number 8.2(d) specified in the application for funding or from the funding amounts specified in 7.9 adjusted relative energy carrier amounts.

(viii) The Aid beneficiary falls below the thresholds set when submitting the application pursuant to Number 8.2(d) specified in the application or in accordance with 7.9 or adjusted in accordance with Number 7.9, by more than 10 % for a calendar year.

(b) With regard to Number 12.2(a)(viii) the contractual penalty to be paid by the Aid beneficiary shall be calculated as follows: It is the percentage by which the project deviates by more than 10 % from the amount of funding granted for the relevant calendar year under Number 8.2(d) or the amount planned in accordance with 7.9 for the respective calendar year in accordance with Number 8.2(d) or the adjusted absolute greenhouse gas emission reduction in accordance with Number 7.9, with the absolute greenhouse gas emission reduction planned for this calendar year and the respective current effective CO_2 price in accordance with Number 7.1(b) shall be multiplied. The amount of the contractual penalty pursuant to sentence 2 shall be reduced by the amount of the grant for the respective calendar year, which is calculated in accordance with Number 9.5(a)(i) is not granted. In the other cases specified in Number 12.2(a) the contractual penalty to be paid by the Aid beneficiary shall be up to 1% of the maximum total grant amount per breach of duty. For a negligent breach of obligations under Number 12.2(a)a lower amount of the contractual penalty may be provided for in the model climate protection contract.

(c) In the event that the aid beneficiary is a consortium pursuant to Number 5.2 the above Numbers 12.2(a) and (b) shall apply accordingly in the event that one or more consortium members forfeit the contractual penalty in accordance with the above paragraphs. All consortium members shall be jointly and severally liable for payment of the contractual penalties forfeited by one or more consortium members. Further details are set out in the model climate protection contract.

12.3 Announcement of final fines, court decisions and serious violations of the grant notice or climate protection contract

(a) The granting authority shall publish on its website for a period of five years the issue of final administrative fines and legally binding court decisions in which a breach of antitrust law was established, a fine or a fine or custodial sentence was imposed in connection with a grant under this funding guideline or a climate protection contract, as well as serious breaches of the grant decision or the climate protection contract. The notice must state the nature of the offence, the aid beneficiary of the grant and the sanction.

(b) The aid beneficiary of the grant must agree in the climate protection contract with the notification in accordance with para. (a) declare its agreement.

13. PERIOD OF VALIDITY

This funding guideline enters into force on March 11, 2024. It will be repealed when all current climate protection contracts have been terminated, but no later than December 31, 2050, unless the period of validity of this funding guideline is extended in advance.

The funding guideline will be evaluated for the first time after the third funding call at the latest and, if necessary, adapted in agreement with the BMF. Further evaluations and adjustments remain reserved. For funding applications submitted before the amended funding guideline comes into force, the latest version of the replaced guideline applies, even if the decision on the application is made after the amended guideline comes into force.

Berlin, March 11, 2024

Federal Ministry

for Economic Affairs and Climate Action

On behalf of

Bernhard Kluttig

Appendix 1
Calculation of the disbursement amount and determination of the maximum funding amount

The amount of the annual grant or the annual surplus payments ("**disbursement amount**") is determined by the granting authority on the basis of the aid beneficiary's bid in accordance with the following provisions. **Number 1** explains the general rules for calculating the disbursement amount. It describes the dynamisation of the reference system, which takes into account the dynamic development of the corresponding energy carrier prices. **Number 2** specifies how the dynamic development of the energy carrier prices of the project is mapped. **Number 3** explains how the maximum subsidy amount is calculated. **Number 4** summarises the most important elements that are included in the calculation of the disbursement amount. The calculations are based on specific variables (normalised to a unit of the product). **Number 5** therefore defines specific variables based on the absolute, measurable variables.

The structure of the dynamisation depends on which energy carriers are dynamised in accordance with the specifications of the granting authority set out in the funding call and which energy carriers are used in the project. If a funding call specifies that only individual or several energy carriers in the reference system are to be dynamised, **Number 1** applies. If individual or several energy carriers of the projects are also dynamised, **Number 2** also applies.

It should be noted that the variables listed below are predominantly time-variable. The superscript t for the temporal variability is usually omitted in the following for better readability and is only used for planned values that are not constant over time. Values realised during implementation are marked with the superscript real and therefore do not have the superscript t. The temporal dependency of the variables is listed in the explanatory tables after each formula. The terms year and yearly refer to the complete calendar years and, in the case of an operational start during the year, to the first and last partial year. Absolute values are denoted below with capitalised variables, while standardised values are denoted with the corresponding lower-case letters. This paragraph also applies to Annex 2 and Annex 3.

1. General calculation of the payout amount

1) In principle, the payment amount of the annual subsidy is calculated as shown in the following equation. The amount paid out is limited by the maximum annual subsidy amount.

$$Z_{KSV} = \left(p_{KSV}^{Basis} + \Delta k_{KSV}^{Ref,t} - p_{CO2}^{eff}\right)\Delta e^{real}\, Q^{real} - R_{nKSV} - R_{GP} \qquad [1a]$$

If no reduction in greenhouse gas emissions is achieved ($\Delta e^{real} \leq 0$), the following applies $Z_{KSV} = 0$.

The annual payment amount Z_{KSV} is calculated from the difference between the base contract price p_{KSV}^{Basis} (usually adjusted by a dynamisation component $\Delta k_{KSV}^{Ref,t}$ see Number 1 paragraph 3) and an effective CO price ${}_2p_{CO2}^{eff}$ (see Number 1 paragraph 2), multiplied by the annual specific greenhouse gas emission reduction achieved in real terms Δe^{real} and multiplied by the annual production volume achieved in real terms Q^{real} less any other subsidies R_{nKSV} that the company receives for the project after submitting the application and - depending on the provisions of the funding call - less any additional green revenues, if applicable R_{GP}.

In addition, further corrections for energy carrier price adjustments and the adjustment of specific requirements and planned greenhouse gas emission reductions are possible. These and other elements are defined and explained in more detail below.

The base contract price p_{KSV}^{Basis} corresponds to the bid of the aid beneficiary after conclusion of the climate protection contract.

Element	Description of the	Temporal variability
Z_{KSV}	Amount paid out under the climate protection contract [EUR]	Determined annually
p_{KSV}^{Basis}	Base contract price [EUR/t CO_2 -eq.]	Constant over time
$\Delta k_{KSV}^{Ref,t}$	Dynamisation component for the dynamic energy price adjustment of the reference system [EUR/t CO_2 -eq.]	Determined annually
p_{CO2}^{eff}	Effective CO_2 price [EUR/t CO_2 -eq.]	Determined annually
Δe^{real}	Realised specific greenhouse gas emission reduction of the project according to Number 5 [t CO_2 -eq./ME product]	Determined annually
Q^{real}	Realised production volume of the project [ME Product]	Determined annually
R_{nKSV}	Other funding that was approved or increased after submission of the application and was granted in accordance with Number 7.5(c) must be deducted from the amount disbursed in the calendar year following the calendar year in which the other funding was disbursed or otherwise granted [EUR]	Determined annually
R_{GP}	Adjustment date to take account of the green surplus revenue [EUR]	Determined annually

R_{GP} is only applicable if the granting authority specifies in the funding call that the green surplus is to be deducted.

