



**Response of Deutsche Umwelthilfe to the consultation on the
Guidelines on State aid for climate, environment and energy 2022 (CEEAG)
(COMMUNICATION.)**

Berlin, 21.07.2021

The EU Commission has started a consultation on the 2022 Guidelines for State Aid for Climate, Environment and Energy. In this document, the Commission emphasizes that energy subsidies can be important measures to achieve the goals of the "Green Deal" and the "Fit for 55" package, which require a significant acceleration of the expansion of renewable energies. This assessment is strongly shared by Deutsche Umwelthilfe (DUH). The personal injury and property damage caused by the heavy rains in Belgium and Germany in July 2021 have once again underscored the need for rapid action.

DUH is grateful for the opportunity to participate in the consultation of the state aid guidelines. We would like to use this opportunity to draw the Commission's attention to four aspects and make concrete proposals in each case on how to resolve support eligibility assessments.

1. Cancelling of ETS allowances

In order to ensure that the subsidies under sections 4.1 and 4.12 have an effect on decarbonization, DUH believes that decarbonization measures should only be eligible for subsidies if the member state introducing them cancels CO₂ allowances to the extent of the expected CO₂ reduction effect.

DUH proposals

DUH suggests that points 81 and 370 include as an additional condition for the eligibility of the measures that the member state cancels CO₂ allowances within the EU ETS to the extent of the expected decarbonization effect. For the calculation of the volume of CO₂ allowances to be cancelled, DUH suggests referring to the specifications in point 98.

Rationale

The promotion of decarbonisation measures according to sections 4.1 and 4.12 distorts the market for CO₂ allowances, contrary to point 40. This is because the CO₂ reduction results from the subsidy, and not from incentives given by the ETS. The subsidy leads to a price reduction in the market for CO₂ allowances, making the emission of greenhouse gases cheaper and weakening the instrument. In order to avoid or reduce these effects, DUH proposes to link the eligibility of decarbonisation subsidies to the obligation to cancel CO₂ certificates to the extent of the expected effects. Without such can-

cellation of allowances, the promotion of decarbonisation measures does not lead to a net decarbonisation, i.e. it loses its fundamental rationale under state aid law as formulated in points 73 and 369, among others.

DUH welcomes the calculation requirements in point 98. In particular, the consideration of the life-cycle emissions appears suitable for arriving at objective and comparable assessment standards.

2. Promotion of fossil energy

DUH fundamentally rejects the subsidization of fossil electricity and heat generation. This applies to indirect subsidies in the form of reductions in network charges, taxes and parafiscal levies as well as to direct subsidies in the form of payments to plant operators.

DUH proposals

DUH suggests that point 50 should stipulate that the reductions in network charges, taxes and parafiscal levies must be taken into account when determining the net additional costs for fossil plants.

In section 4.1, in particular in point 74, DUH believes that the same standards should be applied to fossil energy use as those formulated by the Commission in point 134 for the use of natural gas in the building sector.

In point 105, the possible reductions in grid fees, taxes and parafiscal levies should be considered as part of the case-by-case assessment.

DUH expressly welcomes the requirement in point 108.

In DUH's view, the requirement of holding a public consultation (e.g. section 4.1.3.4) should also apply to the granting of reductions in network charges, taxes and parafiscal levies under section 4.7.

The exception for the application of point 50 and the cumulation rules in section 3.2.1.3.1, which are regulated in points 268 and 277, should be reconsidered.

Rationale

Achievement of the EU climate objectives is supported by measures for efficient energy use and by increasing the share of renewable energy. Any promotion or preferential treatment of energy consumption or energy production makes it more difficult to achieve the targets. This is particularly true if fossil energy production is promoted.

Even if natural gas replaces coal or oil to realize emissions reductions, the effect is small compared to other alternatives that are already available on the market. The considerations in point 134 should therefore also apply in section 4.1.

Where particularly CO₂-intensive technologies are used, this should be prevented by regulatory measures (bans, limit values) or hindered by high additional payments. DUH agrees with the Commission's considerations on lock-in effects, e.g. in 135.

