

Subject Ørsted response to EU consultation on CEEAG
To European Commission, Directorate-General for Competition
From Ørsted
Regarding Input to revision of EU State Aid Guidelines on (Climate) Energy and Environment

2 August 2021

Our ref. JRMAD

Ørsted welcomes the opportunity to contribute to the consultation on the revision of the Guidelines on State Aid for Climate, Environmental Protection and Energy.

The Ørsted vision is a world that runs entirely on green energy. Ørsted develops, constructs, and operates offshore and onshore wind farms, solar farms, energy storage facilities, and bioenergy plants and provides energy products to its customers. Ørsted ranks as the world's most sustainable energy company in Corporate Knights' 2021 index of the Global 100 most sustainable corporations in the world and is recognised on the CDP Climate Change A List as a global leader on climate action. Headquartered in Denmark, Ørsted employs 6,311 people.

We welcome the ambition to bring state aid guidelines in line with the EU's climate and energy objectives. Our comments to the draft guidelines are structured along the following headlines:

1. **General comments**
2. **Definitions (chapter 2.4)**
3. **Overall principles of the guidelines (chapter 3.1 – 3.3)**
4. **Aid for the reduction and removal of greenhouse gas emissions, including through support for renewable energy (chapter 4.1)**
5. **Aid for clean mobility (chapter 4.3)**
6. **Aid for the security of electricity supply (chapter 4.8)**
7. **Aid in the form of reductions from electricity levies for energy-intensive users (chapter 4.11)**

1. General Comments

Our ref. JRMAD

Since the adoption of the current state aid guidelines, the EU policy objectives on climate, environment and energy have changed substantially.

While in 2013-14 the EU had only a 2020 target framework for climate and energy, there is now a political and legally binding agreement on economy-wide climate neutrality by 2050.

The 2050 climate neutrality objective has furthermore been a driving force in the adoption of an increased 2030 GHG reduction target of 55%. In other words, there is a clear coherence between the long-term climate neutrality target and the short to medium term policy direction in the EU as pertains to climate and energy policies.

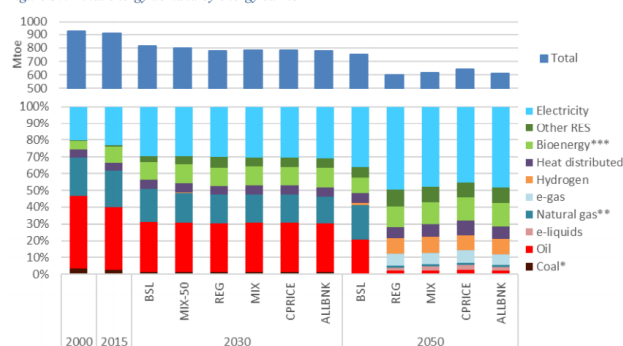
We believe this coherence should also be ensured in the entirety of EU competition policy. State-aid guidelines across sectors should be aligned with the objectives of the EU Green Deal.

The Revision of the Guidelines on State aid for climate, environmental protection and energy (CEEAG) is of particular importance. Therefore, **the CEEAG should ensure compliance with state aid measures not only for the duration of the state aid guidelines themselves but also towards EU's long term climate objectives** – i.e. the 2050 climate neutrality perspective.

In this context, we believe a clear distinction needs to be made between renewable and non-renewable energy sources.

According to the European Commission's own 2030 and 2050 climate and energy scenarios (COM/2020/562), consumption of fossil fuels will need to reduce dramatically towards 2050 to reach climate neutrality.¹

Figure 37: Final energy demand by energy carrier



Note: * includes peat, oil shale, ** includes manufactured gases, *** solid biomass, liquid biofuels, biogas, waste

Source: 2000, 2015: Eurostat, 2030-2050: PRIMES model

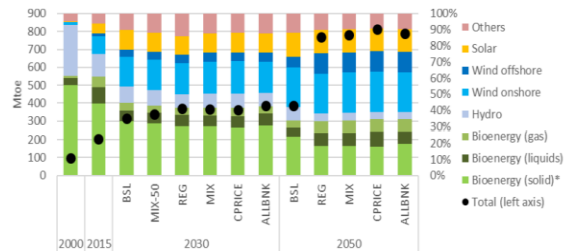
- 66-71% reduction in natural gas demand in 2050 compared to 2015
- 95+ % reduction in coal demand in 2050 compared to 2015
- 95+ % reduction in oil demand in 2050 compared to 2015

¹ 2030 climate target plan impact assessment, annex II page 51 - [resource.html \(europa.eu\)](https://resource.html.europa.eu)

Contrary renewable energy production will need to increase significantly towards 2030 and 2050:²

Our ref. JRMAD

Figure 41: Renewable energy production



Note: includes biofuel production for international air and maritime bunkers

Source: 2000, 2015: Eurostat, 2030-2050: PRIMES model

- 30 times increase for offshore wind in 2050 compared to 2015
- 8 times increase for onshore wind in 2050 compared to 2015
- 8 times increase for solar power in 2050 compared to 2015

Therefore, **to ensure that the CEEAG underpins both short, medium and long term objectives of the European Union, it is important that a very clear distinction between renewable and fossil energy sources³** is made in the criteria set out in the guidelines.

The risk of not considering the abovementioned energy demand projections is that economic activities that are not compatible with the long-term policy objectives of the Union are nevertheless deemed eligible for state aid. This could lead to stranded assets and thereby increased costs for consumers and tax payers.

² 2030 climate target plan impact assessment, annex II page 55 - [resource.html \(europa.eu\)](https://resource.html.europa.eu)

³ As nuclear energy is not within the scope of CEEAG, this falls outside this distinction. It should be considered a "zero carbon energy source" – thus neither renewable nor low carbon.