2) The effective CO_2 price under this and all other design variants is as follows:

$$p_{CO2}^{eff} = \frac{\left(e_{Ref} - a_{Ref}\right) - \left(e^{real} - a^{real}\right)}{\Delta e^{real}} p_{EUA}^{real} \qquad [2]$$

The effective CO_2 price takes into account costs and revenues resulting from the EU ETS. This takes into account the difference between the project and the respective reference system subject to the EU ETS, taking into account the respective free allocation.

Element	Description of the	Temporal variability
e_{Ref}	Specific greenhouse gas emissions of the reference system [t CO_2 -eq./ME product]	Constant over time
a_{Ref}	Free specific allocation for the reference system	Determined annually

Element	Description of the	Temporal variability
	[t CO_2 -eq./ME product]	
e^{real}	Realised specific greenhouse gas emissions of the project [t CO_2 -eq./ME product]	Determined annually
a^{real}	Realised specific free allocation of the project [t CO_2 -eq./ME product]	Determined annually
p_{EUA}^{real}	Indexed CO_2 price in the EU ETS [EUR/t CO_2 -eq.]	Determined annually

3) The following applies to the dynamisation component to take into account the development of the energy carrier price of the reference system during the term of the contract (dynamisation):

$$\Delta k_{KSV}^{Ref,t} = -\frac{\sum_i \beta_i^{Ref} d_i^{Ref} \left(p_i^{real} - p_i^{Basis}\right)}{\Delta e^{Plan,t}} \qquad [3]$$

This adjustment compensates for higher or lower differential costs for the implementation of the project relative to the respective reference system. These are calculated from the difference between the real indexed energy carrier prices for the energy carriers of the reference system and the base prices for the dynamised energy carriers of the reference system.

Element	Description of the	Temporal variability
d_i^{Ref}	Specific demand of the reference system of energy carrier i [MWh/ME product]	Constant over time
β_i^{Ref}	Factor for determining the proportion of dynamisation of energy carrier i of the reference system	Constant over time
p_i^{real}	Real indexed price for energy carrier i [EUR/MWh]	Determined annually
p_i^{Basis}	Base price for energy carrier i [EUR/MWh]	Constant over time
$\Delta e^{Plan,t}$	Planned specific greenhouse gas emission reduction of the project in tonnes per year according to Number 5 [t CO_2 -eq./ME product]	Defined for each year

4) The factor β_i^{Ref} is determined by the granting authority for each energy carrier in the funding call.

5) The sum of the basic contract price and the dynamisation component described in Number 1 paragraph 3 is the dynamised contract price.

6) Other funding that was approved or increased after the application was submitted and was therefore not taken into account in the bid and in the calculation of the funding cost efficiency will be deducted from the amount paid out in accordance with Number 7.5(c) shall be deducted (R_{nKSV}).

2. Calculation of the disbursement amount for dynamisation of energy carriers of the project

1) The granting authority may provide for an energy carrier price adjustment for one or more energy carriers in the project. The following equation then applies to the disbursement amount:

$$Z_{KSV} = \left(p_{KSV}^{Basis} + \Delta m_{KSV}^{Plan,t} + \Delta k_{KSV}^{Plan,t} - p_{CO2}^{eff}\right)\Delta e^{real} Q^{real} - R_{nKSV} - R_{GP} \qquad [1b]$$

The amount paid out is limited by the maximum annual funding amount.

If no reduction in greenhouse gas emissions is achieved ($\Delta e^{real} \leq 0$), the following applies $Z_{KSV} = 0$.

R_{GP} is only applicable if the granting authority specifies in the funding call that the green surplus is to be deducted.

If the granting authority provides for an energy carrier price adjustment for one or more energy carriers in the project, the dynamisation component under Number 2 (6) replaces the dynamisation component under Number 1 (3).

Element	Description of the	Temporal variability
$\Delta m_{KSV}^{Plan,t}$	Adjustment of the base contract price to the annual specific energy carrier amounts to be applied [EUR/t CO_2 -eq.]	Defined for each year
$\Delta k_{KSV}^{Plan,t}$	Dynamisation component for the dynamic energy carrier price adjustment [EUR/t CO_2 -eq.]	Determined annually

2) The planned energy carrier amounts are specified by indicating the planned specific energy carrier amounts of the dynamised energy carriers in each year t ($d_i^{Plan,dyn,t}$) and the non-dynamised energy carriers in each year t ($d_i^{Plan,ndyn,t}$). This information is provided for projects as a whole. If the project comprises several products that can be assigned to different reference systems, the information is provided for each of these products. If this is not possible for technical reasons, the absolute figures in Annex 3 are given for the entire project as a total.

3) In each year of the contract term, the payment is adjusted by taking into account the planned change in greenhouse gas emission reductions over time and the planned change in the dynamised energy carrier amounts over time in the following adjustment date:

$$\Delta m_{KSV}^{Plan,t} = p_{KSV}^{Basis} \left(\frac{\Delta e^{Plan,mittel}}{\Delta e^{Plan,t}} - 1 \right) + \frac{1}{\Delta e^{Plan,t}} \sum_i p_i^{Basis} \left(d_i^{Plan,dyn,t} - d_i^{Plan,dyn,mittel} \right) \qquad [4]$$

On the one hand, this term adjusts the base contract price to the planned annual specific greenhouse gas emission reduction of the project and, on the other hand, the differential cost changes resulting from the planned adjustment of the energy carrier amounts are taken into account.

Element	Description of the	Temporal variability
$d_i^{Plan,dyn,t}$	Specific demand of the project for the dynamised energy carrier i in year t [MWh/ME product]	For each year fixed
$d_i^{Plan,dyn,mittel}$	Average planned specific demand of the project for the dynamised energy carrier i [MWh/ME product]	Constant over time

$\Delta e^{Plan,mittel}$	Average planned specific greenhouse gas emission reduction of the project [t CO_2 -eq./ME product]	Constant over time

4) The average planned specific demand of the project for the dynamised energy carrier i ($d_i^{Plan,dyn,mittel}$) is calculated as a weighted average for all years t of the planned energy carrier amounts as follows.

$$d_i^{Plan,dyn,mittel} = \frac{\sum_t Q^{Plan,t} d_i^{Plan,dyn,t}}{\sum_t Q^{Plan,t}} \quad [5]$$

By adjusting the planned energy carrier amounts and the planned reduction in greenhouse gas emissions in accordance with Number 7.3 does not change $d_i^{Plan,dyn,mittel}$ does not change.

Element	Description of the	Temporal variability
$Q^{Plan,t}$	Planned production volume of the project in tonnes per year [ME Product]	Constant over time

5) The average planned greenhouse gas emission reduction of the project ($\Delta e^{Plan,mittel}$) is calculated as a weighted average for all years t of the planned greenhouse gas emission reduction as follows:

$$\Delta e^{Plan,mittel} = \frac{\sum_t Q^{Plan,t} \Delta e^{Plan,t}}{\sum_t Q^{Plan,t}} \quad [6]$$

By adjusting the planned energy carrier amounts and the planned reduction in greenhouse gas emissions in accordance with Number 7.3 does not change $\Delta e^{Plan,mittel}$ does not change.

