



EUROPEAN COMMISSION

Brussels 27.9.2022
C(2022) 6946 final

PUBLIC VERSION

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**Subject: State Aid SA.102303 (2022/N) – Germany – EEG 2021 amendments:
Easter Package 2022 – Early Bird Measures**
**State Aid SA.103086 (2022/N) – Germany – EEG 2021 amendments:
Additional round of solar PV tenders in 2022**

Excellency,

1. PROCEDURE

- (1) On 25 July 2022, further to pre-notification contacts, which started on 25 February 2022, including conference calls on 25 February 2022, 3 May 2022 and 31 May 2022, and requests for information dated 17 March 2022, 8 April 2022 and 13 April 2022, to which Germany submitted responses on 5 April 2022, 13 April 2022, 20 April 2022 and 24 May 2022 respectively, Germany notified proposed adjustments to existing aid, following the approval decision in case SA.57779 (2020/N)¹, to small rooftop photovoltaic installations and a proposed change from a fixed to a sliding market premium for innovation tenders, pursuant to Article 108(3) of the Treaty on the Functioning of the European Union (“TFEU”). Further requests for information were sent on 5 August 2022 and 19 August 2022, to which Germany submitted responses on 15 August 2022 and 23 August 2022 respectively.

¹ Decision of 29.04.2021, C(2021) 2960 final, State Aid SA.57779 (2020/N) Germany EEG 2021 – Reform of the Renewable Energy Law (OJ C 240, 18.06.2021, p. 4-5). Available at: https://ec.europa.eu/competition/state_aid/cases1/202124/288710_2283746_342_2.pdf.

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- (2) On 25 July 2022, further to pre-notification contacts, which started on 16 May 2022, including a conference call on 31 May 2022, Germany also notified an additional round of the rooftop solar PV and ground-based solar PV tender of 2022, not included in the decision on 9 December 2021 in case SA.64376 (2021/N)². A request for information was sent on 5 August 2022, to which Germany submitted responses on 15 August 2022.
- (3) By letters dated 19 May 2022 and 23 May 2022, Germany agreed to exceptionally waive its rights deriving from Article 342 TFEU in conjunction with Article 3 of Regulation 1/1958³ and to have the present decision notified and adopted in English.

2. DETAILED DESCRIPTION OF THE MEASURES:

- (4) The measures notified and assessed in this decision relate to:
 - (a) adjustments to existing aid to small rooftop photovoltaic installations (“small rooftop PV measure”);
 - (b) an introduction of a sliding market premium for innovation tenders (“innovation tender measure”); and
 - (c) an additional round of the ground-based solar PV and rooftop solar PV tender of 2022, taking place on 1 November 2022 and 1 December 2022 respectively (“additional round of solar PV tenders”).
- (5) In this decision, these measures are collectively referred to as the “notified measures”.

2.1. Description and objectives of the notified measures

2.1.1. Small rooftop PV measure

- (6) In its decision dated 29 April 2021 in case SA.57779, the Commission approved Germany’s support to rooftop solar photovoltaic (“PV”) installations,⁴ as part of Germany’s general support scheme under the Renewable Energy Law (*Erneuerbare Energien Gesetz*) (“EEG”) for the promotion of the production of electricity from renewable sources (“RES”) (hereafter referred to as the “existing scheme” or “existing support”). This measure, as described in the decision in case SA.57779,⁵ consists of support in the form of a feed-in tariff or a market premium for small installations (not exceeding 750 kW) that are exempt from competitive bidding requirements. Installations with an installed capacity of between 300 and 750 kW can opt to either participate in tenders or to receive a market premium, in

² Decision of 09.12.2021, C(2021) 9329 final, State Aid SA.64376 (2021/N) Germany EEG 2021 amendments (OJ C 46, 28.01.2022, p. 5-6). Available at: [SA_64376_E07E447E-0000-CA66-81FD-5938C3224B68_69_1.pdf \(europa.eu\)](#).

³ Regulation No 1 determining the languages to be used by the European Economic Community (OJ 17, 6.10.1958, p. 385).

⁴ See recitals 18-19, 89-93, 141-151 and 335-350.

⁵ See in particular recitals 24-32 and 141-144.

which case only a maximum of 50% of the generated electricity that is marketed is eligible to receive a market premium.

- (7) Since the decision in case SA.57779, the EU has set an ambitious climate protection target of reducing greenhouse gas emissions by at least 55% by 2030, with a view to becoming climate neutral by 2050.⁶ In order to achieve this, Germany needs to drastically increase the use of renewable energy. The Federal Government of Germany has set itself the new target of generating 80% of electricity consumption from renewable energy sources by the year 2030. Among the new measures in support of reaching that target, Germany plans to further incentivise the use of rooftops for the generation of RES electricity through the use of small rooftop PV installations. Germany further plans to incentivise the installation of small rooftop PV installations for the purpose of injecting 100% of electricity generated into the grid.
- (8) To this end, the notified measure introduces a differentiation between:
 - (a) installations with 100% grid injection (“full feed-in installations”); and
 - (b) installations relying at least in part on self-supply for their business model (“partial self-supply installations”).
- (9) Germany explains that the existing support mainly favours installations which have a large share of self-consumption, so that they have little incentives to optimise the installation size to also be able to feed the electricity produced into the grid. Therefore, in order to optimise the use of the available rooftop space in Germany for electricity production which is not only used for self-consumption, a new level of support is introduced for installations of up to 300 kW which fully feed the electricity produced into the grid (“full feed-in segment”). This support is to be calculated individually according to the specific size of the installations (as is the case under the existing scheme). Full feed-in installations are only eligible for this new level of support if 100% of the electricity they produce is injected into the grid, with prior notification to their grid operator of their intention to do so. Should the installation fail to inject 100% of electricity generated into the grid, it receives no aid under the small rooftop PV measure and, therefore, compensation it may receive for the electricity it has supplied is reduced to the market value of the electricity actually injected into the grid.
- (10) For partial self-supply installations, there will be three categories of installations by size (i.e. up to 40 kW, up to 100 kW and up to 750 kW).
- (11) The level of support for partial self-supply installations is lower than for full feed-in installations, in order to incentivise a higher amount of electricity actually injected into the grid by small rooftop PV installations (see section 2.4.1 below).

⁶ Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 (‘European Climate Law’), OJ L 243, 9.7.2021, p. 1.

2.1.2. Innovation tender measure

- (12) The EEG 2021 establishes two annual innovation tenders, which span several technologies⁷. Germany committed to carrying out annual innovation tenders for installations providing specific services to the grid, with the intention of testing how to further incentivise the market and grid integration of RES installations. Only combinations of either several RES technologies, or of one or several RES technologies with electricity storage, are eligible to participate in innovation tenders. Germany submits that, through the innovation tender, a technologically neutral element is maintained in the tenders.
- (13) The most recent round of innovation tenders on 1 April 2022 was oversubscribed and the entire volume tendered could be awarded. The average volume-weighted award value was 5.42 ct/kWh with a fairly wide spread of between 3.95 ct/kWh and 7.43 ct/kWh.⁸ The two bidding rounds in April 2021 and August 2021 had an average volume-weighted award value of 4.29 ct/kWh and 4.55 ct/kWh.⁹
- (14) Since the Commission adopted its decision in case SA.57779, electricity market prices in Germany have increased significantly since the last quarter of 2021. In 2021, on average, EUR 97/MWh was paid for electricity on the stock exchange, amounting to more than a triple of the electricity price level in the previous year (which was around EUR 30/MWh on average). At the end of 2021, prices rose to record levels, with weekly averages of the German wholesale electricity price of over EUR 250/MWh.¹⁰ This trend continued into 2022, with high electricity prices as compared to equivalent periods the year before.
- (15) Germany considers the fixed market premium to be no longer necessary and as giving rise to a risk of overcompensation in the event of a rise in electricity prices in the short term.
- (16) It is not possible to assess the extent to which a specific installation could be overcompensated as a result of a combination of increased electricity prices and the fixed market premium, since the profitability of individual installations in the call for innovation tenders cannot be estimated: the requirements of individual installations participating in the call for innovation tenders tend to vary considerably, depending on the technologies and combinations of technologies used. Since only combinations of different RES technologies, or a combination of one or several different RES technologies and storage, are allowed, their investment costs tend to be higher than for installations of only one RES technology. Furthermore, it is impossible to anticipate the duration for which electricity prices will remain high. Therefore, the innovation tender measure

⁷ See recitals 114-121 and 363-374.

⁸ The high values are also due to the fact that a sub-segment for special solar installations was tendered in this round (see recital 120 of the decision in case SA.57779 describing these special solar installations).

⁹ The dispersion was less wide than in 2022, as there was no separate sub-segment for special solar installations (the highest bid values awarded were 4.88 ct/kWh and 5.48 ct/kWh, respectively).

¹⁰ See e.g. short analysis of electricity price development 2021, Energy Institute at the University of Cologne (EWI) gGmbH, January 2022: https://www.ewi.uni-koeln.de/cms/wp-content/uploads/2022/01/EWI_Kurzanalyse_Strompreise_20220105.pdf.

replaces the fixed market premium with a sliding market premium, which would limit the payments that beneficiaries could receive, as no remuneration (market premium) would be paid when the monthly market price exceeds the reference value (“*anzulegender Wert*”), which in the case of a tender procedure consists of the bid price. The level of remuneration to be applied to innovation tenders is to be calculated in accordance with Annex 1 of the EEG, and consists of the difference between the market price and the reference value whenever the former is lower than the latter.

- (17) The only selection criterion in the tender procedure is the value of the bid. Remuneration for installation combinations awarded under these innovation tenders is to be made for a period of 20 years, except for installation combinations that contain an existing biomass installation, for which the period is reduced to 10 years.