2. Definitions

Our ref. JRMAD

2.1 Low Carbon

Building on the comments above, it is noteworthy that the draft guidelines do not contain a definition of “low carbon”. Both the terms low carbon energy, low carbon gas and low carbon fuels are used in crucial paragraphs in the guidelines, but without establishing a clear definition, it remains unclear what is meant.

One would assume that low carbon refers to fossil fuels, as for instance nuclear is not covered by the scope of the guidelines. If feasible within the scope of the guidelines, we would also suggest to clearly define low carbon. Moreover, it is crucial to align state aid guidelines with long term climate ambitions, as referred to in the first chapter of this consultation response. Therefore, **mentioning renewables alongside low carbon, and within the same context in the guidelines should be avoided.**

2.2 CCS / CCU

In the definitions of CCS and CCU, there seems to be an omission of CO₂ emitted from industrial processes. For instance, the melting of limestone for cement production emits CO₂ – but is in itself not the burning of fossil fuels. Nevertheless, process emissions could become important point sources of CO₂ for future production of advanced hydrogen-based products such as e-kerosene or e-methanol.

We believe a distinction between different types of CCS/CCU needs to be made.

According to the IPCC, **bioenergy with carbon capture and storage “has the potential for net carbon dioxide removal from the atmosphere”**.⁴ That’s because the underlying carbon has already been absorbed from the atmosphere during the biomass growth. By contrast, the burning of fossil fuels emits CO₂ that would have otherwise been permanently stored underground.

Fossil energy with carbon capture can at best be considered as a measure for reducing emissions. This is particularly true because capture rates are typically well below 70%.⁵ The IPCC states that a combined cycle gas power plant with CCS still emits, on average, 0.054 tonnes of CO₂-e per MWh.⁶ It should also be noted that fossil fuel upstream emissions will remain regardless of capture rates at the point of final emission.

⁴ IPCC (2014): Annex II: Glossary [Mach, K.J., S. Planton and C. von Stechow (eds.)]. In: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, pp. 117-130.

⁵ Mark Jacobsen (2019) The health and climate impacts of carbon capture and direct air capture. The paper found that “Even without accounting for upstream emissions, the equipment associated with the coal plant was only 55.4 percent efficient over 6 months, on average.”

⁶ IPCC (2014) Annex II: Metrics & Methodology. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA

Furthermore, there is a difference in the application of CCS/CCU. **Carbon capture might be necessary in hard-to-abate sectors** such as cement production or petrochemical processes that use fossil fuels as feedstock. On the contrary, carbon capture is likely an economically inefficient option in sectors in which readily available decarbonisation alternatives exist, for example electricity generation or low-temperature process heat. This is aggravated by the fact that these sectors, as opposed to for example cement production, are exposed to upstream emissions (e.g. methane leaking in pipelines before it can even be used in a plant) that are unlikely to be mitigated with carbon capture technology.

18. For the purposes of these guidelines, the following definitions apply:

...

(13) ‘carbon capture and storage’ or ‘CCS’ means a set of technologies that captures the carbon dioxide (CO₂) emitted from industrial plants based on fossil fuels or biomass, including power plants and waste-to-energy plants, ***or from industrial processes***, [or captures it directly from ambient air], transports it to a storage site and injects the CO₂ in suitable underground geological formations for the purpose of permanent storage of CO₂; ***While bioenergy with carbon capture and storage (BECCS) can, in case of sustainable biomass sourcing, have the potential for net carbon dioxide removal from the atmosphere, fossil energy with CCS can be considered as a measure for reducing emissions.***

(14) ‘carbon capture and use’ or ‘CCU’ means a set of technologies that captures the CO₂ emitted from industrial plants based on fossil fuels or biomass, including power plants and waste-to-energy plants, ***or from industrial processes***, [or captures it directly from ambient air], and transports it to a CO₂ consumption or utilisation site; ***While bioenergy with carbon capture and utilization can, in case of sustainable biomass sourcing, be considered carbon neutral, fossil energy with CCU can be considered as a measure for reducing emissions.***

2.3 Offshore electricity grids

Our ref. JRMAD

It is highly welcomed that the draft guidelines acknowledge the need for a clear definition of offshore electricity grids. It is especially applaudable that the dual functionality – i.e. interconnector and feeder line – is clearly recognised in the definition.

Exactly the dual functionality differentiates offshore electricity grids from conventional interconnectors, and for that reason, the rules governing such assets may not always be compatible with the optimal functioning of an offshore electricity grid.

It is furthermore applaudable that the technology interoperability is highlighted as a condition for state aid covering substations. However, a governance structure that allows vendors to share technology specifications and simulation models in a confidential manner and to be used only for specific purposes need to be established.

18. For the purposes of these guidelines, the following definitions apply:

...

(35) ‘energy infrastructure’ means any physical equipment or facility which is located within the Union or linking the Union to one or more third countries and falling under the following categories:

(a) concerning electricity:

...

(v) off-shore electricity grids, which means any equipment or installation of electricity transmission or distribution infrastructure, as defined in point (i) above, which has dual functionality: interconnection and transmission or distribution of offshore renewable electricity from the offshore generation sites to two or more countries. This also includes any offshore adjacent equipment or installation essential to operate safely, securely and efficiently, including protection, monitoring and control systems, and necessary substations if they also ensure technology interoperability ~~and~~ *by inter alia making all the necessary information available to enable* interface compatibility, *including* between different technologies;

2.4 Energy Islands

Belgium and Denmark have concrete plans to develop hubs for offshore wind farms, which will be located on natural or artificial islands or platforms. According to the Danish Energy Agency, energy islands will enable wind turbines to be “placed further away from the coast and distribute the power they generate between several countries more efficiently.”⁷ Proposals also include using energy islands for battery and power-to-x facilities, and even for non-typical energy infrastructure such as hosting 5G antennas or radar equipment.⁸ We would like to ask the Commission to **clarify whether infrastructure projects that are commonly referred to as “energy islands” would be fully eligible for state-aid** under the draft guidelines?