6) The dynamisation component is calculated according to the following formula, whereby the dynamisation of the reference system is also taken into account:

$$\Delta k_{KSV}^{Plan,t} = \frac{\sum_i \beta_i^{Vorhaben} d_i^{Plan,dyn,t} \left(p_i^{real} - p_i^{Basis}\right)}{\Delta e^{Plan,t}} - \frac{\sum_i \beta_i^{Ref} d_i^{Ref,dyn,t} \left(p_i^{real} - p_i^{Basis}\right)}{\Delta e^{Plan,t}} \quad [7]$$

The dynamisation component defined in this way represents a positive adjustment of the base contract price if the energy carrier price adjustment for the dynamised energy carriers of the project is greater than that for the dynamised energy carriers of the respective reference system. In the opposite case, the dynamisation component is negative. The risk arising from changes in the dynamised energy carrier prices compared to the fixed base prices is thus taken into account within the framework of the other requirements and restrictions of these funding guidelines.

Element	Description of the	Temporal variability
$\beta_i^{Vorhaben}$	Factor for determining the proportion of dynamisation of energy carrier i of the project	Constant over time
$d_i^{Ref,dyn,t}$	Specific demand of the reference system for energy carrier i, adjusted by the non-dynamised energy carrier demand of the project in year t [MWh/ME product]	Defined for each year

7) The factor $\beta_i^{Vorhaben}$ is defined identically by the granting authority for each energy carrier for all projects in the funding call. Even if the value is not equal to one, these energy carriers are still considered to be fully dynamised and are therefore not included in the calculation of $d_i^{Ref,dyn,t}$ in accordance with paragraph 8.

8) The dynamised energy carrier amounts in the reference system are adjusted each year based on the energy carrier amounts of the project that are not dynamised. To do this, the net energy carrier amounts are first determined for each year. For each energy carrier in the reference system, the demand for the same energy carrier in the project is deducted if it is not dynamised. The value of this difference is capped at zero. The energy carrier demand of the same energy carrier of the reference system is deducted from each non-dynamised energy carrier of the project. The value of this difference is capped at zero. This results in the following net requirements for each energy carrier:

$$d_i^{Ref,netto,t} = \max(d_i^{Ref} - d_i^{Plan,ndyn,t}, 0) \quad [8]$$

$$d_i^{Plan,ndyn,netto,t} = \max(d_i^{Plan,ndyn,t} - d_i^{Ref}, 0) \quad [9]$$

The remaining non-dynamised energy carrier amounts of the project are then deducted proportionately from the remaining energy carrier amounts of the reference system. For this purpose, the specific net requirements of the energy carriers of the reference system are further adjusted as follows in order to determine the specific requirements of the reference system for energy carrier i, which is used for the purpose of dynamisation ($d_i^{Ref,dyn,t}$):

$$d_i^{Ref,dyn,t} = \max(\, d_i^{Ref,netto,t} \left(1 - \frac{\sum_i d_i^{Plan,ndyn,netto,t}}{\sum_i d_i^{Ref,netto,t}}\right), 0) \quad [10]$$

If $d_i^{Ref,dyn,t}$ becomes less than zero, the value is set to zero. If $d_i^{Ref,netto,t}$ is zero for all energy carriers in a year, it is also $d_i^{Ref,dyn,t}$ is zero for all energy carriers. The granting authority may stipulate that certain energy carriers in the reference system are not affected by this rule. The following applies to these:

$$d_i^{Ref,dyn,t} = d_i^{Ref} \quad [11]$$

Element	Description of the	Temporal variability
$d_i^{Plan,ndyn,t}$	Specific demand of the project for non-dynamised energy carriers i in year t [MWh/ME product]	Defined for each year
$d_i^{Plan,ndyn,netto,t}$	Specific net demand of the project for non-dynamised energy carriers i in year t [MWh/ME product]	Defined for each year
$d_i^{Ref,netto,t}$	Specific net demand of the reference system for energy carriers i in year t [MWh/ME product]	Defined for each year

3. Determination of the maximum annual and maximum total funding amount

1) In the event that there is no dynamisation of energy carriers in the project, the maximum annual funding amount and thus the maximum annual payment amount is calculated as follows:

$$Z_{KSV}^{max,t} = \left(p_{KSV}^{Basis} + \Delta k_{max.KSV}^{Ref,t} - p_{CO2}^{sicher,t}\right)\Delta e^{Plan,t}\, Q^{Plan,t} - R_{nKSV}^{max,t} \quad [12]$$

Element	Description of the	Temporal variability
$Z_{KSV}^{max,t}$	Maximum annual subsidy amount, calculated in accordance with Number 3, paragraph 1 or 3, depending on the application [EUR]	Defined for each year
$\Delta k_{max.KSV}^{Ref,t}$	maximi dynamisation component for the reference system [EUR/t CO_2 -eq.]	Defined for each year
$p_{CO2}^{sicher,t}$	Hedging price for the CO_2 price, which is used to determine the maximum annual subsidy amount [EUR/t CO_2 -eq.]	Defined for each year
$R_{nKSV}^{max,t}$	Other funding that was approved or increased after the application was submitted and leads to a permanent reduction in funding [EUR]	Defined for each year

2) The term of the maximised dynamisation component takes into account the additional budget required that could be paid out as a result of the dynamisation of the reference system. This term does not represent an independent restriction for Δk_{KSV}^{Ref} represents an independent restriction for The following applies to the term of the maximised dynamisation component:

$$\Delta k_{max.KSV}^{Ref,t} = \frac{\alpha}{1+\alpha} \frac{\sum_i \beta_i^{Ref} d_i^{Ref} p_i^{sicher,t}}{\Delta e^{Plan,t}} \quad [13]$$

Element	Description of the	Temporal variability
α	Hedging factor for determining the maximised dynamisation component	Constant over time
$p_i^{sicher,t}$	Hedging price for energy carrier i, which is used to determine the maximum annual subsidy amount [EUR/MWh]	Defined for each year

3) In the event that the project's energy carriers are dynamised, the maximum annual funding amount is calculated as follows:

$$Z_{KSV}^{max,t} = \left(p_{KSV}^{Basis} + \Delta k_{max.KSV}^{Plan,t} - p_{CO2}^{sicher,t}\right)\Delta e^{Plan,t}\, Q^{Plan,t} - R_{nKSV}^{max} \quad [14]$$

Element	Description of the	Temporal variability
$\Delta k_{max.KSV}^{Plan,t}$	Maximised dynamisation component [EUR/t CO_2 -eq.]	Defined for each year

4) The following applies to the maximised dynamisation component:

$$\Delta k_{max.KSV}^{Plan,t} = \alpha \left(\frac{\sum_i \beta_i^{Vorhaben} d_i^{Plan,dyn,t} p_i^{sicher,t}}{\Delta e^{Plan,t}} + \frac{1}{1+\alpha} \frac{\sum_i \beta_i^{Ref} d_i^{Ref,dyn,t} p_i^{sicher,t}}{\Delta e^{Plan,t}} \right) \quad [15]$$

This does not constitute an independent restriction for $\Delta k_{KSV}^{Plan,t}$ represents an independent restriction for In addition to Number 3 (2), the hedging prices and energy carrier amounts of the dynamised energy carriers of the project are therefore also used to define the maximised dynamisation component. In the event that the same energy carrier is dynamised on the part of the project and the reference system, only the amount of the difference in requirements is taken into account in the calculation of the maximum subsidy amount. If the demand of the reference system is greater, the difference is treated in the same way as energy carriers that are only used in the reference system, otherwise in the same way as energy carriers that are only used in the project.