2.1.3. Additional round of solar PV tenders

- (18) In its decision dated 9 December 2021 in case SA.63476¹¹, the Commission approved Germany’s decision to increase the targeted tender volumes for solar PV (rooftop and ground-based), onshore wind and the special solar innovation segment for the year 2022, in order to meet Germany’s plan to add at least 100 TWh per year of renewable energy by 2030, increasing the target share of renewables in the power mix to 80%. To this purpose, additional ‘special invitations to tender’ (*Sonderausschreibungen*) were launched in 2022.
- (19) Relevant for the purpose of this decision are the new tenders (§28a EEG 2021), concerning ‘regular’ rooftop and ground-based solar PV¹², for which the tender quantities were each time increased by 2 000 MW as follows¹³:
- (a) ground-based solar PV: target tender volume of 3 600 MW in 2022, of which 2 000 MW in the context of the EEG 2021 ‘special invitations to tender’;
 - (b) rooftop solar PV: target tender volume of 2 300 MW in 2022, of which 2 000 MW in the context of the EEG 2021 ‘special invitations to tender’.
- (20) In the decision in case SA.64376, Germany notified the increased tender volume for two 2022 tender rounds for ‘regular’ solar PV. The rationale for this was that the EEG 2021, adopted in December 2020, did not foresee a volume adjustment mechanism (‘safeguard’) to ensure the competitiveness of the ‘regular’ solar PV tenders in both the segment of ground-based solar PV and in the segment of rooftop solar PV. After having observed the results of two 2022 tender rounds, Germany would, according to its commitment in case SA.63476¹⁴, assess the impact of the increased tender volumes on the competitiveness of the ‘regular’ solar PV tenders, which would steer a decision on the potential need for the

¹¹ See recitals 11-22.

¹² The wording ‘regular’ in the context of solar PV tenders refers to the difference with the category of special solar innovation tenders.

¹³ See recital 14 in the decision in case SA.63476.

¹⁴ See recital 16 in the decision in case SA.63476.

introduction of a volume adjustment mechanism in the additional tender round of 2022.

- (21) At the time of this decision, the results of the first two rounds of ground-based solar PV tenders and the first round of rooftop solar PV tender were known. The results were the following:
- (a) Ground-based solar PV:
 - Tender of 1 March 2022: a volume of 1 108 MW was tendered, and the tender was slightly oversubscribed with a bid volume of 1 116 MW.
 - Tender of 1 June 2022: a volume of 1 126 MW was tendered, and the tender was significantly undersubscribed with a bid volume of only 714 MW.
 - (b) Rooftop solar PV:
 - Tender of 1 April 2022: a volume of 767 MW was tendered, and the tender was significantly undersubscribed with a bid volume of only 212 MW.
- (22) On the basis of these results, Germany suggested including a volume adjustment mechanism in the additional round of tenders for both rooftop and ground-based solar PV in order to ensure a competitive bidding process. As a consequence, for both, ground-based and rooftop solar PV tenders, the tender volume in the additional round of 2022 will be calculated on the average of the actually awarded volumes in the first two bidding rounds. This implies the following based on the published results of the first two tender rounds for ground-based and rooftop solar PV:
- (a) Ground-based solar PV: a volume of 1 083.63 MW was awarded support during the first tender round of March 2022 (out of 1 107.73 MW tendered); a volume of 695.85 MW was awarded support during the second tender round of June 2022 (out of 1 125.99 MW tendered). As a consequence, the volume to be tendered in the additional round of solar PV tenders will be 889.74 MW, instead of the more than 1000 MW originally planned.
 - (b) Rooftop solar PV: a volume of 203.54 MW was awarded support during the first tender round of April 2022 (out of 766.67 MW tendered); a volume of 201.04 MW was awarded support during the second tender round of August 2022 (out of 766.67 MW tendered). As a consequence, the volume to be tendered in the additional round of solar PV tenders will be 202.29 MW, instead of the 766.67 MW originally planned.
- (23) This measure was explicitly carved out from the notification of the initial scheme and accordingly not covered by the initial decision¹⁵.

¹⁵ See recitals 16 and 58 in the decision in case SA.63476.

- (24) In the case of rooftop solar PV, since the tender results of the second tender were not yet available at the time of the decision on the design of the safeguard, the law provides that the average amount of the actually awarded volumes in the first two bidding rounds may be topped up with the difference between the actual awards in the second and first bidding rounds. This provision is only applicable in case the quantity awarded in the second tender round (of 1 August 2022) is higher than the quantity awarded in the first bidding round (of 1 April 2022), and serves to support the positive market development in order to maximise the existing potential for rooftop solar PV installations in the market. Since the results of the second tender round show that this condition is not fulfilled with, the volume to be tendered in the additional round of rooftop solar PV tenders will be based on the average of the previous two rounds, as indicated above.
- (25) The notified measures are reflected in the German Renewable Energy Law, in particular §28a, §28a(4) regarding ground-based solar PV and §28a(5) regarding rooftop solar PV. The only selection criterion in the tender procedure is the value of the bid. The EEG also specifies that for large solar PV installations, in particular solar PV installations participating in tenders, no subsidy will be paid for hours in which the spot market price is negative, whenever negative prices persist for at least 4 consecutive hours (§51 EEG 2021). The number of non-remunerated negative price hours will be added at the end of the support period for contracts awarded through tenders.

2.2. National legal basis

2.2.1. Small rooftop PV measure

- (26) The EEG 2021 was adopted on 18 December 2020 and entered into force on 1 January 2021, under the suspensive condition of State aid approval by the Commission.
- (27) The notified small rooftop PV measure is included in the 2022 Law on emergency measures to accelerate the development of renewable energy and other measures in the electricity sector (*‘Gesetz zu Sofortmaßnahmen für einen beschleunigten Ausbau der erneuerbaren Energien und weiteren Maßnahmen im Stromsektor’*), amending §§48(5), 100(14), 105(6) and (7) of the EEG 2021. The 2022 Law, inter alia, amends §105(6) of the EEG 2021 and contains a suspension clause, according to which the changes to the EEG 2021 that constitute the notified small rooftop PV measure may be applied only following, and only in accordance with, Commission approval.
- (28) The objectives of the notified measures, including the small rooftop PV measure, follow those of the EEG 2021, while increasing its environmental ambitions. The small rooftop PV measure in particular seeks to support wider-scale rooftop PV deployment and to incentivise the injection of electricity generated with photovoltaic panels into the grid.

2.2.2. Innovation tender measure

- (29) The details concerning the remuneration for innovation tenders are provided for in §§8, 9 and 11 of the Innovation Tender Ordinance (*‘Innovationsausschreibungs-verordnung’* or *“InnAusV”*). The InnAusV was adopted on 20 January 2020 and was last amended by Article 11c of the Law on

the implementation of EU legal requirements and on the regulation of pure hydrogen networks in energy industry law (*‘Gesetz zur Umsetzung unionsrechtlicher Vorgaben und zur Regelung reiner Wasserstoffnetze im Energiewirtschaftsrecht’*) of 16 July 2021.

- (30) The notified innovation tender measure is included in the 2022 Law on emergency measures to accelerate the development of renewable energy and other measures in the electricity sector (*‘Gesetz zu Sofortmaßnahmen für einen beschleunigten Ausbau der erneuerbaren Energien und weiteren Maßnahmen im Stromsektor’*), amending several sections of the InnAusV, including §§8, 9 and 11.
- (31) Annex 1 to the EEG, in accordance with which the sliding market premium is to be calculated and to which reference is made in the revised InnAusV, is contained in the EEG 2021.
- (32) The objective of the InnAusV is to incentivise innovation in the market and grid integration of RES installations, in terms of both technological innovations and innovative ways to turn RES energy into more predictable and dispatchable forms of output in order to optimise their use and availability.
- (33) The revised InnAusV contains a suspension clause, according to which the revised sections may be applied only after the Commission’s approval has been notified to Germany (new §14 of the InnAusV).

2.2.3. Additional round of solar PV tenders

- (34) The details for the additional round of solar PV tenders are set out in §28a of the EEG 2021, implemented by means of Article 11 of the Law for the implementation of Union law requirements and for the regulation of pure hydrogen networks in energy law (*‘Gesetz zur Umsetzung unionsrechtlicher Vorgaben und zur Regelung reiner Wasserstoffnetze im Energiewirtschaftsrecht’*).
- (35) The objectives of the notified measures, of which the additional round of solar PV is part, follows the objective of the EEG 2021, while increasing its environmental ambitions. In the context of this measure particularly, the new measures accelerate the capacity expansion path of solar PV by increasing the tender quantities.¹⁶ The additional round will only be implemented after the Commission’s approval has been notified to Germany (§105(1) of the EEG 2021).

2.3. Beneficiaries

- (36) The eligible beneficiaries of the aid are producers of EEG electricity, i.e. RES electricity eligible for support under the EEG 2021.¹⁷
- (37) As in the existing support scheme, different RES support measures and RES tenders are organised per technology, except for the innovation tenders in which

¹⁶ This implies that the increased tender quantities for solar PV will contribute to the increase in the total amount of installed capacity of renewable energy sources in Germany.

¹⁷ The qualification of aid as eligible for support under ‘EEG electricity’ is without prejudice to accounting of renewable energy in line with the principles and methods of Directive 2018/2001/EU.

installations based on all RES sources, as well as storage, can participate. Germany argues that due to its geographical location, as well as network and system integration considerations, it is important to have a diverse mix of technologies. In particular, onshore wind and solar PV complement each other's feed-in (both throughout seasons and various weather conditions), whereas biomass provides a dispatchable production source (that can be used regardless of weather conditions) but that has a much higher cost. Germany cites their experience with past joint tenders for solar and onshore wind, in which only solar projects were awarded. According to Germany, a particular difficulty is the internalisation of system integration costs into the tenders. Germany argues that these arguments become more significant the higher the share of RES in electricity production, since a higher share of RES (in particular solar and wind energy) in the system creates higher supply volatility.