⁷ Danish Energy Agency (2021). What is an Energy Island. [Denmark's Energy Islands | Energistyrelsen \(ens.dk\)](https://ens.dk/en/energy-islands)

⁸ Recovery and Resilience Plan for Belgium (2021). [FR - Plan national pour la reprise et la résilience.pdf \(belgium.be\)](https://fr.europa.eu/fr/plan-national-pour-la-reprise-et-la-resilience/pdf)
 Ilot énergétique offshore. Page 122.

3. Overall principles of the guidelines

Our ref. JRMAD

3.1 Residual market failure

While it is welcomed that the guidelines highlight that state aid should address residual market failures, **paragraph 40 seems to significantly deviate from paragraph 36 in the current guidelines.**

A sentence has been added to the paragraph stating that aid schemes may not *"undermine the efficiency of the market-based mechanism"*. In practice, it would seem very difficult to assess when this would be the case.

For instance, national measures to increase renewable energy deployment or energy efficiency could be argued to undermine the ETS, as such measures would obviously reduce the demand for CO2 allowances. The same could be argued for many measures of sectoral legislation at EU level.

However, it remains that **many barriers exist for e.g. renewable energy and energy efficiency, which will not be addressed simply through carbon pricing.** In addition, the sentence highlighted above seems to put the measure (ETS) above the objective (decarbonisation).

Further, if a Member State is to cancel allowances as a consequence of establishing support schemes for renewable energy or energy efficiency, it would essentially be paying twice, thereby reducing incentives for such measures. First, it would be paying through the actual support scheme, and second through the loss of revenue from the CO2 allowances that it had been obliged to cancel.

We would therefore propose to keep this text closer to the formulation of paragraph 36 in the current state aid guidelines.

40. Different measures to remedy the same market failure may counteract each other. This is the case where an efficient, market-based mechanism has been put in place to specifically counter the problem of externalities, as for instance the Union's ETS. An additional support measure to address the same market failure risks undermining the efficiency of the market-based mechanism. Therefore, when an aid scheme aims at addressing residual market failures, the aid scheme must be designed in such a way as to ~~not undermine the efficiency of~~ **minimize negative impacts on** the market-based mechanism.

3.2 Competitive bidding / non-price selection criteria

It is welcomed that the guidelines seem to underline the importance of transparent criteria for awarding state aid – e.g. by assessing the award of aid in the context of e.g. energy supplied or GHG emissions abated.

However, considering the rapidly dropping prices of renewable energy (e.g. zero-subsidy bids), **it may prove difficult to limit non-price factors to only 25% of the weighting of selection criteria.** The upcoming offshore wind energy tenders in the Netherlands are good examples, where the winner will be decided based on environmental performance and innovation (sector integration) respectively. Such innovative approaches should not be stopped by the CEEAG.

Therefore, it would be useful to clarify how this paragraph would be implemented in a zero-subsidy auction, where essentially “other criteria” account for 100%.

49. The selection criteria in the competitive bidding process should as a general rule be based on the aid amount requested by the applicant put in direct or indirect relation to the contribution to the objective of the measure (for example in terms of unit of environmental protection or unit of energy). In a few exceptional cases, it may be appropriate to include other non-price selection criteria (for instance additional environmental, technological or social criteria). In such cases, such other criteria must account for not more than 25 % of the weighting of all the selection criteria. The Member State must provide reasons for the proposed approach and ensure it is appropriate to the objective pursued.

3.3 Transition fuels

It is applaudable that the draft guidelines address the importance and relevance of medium and long term climate targets when assessing whether to award state aid.

As outlined in the first chapter of this consultation response, it is crucially important to clearly distinguish between renewable energy, where capacities need to increase substantially, and fossil fuels (natural gas, coal and oil), where demand is projected to decrease drastically in climate neutral scenarios.

While it can be argued that the proximity of the target date can have some relevance when assessing eligibility of transition fuels, it should also be noted that **investment horizons and payback periods are generally very long in the energy sector.** In other words, although 2050 may seem far away, most – if not all – large scale investments made today in generation of energy (be it electricity, heating or hydrogen), will likely have an economic lifetime beyond or very close to 2050.

Thus, **it seems that state aid for any fossil fuel investment going forward is likely to be incompatible with the climate targets** set out in the climate law. This is particularly true when weighing the risks of stranded assets and carbon-lock in against short term GHG emissions reduction.

65. State aid for environmental and energy objectives may have the unintended effect of undermining market rewards to the most efficient, innovative producers as well as incentives for the least efficient ones to improve, restructure or exit the market. This may also result in inefficient barriers to the entry of more efficient or innovative potential competitors. In the long term, such distortions may stifle innovation, efficiency and the adoption of cleaner technologies. These distortive effects can be particularly important when the aid is granted to projects that provide a limited transitory benefit but lock out cleaner technologies for a longer term, including those necessary to achieve the medium-term and long-term climate targets enshrined under the European Climate Law. This can, for example, be the case for support to certain activities using fossil fuels that provide an immediate reduction of green house gas emissions, but lead to slower emissions reductions in the long term. All other things being equal, the closer the aided investment is in time to the relevant target date, the greater the likelihood that its transitory benefits may be outweighed by the possible disincentives for cleaner technologies. *However, the long economic lifetime of energy infrastructure investments should be carefully addressed when doing this assessment.* The Commission will therefore take into account these possible short and long term negative effects on *sustainability*, competition and trade in its assessment.