Fossil energy production in many cases is indirectly subsidized by granting reductions in network charges, taxes and parafiscal levies (point 95 and section 4.7). This is particularly applied in favour of fossil generation in CHP plants for high energy volumes. The calculation of net extra cost (point 50,

which is also applicable in section 4.1 due to point 93, but not in section 4.7 due to points 268 and 277) should include these savings on a mandatory basis, taking into account that these savings are usually granted for an unlimited period of time and, contrary to point 84, increase subsequently with rising network charges and taxes. Investments in infrastructure as described in point 105 are often aimed at achieving such savings. Such savings do not benefit all similar companies in the same way, as required in point 95, but selectively benefit those companies that operate fossil energy production. Contrary to what is required in point 269, in many cases there is neither a payment of 20 % nor an agreement with the same effect. At the same time, especially in the case of fossil CHP plants, there is a risk of multiple subsidies (cf. point 100) and cumulation (cf. section 3.2.1.3.1, which is, however, excluded by points 268 and 277). The indirect subsidy from the savings is in many cases very high, so that the payback period of the projects is shorter than required by the Commission in point 121 for the area of building efficiency. Market incentives, as required in point 104, do not have an effect on the operators of these installations.

DUH proposes to apply the requirements for public consultation, laid down e.g. in section 4.1 in particular to the promotion of fossil power generation through the reductions in network charges, taxes and parafiscal levies in section 4.7, as this indirect subsidy has hardly been noticed by the public so far, despite the overall high economic costs.

3. Combined heat and power

Only very small decarbonisation effects can be achieved with fossil cogeneration (CHP). The rationale for direct or indirect subsidies for this technology is correspondingly weak.

DUH proposals

In the definition in point 18 (42), DUH believes that explicit reference should be made to Annex II of Directive 2012/27/EU (new: Annex III), in which the - very low - requirements for "high efficiency" are standardised.

In points 110 (in conjunction with footnote 64) and 345, Member States should be required to take into account the low level of achievable primary energy savings when demonstrating positive environmental effects of natural gas-based CHP technologies.

DUH expressly welcomes the requirement in point 107. It is suggested that great weight be attached to this requirement when examining the eligibility of CHP plants.

Rationale

According to the definition in Annex II, letter a, Directive 2012/27/EU, CHP only has to be 0 % (!) more efficient than separate production with the same fuel. For CHP plants with a capacity of more than 1 MW, the requirements are slightly higher, at 10% primary energy savings¹. The decarbonisation effects, which are determined on the basis of the calculation method linked in footnote 60, are essentially not based on an increase in efficiency through coupling, but on the displacement of coal-fired power plants by (subsidized) gas-fired CHP plants.

¹ Further explanations on the high-efficiency requirements for CHP plants can be found in the annex to this opinion.

Even if the total primary energy savings are allocated to the heat share, CHP plants fall short of the CEEAG requirements for building efficiency, which are set at up to 30 % in point 118.

CHP plants are regularly used in a heat-led mode of operation. As a result, the requirements of point 107 are regularly disregarded by plant operators. With a growing share of renewable electricity, the number of hours in which fossil CHP generation displaces renewable electricity generation will increase. This is especially true if fossil electricity is subsidized (for example, indirectly through reductions in network charges, taxes and parafiscal levies) and competes with unsubsidized RES electricity.

4. District heating

District heating and cooling systems are considered sustainable by DUH if the energy supplied (heat, cooling) is provided exclusively or almost exclusively from renewable sources. However, even in these cases, strong lock-in effects give rise to notable difficulties which should be taken into account regarding eligibility for public support.

In fossil district heating and cooling systems, the disadvantages of fossil lock-in are not offset by any advantages.

DUH proposals

In point 340 or 342, explicit reference should be made to the - very low - requirements for "efficient district heating and cooling" in Article 2(41), Directive 2012/27/EU, according to which a rate of 75% CHP heat is sufficient to qualify as "efficient".

