

## **Draft Taxonomy Delegated Acts**

### **EUTurbines comments**

16 December 2020

EUTurbines welcomes the approach of the EU Taxonomy but believes that the suggested approach of the draft delegated acts for electricity generation and cogeneration with gaseous fuels hampers the creation of a truly integrated and decarbonised energy system, in line with the energy and climate policy and ambitions of the EU. It does not sufficiently take into account a decarbonisation path that leads to immediate cuts in GHG emissions in the short-term.

The comments submitted hereby are complemented by specific amendment proposals annexed at the end of the document.

#### **1. Electricity generation and cogeneration with climate-neutral and renewable gas must be treated like other renewable energy**

Electricity generation and cogeneration with gaseous fuels are considered transitional activities only, ignoring the fact that gaseous fuels are not limited to natural gas and also include climate-neutral and renewable gases. This classification, thus, also ignores the ability of gas power generation technologies to operate with different types of gases, independently of their fossil or renewable origin.

The value of using gaseous fuels in electricity generation and cogeneration for the energy system is widely recognised. It provides the essential flexible dispatchable power and heat/cold generation capacity needed to ensure that supply and demand are balanced at all times in an electricity system dominated by wind and PV, both variable sources – from short imbalance periods throughout the day to long-term and seasonal gaps, where batteries are not suitable.

At the same time, cogeneration plants support the decarbonisation of heat supply. In cases where heat and electricity are simultaneously needed, cogeneration with gaseous fuels is by far the most efficient technological solution – helping not only to achieve the EU energy efficiency targets but also contributing to GHG emission reduction thanks to their efficient use of resources.

Despite their essential contribution to an efficient and reliable balanced energy system, electricity generation and cogeneration with gaseous fuels are today regarded as detrimental to the climate mitigation efforts due to their predominant use of natural gas as main source. However, with the progressive introduction of climate-neutral or renewable gases, like clean hydrogen or biomethane, they will continue to provide their benefits to the system in a sustainable manner.

#### **EUTurbines**

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[www.euturbines.eu](http://www.euturbines.eu)

**European Association of Gas and  
Steam Turbine Manufacturers**  
President  
Prof. Dr. Thomas Thiemann  
Secretary General  
Ralf Wezel

Lyoner Str. 18  
60528 Frankfurt/Main  
Germany  
Phone +49 69 66 03-19 36  
Fax +49 69 66 03-29 36  
[patricia.seizer@euturbines.eu](mailto:patricia.seizer@euturbines.eu)

Boulevard A. Reyers 80  
1030 Brussels  
Belgium  
Phone +32 2 706-82 12  
Fax +32 2 706-82 10  
[magdalena.kurz@euturbines.eu](mailto:magdalena.kurz@euturbines.eu)

**In annex I of the draft delegated act points 4.7 and 4.19, the use of all gaseous fuels – may they be renewable or may they be fossil – is classified as “transitional activity”. The proposal discriminates electricity generation and cogeneration with clean gaseous fuels against other types of clean electricity and cogeneration.**

**Proposed change:**

Both activities – 4.7 and 4.19 – must clearly state that operating an electricity-only plant or a cogeneration plant is fully sustainable according to article 10(1) of Regulation (EU) 2020/852 when using climate-neutral or renewable gases – applying the proposed threshold of 100g CO<sub>2</sub>e/kWh.

## **2. Electricity generation and cogeneration with gaseous fuels as transitional activity**

Regulation (EU) 2020/852 in Art 10(2) foresees “transitional activities”. These need to substantially contribute to climate change mitigation, represent best available technology and exclude a carbon lock-in.

A swift decarbonisation should not be delayed, and we should already today utilise existing technologies to the best of their capability. Electricity generation and cogeneration with natural gas can immediately replace more polluting coal plants and cut GHG emissions in half. As gas power plants can cost-effectively switch to climate-neutral and gases whenever these become available in sufficient quantities, they do not lead to a carbon lock-in or stranded assets – but their transition from natural gas to climate-neutral and renewable gases needs to be adequately reflected in the taxonomy criteria.

The 100g CO<sub>2</sub>e/kWh threshold suggested in annex I of the draft delegated acts cannot be met even by the most modern and efficient installations when operating with natural gas. Abatement technologies like CCU/S require high capital expenditure upfront thus limiting the economic feasibility of these plants, especially in a regime with lower operating hours. In consequence, the taxonomy effectively excludes electricity-only and cogeneration plants using natural gas, limiting its contribution to decarbonisation and thus hampering the transition itself.