Given the massive decrease that's needed in all types of fossil fuels towards 2050 (see chapter 1), **it seems questionable to suggest that certain types of fossil fuels are not likely to have negative environmental effects.**

Further, **the European Green Deal Communication (COM/2019/640) clearly states an intention to end fossil fuels subsidies** and does not distinguish between how much they pollute between them.⁹ Ending fossil fuel subsidies would furthermore be in line with the commitments by the European Union as part of the G20 accord in 2009.¹⁰

It is furthermore concerning that the draft guidelines seem to suggest that the negative environmental effects do not apply to natural gas projects without lock-in effect. Whether there is a lock-in effect or not, burning natural gas will emit CO₂, while its production and transport emit CH₄, both of which have a clearly negative environmental effect.

It would furthermore seem relevant to describe how such a lock-in effect (or the absence of it) would be assessed, i.e. when has lock-in taken place, and when has it not?

⁹ European Green Deal, COM/2019/ 640, page 10, 17 and 21 [resource.html \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52019DC0640)

¹⁰ [G20 Leaders Statement: The Pittsburgh Summit \(utoronto.ca\)](https://www.g20.org/leaders-statement), point 24 (preamble) and point 29

71. Measures that directly or indirectly involve support to fossil fuels, ~~in particular the most polluting fossil fuels,~~ are unlikely to create positive environmental effects and often have important negative effects because they can increase the negative environmental externalities in the market. The same applies for measures involving new investments in natural gas, ~~unless it is demonstrated that there is no lock-in effect.~~ This will in principle render a positive balancing for such measures unlikely, as further explained in Chapter 4.

3.4 Tax Transparency

The EU loses 160-190 billion Euros in revenue every year due to aggressive tax planning strategies. **If Member States were to collect the lost taxes, it would add 0.6 per cent - 1.1 per cent to their public investment spending power.**¹¹ It is essential that corporates, in particular the ones who are beneficiaries of state-aid, contribute their fair share to Member States' fiscal revenues. This ensures that governments have sufficient resources available for state-aid.

Harmful tax practices also distort competition. Corporates with aggressive tax planning strategies gain an unfair competitive advantage over the ones that follow best practices or globally recognised standards. Moreover, the enormous cost of tax avoidance and evasion causes negative externalities for society and therefore clearly constitutes a market failure.

67a (new) Tax avoidance and aggressive tax planning distort competition, both through the creation of unfair advantages, and by causing negative externalities. Aid received must not be associated with harmful tax practices, for example by being funnelled through base erosion and profit shifting frameworks. Aid beneficiaries should therefore be required to make public their Country-by-Country tax reports under a globally recognised standard.

¹¹ European Parliament. Directorate-General for Parliamentary Research Services (2016). Bringing transparency, coordination and convergence to corporate tax policies in the European Union . II, Evaluation of the European added value of the recommendations in the ECON legislative own-initiative draft report

4. Aid for the reduction and removal of greenhouse gas emissions including through support for renewable energy (chapter 4.1)

4.1 Scope (aid for renewable vs. carbon neutral and fossil energy)

As mentioned under chapter 2 of this consultation response, the term “low carbon” is not defined in the guidelines, which makes it difficult to assess exactly what falls under this category.

As further outlined in chapter 3, **the European Green Deal, as well as the EU’s commitments under G20, points clearly in the direction of ending subsidies for fossil fuels.** It would therefore be recommendable to amend the scope of chapter 4.1 (as defined in paragraph 74) to only include renewable and carbon neutral energy – thus deleting the reference to low carbon (fossil fuel) energy.

Further, as by far the largest increases in energy sources will need to come from renewable energy (as highlighted in chapter 1) it seems reasonable to underline this preference in the guidelines.

These points would need to apply both for the production of energy (paragraph 74) and for the infrastructure directly related hereto (paragraph 75).

Furthermore, in paragraph 108, the draft guidelines rightly address the need to avoid carbon lock-in. However the paragraph then goes on to oblige Member States to explain how they intend to avoid carbon lock-in and establish binding commitments on renewable and low-carbon energy, or phase out fossil fuels.

This seems contradictory, as low-carbon fuels – one would assume – is exactly fossil fuels (as nuclear energy is outside the scope of the guidelines). So, the guidelines ask Member States to commit to fossil fuels (low carbon) and - in the same sentence – make a requirement to phasing them out.

Given the clear direction of the commitments in the EU Climate Law and the Climate Target Plan, **it would seem appropriate to oblige Member States to commit themselves to using mainly renewable energy.**

(Title) Aid for the reduction and removal of greenhouse gas emissions, ~~including~~ **notably** through support for renewable energy (chapter 4.1)

74. This Section lays down the compatibility rules for aid measures primarily aimed at reducing greenhouse gas emissions, including aid for the production of **notably** renewable and ~~where relevant~~ **low other** carbon **neutral** energy, aid for energy efficiency including high-efficiency **renewables based** cogeneration, aid for carbon capture, storage and use, **with priority to applications in hard-to-decarbonise sectors, or if there is potential to deliver negative emissions. It also covers** aid for the reduction or avoidance of emissions resulting from industrial processes **and** support for the removal of greenhouse gases from the environment. This Section does not apply to measures whose primary objective is not the reduction or removal of greenhouse gas emission. Where a measure contributes to

both the reduction of greenhouse gas emissions and the prevention or reduction of pollution other than from greenhouse gas emissions, the compatibility of the measure will be assessed on the basis of this Section or Section 4.5, depending on which of the two objectives is predominant.

75. This Section also covers dedicated infrastructure projects (~~including~~ **notably** for **renewable** hydrogen and other ~~low-carbon~~ **renewable and zero carbon** gases, and as well as CCS/CCU) that do not fall under the definition of energy infrastructure.