DUH proposes to repeal point 343.

DUH suggests that the extensive curtailment of consumer rights in Article 24 of Directive (EU) 2018/2001 in favour of the supplier of district heating and cooling be explicitly taken into account in section 4.10.5 when assessing state aid eligibility.

The possibility of justifying the modernisation of district heating and cooling networks operated with oil or coal in point 347 is considered problematic by DUH overall. In any case, the possibility of submitting a timetable for conversion in point 347 (d) should be specified in more detail.

In point 348, binding commitments to implement CCS and CCU should not be listed as a possibility to justify the use of fossil energy for district heating and cooling.

Rationale

The Requirements for a fossil-fuelled "efficient district heating network" are set very low. As little as 75% CHP heat, for which very low requirements also apply, as described above, is sufficient to justify the designation as "efficient" according to the definition in Article 2(41), Directive 2012/27/EU. Heat losses in district heating networks are not considered at all in the efficiency analysis of Directive 2012/27/EU even though they are over 10% on average. These low requirements should be explicitly mentioned in section 4.10 and taken into account by the Commission in eligibility decisions.

The requirements of Directive 2012/27/EU for "efficient district heating networks" are so low that there is no need for an adaptation period as provided for in point 343, which DUH proposes to delete for this reason.

The operation of district heating networks is only profitable if a high spatial connection density is achieved, which is why such investments are preferably made in urban buildings such as apartment blocks. Here, emissions can also be reduced through better building insulation, which decreases the profitability of heat providers, however, as less energy needs to be consumed. At the same time, consumer rights are largely suspended by Article 24 of Directive (EU) 2018/2001. This contributes to serious market distortions in the heat market, as district heating customers usually have no possibility to switch to other technologies (heat pumps, own solar thermal or geothermal energy) and as tenants typically cannot influence the quality of their building insulation. In fact, the supply of district heating and cooling takes place in a monopoly-like structure with high price-defining power of the supplier and long-lasting lock-in effects resulting from both the investments in the district heating networks and the investments of the private consumer in the heat exchanger. In addition, the supplier of district heating has an economic interest in its customers not carrying out heat insulation; it can optimise its pricing in such a way that such investments are not made, contrary to Article 7 Directive 2012/27/EU. In order to reduce these effects, DUH proposes that district heating networks be subject to regulation.

Fossil district heating networks are only suitable as infrastructures for later conversion to renewable heat in exceptional cases. Renewable heat usually has significantly lower temperature levels, which requires a different infrastructure, such as low-temperature grids, different heat exchangers and different space heating systems (low-temperature radiators). The requirements in point 347 (b) and (d) are therefore usually not fulfilled or at least not easily fulfilled. When deciding on the eligibility of state aid for fossil district heating networks, Member States should have to demonstrate conclusively how these barriers can be overcome in specific cases.

The technologies of CCS and CCU are, in the opinion of DUH, not yet sufficiently developed to make them an object of contractual obligations in accordance with point 348. In addition, any binding commitment to this effect is unlikely to be sufficiently stable over a long period of 20 years or more.

Annex to the DUH statement

Actual support intensity for cogeneration

Directive 2012/27/EU, together with the criteria of the State Aid Guidelines, opens up the possibility of national support for cogeneration. In Germany, this leads to fossil CHP plants receiving subsidies far in excess of the funding gap.

The German Combined Heat and Power Act (KWKG) in combination with the payment of the so-called "avoided grid charges" according to § 18 of the Electricity Grid Charges Ordinance (*Stromnetzentgeltverordnung*) enables the investor of a CHP plant to receive public support equalling 2-5 times the investment cost for the plant.