5) The hedging factor α for determining the maximised dynamisation component is defined in the funding call. The hedging price for the CO price ${}_2p_{CO2}^{sicher,t}$ and the hedging price for the energy carrier i $p_i^{sicher,t}$ are announced in the funding call as a time series for each calendar year. $p_{CO2}^{sicher,t}$ is determined in accordance with the trend of the EEX EUA futures.

$p_{CO2}^{sicher,t}$ and $p_i^{sicher,t}$ do not represent a limit for p_{CO2}^{eff} or p_i^{real} respectively.

6) If the planned greenhouse gas emission reduction $\Delta e^{Plan,t}$ for a year is negative or zero, the following applies for that year $Z_{KSV}^{max,t} = 0$. If the calculated maximum subsidy amount for a year is negative, the following also applies for this year $Z_{KSV}^{max,t} = 0$.

7) The maximum total funding amount is defined as the sum of the maximum annual funding amounts for the respective years, calculated in accordance with Number 3 (1) or (3) depending on the application.

$$Z_{KSV}^{max.gesamt} = \sum_t Z_{KSV}^{max,t} \quad [16]$$

Element	Description of the	Temporal variability
$Z_{KSV}^{max.gesamt}$	Maximum total funding amount [EUR]	Constant over time

8) If the start of surgery is postponed in accordance with 7.9(a) the maximum funding amount from the funds available under 7.9(c) or number 7.9(d) adjusted annual plan values with the values specified in the funding call for the respective calendar year for $p_{CO2}^{sicher,t}$ and $p_i^{sicher,t}$ recalculated in accordance with the provisions of this Number. The values determined in this way, which have not yet been corrected with regard to the maximum annual funding amount, are designated as $Z_{KSV,verschoben}^{max,t,unkorr}$ labelled.

a) The sum of these values over all calendar years of the term of the climate protection contract is calculated as follows:

$$Z_{KSV,verschoben}^{max.gesamt,unkorr} = \sum_t Z_{KSV,verschoben}^{max,t,unkorr} \quad [17]$$

Element	Description of the	Temporal variability
$Z_{KSV,verschoben}^{max,t,unkorr}$	Uncorrected value of the maximum annual subsidy amount for year t if the start of operations is postponed [EUR]	Defined for each year
$Z_{KSV,verschoben}^{max.gesamt,unkorr}$	Uncorrected value of the maximum total funding amount if the start of operations is postponed [EUR]	Constant over time

b) If the maximum total funding amount determined in accordance with paragraph 8a) $Z_{KSV,verschoben}^{max.gesamt,unkorr}$ exceeds the maximum total funding amount specified in the grant notification $Z_{KSV}^{max.gesamt}$ in the notice of grant shall apply:

i) The maximum annual funding amounts calculated in accordance with paragraph 8a) shall be reduced proportionately:

$$Z_{KSV,verschoben}^{max,t} = Z_{KSV,verschoben}^{max,t,unkorr} \frac{Z_{KSV}^{max.gesamt}}{Z_{KSV,verschoben}^{max.gesamt,unkorr}} \quad [18]$$

ii) The sum of the maximum annual funding amounts reduced in accordance with paragraph 8b)(i) corresponds to the maximum total funding amount originally specified in the grant notification:

$$Z_{KSV,verschoben}^{max.gesamt} = \sum_t Z_{KSV,verschoben}^{max,t} = Z_{KSV}^{max.gesamt} \quad [19]$$

Element	Description of the	Temporal variability
$Z_{KSV,verschoben}^{max,t}$	Corrected value of the maximum annual subsidy amount for year t if the start of operations is postponed [EUR]	Defined for each year
$Z_{KSV,verschoben}^{max.gesamt}$	Corrected value of the maximum total funding amount if the start of operations is postponed [EUR]	Constant over time

c) If the maximum total funding amount determined in accordance with paragraph 8a) is $Z_{KSV,verschoben}^{max.gesamt,unkorr}$ is equal to or less than the maximum total funding amount specified in the grant notification $Z_{KSV}^{max.gesamt}$the values of the determined maximum annual funding amounts and the determined maximum total funding amount shall be determined as calculated in accordance with paragraph 8a) and shall apply:

$$Z_{KSV,verschoben}^{max,t} = Z_{KSV,verschoben}^{max,t,unkorr} \quad [20]$$

and

$$Z_{KSV,verschoben}^{max.gesamt} = \sum_t Z_{KSV,verschoben}^{max,t} \leq Z_{KSV}^{max.gesamt} \quad [21]$$

4. Bidding procedure and definition of basic parameters

1) The granting authority publishes the following values in particular:

   a. The list of all energy carriers that are dynamised
   b. The base prices p_i^{Basis} for all energy carriers according to a.
   c. The indices to be used to determine p_i^{real} for all energy carriers according to a.
   d. The specific energy carrier amounts of the reference system d_i^{Ref}
   e. The factors $\beta_i^{Vorhaben}$ and β_i^{Ref}
   f. The price index for the annual determination of p_{EUA}^{real}
   g. The specific greenhouse gas emissions of the reference system e_{Ref}
   h. The maximum prices to be applied for the projects H_l and the maximum price H_{max}
   i. The hedging factor α and the hedging prices for the CO_2 price $p_{CO2}^{sicher,t}$ and for each energy carrier i $p_i^{sicher,t}$ to determine the maximum annual subsidy amount
   j. The interest rate ϵ for determining the subsidy cost efficiency

2) Applicants whose projects are subject to an upstream reference system will be notified of the process emissions separately by the granting authority when the funding call is published.

