TO : Executive Vice-President Valdis Dombrovskis

Cc : Executive Vice-President FransTimmermans
Commissioner Virginijus Sinkevičius
Commissioner Mairead McGuinness
Commissioner Kadri Simson

Brussels, 3 February 2021

Subject: Request for a meeting on EU Taxonomy and its Delegated Regulation

Dear Executive Vice-President Valdis Dombrovskis,

Sustainable finance is a key building block of a European decarbonisation roadmap. **Eurelectric is fully committed to the EU's accelerated ambition for 2030 and 2050 as well as EU's sustainability ambitions.** European electricity companies are dedicated to the achievement of a carbon-neutral power sector, in line with the objectives of the EU Taxonomy regulation as well as protecting biodiversity.

Eurelectric welcomes your leadership and the work carried out by the European Commission in developing and proposing the technical screening criteria on climate change adaptation and mitigation and the improvements compared to the final European Commission Technical Expert Group (TEG) report. However we believe key issues remain in the draft delegated acts which threaten to hamper our ability to cost-efficiently deliver on the EU ambitions.

I would like **to extend an offer for a meeting** to exchange on how coherent and effective legislation will help the EU reach its climate and environmental goals.

Three key elements to this end are:

- **Setting the same standard of reference to existing EU law for all renewable electricity generation technologies.** The delegated acts should strictly adhere to the provisions of the level 1 Taxonomy regulation, and align completely with current EU legislation to avoid different standards for different technologies. This should include complete alignment between the "Do no significant harm" (DNSH) criteria and existing EU regulation on environmental protection, in particular when it comes to renewables, such as hydropower. The principle of referring to existing EU law is consistent for other technologies except for hydropower. This may result in increasing legal and investment uncertainty risking to lose flexible clean electricity needed for keeping the high level of security of supply, increasing other renewable electricity technologies and ensuring a safe energy transition.

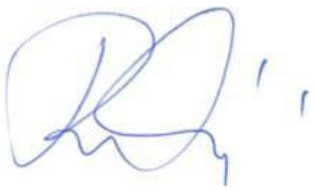
- **Creating a dedicated section in the Annexes for "transitional" and "enabling activities".** This would allow for a regular stock-taking exercise and ensure a level-playing field in the context of best available technologies being used as a benchmark. These dedicated sections should outline a set of criteria that include both quantitative and qualitative elements that allow enabling and transitional activities, upon compliance with these criteria, to be classified as environmentally sustainable activities.

- **Ensuring proportionate DNSH test levels for climate adaptation requirements on climate change mitigation.** Eurelectric supports the need for a comprehensive climate adaptation test for risk mitigation activities, but the current level of requirements in the delegated acts is unproportioned both in terms of details and scope. While investors should be given the tools to identify sustainable activities, the costs related to compliance of these DNSH criteria should not be unreasonable. Indeed, these should not lead to a negative impact for green companies/activities as well as for the competitiveness of European 'real economy'.

Eurelectric provided additional details and further comments in our responses to the public consultation on the delegated regulation, which I am attaching to this letter.

We remain at your disposal to discuss the content of this letter and assist in the development of the EU taxonomy.

Yours sincerely,



Kristian Ruby
Secretary General
Eurelectric

Encl : 1

Copy: Executive Vice-President Timmermans
Commissioner Sinkevičius
Commissioner McGuinness
Commissioner Simson

EC Draft Taxonomy Delegated Regulation on climate change mitigation & adaptation

Eurelectric feedback

December 2020

Eurelectric represents the interests of the electricity industry in Europe. Our work covers all major issues affecting our sector. Our members represent the electricity industry in over 30 European countries.

We cover the entire industry from electricity generation and markets to distribution networks and customer issues. We also have affiliates active on several other continents and business associates from a wide variety of sectors with a direct interest in the electricity industry.

We stand for

The vision of the European power sector is to enable and sustain:
- A vibrant competitive European economy, reliably powered by clean, carbon-neutral energy
- A smart, energy efficient and truly sustainable society for all citizens of Europe

We are committed to lead a cost-effective energy transition by:

investing in clean power generation and transition-enabling solutions, to reduce emissions and actively pursue efforts to become carbon-neutral well before mid-century, taking into account different starting points and commercial availability of key transition technologies;

transforming the energy system to make it more responsive, resilient and efficient. This includes increased use of renewable energy, digitalisation, demand side response and reinforcement of grids so they can function as platforms and enablers for customers, cities and communities;

accelerating the energy transition in other economic sectors by offering competitive electricity as a transformation tool for transport, heating and industry;

embedding sustainability in all parts of our value chain and take measures to support the transformation of existing assets towards a zero carbon society;

innovating to discover the cutting-edge business models and develop the breakthrough technologies that are indispensable to allow our industry to lead this transition.