2.4. Allocation process, form of aid and level of support

2.4.1. Non-tendered aid: Small rooftop PV measure

- (38) Small rooftop PV installations up to 750 kW are exempt from the competitive bidding requirement and are instead eligible for a feed-in tariff or a market premium with reference values set out in the EEG 2021¹⁸.
- (39) As noted in recital (8) above, the notified small rooftop PV measure introduces a differentiation between full feed-in installations and partial self-supply installations. The following levels of support are to be made available under the notified measure:

Table 1: Overview of small rooftop PV support levels in the EEG 2021

Size of rooftop PV installation	Level of support	Form of support
<i>(New) Full feed-in segment</i>		
Up to 10 kW	13.40 ct/kWh	Feed-in tariff
Up to 100 kW	11.30 ct/kWh	Feed-in tariff
Up to 300 kW	9.40 ct/kWh	Market premium
<i>(Existing) Partial self-supply segment</i>		
Up to 10 kW	8.60 ct/kWh	Feed-in tariff
Up to 40 kW	7.50 ct/kWh	Feed-in tariff
Up to 750 kW	6.20 ct/kWh	Market premium

Source: notification documents of the German authorities

- (40) Hence, under the new arrangement in the EEG 2021, if the operator feeds into the grid all of the electricity produced by the installation in a calendar year, the

¹⁸ See recital 19 and section 2.6.2.5 in the decision in case SA.57779.

existing remuneration is increased compared to the existing aid level (see Table 1):

- (a) by 4.80 ct/kWh for installations of up to 10 kW;
 - (b) by 3.80 ct/kWh for installations of up to 40 kW;
 - (c) by 5.10 ct/kWh for installations of up to 100 kW; and
 - (d) by 3.20 ct/kWh for installations of up to 300 kW.
- (41) The support will be calculated for each installation individually, and will be applied pro rata with respect to the size of the installation. Therefore, for example, a beneficiary with an installation of 50 kW, who feeds in all electricity into the grid, will receive 11.32 ct/kWh for all remunerable production¹⁹.
- (42) Germany has provided the following reference projects for the measure, based on the different installation sizes for which distinct levels of support apply in the EEG 2021, in particular in the new full feed-in segment with 100% grid injection. Germany considers that these projects are representative of the different types of small rooftop PV installations. There are four reference projects related to size:
- (a) Rooftop solar PV installation of 10 kW, with an average energy yield of 9.3 MWh per year; representative for a typical rooftop solar PV system on a single household residential building;
 - (b) Rooftop solar PV installation of 100 kW, with an average energy yield of 90 MWh per year; representative for a typical rooftop solar PV system on a commercial building;
 - (c) Rooftop solar PV installation of 300 kW, with an average energy yield of 270 MWh per year; representative for a typical rooftop solar PV system on a large commercial/industrial building and the largest category of installations that can be supported in the full feed-in segment;
 - (d) Rooftop solar PV installation of 400 kW, with an average energy yield of 360 MWh per year; representative for a typical rooftop solar PV system on a large commercial/industrial building, representative for the largest category of installations that are supported in the partial self-supply segment.²⁰

¹⁹ Calculated as $((13.4 - 0.4) \text{ ct/kWh} \times 10 + (11.3 - 0.4) \text{ ct/kWh} \times 40) / 50$. Since an installation of 50 kW is entitled a feed-in tariff, the direct marketing cost (of 0.4 ct/kWh) has to be subtracted from the aid (see recital (51)).

²⁰ Germany argues that in the segment of small rooftop PV installations, larger installations above 400 kW are in practice rarely built. The reasoning is that in order to be profitable a large share of self-consumption is required, which is generally not achievable for these installations. According to Germany's assessment and experience with the market, only 10% of the plants, which are larger than 300 kW, use part of the electricity they consume. Therefore, the category of installations with a capacity above 300 kW is therefore negligible. The reference project with a capacity of 400 kW is representative for this small part of the installations in the segment between 40 and 750 kW.

- (43) The analysis has been replicated for each of the four installation sizes and also per aid category, to distinguish between the support levels in the full feed-in segment and the existing segment, which allows for partial self-supply. According to data submitted by Germany, a small installation has a rate of self-supply of typically 25%; hence, this degree of self-supply has been used in the following analysis.
- (44) The same installation sizes have been used for both segments of support, despite the different size categories in the segment with partial self-supply. These reference projects represent typical average installations and are provided by way of sample. The level of support for reference projects in the partial self-supply segment were calculated on the basis of the level of support applicable to installations of that size. The level of support is granted pro rata and is calculated individually for each installation.
- (45) Germany has submitted a quantification of all the costs and revenues over the lifetime of the installations (20 years), for each of the eight reference projects (per size and per type of support).

Table 2: Quantification: Reference projects small rooftop solar PV

Reference project	10 kW	100 kW	300 kW	400 kW
Lifetime of the project (y)	20	20	20	20
Energy yield per year (kWh/kW) (degradation factor of 0.25%/y)	930	900	900	900
Investment cost (EUR/kW)	1 460	1 055	930	910
Operating costs (EUR/kW/y)	17	17	17	17
Direct marketing cost (EUR/y)	120	400	650	850
Full Feed-in				
Funding gap (EUR) (no EEG support)	-10 633	-59 716	-135 822	-172 920
Partial Self-supply				
Funding gap (EUR) (no EEG support)	-5 405	-19 886	-68 403	-83 028

Source: notification documents of the German authorities

- (46) The relevant cost parameters are the initial investment cost (capex), which is increasing with the size of the installation, and the recurring operating costs (EUR 17/kW per year for all reference projects), which have been adjusted for inflation (2%) in the analysis. Despite the currently high levels of inflation, Germany opted to take a precautionary approach and consider the long-term rate of inflation targeted by the ECB in the analysis. Without EEG support all installations need to

sell the generated solar energy on the market which involves also costs ('direct marketing cost'). The energy yield (kWh/kW) is somewhat higher for the smallest size of installations, since small rooftop installations are usually installed on residential buildings with pitched roofs, which is more favourable for the energy yield compared to flat roofs, and decreasing by 0.25% per year, to take into account the decrease in performance of PV panels over time. It is clear from the data provided by Germany that the notified measures cover primarily the initial fixed investment costs. The operating costs over the lifetime of the investment are also covered but represent 15 to 25% of the total costs of the relevant reference projects.

- (47) The relevant revenue streams in case of direct marketing and no EEG support are based on the expected electricity market prices. The applied electricity market model (developed by "Energy Brainpool"²¹) uses the fundamental model "Power 2 Sim", modelling future electricity markets according to scenarios. It carries out hourly calculations until the year 2050 and takes into account all European countries. It is based on the input from renowned studies and databases such as the "EU Energy, Transport and Emission GHG Trends to 2050", Eurostat or ENTSO-E. CO₂ certificate and fuel prices follow forward markets until 2025. Exchange rates are also relevant, as certain commodities (such as fossil fuels used in electricity production) are not traded in EUR. As there are no indications about future exchange rate developments (e.g. in the "World Energy Outlook") the average over the last 10 years is taken as an assumption for 2025, which also corresponds to current developments on the forward markets. Taking into account the hourly generation profile of variable renewable energies allows for realistic results with regard to their actual production and their influence on electricity market prices. As regards weather conditions, the scenarios are based on data of the year 2009, which corresponds to a long-term average in central Europe.
- (48) All costs and revenues are discounted by using the Weighted Average Cost of Capital ('WACC') as discount factor. An appropriate value of the WACC in case of direct marketing and no EEG support, is considered to be 7%, based on research and surveys executed by Energy Brainpool, referred to by Germany.
- (49) Germany argues that the counterfactual situation consists of no execution of the project, because without support the projects would face an increased financing risk and high administrative burden, despite the current high level of electricity market prices (regarding the selling of small amounts of solar energy on the market, in particular in the full feed-in segment). Hence, the net present value ('NPV') of the counterfactual scenario is zero, and the funding gap equals the NPV of the project without EEG support.
- (50) For each of the reference projects the base year is 2022 (the first year in which the aid is granted) and the NPV is calculated over the expected economic lifetime of the project of 20 years. The funding gap for each of the reference projects turns out to be significantly negative, in case no EEG support is granted.

²¹ "Energy Brainpool" is an independent energy market expert, focused on electricity and energy trading in Europe, with an expertise in the analysis, forecasting and modelling of energy markets and prices: <https://www.energybrainpool.com/unternehmen/ueber-energy-brainpool.html>.

- (51) Germany also provided the calculations of the funding gap in case EEG support is granted. There are two adjustments taken into account in the calculation of the NPVs of the reference projects in that case. First, to calculate the revenues, the relevant feed-in tariff is considered in case of installations of 10kW and 100kW as these are not obliged to directly market the energy produced (the cost of direct marketing is not considered in case EEG support is granted, since producers of electricity are not obliged to directly sell their electricity on the market); for installations of 300kW, the revenues are determined either by the electricity price (in case the market price for electricity is higher than the reference value in the EEG) or by the EEG support (in case the market price for electricity is lower than the reference value in the EEG). Germany adapts the EEG support in the law by subtracting 0.4 ct/kWh in order to take into account the avoided cost of direct marketing for installations that are subsidised through a feed-in tariff. Second, a lower value of the discount factor used in the NPV calculations, reflecting the lower financing risk in case EEG support is granted. For installations up to 10 kW a WACC of 3.9% is used (based on a 50-50% debt and equity financing, 5% equity yield rate and cost of debt of 2.8%), while for larger installations a WACC of 4.1% was used (based on a 75-25% debt and equity financing, 8% equity yield rate and cost of debt of 2.8%).
- (52) The results of the funding gap calculations for the eight relevant reference projects with EEG support (with each time a NPV of the counterfactual scenario of zero) are presented in Table 3.