3) In particular, the applicant shall submit the following values with the application:

   a. The basic contract price p_{KSV}^{Basis}
   b. The planned reduction in greenhouse gas emissions $\Delta e^{Plan,t}$ over the term of the contract and the average greenhouse gas emission reduction $\Delta e^{Plan,mittel}$
   c. The planned energy carrier amounts over the term of the contract, which include the planned specific requirements of the dynamised energy carriers $d_i^{Plan,dyn,t}$ and the non-dynamised energy carriers $d_i^{Plan,ndyn,t}$ as well as the average energy carrier amounts $d_i^{Plan,dyn,mittel}$ for each dynamised energy carrier
   d. The energy carrier amounts that fulfil the target state of climate neutrality defined in this funding guideline
   e. The planning of production quantities $Q^{Plan,t}$ over the term of the contract
   f. The specific demand for hydrogen, even if it is produced in the project itself
   g. Derived from this is the time course of the absolute reduction in greenhouse gas emissions and the absolute demand for hydrogen
   h. The other funding already approved

5. Extended definitions and representation in absolute values

1) The realised specific greenhouse gas emissions of the project e^{real} are linked as follows to the absolute greenhouse gas emissions measured E^{real} and the realised production volume:

$$E^{real} = Q^{real} e^{real} \quad [22]$$

2) The planned specific greenhouse gas emissions of the project $e^{Plan,t}$ are compared as follows with the planned absolute greenhouse gas emissions $E^{Plan,t}$ and the planned production volume $Q^{Plan,t}$ are linked as follows:

$$E^{Plan,t} = Q^{Plan,t} e^{Plan,t} \quad [23]$$

3) The specific greenhouse gas emissions of the reference system e_{Ref} are specified by the granting authority in the funding call. Process emissions within the meaning of number 7.1(d) sentence 4 will be communicated separately to the authorised applicants, where relevant, with the publication of the funding call.

4) The planned absolute greenhouse gas emissions of the reference system are calculated as follows:

$$E_{Ref}^{Plan,t} = e_{Ref} Q^{Plan,t} \quad [24]$$

5) The realised greenhouse gas emissions of the reference system are calculated as follows:

$$E_{Ref}^{real} = e_{Ref} Q^{real} \quad [25]$$

6) The specific greenhouse gas emission reduction realised is calculated as follows:

$$\Delta e^{real} = e_{Ref} - e^{real} \quad [26]$$

7) The specific greenhouse gas emission reduction planned for each year is calculated as follows:

$$\Delta e^{Plan,t} = e_{Ref} - e^{Plan,t} \quad [27]$$

8) The absolute reduction in greenhouse gas emissions determined annually is calculated as follows:

$$\Delta E^{real} = E_{Ref}^{real} - E^{real} \quad [28]$$

9) The absolute reduction in greenhouse gas emissions planned for each year is calculated as follows:

$$\Delta E^{Plan,t} = E_{Ref}^{Plan,t} - E^{Plan,t} \quad [29]$$

10) The relative reduction in greenhouse gas emissions planned for each year is calculated as follows:

$$\mu^{Plan,t} = \frac{\Delta E^{Plan,t}}{E_{Ref}^{Plan,t}} \quad [30]$$

11) The annual relative reduction in greenhouse gas emissions is calculated as follows:

$$\mu^{real} = \frac{\Delta E^{real}}{E_{Ref}^{real}} \quad [31]$$

12) The deviation from the annually planned specific greenhouse gas emission reduction is calculated as follows:

$$\sigma = \frac{\Delta e^{real} - \Delta e^{Plan,t}}{\Delta e^{Plan,t}} = \frac{\frac{\Delta E^{real}}{Q^{real}} - \frac{\Delta E^{Plan,t}}{Q^{Plan,t}}}{\frac{\Delta E^{Plan,t}}{Q^{Plan,t}}} \quad [32]$$

13) The realised specific free allocation of the project is calculated as follows a^{real} is calculated as follows from the absolute free allocation actually realised A^{real} and the realised production volume:

$$a^{real} = \frac{A^{real}}{Q^{real}} \quad [33]$$

14) The free specific allocation of the reference system a_{Ref} is determined by the granting authority.

15) The planned specific energy carrier amounts of the dynamised energy carriers $d_i^{Plan,dyn,t}$ are compared with the planned absolute requirements of the energy carriers $D_i^{Plan,dyn,t}$ and the production volume $Q^{Plan,t}$ as follows:

$$D_i^{Plan,dyn,t} = d_i^{Plan,dyn,t} Q^{Plan,t} \quad [34]$$

16) The planned specific energy carrier amounts of the non-dynamised energy carriers $d_i^{Plan,ndyn,t}$ are compared with the planned absolute requirements of the energy carriers $D_i^{Plan,ndyn,t}$ and the production volume $Q^{Plan,t}$ as follows:

$$D_i^{Plan,ndyn,t} = d_i^{Plan,ndyn,t} Q^{Plan,t} \quad [35]$$

17) The absolute planned energy carrier amount of the reference system for energy carrier i is calculated as follows:

$$D_i^{Ref,t} = d_i^{Ref} Q^{Plan,t} \quad [36]$$

18) The project's net demand for non-dynamised energy carriers is calculated as follows:

$$D_i^{Plan,ndyn,netto,t} = \max(D_i^{Plan,ndyn,t} - D_i^{Ref,t}, 0) \quad [37]$$

19) The demand of the reference system for energy carrier i, reduced to the amount that is greater than the demand of the same energy carrier in the project, is defined as follows:

$$D_i^{Ref,netto,t} = \max(D_i^{Ref,t} - D_i^{Plan,ndyn,t}, 0) \quad [38]$$

20) The absolute demand of the reference system for energy carrier i, which is used in the dynamisation, is calculated as follows:

$$D_i^{Ref,dyn,t} = D_i^{Ref,netto,t} \left(1 - \frac{\sum_i D_i^{Plan,ndyn,netto,t}}{\sum_i D_i^{Ref,netto,t}}\right) \quad [39]$$

If $D_j^{Ref,dyn,t}$ becomes less than zero, the value is set to zero. If the granting authority stipulates that an energy carrier in the reference system is not affected by this rule, the following applies:

$$D_i^{Ref,dyn,t} = D_i^{Ref,t} \quad [40]$$

21) The total energy requirement of a project is calculated as follows:

$$D^{Plan,gesamt,t} = \sum_i D_i^{Plan,dyn,t} + \sum_i D_i^{Plan,ndyn,t} \quad [41]$$

22) The specific total energy requirement of a project is calculated as follows:

$$d^{Plan,gesamt,t} = \sum_i d_i^{Plan,dyn,t} + \sum_i d_i^{Plan,ndyn,t} \quad [42]$$

23) The relative share of a dynamised energy carrier in the total energy requirement is calculated as follows:

$$\delta_i^{Plan,dyn,t} = \frac{D_i^{Plan,dyn,t}}{D^{Plan,gesamt,t}} = \frac{d_i^{Plan,dyn,t}}{d^{Plan,gesamt,t}} \quad [43]$$

24) The relative share of a non-dynamised energy carrier in the total energy demand is calculated as follows:

$$\delta_i^{Plan,ndyn,t} = \frac{D_i^{Plan,ndyn,t}}{D^{Plan,gesamt,t}} = \frac{d_i^{Plan,ndyn,t}}{d^{Plan,gesamt,t}} \quad [44]$$

25) Taking into account the absolute reduction in greenhouse gas emissions and the absolute planned energy carrier amounts, the payout amount in the event that only energy carriers from the reference system are dynamised can be shown as follows:

$$Z_{KSV} = p_{KSV}^{Basis} \Delta E^{real} - \sum_i \beta_i^{Ref} D_i^{Ref,t} \left(p_i^{real} - p_i^{Basis}\right) \frac{\Delta E^{real}}{\Delta E^{Plan,t}} - \left(\left(Q^{real}(e_{Ref} - a_{Ref}) - \left(E^{real} - A^{real}\right)\right) p_{EUA}^{real}\right) - R_{nKSV} - R_{GP} \quad [45]$$