A basic bonus is paid for each electrical kWh generated, depending on plant size, up to a maximum of 30,000 operating hours. This amounts to 8 cents/kWh for plants below 50 kW and 3.4 cents for plants larger than 2 MW.	1,020 – 2,400 €/kW
A one-off bonus of €5-390/kW is paid for switching from coal to other fuels , depending on the date of commissioning.	5-390 €/kW
In each year of operation, a CHP plant can receive a payment for avoided grid charges according to § 18 of the Electricity Grid Charges Ordinance (<i>Stromnetzentgeltverordnung</i>). The subsidy was calculated here for 10 years, which applies to new plants connected to the grid until 31.12.2022.	400-1,000 €/kW
Total subsidies:	1,425-3,790 €/kW

The above table does not include the operating cost benefits that additionally result in many constellations from reductions in network charges, taxes and parafiscal levies. Also not included is the additional state aid for heat grids and heat storage facilities, which benefit the same operators.

In a concrete example calculation, this results in a subsidy in favour of a CHP plant of 200% of investment cost, while a large solar thermal heat plant only achieves 45% of investment cost:

Commented [61]: Die Abbildung sollte auch übersetzt werden

Comparison of Subsidies

Solar thermal system

26.000 m² Collector

18 MW Power_{therm}

Investment: 7 Mio. €

Subsidies: 45%



Natural Gas Combined heat and power plant

18 MW Power_{el}

Investment: 7 Mio. €

Subsidies:

CHP-Bonus 4,77 ct/kWh

Total 14,3 Mio €

Or 204 %



Source: Deutsche Umwelthilfe 2021, on the basis of an illustration by the Hamburg Institute 2020

Supplementary information on primary energy savings through CHP

The European legal definition of the "high efficiency" of CHP plants in Annex II letter a Directive 2012/27/EU has been formulated in favour of fossil plant operators:

- Primary energy savings of 0 % (!) are sufficient for classification as "highly efficient". For larger plants, at least 10 % is required, which is still a very low value².
- According to the Commission Decision of 21 December 2006 establishing harmonised efficiency reference values, the requirements of 0 or 10 % can be lowered further under certain circumstances, so that even negative primary energy savings can justify the classification as "highly efficient".
- The losses in heating networks (around 10 %) are not taken into account in the efficiency analysis. The quantities of heat that must be generated to cover the losses are considered eligible for support.
- On the basis of this classification, the German government has enacted rules on applicable primary energy factors that make it possible to market fossil heat from CHP plants as CO₂-free or CO₂-reduced to an extent that far exceeds the low primary energy savings effect.
- According to Annex II letter f no. 1) Directive 2012/27/EU, the reference values used to determine the primary energy savings do not put the CHP plant in relation to counterfactual scenarios, but to the hypothetical use of the same energy carrier used only to produce heat (heat from coal CHP is compared, for example, with heat from a coal-fired boiler). No comparison is required with building insulation or with a heat pump increasingly powered by renewable electricity.

Distortions on the electricity market are not considered, which creates an incentive to operate the CHP plant heat-led, rather than responding flexibly to conditions on the power market. This incentive can hardly be reduced even by adding a heat storage system to the CHP plant. The expansion of renewable electricity generation means that electricity production and heat demand will increasingly move independently of each other. The optimal operating conditions of CHP plants will thus occur less and less frequently, meaning that a crucial prerequisite for the future rationale of aid to CHP is missing.

Distortions on the heat market are not considered by legislation either. These occur due to the long-lasting lock-in effects and the monopoly-like structure of the district heating supply, which is covered with heat from the CHP plant. This fundamentally contradicts the "efficiency first" principle of Directive 2012/27/EU. District heating and the associated CHP plants can only be operated profitably if there is no increase in efficiency of the heat customers supplied. With Article 24 of Directive (EU) 2018/2001, district heating companies have effective instruments at their disposal to discourage their customers from insulating buildings or from using their own renewable heat sources.

² According to an analysis by the German Federal Ministry for Economic Affairs and Energy (BMWi), the 10 % requirement is met on average by large CHP plants in Germany. The analysis states that the average primary energy saving of the large CHP plants is 11%. Cf. Prognos et al, Evaluation of CHP, report for the BMWi, 2019, p. 46.