



## Statement by Deutsche Umwelthilfe e.V. (Environmental Action Germany)

### Public Consultation for the Revision of the Guidelines on State aid for Environmental protection and Energy 2014-2020 (EEAG)

Deutsche Umwelthilfe (DUH) sees considerable need for adaptation of the Guidelines 2014/C 200/01. The Guidelines in state aid for environmental protection and energy 2014-2020 were designed to grant permissible aid on member state level to achieve the climate targets. By 2020, 20% more efficiency and renewable energy (RE), respectively, were to be achieved and at the same time CO<sub>2</sub> was to be reduced by 20%. Reality shows that half of the member states have failed to meet the CO<sub>2</sub> reduction target. One reason is the wrong alignment of the guidelines consulted here. The current version results in a massive support of fossil energy – associated with high CO<sub>2</sub> emissions. Climate friendly renewable energy, however, is disadvantaged. There is no level playing field – even though this is precisely what the guidelines were intended for in the first place. The promotion of fossil energy must stop. Investments in fossil energy projects prevent the transition to a renewable energy system and lead to stranded investments. Ambitious climate targets and promotion of fossil energy are mutually exclusive. Natural gas subsidies will lead to future distortions as Paris agreement compatibility will become more and more relevant for business cases - well before today's new projects are depreciated.

As part of the negotiations within the "Green Deal", EU Council and Commission have now agreed on a 55% reduction target for CO<sub>2</sub> until 2030; the EU Parliament even demanded 60%. To almost triple the reduction in only 10 years, the guidelines must be adapted quickly. Specifically, we recommend the following changes:

#### 1. Stop aid for CHP

Power plants using CHP (combined heat and power) technology are largely based on coal and natural gas. In Germany, 72% of district heating comes from (fossil) CHP plants – due to the massive financial support for CHP plants – allowed by the guidelines consulted here.

The EEAG allows fossil CHP to be subsidized if it is "highly efficient" and thus follows the basic idea of more efficiency. The EED defines that highly efficient CHP must save at least 10% primary energy compared to the generation of electricity and heat in separate plants. This comparison only applies to the same fuel and within the system limits. In practice, this puts systems with renewable heat at a competitive disadvantage although renewable systems are cheaper, can save even more primary energy and are associated with significantly lower CO<sub>2</sub> emissions.

The following example illustrates this:

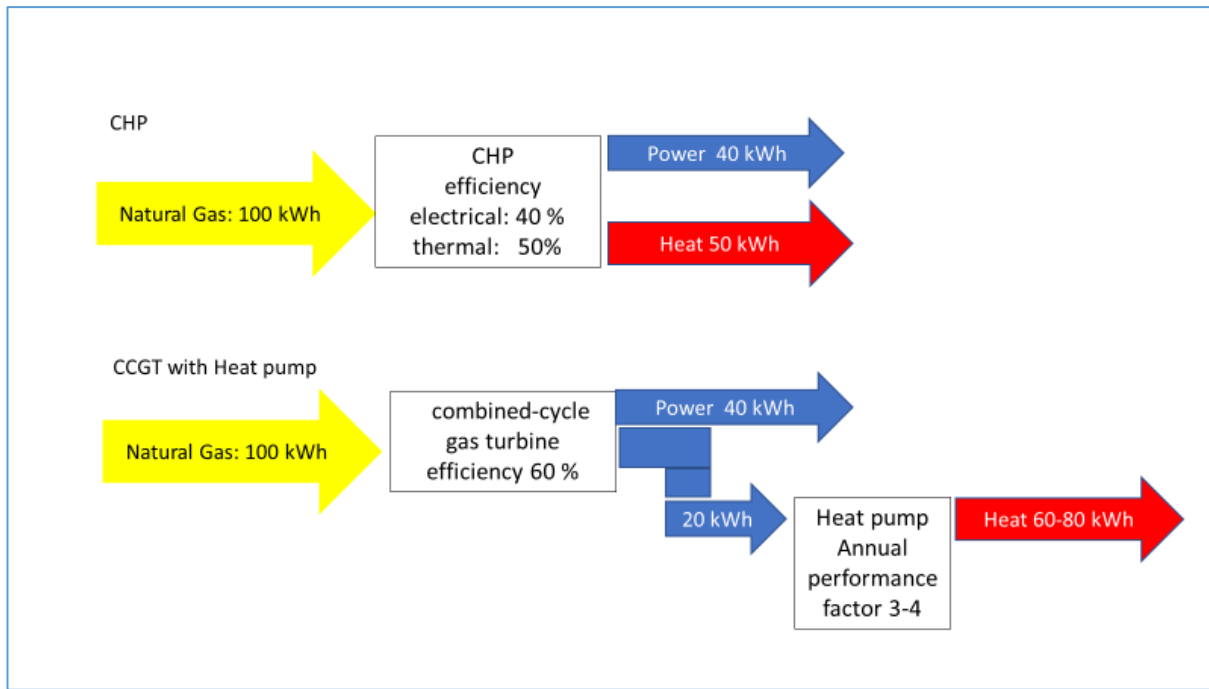


Fig. 1: Comparison CHP to CCGT plus heat pump (DUH)