26) Taking into account the absolute reduction in greenhouse gas emissions and the absolute planned energy carrier amounts, the payout amount in the event that the project's energy carriers are dynamised can be presented as follows:

$$Z_{KSV} = p_{KSV}^{Basis} \Delta E^{real} + \Delta M_{KSV}^{Plan,t} \Delta E^{real} + \left(\sum_i \beta_i^{Vorhaben} D_i^{Plan,dyn,t} \left(p_i^{real} - p_i^{Basis}\right) - \sum_i \beta_i^{Ref} D_i^{Ref,dyn,t} \left(p_i^{real} - p_i^{Basis}\right)\right) \frac{\Delta E^{real}}{\Delta E^{Plan,t}} - \left(\left(Q^{real}(e_{Ref} - a_{Ref}) - \left(E^{real} - A^{real}\right)\right) p_{EUA}^{real}\right) - R_{nKSV} - R_{GP} \quad [46]$$

The following applies

$$\Delta M_{KSV}^{Plan,t} = p_{KSV}^{Basis} \left(\frac{\Delta E^{mittel,t}}{\Delta E^{Plan,t}} - 1\right) + \frac{1}{\Delta E^{Plan,t}} \sum_i p_i^{Basis} \left(D_i^{Plan,dyn,t} - D_i^{Plan,dyn,mittel,t}\right) \quad [47]$$

with

$$D_i^{Plan,dyn,mittel,t} = d_i^{Plan,dyn,mittel} Q^{Plan,t} = \frac{Q^{Plan,t}}{\sum_t Q^{Plan,t}} \sum_t D_i^{Plan,dyn,t} \quad [48]$$

and

$$\Delta E^{mittel,t} = \Delta e^{mittel} Q^{Plan,t} = \frac{Q^{Plan,t}}{\sum_t Q^{Plan,t}} \sum_t \Delta E^{Plan,t} \quad [49]$$

Element	Description of the	Temporal variability
E^{real}	Realised greenhouse gas emissions of the project in year t [t CO_2 -eq.]	Determined annually

Element	Description of the	Temporal variability
$E^{Plan,t}$	Planned greenhouse gas emissions of the project in tonnes per year [t CO_2 -eq.]	Defined for each year
$E_{Ref}^{Plan,t}$	Planned greenhouse gas emissions of the reference system in tonnes per year [t CO_2 -eq.]	Defined for each year
E_{Ref}^{real}	Realised greenhouse gas emissions of the reference system [t CO_2 -eq.]	Determined annually
$e^{Plan,t}$	Planned specific greenhouse gas emissions of the project in tonnes per year [t CO_2 -eq./ME product]	Defined for each year
ΔE^{real}	Realised greenhouse gas emission reduction of the project [t CO_2 -eq.]	Determined annually
$\Delta E^{Plan,t}$	Planned greenhouse gas emission reduction of the project in tonnes [t CO_2 -eq.]	Defined for each year
$\mu^{Plan,t}$	Planned relative greenhouse gas emission reduction of the project in tonnes [%] per year	Defined for each year
μ^{real}	Realised relative greenhouse gas emission reduction of the project [%]	Determined annually
σ	Deviation from the annually planned specific greenhouse gas emission reduction of the project [%]	Determined annually
A^{real}	Realised free allocation of the project [t CO_2 -eq.]	Determined annually
$D_i^{Plan,dyn,t}$	Demand of the project for the dynamised energy carrier i in year t [MWh]	Defined for each year
$D_i^{Plan,ndyn,t}$	Demand of the project for non-dynamised energy carrier i in year t [MWh]	Defined for each year
$D_i^{Plan,ndyn,netto,t}$	Net demand of the project for non-dynamised energy carrier i in year t [MWh]	Defined for each year
$D_i^{Ref,t}$	Demand of the reference system for energy carrier i in year t [MWh]	Defined for each year

Element	Description of the	Temporal variability
$D_i^{Ref,netto,t}$	Net demand of the reference system for energy carrier i in year t [MWh]	Defined for each year
$D_i^{Ref,dyn,t}$	Demand of the reference system for energy carrier i in year t, adjusted for the requirements of the project [MWh]	Defined for each year
$D^{Plan,gesamt,t}$	Planned total energy requirement of the project in tones per year [MWh]	Defined for each year
$d^{Plan,gesamt,t}$	Specific planned total energy demand of the project in tonnes per year [MWh/ME product]	Defined for each year
$\delta_i^{Plan,dyn,t}$	Planned relative share of the dynamised energy carrier i in the total energy demand in year t	Defined for each year
$\delta_i^{Plan,ndyn,t}$	Planned relative share of non-dynamised energy carrier i in total energy demand in year t	Defined for each year
$\Delta M_{KSV}^{Plan,t}$	Adjustment term of the base contract price to the annual energy carrier amounts to be applied when using absolute values [EUR/t CO_2 -eq.].	Defined for each year
$D_i^{Plan,dyn,mittel,t}$	Average planned absolute demand of the project for the dynamised energy carrier i, applied for year t [MWh]	Defined for each year
$\Delta E^{mittel,t}$	Average planned absolute greenhouse gas emission reduction of the project, applied for year t [t CO_2 -eq.]	Defined for each year

Appendix 2
Evaluation criteria

The criteria for evaluating the projects in the bidding process are described below using formulae. **Number 1** defines the criterion of subsidy cost efficiency, which is weighted most heavily. **Number 2** describes the criterion of relative greenhouse gas emission reduction, which is given less weight. **Number 3** describes how the criteria are offset against each other to determine the total score.

1. Conveying cost efficiency

1) The criterion of extraction cost efficiency is based on the calculation of specific extraction costs:

$$F = p_{KSV}^{Basis} + \frac{S_0 + \sum_{t=1} \frac{S_t}{(1+\epsilon)^t}}{\sum_{t=1} \frac{\Delta E^{Plan,t}}{(1+\epsilon)^t}} \quad [50]$$

The specific subsidy costs are therefore calculated as the sum of the base contract price and the specific costs of other subsidies that have already been approved at the time of bidding.

The specific costs of other funding are calculated from the other funding that is or was paid out or otherwise granted before the planned start of operations (S_0), and the discounted sum of the monetary amounts or - in the case of other funding granted in any other way - the monetary value of the other funding paid or otherwise granted in the respective years from the planned operational start (t are paid out or otherwise granted (S_t), is determined. This sum is set in relation to the discounted sum of the greenhouse gas emissions saved.