Table 3: Results quantification funding gap reference projects with EEG support

NPV (‘000 EUR) reference projects (with EEG support)	10kW	100kW	300kW	400kW
Full feed-in	-1	0	-1	0
Partial feed-in	0	0	-5	0

Source: Notification documents of the German authorities

- (53) The results of the funding gap analyses for all reference projects show that (1) without EEG support the net present value of the cash flows of the projects over the economic lifetime of 20 years is highly negative (i.e. a significant funding gap exists) (cf. Table 2), and (2) the EEG support significantly reduces the funding gap and makes the NPV of the project close to 0 (cf. Table 3)
- (54) In order to make sure that the subsidised projects are effectively implemented, remuneration is only paid once an installation has been commissioned and started operating. In addition, the aid application must have been done before the start of the project.
- 2.4.2. *Tendered aid: Innovation tenders and additional round of solar PV tenders*
- (55) Support for installations that fall under the category of RES innovation projects and regular solar PV with a capacity above 750 kW is granted through a competitive bidding process.
- (a) There are two annual innovation tenders, on 1 April and 1 August of the year. Since the sliding premium is set to apply from the next tender round

in 2022, the next tender is postponed from 1 August 2022 to 1 October 2022.

- (b) Funding for all regular ground-based solar installations with a capacity over 750 kW will be tendered in three annual rounds (March, June and November, with November being the additional round). Funding for all regular rooftop solar PV installations with a capacity over 750 kW will be tendered in two annual rounds (June and December), except in 2022 where there will be three annual tender rounds (April, August and December, with December being the additional round).
- (56) Under the innovation tender measure, the remuneration is to be paid to the beneficiary as a sliding market premium on top of the market price. In case the tender is undersubscribed, only the lowest 80% of bids in terms of capacity are to be awarded, and no remuneration is to be paid in the case of a negative spot price.
 - (57) For regular solar PV tenders, the remuneration is still to be paid as a sliding market premium that covers the difference between a reference value (determined by the bids in the tender in the case of tendered support) and the market price for the electricity²²; however, the additional round of solar PV tenders includes a volume adjustment mechanism, as described in recitals (22) and (24), since the first two tender rounds in 2022 were undersubscribed.
 - (58) Despite the current high electricity market prices, in particular as a result of the Russian war of aggression against Ukraine, Germany argues that this does not change the fact that renewable energy installations still need support in order to be profitable over their entire lifetime; the electricity price scenarios known to the German federal authorities do not suggest that the electricity prices will remain high in the long run. As a consequence, Germany argues that the cost of electricity generation from RES is expected to be higher than the market price for electricity over the long run.
 - (59) In order to further substantiate this, similar as for the small rooftop PV measure, Germany provided figures on the funding gap for typical ground-based and rooftop PV installations over their lifetime of 20 years. The following reference projects have been used, which represent the average typical size of an installation in the respective tenders:
 - (a) Rooftop installation of 1 250 kW, with an average energy yield of 1 125 MWh per year;
 - (b) Ground-based installation of 6 400 kW, with average energy yield of 6 080 MWh per year.
 - (60) Germany has submitted a quantification of all the costs and revenues over the lifetime of the installations (20 years), for each of the reference projects. The funding gaps have been calculated according to the same methodology as described in recitals (46) to (50) above, and are presented in Table 4. It is clear from the data provided by Germany that the notified measures cover primarily the initial fixed investment costs. The operating costs over the lifetime of the

²² See recital 25 in the decision in case SA.57779.

investment are also covered but represent 20 to 25% of the total costs of the relevant reference projects.

Table 4: Quantification: Relevant parameters reference projects tendered solar PV

Reference project	Rooftop solar PV installation (> 750 kW)	Ground-based solar PV installation (> 750 kW)
Capacity (kW)	1 250	6 400
Lifetime of the project (y)	20	20
Energy yield per year (kWh/kW) (degradation factor of 0.25%/y)	900	950
Investment cost (EUR/kW)	790	650
Operating costs (EUR/kW/y)	15	15
Direct marketing cost (EUR/y)	1 600	6 000
Funding gap (EUR) (no EEG support)	-395 300	-896 300

Source: notification documents of the German authorities

- (61) For each of the reference projects, the NPV is calculated over the expected economic lifetime of the project of 20 years. The funding gap for each of the reference projects turns out to be significantly negative, as shown in Table 4 above.
- (62) As regards innovation projects, Germany argues that these projects are by definition more expensive than regular solar PV projects, since, as explained in recital (12), they require a combination with an electricity storage facility, which means they regularly incur significant additional investment costs in storage facilities. Germany provided the following information on the additional costs of electricity storage: it has been observed that, although the tender is technology neutral, only large ground-based solar PV installations with battery storage are currently awarded support through the innovation tenders, whereby the additional costs compared to the regular ground-based solar PV tenders (see funding gap in Table 4) is estimated by the German authorities at 20%, due to the storage requirement (battery component linked to the installation). The additional investments in storage capacity increase the market value of the installation, but the additional revenues are currently not yet sufficient to compensate the additional investment cost. As a consequence, despite the higher market revenues from the battery storage, there is no overall gain in profitability compared to regular ground-based solar PV installations. Hence, the funding gap for innovation projects is comparable to the one for regular solar PV tenders. Germany argues that an estimation of the exact value of the funding gap is very difficult, since there is a large variety of different configurations of innovation projects possible, which are hard to capture in a few relevant reference projects.

Based on Germany's assessment, the best estimate of the funding gap for innovation projects is similar to the one for large ground-based solar PV installations (about EUR 900 000, as shown in Table 4), since the increased market revenues are fully offset by the additional required investment in storage.

- (63) In order to make sure that the innovation tender projects and regular solar PV projects are effectively implemented, two rules apply.
- (64) First, in the case of innovation tenders, a guarantee needs to be provided by the beneficiary to the State, which amounts to 60 EUR/kW and the installations have to enter into operation at the latest 30 months after the award.
- (65) Second, in view of the substantial increase in the tender volumes for regular ground-based and rooftop solar PV tenders in 2022, and in order to increase the tender participation while ensuring that projects are implemented, the EEG 2021 introduced simplified tender procedures for both the bidders and the Federal Network Agency (the Bundesnetzagentur, 'BNetzA'). In summary, the following facilitations have been introduced in the tender procedure:
 - (a) Rooftop solar PV tenders changed from a bidder- to a project-based procedure, whereby a change of location is no longer possible. A guarantee payment (amount per bid quantity) of EUR 35/kW needs to be provided by the beneficiary to the State (§38d EEG 2021). While the implementation deadline and penalties have been abolished (§38f and §55 EEG 2021), rooftop solar PV awards are permanently bound to the project site that was the subject of the bid and cannot be transferred to other sites; moreover, there is a maximum duration of the support, counting as of the day of the award of the project (instead of the day of start of the operations), which ensures that projects are implemented as soon as possible.
 - (b) For ground-based solar PV tenders a guarantee payment of EUR 50/kW needs to be provided by the beneficiary to the State (§37a EEG 2021). The implementation deadline has been temporarily (2021 and 2022 only) extended from 24 to 32 months, in order to compensate for expected delays in implementation of the projects due to the Covid-19 pandemic, as well as for the increasing length of the procedure to obtain permits (§100(11) EEG 2021). To incentivise faster implementation of projects, a penalty in the form of a reduction of 0.3 ct/kWh in the bid value applies if the project is not implemented within 24 months (§54(1) EEG 2021).
- (66) Finally, the aid application which in this case corresponds to the submission of a bid, must be done before the start of the project.

2.5. Duration of the support

- (67) The small rooftop PV measure and the additional round of solar PV measure notified in this case, have a limited duration:
 - (a) Small rooftop PV measure: until 31 December 2022; and
 - (b) Additional round of solar PV tenders: since Germany notified two tender rounds in the context of the Commission decision in case SA.64376, the

measure as subject of the current decision only concerns the additional tender round of solar PV tenders, i.e. the tender round of 1 November 2022 for ground-based solar PV installations and the tender round of 1 December 2022 for rooftop solar PV installations.

- (68) The duration of the innovation tender measure is until 31 December 2026.

2.6. Cumulation

- (69) Germany has confirmed that aid granted pursuant to the notified measures can only be cumulated with aid or de minimis aid to the extent that such cumulation is permissible under the relevant State aid rules and in so far as it does not lead to overcompensation, in line with point 56 and 57 of the CEEAG.

2.7. Budget and financing

- (70) Since 1 July 2022, Germany has abandoned the EEG levy. This implies that the notified measures are currently only financed through the general State budget.
- (71) The total budget of the small rooftop PV measure for its entire duration is estimated at EUR 250 million.
- (72) As regards the innovation tender measure, the replacement of the fixed market premium by the sliding market premium does not increase the need for funding. There is therefore no greater demand on the general budget of the state for this notified measure than already exists for the existing measure.
- (73) For the additional round of solar PV tenders, Germany estimates the additional cost at EUR 260 million, over its entire duration. Germany argues that only rough estimates of the budget are possible *ex ante*, since the cost of the increased tender volumes for solar PV depends on the outcome of the tenders and the evolution of energy prices in the market.

2.8. Monitoring of costs

- (74) With regard to the notified measures, the German authorities have committed to annually verify the production costs of typical installations as part of the domestic technology-specific monitoring reports (*'Forschungsvorhaben'*) and compare them with the remuneration levels.
- (75) The German authorities observe that if overcompensation occurs, measures will be taken to review the remuneration awarded in the future to such installations in order to avoid any overcompensation in line with point 92 of the CEEAG.