108. Aid for decarbonisation may unduly distort competition where it displaces investments into cleaner alternatives that are already available on the market, or where it locks in certain technologies, hampering the wider development of a market for and the use of cleaner solutions. The Commission will therefore also verify that the aid measure does not stimulate or prolong the consumption of fossil-based fuels and energy⁶³, thereby hampering the development of cleaner alternatives and significantly reducing the overall environmental benefit of the investment. Member States should explain how they intend to avoid that risk, including by way of binding commitments to use mainly renewable ~~or low-carbon~~ fuels or phase out fossil fuel sources.

110. Similarly, measures that incentivise new investments in energy or industrial production based on natural gas may reduce greenhouse gas emissions and other pollutants in the short term but aggravate negative environmental externalities in the longer term, compared to alternative investments. For investments in natural gas to be seen as having positive environmental effects, Member States **and project developers** must explain **in the pre-notification** how they will ensure that the investment contributes to achieving the Union's 2030 climate target and 2050 climate neutrality target. In particular, the Member States should explain how a lock in of this gas-fired energy generation or gas-fired production equipment will be avoided. For example, this may include binding commitments by the beneficiary to implement decarbonisation technologies such as **substitution of** natural gas by renewable or ~~low~~ carbon **neutral** gas or to close the plant, or CCU/CCS in **in hard-to-decarbonise sectors** on a timeline consistent with the Union's climate targets⁶⁴.

4.2 Technology Specific Auctions

Technology-specific auctions are the best way to provide visibility to investors and minimise costs for society. Their ability to be tailored to the generation specificities of different power sources makes technology-specific auctions a core element in the transposition and implementation of the Renewable Energy Directive (in particular its Art. 4) and the Governance Regulation.

While we welcome an exemption from technology neutral auctions for renewable energy sources--specific schemes, we would like to emphasize that costs for technologies can deviate significantly. Followingly, **auctions focused on all**

renewable energy technologies could result in one technology winning the entire auctioned volume without giving room to emerging technologies.

Our ref. JRMAD

Further, **not exploiting the complementarities of the different power generation profiles across technologies is a major risk.** For example, the complementarity between wind whose generation is higher in winter months and at night, and solar energy whose generation is higher during summer months and during the day. This complementarity is essential to guarantee a balanced energy system and ensures a better grid planning and utilisation.

Finally, different technologies operate with fundamentally different frameworks when it comes to lead-times and complexity for both construction and permitting procedures.

The draft guidelines promote technology-neutral auctions as the best way forward. This contrasts with Member States' right to design their renewable energy support schemes to fit national market conditions. National Governments need to have the confirmation that these technology-specific auctions are consistent with the EU framework – consistently with the Renewable Energy Directive. This coherence is critical to investor visibility and to the timely implementation of national auctions systems.

83. The Commission will assess the reasons given as justification and will, for instance, consider that a more limited eligibility does not unduly distort competition where:

- (a) a measure targets a specific sectoral or technology based target established in Union law, such as a renewable energy or energy efficiency scheme⁵⁴;
- (b) a measure aims specifically to support demonstration projects;
- (c) a measure aims to address not only decarbonisation but also air quality or other pollution;
- (d) a Member State provides evidence that eligible sectors or innovative technologies have the potential to make an important contribution to environmental protection and deep decarbonisation in the longer term, particularly in terms of cost effectiveness;
- (e) a measure is required to achieve diversification necessary to avoid exacerbating issues related to network stability⁵⁵; ***or to achieve complementarity of technologies necessary to guarantee a balanced energy system and ensures a better grid planning and utilisation;***
- (f) a more selective approach can be expected to lead to lower costs of achieving environmental protection (for example through reduced grid integration costs), and/or result in less distortion of competition.

54) Eligibility in such a case should only be limited in line with relevant definitions where available in the sectoral legislation. For example, renewable energy sources--specific schemes should be open to all technologies that meet the definition of 'renewable energy

sources' in Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 8) ***unless where the level of support that different technologies are expected to require deviates significantly (see footnote 59)***

Our ref. JRMAD

55) In such a case, the Member State should demonstrate that appropriate steps have first been taken through market and ancillary service design to expose investors to risks associated with curtailment and reward locational and technology choices that support grid stability. Where the Member State identifies a persistent local security of supply problem that cannot be solved in the medium term with improvements to market design or sufficient network reinforcement, a measure to address this concern should be designed and assessed under Section 4.8.

4.3 Exemptions to tendering - Individual award

It is welcomed that the guidelines increase the emphasis on competitive tenders. These have been instrumental in bringing down costs.

It could, however, in certain cases be considered whether **individual award should be allowed for a novel project, in Member States eligible for funding under the just transition mechanism**, where re-skilling of workers and ensuring a just transition is a top priority.

Since renewable energy supply chains have especially been established in Western Europe, it could therefore be considered, whether governments in just transition regions, should be allowed some leeway on tendering, to ensure that beneficiaries with local supply chains can benefit from rapid uptake of renewable energy.

92. Exceptions from the requirement to allocate aid and determine the aid level through a competitive bidding process can be justified where evidence, including that gathered in the public consultation, is provided that one of the following applies:

(a) there is insufficient potential supply to ensure competition; in that case, the Member State must demonstrate that it is not possible to increase competition by reducing the budget or expanding the eligibility of the scheme;

(b) beneficiaries are small projects, defined as follows:

(i) for electricity generation or storage projects – projects below the threshold in Article 5 of Regulation (EU) 2019/943;

(ii) for electricity consumption – projects with a maximum demand less than 400kW; (iii) for heat generation and gas production technologies – projects below 400kW installed capacity.

c) beneficiaries are novel projects in cohesion Member States, where the project has a significant positive impact on the environmental performance of that Member State and demonstrably contribute to its just transition.

4.4 Subsidy per tonne of CO2 avoided

Our ref. JRMAD

Ensuring the proportionality of state aid measures is and should be an important part of the state aid guidelines. The subsidy per tonne of CO2 equivalent seems to add important information to such an assessment.