Element	Description of the
F	Specific subsidy costs of the project [EUR/t CO_2 -eq.]
S_0	Sum of other funding already approved at the time of bidding that is paid out or otherwise granted before the planned operational start of the project [EUR]
S_t	Sum of other funding already approved at the time of bidding that will be paid out or otherwise granted in year t after the planned operational start of the project [EUR]
ϵ	Interest rate to be applied in accordance with the funding call by the granting authority

2) The points for the criterion of extraction cost efficiency are then calculated from the specific extraction costs standardized by the maximum price valid for the respective bid (H_I) and the specific extraction costs standardised by the highest maximum price (H_{max}) in the respective bidding procedure. The weighted average is calculated from the two components. The weighting is 0.5 on both sides, but can be adjusted by the granting authority in the funding call. The score is then calculated as follows:

$$P_F = \gamma \left(1 - \frac{F}{H_I}\right) + (1-\gamma)\left(1 - \frac{F}{H_{max}}\right) \quad [51]$$

Element	Description of the
P_F	Points from the criterion of subsidy cost efficiency
γ	Weighting factor, set at 0.5 or otherwise by the granting authority
H_I	Maximum price relevant for the bid [EUR/t CO_2 -eq.]
H_{max}	Highest maximum price in the funding call [EUR/t CO_2 -eq.]

2. Relative reduction in greenhouse gas emissions

1) The criterion of relative greenhouse gas emission reduction assesses the relative greenhouse gas emission reduction up to the end of the fifth year, calculated from the operational start of the project. This approach ensures that projects that achieve a higher relative greenhouse gas emission reduction in a timely manner receive a higher score. If the operational start is planned for the first of January of a calendar year, the criterion is calculated as follows:

$$\mu_5 = \frac{\sum_{t=1}^{5} \Delta E^{Plan,t}}{\sum_{t=1}^{5} E_{Ref}^{Plan,t}} \quad [52]$$

If the operational start of the project is not planned for the first of January of a calendar year, the criterion is calculated as follows:

$$\mu_5 = \frac{\sum_{t=1}^{5} \Delta E^{Plan,t} + \tau \Delta E^{Plan,6}}{\sum_{t=1}^{5} E_{Ref}^{Plan,t} + \tau E_{Ref}^{Plan,6}} \quad [53]$$

The total is calculated over the first partial year, the following four full calendar years and the fifth full calendar year on a pro rata basis, so that the period of five full years is totalled. The share of the fifth full calendar year within the term of the climate protection contract is calculated as follows:

$$\tau = \frac{365 - \theta^{Plan,1}}{365} \quad [54]$$

Element	Description of the
μ_5	Relative greenhouse gas emission reduction of the project by the end of the fifth year within the term of the climate protection contract
τ	Proportion of the fifth full calendar year within the term of the climate protection contract that is taken into account if the project begins during the year
$\theta^{Plan,1}$	Planned number of days in the first partial year of the term of the climate protection contract

2) The relative reduction in greenhouse gas emissions is transformed into a factor to determine the total score. The factor is calculated according to:

$$f_R = 1 + s(\mu_5 - \mu_R) \quad [55]$$

Element	Description of the
f_R	Factor from the greenhouse gas emission reduction criterion
s	Weighting factor for the relative greenhouse gas emission reduction, set at 0.8 or set differently by the granting authority
μ_R	Comparative value for the relative greenhouse gas emission reduction, set at 0.75 or set differently by the granting authority

3. Total points

1) The total number of points for a project is then calculated as follows:

$$P_{gesamt} = P_F \cdot f_R \quad [56]$$

Element	Description of the
P_{gesamt}	Total number of points for the project

2) The granting authority may specify different values for the weighting factor and the comparative value of the relative greenhouse gas emission reduction in the funding call. The values are to be selected in such a way that for expected bids f_R lies between 0.8 and 1.2.

Annex 3
Projects with multiple reference systems

The following Number explains the requirements to be observed in a bidding process and for determining the amount of the grants and surplus payments and the maximum annual funding amount for a project that relates to several reference systems.

1. General provisions

1) Even if a project relates to several reference systems (1 to n), only one base contract price is to be offered.

2) A general averaging factor is defined as follows, which is used when project variables cannot be defined for each reference system.

$$u_g = \frac{e_{Ref,g} \sum_t Q_g^{Plan,t}}{\sum_{g=1}^{n} e_{Ref,g} \sum_t Q_g^{Plan,t}} \quad [57]$$

The averaging factor describes the share of greenhouse gas emissions in the reference system of the production volume of a project that can be allocated to a reference system in the total greenhouse gas emissions of a project in the reference systems, totalled over the term of the climate protection contract. It thus represents the share of the possible greenhouse gas emission reduction for a specific product in the total possible greenhouse gas emission reduction of the project.

3) The following relationship applies to the planned greenhouse gas emissions of the project, although this allocation to the individual products cannot always be determined and the following equation does not apply. The planned absolute greenhouse gas emissions of the project are determined in total for the project.

$$E^{Plan,t} = \sum_g E_g^{Plan,t} = \sum_g Q_g^{Plan,t} e_g^{Plan,t} \quad [58]$$

4) The following relationship applies to the realised greenhouse gas emissions of the project, although this allocation to the individual products cannot always be determined and the following equation does not apply. The realised greenhouse gas emissions are then calculated as a total for the entire project.

$$E^{real} = \sum_g E_g^{real} = \sum_g Q_g^{real} e_g^{real} \quad [59]$$

5) The following applies to the planned greenhouse gas emissions of the reference system:

$$E_{Ref}^{Plan,t} = \sum_g E_{Ref,g}^{Plan,t} = \sum_g Q_g^{Plan,t} e_{Ref,g} \quad [60]$$

6) The following applies to the realised greenhouse gas emissions of the reference system:

$$E_{Ref}^{real} = \sum_g E_{Ref,g}^{real} = \sum_g Q_g^{real} e_{Ref,g} \quad [61]$$

7) The following applies to the deviation from the annually planned specific greenhouse gas emission reduction:

$$\sigma = \sum_g u_g \sigma_g \quad [62]$$

The following applies to the deviation in relation to a reference system:

$$\sigma_g = \frac{\Delta e_g^{real} - \Delta e_g^{Plan,t}}{\Delta e_g^{Plan,t}} \quad [63]$$

with the realised specific greenhouse gas emission reduction in relation to a reference system

$$\Delta e_g^{real} = e_{Ref,g} - e_g^{real} \quad [64]$$

and the planned specific greenhouse gas emission reduction in relation to a reference system

$$\Delta e_g^{Plan,t} = e_{Ref,g} - e_g^{Plan,t} \quad [65]$$

If, for technical reasons, it is not possible to determine the planned or realised specific greenhouse gas emission reduction in relation to a reference system, the following applies:

$$\sigma_g = \frac{\frac{\Delta E^{real}}{Q_g^{real}} - \frac{\Delta E^{Plan,t}}{Q_g^{Plan,t}}}{\frac{\Delta E^{Plan,t}}{Q_g^{Plan,t}}} \quad [66]$$

8) The following relationship applies to the planned absolute requirements of the project for dynamised energy carrier i, although this allocation to the individual products cannot always be determined and the following equation does not then apply.

$$D_i^{Plan,dyn,t} = \sum_g D_{i,g}^{Plan,dyn,t} = \sum_g Q_g^{Plan,t} d_{i,g}^{Plan,dyn,t} \quad [67]$$