2.9. Transparency

- (76) Germany will ensure compliance with the transparency requirements laid down in points 58 to 61 of the CEEAG. The relevant data of the notified measures will be published on a national website that will link to the Commission transparency register.

2.10. Undertakings in difficulty or subject to an outstanding recovery order

- (77) Germany confirmed that no aid can be granted to undertakings in difficulty as defined by the Commission Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty²³ and all firms that intend to participate in the scheme will have to provide a declaration that they are not an ‘undertaking in difficulty’.
- (78) Germany has committed that no aid will be granted to undertakings subject to an outstanding recovery order following a previous Commission decision declaring aid illegal and incompatible with the internal market.

2.11. Evaluation

- (79) The notified measures will be part of the overall evaluation of the effects of the EEG 2021 scheme, for which Germany has committed to submit the final evaluation report to the Commission nine months before the end of the scheme, by 31 March 2026. In particular, Germany will add the following evaluation question to the evaluation plan: *“To what extent has the introduction of a new segment with full grid injection for small rooftop solar PV installations, contributed to a more optimal use of the available rooftop space and to a higher degree of electricity produced by small rooftop installations being injected into the grid?”*. The evaluation of the EEG 2021 scheme is described in detail in recitals 218 to 235 of the Commission decision in case SA.57779. No change to the evaluation, apart from the additional evaluation question, will take place.
- (80) Germany has furthermore confirmed that where an environmental impact assessment or an assessment is required under Directive 2011/92/EU, it will be carried out (Annex D to the DA on climate change mitigation and adaptation of the taxonomy), and that any necessary corrective and compensatory measures and audits will be carried out.

3. ASSESSMENT OF THE MEASURES

3.1. Presence of state aid

- (81) Germany has notified the measures described in section 2.1 as State aid. Germany submits that the notified measures are financed from State resources, due to the payment of financial means from the Federal budget into the EEG account.
- (82) Article 107(1) TFEU states that *‘any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods, shall, in so far as it affects trade between Member States, be incompatible with the common market’*.
- (83) To determine whether a measure constitutes State aid within the meaning of Article 107(1) of the Treaty, the measure must:

²³ 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).

- (a) confer an advantage on certain undertakings or certain sectors (selective advantage),
- (b) be imputable to the State and involve State resources,
- (c) distort or threaten to distort competition, and
- (d) be liable to affect trade between Member States.

3.1.1. Existence of a selective advantage

- (84) Regarding the support of electricity generated from renewable energy sources, the Commission notes that the notified measures confer an advantage on certain electricity producers in the form of a direct grant (market premium or feed-in tariff). Those payments guarantee that, in particular at times when the electricity price is lower than the cost of electricity production, eligible electricity producers will obtain a remuneration for their electricity produced that is higher than the market price, enabling them to cover their costs, which would not be fully covered under normal market circumstances. They are thus advantaged by the notified measures.
- (85) Furthermore, the aid is selective, since it only applies to specific RES electricity technologies provided for under the EEG, as opposed to conventional electricity production technologies.

3.1.2. Imputability and existence of State resource

- (86) Only advantages which are granted directly or indirectly through State resources are to be regarded as aid within the meaning of Article 107(1) TFEU.
- (87) The notified measures are imputable to the State and involve State resources. To that effect, the notified measures are established by law (EEG 2021) and implementing decrees (see section 2.2). The German authorities determine all elements of the scheme, including the beneficiaries, the conditions of eligibility in the scheme, and the scheme's budget. The notified measures are financed by the general State budget (recital (70)).

3.1.3. Impact on trade between Member States and on competition

- (88) The beneficiaries of the scheme are EEG electricity installations that are eligible for support under the EEG 2021. In all those sectors, trade takes place between Member States, and the beneficiaries are in competition with undertakings located in other Member States. In addition, the electricity market is liberalised and electricity is traded between Member States. The EEG electricity is generally sold on the spot market, where it enters in competition with all sources of electricity. The German spot market is interconnected with other markets.
- (89) For all the reasons mentioned above, the measures are therefore liable to distort competition and affect trade between Member States.

3.1.4. Conclusion on the existence of aid

- (90) The Commission concludes that the notified measures constitute State aid within the meaning of Article 107(1) TFEU. The German authorities do not contest that conclusion.

3.2. Lawfulness of the aid

- (91) Germany confirmed that aid under the notified measures will only be granted following the announcement of the Commission decision approving the notified measures.²⁴ Thus, Germany has complied with the standstill obligation set out in Article 108(3) TFEU.

3.3. Compatibility of the aid

- (92) The Commission has assessed the compatibility of the notified measures on the basis of Article 107(3)(c) TFEU. The notified measures aim at promoting economic activities in a manner that reduces greenhouse gas emissions and increases the level of environmental protection, as described in section 2.1. The supported activities fall within the scope of the Guidelines on State aid for climate, environmental protection and energy 2022 (“CEEAG”)²⁵. More specifically they fall under the category of aid for the reduction and removal of greenhouse gas emissions, including through support for renewable energy (see point 16(a) of the CEEAG).
- (93) The Commission has therefore assessed the notified measures as support for the producers of electricity from RES under the general compatibility provisions in CEEAG Section 3, as well as the specific compatibility criteria for aid for the reduction and removal of greenhouse gas emissions including through support for renewable energy and energy efficiency CEEAG Section 4.1.

3.3.1. Positive condition: the aid must facilitate the development of an economic activity

3.3.1.1. Contribution to the development of an economic activity

- (94) Article 107(3)(c) TFEU provides that the Commission may declare compatible ‘aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest’. Therefore, compatible aid under that provision of the Treaty must contribute to the development of certain economic activities (or of certain economic areas).²⁶ In accordance with this, point 23 of the CEEAG states that, when notifying aid, Member States must identify the economic activities that will be facilitated as a result of the aid and how the development of those activities is supported.

²⁴ For the small roof-top PV measure: §§105(6) of the EEG 2021; for the innovation tender measure: §14 of the InnAusV; for the additional round of solar PV tenders: §105(1) of the EEG 2021. See recitals (27), (33) and (35).

²⁵ OJ C 80, 18.2.2022, p.1.

²⁶ See judgment in case C-594/18 P, *Austria v Commission*, EU:C:2020:742, paragraphs 20 and 24.

- (95) The notified measures support the generation of electricity produced from renewable energy sources, in particular solar PV and onshore wind, therefore contributing to the development of economic activities in this sector.
- (96) According to point 19(35) of the CEEAG, ‘energy from renewable sources’ means energy produced by plants using only renewable energy sources (namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas (as defined in Article 2(1) of Directive (EU) 2018/2001)), as well as the share in terms of calorific value of energy produced from renewable energy sources in hybrid plants which also use conventional energy sources and includes renewable electricity used for filling storage systems connected behind-the-meter (jointly installed or as an add-on to the renewable installation), but excludes electricity produced as a result of storage systems.
- (97) The Commission therefore considers that the notified measures facilitate the development of certain economic activities as required by Article 107(3)(c) TFEU and point 23 of the CEEAG.

3.3.1.2. Incentive effect

- (98) State aid can only be considered to facilitate an economic activity if it has an incentive effect. An incentive effect occurs when the aid induces the beneficiary to change its behaviour towards the development of an economic activity pursued by the aid, and if this change in behaviour would not otherwise occur without the aid.²⁷
- (99) Point 29 of the CEEAG stipulates that aid does not normally present an incentive effect in cases where works on the projects started prior to the aid application. In addition, in order to demonstrate the presence of an incentive effect, point 28 of the CEEAG requires Member States to identify the factual scenario and the likely counterfactual scenario in the absence of aid. Furthermore, points 28, 38 and 90 of the CEEAG require the incentive effect and necessity of aid to be demonstrated through a quantification for the reference projects supported under the scheme following the description in point 51 of the CEEAG (where aid is not provided through competitive bidding procedure). Point 52 of the CEEAG explains that a counterfactual scenario may consist in the beneficiary not carrying out an activity or investment. Where evidence supports that this is the most likely counterfactual, the net extra cost may be approximated by the negative NPV of the project in the factual scenario without the aid over the lifetime of the project (hence, implicitly assuming that the NPV of the counterfactual is zero).

3.3.1.2.1. Small rooftop PV measure

- (100) As noted in recitals (49) and (50), absent the aid, there will be no investment in small rooftop solar PV installations and that therefore the NPV of the counterfactual scenario is zero. Germany submitted funding gap analyses showing significantly negative funding gaps for each of the relevant reference projects.

²⁷ See in that sense Section 3.1.2 of the CEEAG, as well as the *Hinkley* judgment (C-594/18 P, *Austria v Commission*, EU:C:2020:742, paragraphs 20 and 24).

- (101) Germany further argues that this counterfactual is not changed or reversed due to currently high electricity market prices (see recital (49)). Germany explains that increases in electricity prices (even significant ones) do not absolve RES installations of the need to refinance themselves over their lifetime, and that it cannot be expected that the current electricity market prices will prevail on a lasting basis.
- (102) Taking this into consideration, and considering in particular the small size of the eligible rooftop solar PV installations, it is likely that no investment decisions would be made in favour of them, or that there would be no incentive to feed the electricity generated by these small rooftop PV installations into the grid, without the aid, since the investment in small rooftop solar PV would be loss-making.
- (103) As mentioned in recital (54), the aid application must occur before the start of the small rooftop PV projects. Therefore, the requirement in point 29 of the CEEAG is also fulfilled
- (104) The Commission therefore concludes that the aid has an incentive effect and facilitates the development of electricity production (and feeding that production into the grid) from small rooftop PV installations.