However, numerous life-cycle assessments have shown the difficulties, to not say impossibility, of setting objective GHG emission footprints of different policy measures. This stems from the reliance on input assumptions, the chosen counterfactual (what would otherwise happen) and the scope (system boundary) of the assessment. Therefore **having too strong a focus on this measure could run counter to the concerns related to carbon lock-in highlighted in this consultation response**, and also highlighted elsewhere in the draft guidelines.

For instance, in the short run, switching from one fossil fuel to another fossil fuel (with lower GHG intensity) may perform well in a “subsidy per tonne of CO2-e avoided score.” However, it is likely to lock-in carbon-emitting energy infrastructure for decades to come – even until after 2050 – thus threatening the EU’s climate goals.

Similarly, **it is not feasible to make assumptions based on future decarbonisation trends**. For example, measuring the emissions reduction benefits of direct or indirect (e.g. hydrogen) electrification in industry based on today’s grid mix would result in significantly different results than when using projections of a decarbonised mix. This could tilt counterfactual analysis towards existing polluting technologies.

If this measure is applied, it would seem crucial to **ensure that all relevant emissions are accounted for** (upstream and downstream, including emissions arising in third countries), that technological development and decarbonisation pathways are taken into account, and that estimates are based on the latest research from independent bodies and frameworks.

To fully account for the carbon lock-in effects, it is relevant to ask for a description of when a project will become carbon neutral, and if that is not possible, when the economic activity causing the emissions will be phased out.

98. The subsidy per tonne of CO2 equivalent emissions *avoided including both upstream and downstream emissions including from third countries* must be estimated for each beneficiary or reference project, and the assumptions and methodology, *based on the latest research from independent bodies and frameworks*, for that calculation provided. To the extent possible, this should seek to identify the net emissions reduction from the activity, taking into account life-cycle emissions created or reduced. *Further, compliance with carbon neutrality should be addressed, and where this is not possible, an end date for the project should be described.*

4.5 Exposure to risks – insufficient transmission

Our ref. JRMAD

The principle of exposing beneficiaries of state aid to risks they can contribute to managing, is reasonable. However, it is crucially important to assess and determine what those risks are, and what they are not.

Notably, **renewable energy producers cannot reasonably be expected to have any meaningful influence on the availability of transmission infrastructure.** Both build-out and operation of transmission assets is based on decisions made by transmission system operators (TSOs) under rules developed by politicians and regulators.

Renewable energy producers can of course make their opinion heard and give input to practices on both planning, build-out and operation of transmission grids. However, when it comes to formalising rules as well as implementing them and operating the grid, renewable energy producers have no formal influence. It would therefore be **unreasonable to expose renewable energy producers to this particular risk.**

102. Beneficiaries of the measure should be exposed to risks that they can contribute to managing, for example risks associated with the curtailment of renewable energy linked to periods of excess production ~~or to insufficient transmission.~~

4.6 Electricity production from biomass in hours of RES curtailment

The European Commission's zero pollution action plan and general attention to air pollution is highly welcomed, as is the planned revision of the Industrial Emissions Directive (IED) in Q4 of 2021. We note that the draft state aid guidelines also seek to contribute to the ambitions to reduce air pollution, but we are doubtful whether the approach chosen is appropriate and whether it is in line with the functioning of the European electricity market.

It is stated that biomass cannot receive incentives to generate electricity or heat at times when this would mean that zero air pollution renewable energy sources would be curtailed.

It is unclear whether the proposal aims for TSOs to intervene in the market, when the described scenario unfolds. Who in the end takes the decision to scale down electricity and heat production from biomass plants? We would suggest deleting paragraph 107 in case it can not be clarified how it would be implemented in a manner that is not distorting the functioning of the electricity market.

~~107. To avoid undermining the objective of the measure or other Union environmental protection objectives, incentives must not be provided for the generation of energy that would displace less polluting forms of energy. For example, where cogeneration based on non renewable sources is supported, or where biomass is supported, they must not receive incentives to generate electricity or heat at times when this would mean zero air pollution renewable energy sources would be curtailed.~~

5. Aid for clean mobility

Our ref. JRMAD

5.1 Zero-emission vs. clean transport vehicles

Under the rules for awarding state aid for transport, it is stated that recharging and refueling infrastructure for "zero-emission and clean transport vehicles" are within scope. One would assume that the two are not the same, so **do clean transport vehicles emit greenhouse gases?** If so, it would seem more precise to label it as fossil fuel-driven transport and vehicles. And if that is the case, it should be out of scope. We therefore propose using the terminology of zero-emissions transport vehicles in the guidelines.

163. Alternatives to vehicles using the most polluting fossil fuels, (such as diesel or liquid petroleum gas (LPG) are already available on the market for use in the road transport, inland and sea and coastal water transport, and railway transport sectors. Therefore, aid for the acquisition or leasing of those vehicles, even new generation vehicles going beyond Union standards where applicable, is not considered to yield the same positive effects as aid for the acquisition or leasing of clean vehicles with ~~lower~~ **zero** direct (tailpipe/exhaust) CO₂ emissions. Firstly, the marginal improvement in terms of direct CO₂ and pollutant emission reduction is counterbalanced by the continuation of carbon emissions linked to the use of fossil fuels. Secondly, the granting of aid for acquiring those types of vehicles entails a significant risk of locking in fossil-based technologies and displacing investments into cleaner alternatives available on the market by shifting the demand away from non-fossil-based alternative fuel vehicles. This would also discourage the further development of the market for clean, future-proof non-fossil-based technologies. The Commission therefore considers that the negative effects on competition of aid for vehicles using the most polluting fossil fuels, such as diesel or LPG, are unlikely to be offset.

164. When assessing the distortion of competition of aid for the acquisition of ~~clean~~ **zero emissions** transport vehicles, the Commission will consider whether bringing into service new transport vehicles would result in or aggravate existing market failures, such as overcapacity in the sector concerned.