**Recognising that gas power plants contribute to climate change mitigation while, at the same time, setting incentives for a switch to clean gaseous fuels whenever this is possible, can best be done by defining an emission target connected to an average over the plant’s lifetime.**

**Proposed change:**

A realistic threshold of 250g CO<sub>2</sub>e/kWh on average over the lifetime of the plant (in the case of cogeneration, applying the heat bonus method) provides plant operators with an ambitious target for the transition, requiring them to switch as fast as possible from natural gas to clean gases.

This approach is fully in line with the approach adopted last year by the European Investment Bank in its energy lending policy.

## **3. Electricity generation and cogeneration with gaseous fuels need realistic “do not significant harm” (DNSH) criteria**

Annex II of the draft delegated act lists thresholds for DNSH for both categories 4.7 and 4.19. Annex II explicitly refers only to climate adaptation activities. In the public discussion, however,

they are regarded as general thresholds that define whether an economic activity does significant harm to the climate ambitions. This has a potential impact far beyond the direct classification of sustainable investments: given the attention that the EU Taxonomy has received since its proposal, it is likely that it will be used for purposes other than those initially intended. These might include its utilisation as general eligibility criteria for EU funding or becoming a benchmark for lending or funding criteria of development banks or Export Credit Agencies (ECAs). Accordingly, the setting of ambitious, yet realistic thresholds, is essential.

**The suggested threshold of 270g CO<sub>2</sub>e/kWh does not reflect the use of best available technologies of gas electricity-only plants and cogeneration plants nor the growing availability of climate-neutral and renewable gases today. GHG emissions depend on the CO<sub>2</sub> content of the gaseous fuel and the efficiency of the plant. The energy efficiency of best available technologies should be used as basis verify that gas power plants do no significant harm in climate adaptation activities. In the same way, any thresholds considered should refer to an average over the plant's lifetime, to mirror the progressive switch of gas power plants to the use of climate-neutral and renewable gases.**

**Proposed change:**

The threshold of 270g CO<sub>2</sub>e/kWh for electricity generation should be replaced by a reference to the energy efficiency levels associated with the best available techniques (BAT-AEELs), as described in the Commission implementing decision (EU) 2017/1442 establishing best available techniques (BAT) conclusions for large combustion plants.

In addition, the threshold of 270g CO<sub>2</sub>e/kWh for cogeneration should refer to kWh of electricity generated (kWh<sub>e</sub>) on average over the lifetime of the plant (applying the heat bonus) – following the approach of the European Investment Bank.

#### **4. Electricity generation and cogeneration with biogas are sustainable activities**

Points 4.8 and 4.20 in Annex I define, both, electricity generation and cogeneration with biofuels as “transitional activities”.

**The proposal discriminates generation with biofuels against other solutions for the production of electricity and cogeneration with renewables.**

**Proposed change:**

Following a technology-neutral approach, the use of biofuels that comply with REDII must be equally treated to other REDII compliant solutions and be regarded as sustainable in accordance with Art 10(1) of Regulation (EU) 2020/852.

#### **5. The manufacturing of multi-purpose (renewable) energy technologies must not be penalised**

The delegated act does not provide a definition of renewable energy technologies in category 3.1. of annex I.

The technologies used to produce the electricity and heat or cold are not necessarily single-purpose technologies. This is the case of gas and steam turbines, which can be used in a variety of applications, both renewable and non-renewable, and where this essential component is the same from a technology point of view.

**The Taxonomy must not penalise technologies that have different uses, when these are used in renewable applications.**

**Proposed change:**

It should be clearly specified that technologies and core components used for the production of electricity and heat from renewable energy sources as defined in Art 2(1) of Directive (EU) 2018/2001 are included in the scope.

**6. Manufacturing of other low carbon technologies needs to also include technologies for transitional activities**

The delegated act covers in point 3.4 to the manufacturing of low carbon technologies that result in substantial GHG emission reductions in other sectors of the economy.

**The Taxonomy needs to recognise the contribution of technologies used in transitional activities – when these can prove to be future-proof – and, accordingly, consider their manufacture an enabling activity in accordance with Article 10(1), point (i).**

For example, the manufacture of gas turbines should be an enabling activity when the technology is capable of utilising climate-neutral and renewable gases in the future.

**Proposed change:**

It should be clarified, that point 3.4 also covers the manufacturing of technologies used in transitional following Article 10(2) of Regulation (EU) 2020/852 and as identified in annex I of the delegated acts, provided they are future-proof.