3.3.1.2.2. Innovation tender and additional round of solar PV tenders

- (105) As noted in recitals (58) to (62), large solar PV projects (rooftop and ground-based) and innovative RES projects – for which the aid is allocated through tenders – will not be executed in the absence of the aid, given the gap between the cost to produce the electricity and the market price for electricity which is, considered over the lifetime of the solar PV project, generally lower. The current circumstances with very high electricity prices are deemed to be temporary and cannot reasonably be expected to persist over the 20 year lifetime of the projects. This is also shown by the negative NPV of the projects and existence of a significant funding gap when they do not receive EEG support (see Table 4).
- (106) Point 29 of the CEEAG stipulates that aid does not normally present an incentive effect in cases where works on the projects started prior to the aid application. Point 30 of the CEEAG further explains that the aid application may take various forms, including for example a bid in a competitive bidding process. As mentioned in recital (66), Germany ensures that applications for aid will be rejected if the requirements with regard to the incentive effect are not met. Therefore, the requirements in point 29 of the CEEAG are fulfilled.
- (107) The Commission therefore concludes that the aid has an incentive effect and facilitates the development of large solar PV projects and innovative solutions to market and grid integration of RES installations.

3.3.1.3. No breach of any relevant provision of Union law

- (108) State aid cannot be declared compatible with the internal market if the supported activity, the aid measure, or the conditions attached to it, entail a violation of relevant Union law.²⁸
- (109) In order to alleviate any concern regarding compliance with Articles 30 and 110 TFEU, Germany has created enabling rules such that producers located in other Member States are allowed to bid for capacity allocated within the tenders. The mechanism allows the Commission to conclude that the risk of possible discrimination against producers of other Member States is reduced. The Commission therefore concludes, in accordance with its case practice²⁹, that enabling an opening of the scheme in this manner reduces the risk of possible discrimination against producers of renewable electricity in other Member States. This has not been altered by the notified measures subject to this decision.
- (110) Therefore, the Commission considers that the notified measures do not infringe relevant Union law, and that the requirements of point 33 of the CEEAG are fulfilled.

3.3.1.4. Conclusion

- (111) The Commission therefore concludes that the notified measures fulfil the first (positive) condition of the compatibility assessment i.e. that the aid facilitates the development of an economic activity pursuant to the requirements set out in CEEAG Section 3.1

3.3.2. *Negative condition: the aid cannot unduly affect trading conditions to an extent contrary to the common interest*

3.3.2.1. The market affected by the aid measures

- (112) The market affected by the aid is the market for electricity production in Germany.

3.3.2.2. The positive effects of the aid measures

- (113) As indicated in section 3.3.1.1, the notified measures contribute to the development of a certain economic activity, i.e. the generation of electricity from renewable energy sources. The promotion of the development of renewable energy is one of the aims of the Union's policy on energy. The measure is also in full consistency with Germany's and the Union's RES and emissions targets.

3.3.2.3. The need for State intervention

- (114) In order to demonstrate the necessity of aid, points 38 and 90 of the CEEAG explain that the Member State must show that the reference project(s) would not be carried out without the aid, taking into account the counterfactual situation, as

²⁸ CEEAG point 33, and Judgment of 22 September 2020, *Austria v Commission*, C-594/18 P, EU:C:2020:742, paragraph 44.

²⁹ Decision SA.38632, Decision SA.45461, and Decision SA.57779 (in particular section 3.3.1.3).

well as relevant costs and revenues including those linked to measures identified in point 89. Point 89 of the CEEAG states that the Member State must identify the policy measures already in place to reduce greenhouse gas emissions. Point 91 of the CEEAG explains that where the Member State demonstrated that there is a need for aid, the Commission presumes that a residual market failure remains, which can be addressed through aid for decarbonisation, unless it has evidence to the contrary. To ensure that aid remains necessary for each eligible category of beneficiary, Member States must update their analysis of relevant costs and revenues at least every three years for schemes that run longer than that, as set out in point 92 of the CEEAG.

3.3.2.3.1. Small rooftop PV measure

- (115) In order to show the necessity of the aid in the relevant segments of small rooftop PV installations (reference projects of 10kW, 100kW, 300kW, 400 kW, each with a possibility to choose full grid injection or partial self-supply), Germany provided calculations of the net present value ('NPV') for each of the reference installations with and without EEG support.
- (116) The relevant parameters for each type of reference project, on which the funding gap calculations are based, are presented in recitals (43) to (48), including Table 2. As explained in recital (49), Germany argues that the counterfactual situation consists of no execution of the project. The commission considers this a credible counterfactual scenario and therefore accepts that the funding gap equals the NPV of the project without EEG support.
- (117) The results of the funding gap analyses for the reference projects, which the Commission has reviewed, show the existence of a funding gap: without EEG support, the net present value of the cash flows of the projects over the economic lifetime of 20 years is highly negative, and this in all of the relevant reference scenarios. This implies that without any support measures, an investor would not have an incentive to undertake the project and invest in small rooftop PV projects, as the investment would be highly unprofitable, both when opting for full feed-in of the electricity into the grid or when opting for self-supply. Hereby, Germany has proven that there is a need for aid, and according to point 91 of the CEEAG, the Commission presumes a residual market failure remains which can be addressed through aid for decarbonisation. The Commission has no evidence to the contrary.
- (118) Despite other policy measures already in place to reduce greenhouse gas emissions, Germany aims at updating the support measure for small rooftop PV installations, since it believes all installations are necessary to reach the RES targets, and in this respect, all available rooftop spaces have to be used. Hence, the need for a separate measure which stimulates small rooftop installations to not only cater for their own needs but also to inject all the electricity produced from solar energy into the electricity grid. As shown by the funding gap calculations, in order to increase the installation of small rooftop solar PV panels and optimise the available space to contribute to its RES targets, State aid is necessary to make these investments materialise.
- (119) To ensure that aid remains necessary for each eligible category of beneficiary, Member States must update their analysis of relevant costs and revenues at least every three years for schemes that run longer than that, as set out in point 92 of

the CEEAG. Even though the notified measure is – in its current form – only temporary and applicable until the end of 2022, Germany has committed to do regular checks of the parameters in the funding gap calculations during their annual national monitoring exercise. Germany has also committed that where the results of their annual monitoring exercise show that there is no further need for the aid for each category of beneficiary, the category should be removed before further aid is granted (see recitals (74) and (75)).

- (120) Given the existence of significantly negative funding gaps for each of the reference projects of small rooftop PV installations, the Commission considers that the notified measure is necessary to support the targeted economic activities in a manner that increases environmental protection.

3.3.2.3.2. Innovation tender and additional round of PV measure

- (121) The Commission recalls the analysis by the German authorities in recitals (59) and (60) and its conclusions in recitals (61) and (62) that in the long run large solar PV projects (rooftop and ground-based) and innovative RES projects – for which the aid is allocated through tenders – will need support, given the existence of a significant funding gap, showing that, in the long run, a gap between the costs of producing renewable electricity and the price achievable on the market, is expected to be present. The Commission therefore considers that Germany has proven that there is a need for aid. Therefore, the requirements in point 90 of the CEEAG are fulfilled.
- (122) Despite other policy measures already in place to reduce greenhouse gas emissions, Germany aims at continuing to incentivise the investments in renewable energy production through large solar PV projects and innovative RES projects. Germany argues this is necessary in order to obtain its national and EU climate targets in terms of renewable energy production. As shown by the funding gap calculations, in order to increase the investment in large rooftop and ground-based solar PV projects, State aid is necessary to make these investments materialise. Therefore, in line with point 91 of the CEEAG, the Commission considers that a residual market failure remains and that it can be addressed by the measure. The Commission has no evidence to the contrary.
- (123) The Commission therefore considers that the notified measures concerning innovation tenders and additional solar PV tenders are necessary to support the targeted economic activities in support of technological developments for market and grid integration of RES installations.
- (124) The same provisions regarding monitoring (see recital (119)) apply also to large solar PV projects (rooftop and ground-based) and innovative RES projects, and point 92 of the CEEAG is thus complied with.
- (125) The Commission therefore considers that the notified measures regarding large solar PV projects (rooftop and ground-based) and innovative RES projects are necessary to support the targeted economic activities in a manner that increases environmental protection.

3.3.2.4. The appropriateness of the aid

- (126) Points 39 and 43 of the CEEAG explain that the proposed aid measure must be an appropriate policy instrument to achieve the intended objective of the aid, that is to say there must not be a less distortive policy and aid instrument capable of achieving the same results.
- (127) Point 93 of the CEEAG states that the Commission presumes the appropriateness of State aid for achieving decarbonisation goals provided all other compatibility conditions are met. It further sets out that, given the scale and urgency of the decarbonisation challenge, a variety of instruments, including direct grants, may be used.
- (128) The Commission therefore considers that, in light of the overall assessment of the compatibility of the measure, the aid in the form of direct grants to support the production of renewable electricity in each of the notified measures, is an appropriate instrument to support the targeted economic activity in a manner that increases environmental protection.

3.3.2.5. Eligibility

- (129) Point 95 of the CEEAG explains that decarbonisation measures targeting specific activities which compete with other unsubsidised activities can be expected to lead to greater distortions of competition, compared to measures open to all competing activities. As such, Member States should give reasons for measures which do not include all technologies and projects that are in competition. Furthermore, Member States must regularly review eligibility rules and any rules related thereto to ensure that reasons provided to justify a more limited eligibility continue to apply for the lifetime of each scheme, as set out in point 97 of the CEEAG.

3.3.2.5.1. Small rooftop PV measure and additional round of solar PV tenders

- (130) For the reasons explained in recital (37), Germany argues that it is important to have a diverse mix of technologies. Germany therefore considers the continued separation of solar PV tenders from other renewable energy tenders justified.
- (131) In addition, if the tender is a competitive bidding process, tender results also show the difference in costs between different technologies. The Commission observes that this has so far been the case in Germany: 5.19 ct/kWh for ground-based solar PV, 5.85 ct/kWh for onshore wind, 8.53 ct/kWh for rooftop solar PV, 15.8 ct/kWh for biomass and 17.8 ct/kWh for biomethane in the respective tenders of spring 2022³⁰. This shows that each technology has a cost difference of at least 10%. Given that there is a significant deviation between the bid levels of beneficiaries participating in tenders of different technologies, separate competitive bidding processes may be used, in line with point 104(b) of the CEEAG.

