

## **Targeted Consultation for the Evaluation of the Guidelines on State aid for Environmental protection and Energy 2014-2020 (EEAG)**

**Response from the Zero Emission Technology and Innovation Platform (ZEP)  
10<sup>th</sup> July 2019**

### **Effectiveness:**

*In this section, we would like your opinion on the extent to which the State aid Guidelines for environmental protection and energy (EEAG) and the provisions applicable to aid for environmental protection (which include provisions on energy) (Section 7) of the General Block Exemption Regulation (related GBER provisions) have achieved their objectives and delivered results.*

**1. Based on your experience, to what extent have the EEAG and the corresponding GBER provisions (e.g. tendering, technological neutrality, market integration) been effective in:**

- enabling the deployment of renewables while lowering societal costs and reducing the amount of aid needed?
- facilitating the integration of renewable energy into the electricity market?
- ensuring financing of support schemes to renewable energy sources, while limiting negative impacts on the competitiveness of EU firms?
- ensuring that capacity mechanisms were necessary and cost effective in providing security of supply and least-distortive to competition and intra-EU trade?
- ensuring that capacity mechanisms did not negatively impact the objective of phasing out environmentally harmful subsidies including for fossil fuels?
- ensuring that in cogeneration and district heating the most cost efficient projects could be realised?

**Please explain (10,000 Characters):**

The State Aid Guidelines for EEAG have been incredibly successful for low-carbon technologies which have a positive impact for the environment. This is exemplified by the rapid and widespread uptake of onshore and offshore renewable electricity generation, where state aid has driven cost reductions and lowered societal costs.

As the EU looks to its 2030 climate and energy targets, State Aid will have an increasingly important role in addressing new challenges, not just renewable electricity generation, but for low-carbon electricity generation, decarbonisation of industry, heat and transport.

**5. Based on your experience, has State aid granted under the EEAG or the GBER generally achieved the relevant climate and environmental protection objectives while maintaining a competitive internal market? (1000 Characters)**

State Aid for CCS is yet to prove its value in achieving the Climate and Environmental Protection Objectives. The practical experience from CCS projects is that the state aid process places a not insignificant financial cost and time delay to projects applying for aid.

The Guidelines for CCS (Section 3.6 EEAG) as they are currently written follow a rigid structure for the CCS chain. For example, capture technologies are seen as an accessory to current manufacturing processes (paragraph 164 & 165). In truth, both now and in the future, CO<sub>2</sub> capture can be an integral part of the production process; therefore, the capture facility will not be additional to the process and be excluded from state funding.

Furthermore, when the Guidelines were written, CCS projects were seen as an integrated project with capture, transport and storage all within one project. Recently, it has become prevalent that an investment model can envisage investment in separate parts of the CCS chain.

Enabling flexible investment in part of the CCS chain and allowing state aid for integrated processes will help encourage investment in CCS. Widespread investment and deployment of CCS with state aid assistance will help achieve the EUs climate objectives and stimulate an internal market.

**7. Based on your experience, have there been any unexpected or unintended results from the implementation of the EEAG and the corresponding GBER provisions? (1000 Characters)**

The EEAG for CCS has unintentionally introduced the perception of additional project risk, and inhibited investment. For the delivery of projects this is not helpful for securing a wide profile and pipeline of projects which will help to achieve the EU climate and energy goals.

**13. Based on your experience, has the higher aid intensity allowed under point 78 of the EEAG been adequate to address the double market failure linked to the higher risks of innovation and the environmental aspects of the project without creating unnecessary distortions of competition? (yes, Not adequate (too low), not adequate (too high), I don't know. (1000 characters))**

Yes

The higher aid intensity allowed under point 78 of the EEAG is particularly important for CCS projects. The clarity allowing 100% aid intensity for CCS projects of all sizes is welcomed and essential to enable the deployment of CCS in Europe.