167. A comprehensive network of recharging and refuelling infrastructure is necessary to enable a widespread uptake of ~~clean~~ **zero-emission** transport vehicles, and to enable the shift towards zero emission mobility. In fact, a particularly critical barrier to the market uptake of ~~clean~~ **zero-emission** transport vehicles is the limited availability of the infrastructure to recharge or refuel them. Furthermore, the recharging and refuelling infrastructure is not spread evenly across Member States. At the same time, as long as the share of ~~clean~~ **zero-emission** transport vehicles in operation remains limited, the market alone may fail to deliver the recharging and refuelling infrastructure needed.

172. When assessing the necessity of aid for the deployment of recharging and refuelling infrastructure for zero-emission ~~and clean~~ transport vehicles that is open for access by third parties, including publicly accessible recharging or refuelling infrastructure, the market penetration of the ~~clean~~ **zero-emission** transport vehicles that such infrastructure would serve may be considered.

5.2 Gas-fuelled transport vehicles

It is applaudable that the draft guidelines consider that certain aid measures for fossil fuel transport are unlikely to be offset. While it can be argued that natural gas-fuelled (including CNG and LNG) transport vehicles may lead to some reduction in greenhouse gas emissions and other pollutants in the short run, it should be noted that **investment horizons and payback periods are generally very long for refuelling infrastructure**. Additionally, gas-fuelled (including CNG and LNG) transport vehicles are not zero-emissions technologies, making them unfit for use in a carbon-neutral Europe. Thus, even in case cleaner alternatives are not readily available, state-aid should support technologies that can be used beyond 2050.

161. The Commission considers that certain aid measures have negative effects on competition and trade that are unlikely to be offset. In particular, measures that incentivise new investments in natural gas-fuelled (including CNG and LNG) transport vehicles may lead to a reduction in greenhouse gas emissions and other pollutants in the short run but aggravate negative environmental externalities in the longer run, compared to alternative investments. In addition, aid for the acquisition of ~~clean~~ **gas-fuelled** transport vehicles may unduly distort competition where it displaces investments into cleaner alternatives that are already available on the market, or where it locks in certain technologies, hampering the wider development of a market for and the use of cleaner technologies. Therefore, in those cases, the Commission considers that the negative effects on competition of aid for the acquisition or leasing of natural gas-fuelled clean transport vehicles such as CNG and LNG vehicles are unlikely to be offset.

162. Aid for the acquisition or leasing of CNG and LNG vehicles may be regarded as not creating long-term lock-in effects and not displacing investments into cleaner technologies if, at the moment when the Member State notifies the Commission of its plans to implement the aid measure or when the aid measure is implemented, the Member State demonstrates that cleaner alternatives are not readily available on the market and are not expected to be available in the short term⁷¹. ~~The aid may also be regarded as not having lock-in effects or displacing investments into cleaner technologies where the Member State commits to~~ **Members States should** ensure that those vehicles would be operated using blending of biogas or renewable gaseous transport fuels of non-biological origin. (minimum 20%).

185. Aid for the deployment or upgrade of CNG and LNG refuelling infrastructure may be regarded as not creating long-term lock-in effects and not displacing investments into cleaner technologies if, at the moment when the Member State notifies the Commission of its plans to implement the aid measure or when the aid measure is implemented, the Member State demonstrates that cleaner alternatives are not readily available on the market and are not expected to be available in the short term⁷⁵. ~~Aid for the deployment or upgrade of CNG and LNG refuelling infrastructure may also be regarded as not creating long-term lock-in effects where the Member State commits to~~ **Member States should** ensure that the CNG and LNG is blended with biogas or renewable gaseous transport fuels of non-biological origin (minimum 20%), **and that the**

refuelling infrastructure is equipped to handle up to 100% of biogas or renewable gaseous transport fuels of non-biological origin.

Our ref. JRMAD

186. Alternatives to fossil-based fuels are already available on the market for use in the road transport, inland and sea and coastal water transport, and railway transport sectors. Therefore, aid for the deployment or upgrade of refuelling infrastructure supplying fossil-based fuels such as carbon-intensive hydrogen is not considered to yield the same positive effects as aid for the deployment of refuelling infrastructure supplying non- fossil-based fuels. Firstly, the improvement in terms of CO2 emission reductions achieved in the transport sector is likely counterbalanced by the continuation of carbon emissions linked to the production and use of fossil-based fuels. Secondly, in the absence of a commitment from the Member State that the refuelling infrastructure will supply renewable ~~or at least low carbon~~ **or carbon neutral** hydrogen, the granting of aid for deploying hydrogen refuelling infrastructure may entail a risk of locking in the production of carbon-intensive hydrogen, thereby displacing investments into cleaner alternatives by shifting demand away from non-fossil-based production processes. This would also discourage the further development of the market for clean, future-proof non-fossil-based technologies for zero emission mobility, and for the production of non-fossil fuels and energy. The Commission therefore considers it generally unlikely that the negative effects on competition of aid for the deployment or upgrade of refuelling infrastructure supplying fossil-based fuels such as carbon-intensive hydrogen will be offset.

6. Aid for the security of electricity supply

Our ref. JRMAD

We welcome the Commission's proposals on the section for the security of electricity supply. We believe that the goal of further integrating the European electricity market could be further strengthened, notably through paragraphs 293.

293. Member States may also rely on national resource adequacy assessments to demonstrate the necessity of security of supply measures, ***including the demonstration that any barriers for efficient cross-border trading including interconnector capacity allocation are removed***, to the extent permitted under Article 24 of Regulation (EU) 2019/943.