³⁰ All tender outcomes are available on the website of the BNetzA: https://www.bundesnetzagentur.de/DE/Sachgebiete/ElektrizitaetundGas/Unternehmen_Institutionen/Ausschreibungen/Wind_Onshore/BeendeteAusschreibungen/BeendeteAusschreibungen_node.html.

- (132) For the reasons provided by Germany related to the need to have a diverse mix of technologies and the observation that different technologies have different costs, the Commission considers that the restricted eligibility criteria for the notified measures are justified.

3.3.2.5.2. Innovation tender measure

- (133) As mentioned in recital (12), Germany submits that, through the innovation tender, a strong technology neutral element is maintained in the tenders, as installations based on all RES sources, as well as storage, can participate in them.
- (134) In this respect, the Commission notes that single RES installations are already eligible for support under tenders or through administratively set premiums and tariffs. Further, as mentioned in recital (12), the Commission finds that the objective of the innovation tenders is to support installations providing specific services to the grid (for example, stable or flexible production by linking intermittent RES production with storage or by linking several intermittent RES installations with complementary feed-in profiles). This is particularly important in light of the increasing RES deployment and the high amount of intermittent RES in Germany.
- (135) The Commission therefore finds the delimitation of the innovation tenders to be in line with point 95 of the CEEAG.

3.3.2.6. Public consultation

- (136) Point 99 of the CEEAG requires Member States to consult publicly on the competition impacts and proportionality of proposed measures, prior to the notification of aid. The respective requirements apply only to measures approved from 1 July 2023. Therefore, point 99 of the CEEAG is not applicable to the measures under assessment.

3.3.2.7. The proportionality of the aid, including cumulation

- (137) Point 47 of the CEEAG explains that State aid is considered to be proportionate if the aid amount per beneficiary is limited to the minimum needed for carrying out the aided project or activity. Point 103 of the CEEAG states that aid for reducing greenhouse gas emissions should, in general, be granted through a competitive bidding process, while point 104 of the CEEAG explains that this bidding process should, in principle, be open to all eligible beneficiaries to enable a cost effective allocation of aid and to reduce competition distortions.
- (138) Point 56 of the CEEAG explains that when aid under one measure is cumulated with aid under other measures, Member States must specify the method used to ensure that the total amount of aid for a project or an activity does not lead to overcompensation or exceed the maximum aid amount allowed under the CEEAG.

3.3.2.7.1. Small rooftop PV measure

- (139) Since the reference projects under this scheme are all small rooftop PV projects below 1 MW, the projects are small projects as defined in point 107(b) of the CEEAG³¹. The aid can thus be granted without a competitive bidding process, in line with point 107 of the CEEAG, which states that exceptions from the requirement to allocate aid and determine the aid level through a competitive bidding process can be justified where beneficiaries are small projects.
- (140) For aid granted without the use of a competitive bidding process, point 48 of the CEEAG specifies that aid will be considered as “limited to the minimum needed for carrying out the aided project or activity” if the aid corresponds to the net extra cost (‘funding gap’) necessary to meet the objective of the aid measure, compared to the counterfactual scenario in the absence of aid. The net extra cost is determined by the difference between the economic revenues and costs (including the investment and operation) of the aided project and those of the alternative project which the aid beneficiary would credibly carry out in the absence of aid.
- (141) As explained in recital (49), Germany has clarified that the relevant counterfactual scenario is the non-execution of the project; hence, the maximal aid amount that can be granted corresponds to the funding gap of the project in case carried out without aid. In other terms, the EEG support merely helps cover the funding gap, taking into account an appropriate discount factor that reflects a reasonable profit.
- (142) The relevant parameters for the calculation of the NPV of the reference projects has been provided in Table 2 and explained in recitals (46) to (50). The results of the funding gap calculations for the eight relevant reference projects with EEG support (with each time a NPV of the counterfactual scenario of zero) are presented in Table 3.
- (143) The results of the funding gap analyses for all reference projects show that (1) without EEG support the net present value of the cash flows of the projects over the economic lifetime of 20 years is highly negative (i.e. a significant funding gap exists) (see Table 2), and (2) the EEG support significantly reduces the funding gap and makes the NPV of the project close to 0 (see Table 3). The Commission considers this as proof that the EEG support improves the profitability of the projects and ensures their actual development without leading to overcompensation of the beneficiaries.
- (144) The NPVs of the supported projects are still slightly negative for all of the reference projects, which ensures that the typical small rooftop solar PV installations will not be overcompensated under the notified measures. Germany explains that this will not be a burden to the development of the projects, since small installations are not only built for profitability reasons, but other (non-monetary) aspects are considered as well in the investment decisions of small beneficiaries, such as securing against rising electricity prices, reducing one’s

³¹ Point 107(b)(i) CEEAG specifies that small projects for electricity generation are defined as projects below or equal to 1MW.

own carbon footprint and contributing in this way to the “*Energiewende*”. In addition, Germany explains that their experience with support to small rooftop PV installations with self-supply in the past years has shown that the level of remuneration seems to meet market expectations. Going forward, Germany also commits to monitor the parameters on which the level of support is based and will adjust where appropriate to avoid overcompensation (see recitals (74) and (75)).

- (145) As mentioned in recital (69), Germany has committed to comply with the rules on cumulation. Therefore, the Commission considers that point 56 of the CEEAG is complied with.
- (146) On the basis of the foregoing, the Commission concludes that the notified measure for small rooftop PV installations is proportionate.

3.3.2.7.2. Innovation tenders and additional round of solar PV tenders

- (147) The support allocated in the additional round of ground-based and rooftop solar PV tenders, as well as in the innovation tenders, is granted through a competitive bidding procedure and awarded through a sliding market premium. Germany committed to monitor the parameters on which the tenders are based in order to avoid overcompensation (see recitals (74) and (75)). The reasoning for having technology-specific tenders for ground-based and rooftop solar PV and to have a separate category for innovation tenders, has been explained in recitals (130), (131) and (134).
- (148) Point 49 of the CEEAG states that “*a detailed assessment of the net extra cost will not be required if the aid amounts are determined through a competitive bidding process, because it provides a reliable estimate of the minimum aid required by potential beneficiaries*”. Point 49 of the CEEAG sets out the conditions under which aid allocated through a competitive bidding process can be considered proportionate³², while point 50 of the CEEAG explains that the selection criteria used for ranking bids should put the contribution to the main objectives of the measure in relation with the aid amount requested by the applicant.
- (149) The innovation tenders are open, clear, transparent and non-discriminatory for all eligible RES installation combinations, and they therefore comply with point

³² Namely: a) The bidding process is open, clear, transparent and non-discriminatory, based on objective criteria, defined ex ante in accordance with the objective of the measure and minimising the risk of strategic bidding; b) The criteria are published sufficiently far in advance of the deadline for submitting applications to enable effective competition; c) The budget or volume related to the bidding process is a binding constraint in that it can be expected that not all bidders will receive aid, the expected number of bidders is sufficient to ensure effective competition, and the design of undersubscribed bidding processes during the implementation of a scheme is corrected to restore effective competition in the subsequent bidding processes or, failing that, as soon as appropriate; and d) *Ex post* adjustments to the bidding process outcome are avoided as they may undermine the efficiency of the process’s outcome.

49(a) of the CEEAG. Tender criteria are made public in advance³³, therefore complying also with point 49(b) of the CEEAG.

- (150) The tender volume related to the innovation tender bidding process is a binding constraint, as it can be expected that not all bidders will receive aid, the expected number of bidders is sufficient to ensure effective competition (and indeed the last round was oversubscribed). Point 49(c) of the CEEAG is therefore also complied with. In case the tender is undersubscribed, only the lowest 80% of bids in terms of capacity are to be awarded. While point 49(d) of the CEEAG states that *ex post* adjustments to the bidding process outcome are in principle to be avoided, the Commission notes that the 80% rule never had to be applied in the case of innovation tenders, and hence could not have influenced the outcome of the competitive bidding process.
- (151) The additional round of solar PV tenders are open, clear, transparent and non-discriminatory for all eligible solar PV installations, and the tender criteria are made public in advance in the published EEG 2021. With the introduction of a volume adjustment mechanism, which introduces a correction to the tender volume in case of previous undersubscribed tender rounds (as explained in recitals (22) to (25)), it is ensured that the volume related to the bidding process in the additional round of solar PV tenders is a binding constraint. The volume adjustment mechanism corrects the tender volume in future tender rounds with a view of ensuring their competitiveness by setting the tender volume at a level where no undersubscription is expected to take place and where not all bidders can expect to be selected. Hence it does not contain an endogenous volume rationing mechanism. Therefore, the conditions of point 49 of the CEEAG are complied with.
- (152) Point 50 of the CEEAG explains that the selection criteria used for ranking bids should put the contribution to the main objectives of the measure in relation with the aid amount requested by the applicant. The Commission notes that the sole ranking criterion in the innovation tenders and in the additional round of solar PV tenders is the value of the bid (see recitals (17) and (25)), more specifically the amount of aid requested per unit of electricity produced (ct/kWh). The Commission considers this criterion to be appropriate and straightforward to implement. Therefore, the requirements in point 50 of the CEEAG are fulfilled.
- (153) As mentioned in recital (69), Germany has committed to comply with the rules on cumulation. Therefore, the Commission considers that point 56 of the CEEAG is complied with.
- (154) Therefore, the Commission considers that the innovation tenders and the additional round of solar PV tenders (rooftop and ground-based) are competitive bidding procedures, and therefore concludes that the aid is proportionate.