## Efficiency:

*In this section, we would like to know your opinion about the efficiency of the EEAG and the related GBER provisions.*

**14. Based on your experience, to what extent are the different compatibility conditions and methodologies included in the EEAG and the GBER related provisions sufficiently clear and easy to apply (Yes, No, I Don't Know: explain 5000 characters):**

- in general terms?
- as regards the methodology for calculating eligible costs for investment aid to go beyond standards, in the absence of standards and early adaptation to standards under Article 36 of the GBER and points 73 to 75 of the EEAG?
- as regards the criteria for limiting bidding processes for renewables to specific technologies (see EEAG point 126 and GBER Article 42.3)?
- as regards the methodology for calculating eligible costs for investment aid to renewables and co-generation (CHP) projects?
- as regards the methodology to assess proportionality of aid based on levelised cost of energy (see point 131 of the EEAG and Article 43, paragraphs 5 and 6 of the GBER)?
- **as regards the provisions for demonstration projects (as defined in point 19 paragraph 45 of the EEAG) and for the new and innovative renewable energy technologies (see Article 42.4 of the GBER)?**
- as regards the methodology to assess eligible costs for energy-efficiency investment aid under Article 38 of the GBER?
- as regards the compatibility conditions (in particular the full passing on, the leverage condition, the conditions imposed on the financial intermediaries) for energy efficiency projects in buildings (see paragraphs 4 to 10 in Article 39 of the GBER)?
- as regards the compatibility conditions for aid for Resource Efficiency (section 3.5.1 of the EEAG read in combination with section 3.2 of the EEAG)?
- as regards the compatibility conditions (in particular the “state of the art” requirement, the “polluter pays principle” and the “treatment of the waste of others”) for waste management projects under 47 of the GBER and section 3.5.2 of the EEAG?
- as regards the methodology for calculating eligible costs for waste management projects under Article 47 of the GBER and section 3.5.2. of the EEAG?
- Other (please specify)

*As regards the provisions for demonstration projects (as defined in point 19, paragraph 45 of the EEAG) and for the new and innovative renewable energy technologies? NO*

Point 19 Definition 45 states: “ ‘demonstration project’ means a project demonstrating a technology as a first of its kind in the Union and representing a significant innovation that goes well beyond the state of the art.”

Carbon capture and storage and climate abating carbon capture and utilisation technologies are representative of a complex cross sectoral chain encompassing a large variety of processes. There are opportunities for multiple first of a kind (FOAK) demonstration projects to provide state of the art technological advancement across the CCS chain.

Subsequent CCS projects after the first project may demonstrate several FOAK and state of the art technologies. As it is currently written, the definition of demonstration project for CCS and CCU can lead to the assumption that the first CCS project will be considered the FOAK for all technologies which fall under the CCS and CCU umbrella. This adds uncertainty and does not encourage applications for support for demonstration projects which may represent a part of a complex chain of new technologies.

The current model assumes that a CCS is a full chain system point to sink system where capture facilities are additional to a process. However, for decarbonisation of industrial regions, CO<sub>2</sub> transport and storage infrastructure will most likely receive CO<sub>2</sub> from a multitude of capture facilities. The State Aid Guidelines using eligibility costs does not consider how enabling the construction of infrastructure, such as pipelines and injection facilities, may benefit the decarbonisation of several industrial processes.

## Relevance:

**16. Based on your experience, have the EEAG and GBER adequately addressed recent market developments or technological changes such as: (yes, no, partially, I don't know, explain 5000 characters)**

- Storage
- Zero subsidy bids
- Repowering
- Renewable energy power purchase agreements
- Renewable self consumption and/or active consumers
- Citizens energy communities and/or renewable energy communities
- **Hydrogen, synthetic fuels and low carbon gas**
- Alternative fuel infrastructure (publicly accessible or dedicated infrastructure)
- Low or zero emission vehicles
- **Carbon Capture, Storage and/or Utilisation**
- Nearly-zero-energy buildings
- Smart energy technologies (e.g. in buildings)
- Energy services (e.g. energy performance contracting)

- **Advanced technology for water reuse (e.g. membranes and UV)**
- **Other (please specify)**

NO

The EEAG and GBER have not adequately respond to the recent technological changes and increase in scope seen in the CCS, CCU and hydrogen sectors.

When the State Aid Guidelines were drafted CCS was primarily seen as a technology to produce low-carbon electricity, with the transport and storage infrastructure tied to a gas or coal fired power plant. CCS is still an important option to decarbonise electricity. As shown by recent studies, CCS is now concluded as an essential technology to decarbonise industry<sup>1</sup> and hydrogen production<sup>2</sup>.

The State Aid Guidelines has no scope for CCU technologies. We encourage the Commission define a life cycle analysis methodology which will enable a quantification of the climate abatement potential of different CCU technologies. For future State Aid guidelines, CCU products which have significant carbon abatement, or 'sink factor'<sup>3</sup> should be considered for State Aid.