In the example, 100 kWh of fossil energy used in CHP produces 90 kWh of final energy under ideal operating conditions. When using environmental heat via a heat pump, 100-120 kWh of final energy are generated.

The current definition of CHP as “highly efficient” at 10% primary energy savings systematically favors fossil fuel-based CHP while discriminating against renewable heat. This is not compatible with the goal of the guidelines to fund projects for environmental protection in a non-distortive way.

This is also not compatible with the EU’s climate objectives, given that the CO<sub>2</sub> reduction achieved with renewable energy (RE) is much higher than any reduction achieved by CHP.

A comparison tailored to a fossil system creates a fundamental conflict: on the one hand, the EU promotes climate protection and green energy, but on the other hand overfunds CO<sub>2</sub>-emitting technologies like CHP power plants when compared to renewable funding.

In many member states, the phase-out of coal does not lead to a switch to renewable energy, but – due to the CHP definition of “highly efficient” – to the installation of natural-gas-fired CHP, which, in turn, results in fossil technology locked in and distorting a greening economy for decades.

Electricity-based technologies such as heat pumps are able to reduce CO<sub>2</sub> emissions much more efficiently and cost-effectively than fossil-based heating technologies ever can. The former need to be supported in the energy transition to become even more competitive while the latter should not be funded anymore to reveal their true (environmental) cost and to phase them out eventually. The reform of the guidelines should consider this.

In addition, subsidized fossil CHP electricity crowds out subsidized RE electricity. This system conflict is foreseeably becoming greater - as the share of renewable energy increases. Even now, the minimum cogeneration capacity is higher than what is needed for the safe operation of the power grid. This is due to the obligation of heat supply that the plants have to fulfil. Therefore, renewable energy plants are switched off while fossil power plants are working. This conflict cannot be reduced even by supplementing a CHP plant with storage options. In addition, more flexibility and the use of storage options is associated with the CHP plant being less efficient. Fuel consumption and CO<sub>2</sub> emissions increase.

When the simultaneity of electricity and heat demand – and thus the optimal operation of the CHP plant – occurs less and less frequently, a crucial prerequisite for the future viability of CHP is missing. And with rising shares of renewables in the energy system, the demand for such simultaneity will drop. Cogeneration will actually even increase the demand for sector coupling to compensate for the unneeded simultaneity – which is distortive in too many ways. Cogeneration has therefore no future.

In addition, subsidized cogeneration for district heating also penalizes building-specific solutions with much more potential for CO<sub>2</sub> savings.

#### **Demands:**

- **The EU must stop competitive advantages for fossil energy and disadvantages for renewable energy.**
- **Any aid for fossil CHP must be abolished because supporting fossil energy counteracts the climate goals.**
- **“High efficiency” as a reason for subsidizing fossil CHP plants must be removed from the guidelines because this criterion – based on the definition in the EED – prevents the implementation of technologies with much higher CO<sub>2</sub> reduction potential.**
- **Aid for small CHP systems must also be abolished. They achieve very little to no CO<sub>2</sub> reduction.**
- **Subsidies may instead be granted for renewable heat. The amount of subsidies should be technology-specific in order to reflect the degree of maturity of a certain technology.**

## **2. Stronger promotion of renewable energy**

The switch to a tendering system has declined the expansion of wind energy. For small operators, the price risk of an unsuccessful tender is too high. This means that a significant number of actors, often locally involved such as energy cooperatives, are no longer part of the energy transition. The transition is slowing down and loses contact with citizens, the previous supporters of the transition.

The safeguard “tendering” should therefore include the option of extending but also of limiting the competitive bidding requirement. At the very least, it should question whether competitive bidding is in fact the best instrument to promote a certain technology, development and participation by all parties or whether competitive bidding is discriminatory and actually distorting the level playing field.

Installations smaller than 30 kW for photovoltaics and 18 MW for onshore wind, respectively, should be excluded from the competitive bidding process to support small businesses, municipalities or energy cooperatives in participating in the energy transition.

For small operators, the possibility of “contracts for difference” should be significantly increased.