³³ The procedure for the participation in innovation tenders, including the relevant dates and the tender criteria, is provided on the website of the Federal Network Agency (*Bundesnetzagentur*): <https://www.bundesnetzagentur.de/DE/Fachthemen/ElektrizitaetundGas/Ausschreibungen/Innovation/start.html>.

3.3.2.8. The transparency of the aid

- (155) Germany will ensure compliance with the transparency requirements laid down in points 58 to 61 of the CEEAG (recital (76)). The relevant data of the notified measures will be published on a national website that will link to the Commission's transparency register.

3.3.2.9. Avoidance of undue negative effects of the aid on competition and trade

- (156) Point 70 of the CEEAG explains that the Commission will approve measures under these guidelines for a maximum period of 10 years. As stated in section 2.5, the whole EEG 2021 scheme will run for 6 years, from 1 January 2021 to 31 December 2026. Moreover, the small rooftop PV and additional round of solar PV measure are only applicable in the second half of 2022, and therefore have a very limited duration. Point 70 of the CEEAG is therefore complied with.
- (157) Point 116 of the CEEAG explains that the aid must not merely displace the emissions from one sector to another and must deliver overall greenhouse gas emissions reductions. Furthermore, points 127 to 129 of the CEEAG require Member States to explain how they intend to avoid the risk of aid eventually stimulating or prolonging the consumption of fossil-based fuels and energy.
- (158) Germany explains that all electricity produced by the aided projects must be renewable (see recital (36)), and should thus not prolong the consumption of fossil-based fuels, nor lead to a mere sectoral displacement of emissions. The Commission therefore notes that this requirement is not relevant for the notified measures.
- (159) Point 120 of the CEEAG explains that Member States must demonstrate that reasonable measures will be taken to ensure that projects granted aid will actually be developed. As mentioned in recital (54), aid for small rooftop PV installations is only paid out once the installation has been commissioned and started operating. As mentioned in recitals (64) and (65), guarantee payments and penalties apply to innovation tenders and additional solar PV tenders. Therefore, the Commission considers that point 120 of the CEEAG is complied with.
- (160) Point 121 of the CEEAG explains that aid which covers costs mostly linked to operation rather than investment should only be used where the Member State demonstrates that this results in more environmentally-friendly operating decisions. Point 122 of the CEEAG states where aid is primarily required to cover short-term costs that may be variable, Member States should confirm that the production costs on which the aid amount is based will be monitored and the aid amount updated at least once per year. The aid must be designed to prevent any undue distortion to the efficient functioning of markets, and preserve efficient operating incentives and price signals, as set out in point 123 of the CEEAG.
- (161) Germany explained that the notified measures do not cover costs mostly linked to operation or variable short-term costs, but intend to cover both the initial fixed investment costs and the operating costs over the lifetime of the investment. The funding gap analyses for the reference projects provided by Germany show that the share of operating costs in the total cost of the project lies between 15% and 25% in all relevant cases (see recitals (46) and (60)). Therefore, the Commission

considers that points 121 and 122 of the CEEAG are complied with for the notified measures.

- (162) As explained in recital (42), the small rooftop PV measure only applies to small installations (with a capacity below 750 kW in theory and below 400 kW in practice, see footnote 20). Therefore, as explained in footnote 70 of the CEEAG³⁴, small-scale installations are not obliged to participate in the market and the requirements of point 123 of the CEEAG do not apply to them.³⁵
- (163) As regards the innovation tender measure, Germany confirms that no remuneration is paid, as soon as the spot price is negative (§9 InnAusV, see recital (56)).
- (164) As mentioned in recital (25), for large solar PV installations participating in tenders, no subsidy will be paid for hours in which the spot market price is negative, whenever negative prices persist for at least 4 consecutive hours (§51 EEG 2021) and the number of non-remunerated negative price hours will be added at the end of the support period for contracts awarded through tenders. In addition, Germany argues that, in line with point 123 of the CEEAG, it is necessary to keep this rule in order to achieve the objectives of the measure: the risk that the spot market price becomes negative is a non-production risk from the point of view of the individual operator, which cannot be influenced by its behaviour; transferring this risk to renewable installation operators without any restriction would therefore increase the support costs and at the same time undermine the achievement of the European and national target for the share of renewable energy in gross electricity consumption. This is because, unlike fossil fuel installations that have lower investment costs and a higher share of variable production costs, RES installations have lower variable production costs but a higher share of investment costs (fixed costs) over the lifespan of the installation. Therefore, RES installations need to have more running hours in which they produce electricity for which they are compensated, in order to recoup the initial investment costs. The Commission accepts this assessment insofar as it applies to the short-lasting notified measures subject to this decision, but invites Germany to evaluate the rule in §51 of the EEG 2021, as mentioned in recital 530(b) of the Commission decision in case SA.57779.
- (165) Points 124 and 125 of the CEEAG state that the Commission will carry out a case-by-case assessment for measures that include dedicated infrastructure projects, taking into account steps to mitigate the distortive effect of aid to such

³⁴ Footnote 70 of the CEEAG states that: “*Small-scale renewable electricity installations may benefit from direct price support that covers the full costs of operation and does not require them to sell their electricity on the market, in line with the exemption in Article 4(3) of Directive (EU) 2018/2001. Installations will be considered as small-scale if their capacity is below the applicable threshold in Article 5 of Regulation (EU) 2019/943*”.

³⁵ The definition of small-scale installations in footnote 70 of the CEEAG refers to the definition contained in Article 5(2)(b) of Regulation (EU) 2019/943. Therefore, footnote 70 of the CEEAG applies with respect to small rooftop PV installations with a capacity of up to 400 kW. In the case of small rooftop PV installations over 400 kW but not exceeding 750 kW (if any), the reasoning in recital (164) concerning large solar PV installations applies, including no subsidy being paid in case of negative market prices, whenever negative prices persist for at least 4 consecutive hours (see recital (25)).

infrastructure. The Commission notes that this requirement is not relevant for the measures at stake as no aid under the notified measures covers dedicated infrastructure.

- (166) Point 131 of the CEEAG explains that, where risks of additional competition distortions are identified or measures are particularly novel or complex, the Commission may impose conditions, including the obligation to perform an *ex post* evaluation, as set out in point 76 of the CEEAG. As indicated in section 2.11, the notified measures will be evaluated as part of the overall evaluation of the EEG 2021.
- (167) Point 132 of the CEEAG states that Member States should demonstrate how the proposed measure will not lead to distortions of competition, for example, through increased market power, should the measure be expected to benefit a particularly limited number of beneficiaries. Since the notified measures target a large amount of small and large beneficiaries, the Commission notes that this requirement is not relevant for the notified measures.
- (168) Therefore, the Commission considers that aid granted under the notified measures avoids undue negative effects on competition and trade.

3.3.3. *Weighing up the positive and negative effects of the aid*

- (169) Point 134 of the CEEAG states that: *“Provided that all other compatibility conditions are met, the Commission will typically find that the balance for decarbonisation measures is positive (that is to say, distortions to the internal market are outweighed by positive effects) in the light of their contribution to climate change mitigation, which is defined as an environmental objective in Regulation (EU) 2020/852 and/or in light of their contribution to meeting Union energy and climate objectives, as long as there are no obvious indications of non-compliance with the ‘do no significant harm’ principle³⁶. In case the assumption above does not apply, the Commission will assess whether on balance the positive effects (including compliance with the points in Section 4.1.4 and any commitments related to point 129) outweigh the negative impacts on the internal market.”*
- (170) The notified measures support the production of electricity from renewable energy sources, in particular by means of photovoltaic technology (point 4.1 of the Taxonomy on environmental objectives for climate change mitigation and adaptation). No negative impact on taxonomy environmental objectives is expected. As noted in recital (80), where an environmental impact assessment or an assessment is required under Directive 2011/92/EU, it will be carried out (Annex D to the DA on climate change mitigation and adaptation of the taxonomy). Necessary corrective and compensatory measures and audits will be carried out.
- (171) Therefore, and considering the fact that there are no obvious indications of non-compliance with the ‘do no significant harm’ principle, the Commission

³⁶ For measures which are identical to measures within Recovery and Resilience Plans as approved by the Council, their compliance with the ‘Do no significant harm’ principle is considered fulfilled as this has already been verified.

concludes that the positive effects of the measure outweigh the negative effects on the internal market.

3.3.4. Companies in difficulty and under recovery order

- (172) As explained in recital (77), Germany commits to not award aid under the notified measures to undertakings in difficulty as defined by the Commission Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty.³⁷
- (173) As explained in recital (78), Germany has committed that no aid will be granted to undertakings subject to an outstanding recovery order following a previous Commission decision declaring aid illegal and incompatible with the internal market.
- (174) Therefore, the Commission concludes that each of the notified measures complies with points 14 and 15 of the CEEAG.

3.3.5. Conclusion on the compatibility of the notified measures

- (175) The Commission concludes that the aid to be granted pursuant to each of the notified measures facilitates the development of an economic activity and does not adversely affect trading conditions to an extent contrary to the common interest. Therefore, the Commission considers the aid compatible with the internal market based on Article 107(3)(c) TFEU, as interpreted in the relevant provisions of the CEEAG.

4. AUTHENTIC LANGUAGE

- (176) As mentioned in recital (3), Germany has exceptionally accepted to have the decision adopted and notified in English. The authentic language will therefore be English.

5. CONCLUSION

The Commission has accordingly decided not to raise objections to the aid on the grounds that it is compatible with the internal market pursuant to Article 107(3) of the Treaty on the Functioning of the European Union.

Yours faithfully,

For the Commission,

Margrethe VESTAGER
Executive Vice-President

³⁷ 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).