9) The following relationship applies to the planned absolute requirements of the project for non-dynamised energy carrier i, whereby this allocation to the individual products cannot always be determined and the following equation does not apply.

$$D_i^{Plan,ndyn,t} = \sum_g D_{i,g}^{Plan,ndyn,t} = \sum_g Q_g^{Plan,t} d_{i,g}^{Plan,ndyn,t} \quad [68]$$

10) The following applies to the planned absolute energy carrier amounts of the reference system:

$$D_i^{Ref,t} = \sum_g d_{i,g}^{Ref} Q_g^{Plan,t} \quad [69]$$

11) The following applies to the average absolute energy demand of a dynamised energy carrier, applied to one year:

$$D_i^{Plan,dyn,mittel,t} = \sum_g d_{i,g}^{Plan,dyn,mittel} Q_g^{Plan,t} \quad [70]$$

For $d_{i,g}^{Plan,dyn,mittel}$ applies:

$$d_{i,g}^{Plan,dyn,mittel} = \frac{\sum_t Q_g^{Plan,t} d_{i,g}^{Plan,dyn,t}}{\sum_t Q_g^{Plan,t}} \quad [71]$$

If it is not possible for technical reasons $d_{i,g}^{Plan,dyn,t}$ to specify, applies:

$$d_{i,g}^{Plan,dyn,mittel} = \frac{u_g \sum_t D_i^{Plan,dyn,t}}{\sum_t Q_g^{Plan,t}} \quad [72]$$

12) The following applies to the average absolute reduction in greenhouse gas emissions, applied to one year:

$$\Delta E^{Plan,mittel,t} = \sum_g \Delta e_g^{Plan,mittel} Q_g^{Plan,t} \quad [73]$$

For $\Delta e_g^{Plan,mittel}$ applies:

$$\Delta e_g^{Plan,mittel} = \frac{\sum_t Q_g^{Plan,t} \Delta e_g^{Plan,t}}{\sum_t Q_g^{Plan,t}} \quad [74]$$

If it is not possible for technical reasons $\Delta e_g^{Plan,t}$ to specify, applies:

$$\Delta e_g^{Plan,mittel} = \frac{u_g \sum_t \Delta E^{Plan,t}}{\sum_t Q_g^{Plan,t}} \quad [75]$$

Element	Description of the	Temporal variability
$Q_g^{Plan,t}$	Planned production of product g of the project in year t [ME Product]	Defined for each year
Q_g^{real}	Realised production quantity of product g of the project in year t [ME Product]	Determined annually
u_g	Averaging factor when combining different reference systems	Constant over time
$e_{Ref,g}$	Specific greenhouse gas emissions of the reference system from product g [t CO_2 -eq./ME product]	Constant over time
$E_{Ref,g}^{Plan,t}$	Planned greenhouse gas emissions of the reference system from product g [t CO_2 -eq.]	Defined for each year
$E_{Ref,g}^{real}$	Realised greenhouse gas emissions of the reference system from product g [t CO_2 -eq.]	Determined annually
$E_g^{Plan,t}$	Planned greenhouse gas emissions of the project from the manufacture of product g in tonnes per year; not always determinable [t CO_2 -eq.]	Defined for each year
E_g^{real}	Realised greenhouse gas emissions of the project in the manufacture of product g; not always determinable [t CO_2 -eq.]	Determined annually
$e_g^{Plan,t}$	Specific planned greenhouse gas emissions of the project in the manufacture of product g in tonnes per year; not always determinable [t CO_2 -eq./ME product]	Defined for each year
e_g^{real}	Specific realised greenhouse gas emissions of the project in the manufacture of product g; not always determinable [t CO_2 -eq./ME product]	Determined annually

Element	Description of the	Temporal variability
$\Delta e_g^{Plan,mittel}$	Average planned specific greenhouse gas emission reduction of the project in the manufacture of product g [t CO_2 -eq./ME product]	Constant over time
$\Delta e_g^{Plan,t}$	Planned specific greenhouse gas emission reduction of the project in tonnes per year in the manufacture of product g [t CO_2 -eq./ME product]	Defined for each year
$D_{i,g}^{Plan,dyn,t}$	Demand of the project for the dynamised energy carrier i in year t for the production of the product g; not always determinable [MWh]	Defined for each year
$d_{i,g}^{Plan,dyn,t}$	Specific demand of the project for the dynamised energy carrier i in year t to manufacture the product g; cannot always be determined [MWh/ME product]	Defined for each year
$D_{i,g}^{Plan,ndyn,t}$	Demand of the project for non-dynamised energy carrier i in year t for the manufacture of product g; cannot always be determined [MWh]	Defined for each year
$d_{i,g}^{Plan,ndyn,t}$	Specific demand of the project for the non-dynamised energy carrier i in year t for the manufacture of product g; not always determinable [MWh/ME product]	Defined for each year
$d_{i,g}^{Ref}$	Specific demand of the reference system for product g at energy carrier i [MWh/ME product]	Constant over time
$d_{i,g}^{Plan,dyn,mittel}$	Average planned specific demand of the project for the dynamised energy carrier i to manufacture the product g [MWh/ME product]	Constant over time
σ_g	Deviation from the annually planned specific greenhouse gas emission reduction of the project in relation to product g [%]	Determined annually

2. Payment and determination of the maximum annual subsidy amounts

1) The payout is determined as set out in Number 1 of Annex 1. The presentation using absolute values in accordance with Number 5 of Annex 1 is used.

2) The provisions for determining the maximum annual subsidy amount are retained by calculating the total across all reference systems. This results in the following relationship for the maximum annual subsidy amount in each year t if only the energy carriers of the reference system are dynamised:

$$Z_{KSV}^{max,t} = \left(p_{KSV}^{Basis} - p_{CO2}^{sicher,t}\right)\Delta E^{Plan,t} + \frac{\alpha}{1+\alpha}\sum_i \beta_i^{Ref} p_i^{sicher,t} D_i^{Ref,dyn,t} - R_{nKSV}^{max} \quad [76]$$

The following correlation applies if the project's energy carriers are also dynamised:

$$Z_{KSV}^{max,t} = \left(p_{KSV}^{Basis} - p_{CO2}^{sicher,t}\right)\Delta E^{Plan,t}$$

$$+\alpha\left(\sum_i \beta_i^{\text{Vorhaben}} p_i^{\text{sicher,t}} D_i^{\text{Plan,dyn,t}} + \frac{1}{1+\alpha}\sum_i \beta_i^{\text{Ref}} p_i^{\text{sicher,t}} D_i^{\text{Ref,dyn,t}}\right) - R_{\text{nKSV}}^{\max} \quad [77]$$

3) The other provisions in Annex 1 shall apply accordingly.

3. Valuation

1) The valid maximum price for the project is determined from the weighted average of the maximum prices of all products as follows.

$$H_I = \sum_{g=1}^{n} u_g H_g \quad [78]$$

Element	Description of the	Temporal variability
H_g	Maximum price of product g relevant for the bid [EUR/t CO_2 -eq.]	Constant over time

2) In all other respects, the further requirements are based on Annex 2 Number 1-3, which applies accordingly.