## ANNEX I

### **Technical screening criteria for determining under which conditions an economic activity qualifies as contributing substantially to climate change mitigation and whether an economic activity causes significant harm to any of the other environmental objectives**

#### **4. ENERGY**

##### **4.7. Electricity generation from gaseous and liquid fuels**

###### *Description of the activity*

Construction or operation of electricity generation facilities that produce electricity using gaseous and liquid fuels (not exclusive to natural gas, oil or other refined products).

The activity is classified under NACE codes D35.11 and F42.22 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

~~The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this Section.~~

###### *Technical screening criteria*

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Substantial contribution to climate change mitigation

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The activity complies with either of the following criteria:

1. Life-cycle GHG emissions from the generation of electricity using gaseous and liquid fuels are lower than 100gCO<sub>2</sub>e/kWh.

Life-cycle GHG emissions are calculated based on project-specific data, where available, using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.

Quantified life-cycle GHG emissions are verified by an independent third party.

2. Where facilities incorporate any form of abatement (including carbon capture or use of decarbonised fuels) that abatement activity complies with the criteria set out in the relevant section of this Annex, where applicable. Where facilities incorporate any form of abatement (including carbon capture or use of decarbonised fuels) that abatement activity complies with the criteria set out in the relevant Section of this Annex, where applicable. Where the CO<sub>2</sub> emitted from the electricity generation is captured as a way to meet the emissions limit set out in point 1 of this Section, the CO<sub>2</sub> is transported and stored underground in a way that meets the technical screening criteria for transport of CO<sub>2</sub> and storage of CO<sub>2</sub> set out in Sections 5.11 and 5.12, respectively of this Annex.

3. The activity meets either of the following criteria:

(a) at construction, measurement equipment for monitoring of physical emissions, such as methane leakage is installed or a leak detection and repair program is introduced;

(b) at operation, physical measurement of emissions are reported and leak is eliminated.

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**4. The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where life-cycle GHG emissions from the generation of electricity using gaseous and liquid fuels averaged over the life-time of the asset are lower than 250gCO<sub>2</sub>e/kWhe.**

**To avoid carbon lock-in, direct emissions need to reach the emissions threshold outlined in 4.7 (1) by 2050.**

**New power plants need to be**

- a) **hydrogen- ready based on European technical specifications or norms, as soon as they are available, or**
- b) **ready for renewable, low carbon and/or decarbonised gases.**

**Operators need to have a credible plan about how to reach the emissions threshold in (4). The implementation of such plan being verified at regular intervals by an independent third party.**

**Power plants reach the efficiency levels of best available technologies.**

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[...]

#### **4.19 Cogeneration of heat/cool and power from gaseous and liquid fuels**

*Description of the activity*

Construction and operation of combined heat/cool and power generation facilities using gaseous and liquid fuels (not exclusive to natural gas, oil or other refined products).

The activity is classified under NACE codes D35.11 and D35.30 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

~~The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this Section.~~

*Technical screening criteria*

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Substantial contribution to climate change mitigation

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1. The life-cycle GHG emissions from the co-generation of heat/cool and power<sup>338</sup> from gaseous and liquid fuels<sup>339</sup> are lower than 100gCO<sub>2</sub>e per 1 kWh of energy input to the co- generation.

Life-cycle GHG emissions are calculated based on project-specific data, where available, using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.

Quantified life-cycle GHG emissions are verified by an independent third party.

2 Where facilities incorporate any form of abatement (including carbon capture or use of decarbonised fuels) that abatement activity complies with the relevant Sections of this Annex, where applicable.

Where the CO<sub>2</sub> emitted from the electricity generation is captured as a way to meet the emissions limit set out in point 1 of this Section, the CO<sub>2</sub> is transported and stored underground in a way that meets the technical screening criteria for transport of CO<sub>2</sub> and storage of CO<sub>2</sub> set out in Sections 5.11 and 5.12, respectively of this Annex.

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3. The activity meets either of the following criteria:

- (a) at construction, measurement equipment for monitoring of physical emissions, such as methane leakage is installed or a leak detection and repair program is introduced;
- (b) at operation, physical measurement of emissions are reported and leak is eliminated.