Reaching the EU's 2050 climate neutrality objective requires a massive increase of renewables-based electricity (RES-e). To achieve the high share of RES-e that the Commission's own scenarios (COM/2020/562) suggest are necessary, it is crucial to smoothly integrate rapidly growing intermittent sources. Thus, **Member States must ensure that security of supply measures enable the decarbonised grid mix of the future**. We therefore suggest stronger language in paragraph 304.

304. Member States are ~~encouraged~~ ***obliged*** to introduce additional criteria or features in their security of supply measures to promote the participation of greener technologies (or reduce the participation of polluting technologies) necessary to support the delivery of the Union's environmental protection objectives. Such additional criteria or features must be objective, transparent and non-discriminatory in relation to clearly identified environmental protection objectives, and must not result in the overcompensation of beneficiaries.

Fossil energy with CCS/CCU is at best a measure to reduce emissions. Capture-rates are well below 100% while most emissions from production, exploration, and transportation (e.g. methane leakage) cannot be captured. **Energy generation based on natural gas that is equipped with CCS/CCU should therefore be seen as a less suitable option for explaining the avoidance of a lock-in effect.**

326. Measures that incentivise new investments in energy generation based on natural gas may support security of electricity supply but aggravate negative environmental externalities in the longer term, compared to alternative investments in non-emitting technologies. To enable the Commission to verify that the negative effects of such measures can be offset by positive effects in the balancing test, Member States should explain how they will ensure that such investment contributes to achieving the Union's 2030 climate target and 2050 climate neutrality target. In particular, the Member States ***and project developers*** should explain how a lock-in of this gas-fired energy generation will be avoided. For example, this may include binding commitments by the beneficiary to ~~implement decarbonisation technologies such as CCS/CCU or~~ substitute natural gas by renewable or low carbon ***neutral*** gas, or to close the plant on a timeline consistent with the Union's climate targets, ***or in case this is not feasible, to implement decarbonisation technologies such as CCS/CCU.***

7. Aid in the form of reductions from electricity levies for energy-intensive users

Our ref. JRMAD

7.1 EIUs with high ambitions to decarbonise

We support the main objective of this section, namely to protect European industry and avoid carbon leakage. It is understandable that trade exposure and electro-intensity are the main criteria for assessing levy exemption. **However, the current draft might not provide sufficient incentive for industry to decarbonise,** for example through renewables-based electrification.

In line with the EU decarbonisation objectives, EIUs should be encouraged through State aid to invest in energy efficiency and the decarbonisation of production processes, for example via renewables-based electrification¹². We welcome requirements for beneficiaries to conduct an energy audit (paragraph 364) and take at least one step towards decarbonisation (paragraph 365).

Nevertheless, we believe that the **lack of differentiation between ambitious and less ambitious individual EIU companies could distort competition**. EIUs with high ambitions to electrify might be placed at a competitive disadvantage.

For example, a chemical company that is considering replacing fossil fuel equipment with heat pumps for low-temperature industrial processes might need reductions from electricity levies to make the business case work. However, given that the entire sector qualifies as an EIU, a competing chemical company that does not show such ambition to electrify could receive the same levy exemptions.

We, therefore, suggest that the **allocation of aid to EIUs should also consider ambitions for decarbonisation**, which could be demonstrated with concrete investment plans.

357: The aid under this Section should be limited to sectors that are at a significant competitive disadvantage and risk of relocation outside the Union because of the eligible levies. The risk of relocation depends on the electro-intensity of the sector in question and its exposure to international trade. Accordingly, aid can only be granted if the undertaking belongs to a sector facing a trade intensity of at least 20 % at Union level and an electro-intensity of at least 10 % at Union level. In addition, the Commission considers that a similar risk exists in sectors that face an electro-intensity of at least 7% and face a trade intensity of at least 80%. The sectors meeting these eligibility criteria are listed in Annex I. ***EIUs that are both deemed eligible and clearly demonstrate ambitions to decarbonize through concrete investment plans may receive additional levy exemptions. In case the beneficiary fails to implement its investment plans, it would be subject to paying back exemptions.*** ^{115a}

(new footnote)

New footnote 115a) ***The concrete investment plans for decarbonisation can be measured by an EIU's investment as a certain percentage of gross value added in the last 5-10 years. In addition to concrete investment plans, the maturity of technology should be considered.***

¹² The EU's Long Term Climate Strategy (2018) highlighted electrification as the single most important driver of decarbonization, and was further highlighted in the European Commission's Climate Target Plan (2020)

356. The Commission considers that Member States may grant reductions to levies under this Section only where the overall cumulative level of these levies (before any reductions) is at least [X] EUR/MWh. ***In case an EIU qualifies both through trade exposure and electro intensity (i.e. its listed in Annex 1 industries) as well as through ambitions to decarbonise, the overall cumulative level of these levies (before any reductions) can be at least [Y] EUR/MWh.***

Y should be a lower number than X.

Our ref. JRMAD

7.2 List of eligible sectors - Annex 1

We have noted that electrolysis does not appear as an activity that can be supported via reduced electricity levies. However, many of the activities covered do include hydrogen consumption. This **risks fragmenting the electrolysis market**, as captive production in sectors listed in Annex 1 would be able to benefit from reduced levies, whereas standalone electrolysis would not. It is **therefore crucial to include standalone electrolysis in the list**.

A reference might come from the proposed amendment of the EU ETS (COM/2021/551), which aims to include the "production of hydrogen (H₂) and synthesis gas with a production capacity exceeding 25 tonnes per day" in its Annex 1, making hydrogen production eligible for free allowances. We suggest DG COMP to use a similar approach for the CEEAG. However, it is crucial to reduce the limit of tonnes per day to avoid disrupting the emerging hydrogen industry in its infant (i.e. small projects) stage. Moreover, the EU Hydrogen Strategy states that "the priority for the EU is to develop renewable hydrogen", so the **eligible sector should be the production of renewable hydrogen**.