#### **Demands:**

- **Allow aid for more calculable financial models for small operators such as energy cooperatives.**
- **Limit competitive bidding process to larger projects.**

## **3. Add new safeguard “sustainability”**

A new safeguard should be added: Sustainability. To what extent is aid appropriate for projects in conflict with short-term and/or long-term climate targets set out by the European Green Deal? Despite the Green Deal objectives being the basis for the revision of the EEAG, we feel it necessary to underline sustainability as a separate safeguard.

Experience shows that one cannot be accurate enough in terms of climate goals, sustainable development, consumer rights and the phasing out fossil energy sources. Numerous loopholes, exemptions etc. still serve as justification for state funding for projects that are clearly fossil-driven, e.g. blue hydrogen or new natural gas infrastructure in Northern Germany. Fossil energy can never be sustainable which is why it is no business case without aid and should never become one with aid.

Sustainability should play an important role in allocating state aid to calibrate between market distortions and environmental and climate goals. When sustainability criteria are applied, technologies like carbon capture and storage (CCS), blue hydrogen, "carbon-neutral" (not renewable) projects and cogeneration (no advantage in efficiency, overfunded) are ruled out because they are simply not "fit" enough for the future.

It is important to build path dependencies, expertise and competition in the right sectors and technologies today in order to boost industries and markets and promote competitiveness for their future. A green economy is coming.

**Demand:**

- **Add new safeguard "sustainability" to ensure compatibility of aid with climate goals.**

## **4. No aid for fossil infrastructure**

The current EEAG guidelines list, inter alia, natural gas and LNG infrastructure as possible beneficiaries of aid. From our perspective, this contradicts EU climate targets, as giving aid to these projects increases their competitiveness and therefore solidifies fossil fuel dependency instead of massively deploying renewable energy and energy efficiency at the scale that is now necessary to reach climate protection targets, especially in light of the recently raised ambition of the EU.

Several studies point out that new fossil infrastructure is not necessary if we are to achieve our climate targets and that existing infrastructure is sufficient under a variety of future demand scenarios. In addition, gas demand will fall in the mid-term, leading to the risk of stranded assets in the case of new fossil gas infrastructure which can have a lifespan of 30 to 70 years, way beyond the point where we will have to significantly reduce fossil gas use in the EU in order to fulfil the Paris climate commitments. Aid should only be given for infrastructure that is necessary and beneficial for reaching climate neutrality in the EU. New infrastructure that is "sustainably outdated" before it is depreciated distorts markets and prices.

The guidelines also allow aid for district heating networks with "at least" 75% CHP. As CHP is therefore largely a fossil technology based on coal and natural gas, the guidelines currently basically support infrastructure for fossil energy. Yet, environmental protection and promotion of fossil energy are mutually exclusive. Besides, heating networks are not prepared for the application of renewable heat, which, in general, comes in lower temperatures than fossil heat. However, the switch to renewable heat is necessary to fulfil 2050 climate targets. Aid for fossil infrastructure is therefore a stranded investment.

**Demands:**

- **Any aid toward infrastructure for natural gas or LNG shall be prohibited.**
- **Any aid for district heating networks with high CHP shares must be stopped as they do not align with climate goals.**
- **Subsidies may only be granted for district heating networks with more than 50% share of renewable heat which are able to reduce their CO<sub>2</sub> emissions down to zero by 2050.**

## 5. No promotion of "low-carbon" technologies, blue hydrogen or CCS.

Aid for hydrogen should be restricted to the promotion of green hydrogen made from renewable power. Blue hydrogen, on the other hand, should not be eligible for aid, as this technology still needs natural gas in order to function and therefore prolongs our dependence on this fossil energy carrier. Moreover, blue hydrogen is not carbon neutral, as the strong greenhouse gas methane is emitted throughout the entire production chain from well to consumer, questioning the alleged advantage of natural gas over coal. Latest satellite technology even reveals that these emissions are considerably higher than what has been estimated so far, with the EU Methane Strategy stating that emissions outside of Europe caused by our consumption are three to eight times higher than those within the EU. In addition, blue hydrogen depends on CCS (carbon capture and storage) – a technology that still allows for a significant amount of greenhouse gases to reach the atmosphere, despite decades of research.

Low-carbon technologies do not solve the CO<sub>2</sub> problem, but simply shift it to a different place and time. Moreover, they require constant monitoring. Risks such as GHG leakages persist for many decades. The follow-up costs could therefore be greater than the initial cost savings, which is distortive in the long run.

### Demand:

- **No aid for low-carbon technologies, blue hydrogen or CCS because they are associated with GHG emissions.**

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