**4. The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where life-cycle GHG emissions from the cogeneration of heat/cool and power using gaseous and liquid fuels averaged over the life-time of the asset are lower than 250gCO<sub>2</sub>e/kWhe. GHG emissions are allocated between heat/cold and power using the heat bonus approach<sup>[1]</sup>.**

**To avoid carbon lock-in, direct emissions need to reach the emissions threshold outlined in 4.19 (1) by 2050.**

**New power plants need to be**

- a) **hydrogen- ready based on European technical specifications or norms, as soon as they are available, or**
- b) **ready for renewable, low carbon and/or decarbonised gases.**

**Operators need to have a credible plan about how to reach the emissions threshold in (4). The implementation of such plan being verified at regular intervals by an independent third party.**

**Cogeneration plants reach the efficiency levels of best available technologies.**

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<sup>[1]</sup> Following the EIB energy lending criteria for high efficiency co/tri-generation:  
([https://www.eib.org/attachments/strategies/eib\\_energy\\_lending\\_policy\\_en.pdf](https://www.eib.org/attachments/strategies/eib_energy_lending_policy_en.pdf) )

### 3. MANUFACTURING

#### 3.1. Manufacture of renewable energy technologies

##### *Description of the activity*

Manufacture of renewable energy technologies.

The activity is classified under NACE codes C.25, C.27, C.28 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

The activity is an enabling activity in accordance with Article 10(1), point (i), of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this Section.

##### *Technical screening criteria*

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Substantial contribution to climate change mitigation

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The economic activity manufactures **technologies and core components for the production of electricity and heat from renewable energy technologies sources as outlined in Art 2(1) of Directive (EU) 2018/2001.**

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[...]

#### 3.5. Manufacture of other low carbon technologies

##### *Description of the activity*

Manufacture of low carbon technologies that result in substantial GHG emission reductions in other sectors of the economy **or that are used in transitional activities as referred to in Article 10(2) of Regulation (EU) 2020/852.**

The activity is classified under NACE codes from C10 to C33, in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

The activity is an enabling activity in accordance with Article 10(1), point (i), of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this Section.

##### *Technical screening criteria*

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Substantial contribution to climate change mitigation

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**The economic activity manufactures technologies that are used for transitional activities following Article 10(2) of Regulation (EU) 2020/852, which show to be future-proof.**

The economic activity manufactures low carbon technologies (and their key components) that demonstrate substantial life-cycle GHG emission savings compared to the best performing alternative technology/product/solution available on the market.

Life-cycle GHG emission savings are calculated using Commission Recommendation 2013/179/EU<sup>127</sup> or, alternatively, ISO 14067:2018 or ISO 14064-1:2018.

Quantified life-cycle GHG emission savings are verified by an independent third party.

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## ANNEX II

**Technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives**

### **4. ENERGY**

#### **4.7. Electricity generation from gaseous and liquid fuels**

##### *Description of the activity*

Construction or operation of electricity generation facilities that produce electricity using gaseous and liquid fuels (not exclusive to natural gas, oil or other refined products).

The activity is classified under NACE code D35.11 and F42.22 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

##### *Technical screening criteria*

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Substantial contribution to climate change adaptation

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[...]

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Do no significant harm ('DNSH')

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(1) Climate change mitigation	<p><b><u>Power plants reach GHG emission levels connected to the energy efficiency levels associated with the best available techniques (BAT-AEELs) set out in IMPLEMENTING DECISION (EU) 2017/1442 for large combustion plants.</u></b></p> <p><b><u>For gas combustion &lt;50MW, efficiency ranges for gas combustion ≥ 50MW should apply until the efficiency standards for medium combustion plants have been defined as per Article 12 of DIRECTIVE (EU) 2015/2193.</u></b></p>
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[...]

#### **4.19. Cogeneration of heat/cool and power from gaseous and liquid fuels**

##### *Description of the activity*

Construction and operation of combined heat/cool and power generation facilities using gaseous and liquid fuels (not exclusive to natural gas, oil and other refined products).

The activity is classified under NACE codes D35.11 and D35.30 in accordance with the statistical

classification of economic activities established by Regulation (EC) No 1893/2006.

*Technical screening criteria*

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Substantial contribution to climate change adaptation

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[...]

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Do no significant harm ('DNSH')

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(1) Climate change mitigation	<b><u>Cogeneration plants reach the efficiency levels of best available technologies having The direct GHG emissions of the activity that are lower than 270gCO2e/kWh averaged over the life-time of the asset. GHG emissions are allocated between heat/cold and power using the heat bonus approach<sup>[1]</sup>.</u></b>
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<sup>[1]</sup> Following the EIB energy lending criteria for high efficiency co/tri-generation: ([https://www.eib.org/attachments/strategies/eib\\_energy\\_lending\\_policy\\_en.pdf](https://www.eib.org/attachments/strategies/eib_energy_lending_policy_en.pdf) )