State Aid needs to include and encourage technologies which can permanently remove CO<sub>2</sub> from the atmosphere, also known as negative emissions technologies. The IPCC 1.5°C report<sup>4</sup> and many scenarios proposed in the EU LTS rely on negative emissions technologies especially to address residual emissions, notably from agriculture<sup>5</sup>.

There are limited options for enabling negative emissions: land use change and afforestation can, and must play a key role, as can bioenergy coupled with CCS (BECCS) when used in combination with industrial processes, such as steel and cement production. Direct air capture of CO<sub>2</sub> combined with CCS may also have an important role to play.

## **17. To what extent do recent economic developments – such as the falling renewable energy costs and possible changes to trade intensity and electro intensity of the sectors concerned – impact the relevance of the rules which apply to reductions for energy-**

<sup>1</sup> Material Economics, 2019. Industrial Transformation 2050: Pathways to Net-Zero Emissions from EU Heavy Industry Available at: [https://materialeconomics.com/material-economics-industrial-transformation-2050.pdf?cms\\_fileid=b9785e8b652ba47f227181543fc5d1e8](https://materialeconomics.com/material-economics-industrial-transformation-2050.pdf?cms_fileid=b9785e8b652ba47f227181543fc5d1e8)

<sup>2</sup> Navigant 2019. Gas for Climate: The optimal role for gas in a net-zero emissions energy system. Available at: <https://www.navigant.com/-/media/www/site/downloads/energy/2019/navigant2019gasforclimateoptimalrolenetzeroemissio.pdf>

<sup>3</sup> ZEP, 2017. Sink factor methodologies.

<sup>4</sup> IPCC, 2018. Summary for Policymakers. In: *Global Warming of 1.5°C. An IPCC Special Report* Available at: <https://www.ipcc.ch/sr15/>

<sup>5</sup> European Commission, 2018. A Clean Planet for all A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy.

Available at: [https://ec.europa.eu/clima/sites/clima/files/docs/pages/com\\_2018\\_733\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_en.pdf)

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intensive users (EIUs)? (to a large extent, to some extent, not at all, i don't know, explain 3000 characters)

- **Falling costs of renewable energy producers**
- **Changes to the trade intensity of the sectors listed in Annex 3 and 5 of the EEAG**
- **Changes to the electro intensity of the sectors listed in Annex 3 of the EEAG**
- **Other (please specify)**

*Other: Necessity for CCS*

To some extent

The fall in renewable energy costs as mentioned previously are welcomed and a success of the State Aid scheme. However, increased reliance on renewable energy alone is not sufficient to enable energy intensive industries (EIIs) to transition to a low-carbon future.

Energy intensive industries currently emit 500 million tonnes of CO<sub>2</sub>/year in Europe, accounting for 14% of total EU emissions. Studies have shown that to decarbonise these energy intensive industries alone using renewable electricity would require an increased renewable generation capacity of over 700TWH of electricity, more than the total generation capacity of Germany today<sup>6</sup>. State Aid supporting CCS will play a vital role for the future of energy intensive industries. CCS is essential to decarbonise EIIs in a cost effective manner, whilst retaining output and competitiveness on a global scale<sup>789</sup>.

<sup>6</sup> Material Economics, 2019. Industrial Transformation 2050: Pathways to Net-Zero Emissions from EU Heavy Industry Available at: [https://materialeconomics.com/material-economics-industrial-transformation-2050.pdf?cms\\_fileid=b9785e8b652ba47f227181543fc5d1e8](https://materialeconomics.com/material-economics-industrial-transformation-2050.pdf?cms_fileid=b9785e8b652ba47f227181543fc5d1e8)

<sup>7</sup> Material Economics, 2019. Industrial Transformation 2050: Pathways to Net-Zero Emissions from EU Heavy Industry Available at: [https://materialeconomics.com/material-economics-industrial-transformation-2050.pdf?cms\\_fileid=b9785e8b652ba47f227181543fc5d1e8](https://materialeconomics.com/material-economics-industrial-transformation-2050.pdf?cms_fileid=b9785e8b652ba47f227181543fc5d1e8)

<sup>8</sup> BDI (BDC), 2018. Klimpfade für Deutschland. Available at: <https://bdi.eu/publikation/news/klimapfade-fuer-deutschland/>

<sup>9</sup> Energy Transition Committee, 2017. Better Energy, Greater Transition. Available at: [http://energy-transitions.org/sites/default/files/BetterEnergy\\_fullReport\\_DIGITAL.PDF](http://energy-transitions.org/sites/default/files/BetterEnergy_fullReport_DIGITAL.PDF)  
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### **Not Answered by ZEP**

2. Based on your experience, have Member States created a level playing field for imported and domestically produced biofuels and/or biomass energy when providing support (for instance by supporting a specific type of domestically produced biofuels and/or biomass energy, but not other types of biofuels and/or biomass energy with similar costs or greenhouse gases emissions)? (1000 Characters)

3. Based on your experience, to what extent has the GBER ensured public support for waste recycling while limiting the amount of aid to the minimum and limiting distortions of competition to the minimum? (1000 Characters)

4. Based on your experience, to what extent has Article 39 GBER (Investment Aid for Energy Efficiency Projects in buildings) allowed aid through financial instruments for energy efficiency measures in buildings while limiting distortions of competition at the level of the financial intermediary and the funds involved? (1000 Characters)

6. Based on your experience, has State aid granted under the EEAG or the GBER generally achieved the relevant energy objectives while maintaining a competitive internal market? (1000 Characters)

8. Are there sectors (at NACE 4 [level\[2\]](#)) and products (at Prodcom 8 [level\[3\]](#)) which, were included in the list of eligible sectors and products for reductions under section 3.7.2. of the EEAG (c.f. Annex 3 and Annex 5 of the EEAG), but which, according to your experience, were not particularly affected by the financing costs of renewable energy support and therefore were not put at a significant competitive disadvantage? (if Yes, list sectors & subsectors & substantiate (1000 Characters))

9. Are there sectors (at NACE 4 [level\[4\]](#)) or products (at Prodcom 8 [level\[5\]](#)) which, according to your experience, were particularly affected by the financing costs of renewable energy support and therefore were put at a significant competitive disadvantage, but were not included in the list of eligible sectors for reductions under section 3.7.2. of the EEAG (c.f. Annex 3 and Annex 5 of the EEAG)? (if Yes, list sectors & subsectors & substantiate (1000 Characters))

10. Based on your experience, have the minimum own contributions of the full electricity surcharges of 15 % of the full renewable surcharge, and 4 % and 0.5 % of the Gross Value Added of the undertaking concerned (see points 188 and 189 of the EEAG) been adequately set to ensure a sufficient financing basis for the underlying energy policy? (1000 Characters)

	Too High	Too Low	Adequate	I Dont Know
15% of full renewable surcharge				
4% of Gross Value Added				
0.5% of Gross Value Added				

11. Based on your experience, have the reductions in electricity surcharges given to energy-intensive users (EIUs) created market distortions? (Substantiate 3000 Characters)

12. Based on your experience, what impact have reductions granted to energy intensive users had on renewable energy charges and other relevant charges paid by non-energy intensive industrial consumers and households? (Substantiate 3000 Characters)

15. Based on your experience, how do administrative costs incurred by the aid application under the EEAG and GBER related provisions compare with the actual amount of compensation received? Please rate from very low (administrative costs representing less than 1% of the actual amount of compensation received) to very high (administrative costs representing more than 20% of the actual amount of compensation received) (table then Explain 1000 Characters):

	Very Low	Low (1-5%)	Intermediate (5-10%)	High (10-20%)	Very High (20%+)	I Dont Know
Proportion of administrative costs in total actual amount of compensation received						

18. Based on your experience, to what extent are the EEAG and the related GBER provisions coherent with relevant EU policies and legislation such as: (yes, No, Partially, I don't know, explain 5000 characters)

- Renewable Energy Directive Electricity Directive
- Electricity Market Regulation
- Risk-preparedness Regulation
- EU ETS Directive Industrial Emissions Directive
- Alternative Fuels Directive
- Energy Efficiency Directive
- Energy Performance of Buildings Directive
- EU Waste legislation
- Water Framework Directive
- Air Quality Directive
- Birds Directive
- Habitats Directive
- ERDF Regulation

Other (please specify)

19. Have the EEAG and GBER rules on exemptions or reductions from energy taxation produced inconsistencies with other EU rules? (yes, no, partially, I don't know, explain 1000 characters)

- **Energy Taxation Directive**
- **Other**