Dépôt légal: D/2020/12.105/72

Markets & Investments Committee
Electrification & Sustainability Committee
Generation & Environment Committee

Contacts:
Stella BENFATTO, Advisor - Wholesale Markets – sbenfatto@eurelectric.org
Eivind STEEN, Senior Advisor Hydropower – esteen@eurelectric.org

INTRODUCTION

Eurelectric supports a target of at least 55% greenhouse gas (GHG) emissions reduction by 2030. The electricity industry is committed to deliver a carbon-neutral power supply for Europe well before 2050 and is transforming the energy system to make it more and more responsive, resilient and efficient. Carbon-free direct and indirect electrification as well as the resulting energy efficiency gains will make the key contributions to the decarbonisation of transport, buildings and industry.

Today, the business strategies of many electricity companies are dedicated to the achievement of a carbon-neutral generation, transmission, distribution and supply of power, in line with the objectives of the EU Taxonomy regulation. Creating such a common language for investors, assets' managers, corporates and public authorities is crucial to support the transition towards a decarbonised economy. However, the alignment between the EU Taxonomy and companies' priorities can still be improved while the legislation still need to be implemented and business models can still be refined to improve minor non-strategic issues.

In this context, we welcome the opportunity to provide our feedback on the proposed draft delegated act. While some improvements compared to the final Technical Expert Group on Sustainable Finance (TEG)-report have been made, we believe key issues remain to be addressed in the draft delegated act.

We are worried that the draft delegated act is deviating from two important points. First, **it should strictly adhere to the provisions of the level 1 Taxonomy regulation**. Second the delegated act **must align with current EU legislation to avoid unnecessary double standards**.

GENERAL COMMENTS

Before providing comprehensive comments on specific technologies, Eurelectric would like to outline some general feedback.

- **Sustainable finance is a key building block of a European decarbonisation roadmap.** To be an integrated part of this strategy, **consistency with the EU acquis** (e.g. Clean Energy Package when it comes to the energy sector) **and the EU long-term decarbonisation objectives should be ensured.** In this context, the Taxonomy delegated act and the therein proposed technical screening criteria should respect relevant EU acquis, which was developed following in-depth impact assessment and consultation with all relevant stakeholders, and according to well-established and transparent legislative processes. The delegated act should not set forth new, revised methodologies and metrics, nor more stringent thresholds and sustainability requirements than those already applicable under existing, sector-specific EU regulation (such as the Energy Efficiency Directive, the Renewable Energy Directive, the Clean Vehicles Directive, etc.). Many of these regulations will be revised in the course of next year in light of the EU Green Deal ambitions, and the Taxonomy

delegated act should not anticipate nor forego the outcome of these revisions but refer to the sustainability criteria and objectives therein defined. If not, the delegated act would create a huge legal confusion, risk disrupting the proper market functioning due to changes to the applicable regulatory framework, impact investors' trust and distort competition in the EU internal market. Further, it increases the risk of 'wrong data', i.e. data extracted or reported based on the incorrect legislation.

- **A dedicated section for "transitional" and "enabling activities" is required.** A dedicated section in the Annexes to the delegated act for "transitional activities" as defined in article 10.2 of Regulation (EU) 2020/852 and for "enabling activities" as referred to article 16 of the Regulation should be provided for, which will be subject to review every 3 years as per the requirements of article 19 of the Taxonomy regulation. This would allow for a regular stock-taking exercise and would ensure a level-playing field on the approach related to best available technologies being used as a benchmark. These dedicated sections should outline a set of criteria that include both quantitative and qualitative elements that allow enabling and transitional activities, upon compliance with these criteria, to be classified as environmentally sustainable activities.

- **The energy system is shifting from a centralised and silos-minded set-up to more circular and integrated value chains dominated by renewable energy sources. In this context, activities and technologies supporting this movement should be properly recognised, with dedicated, realistic and progressive thresholds**, while remaining distinct from thresholds defining the "fully" sustainable activities. In order to avoid any risk of lock-in effects due to this "transitional" role, additional criteria should be developed, ensuring the compatibility of those assets in the trajectory to net zero greenhouse gas emissions by 2050. Once the technologies are entirely using renewable or low carbon energy sources and meet the relevant criteria, activities that were considered as transitional should be fully recognized as substantially contributing to climate change mitigation and adaptation.

- **Retail sustainable energy services should be included in the Taxonomy**: Retail activity (sustainable energy services) is still missing from the Taxonomy list. After the decision taken by the EU and its Member States on the liberalisation of the European electricity market in the 1990's, the electricity value chain was restructured in four main segments (generation, transmission, distribution and retail).
  Although legally separated to foster the system's competitiveness, each segment is indispensable to guarantee that the energy needs of Europeans are properly satisfied on an ongoing basis, so that without the concurrence of one of these four segments the electricity value chain could not be properly represented.
  We urge the European Commission to recognise some energy services as an economic activity qualified as contributing significantly to climate change mitigation. Power utilities play an important role in providing services such as energy efficiency which are key to the energy transition. Those activities should clearly be identified and recognised under this Taxonomy. Clear rules on how energy service providers could

apply the Taxonomy in the **Statistical classification of economic activities in the European Community (**NACE) sectors for energy efficient products would be welcome, as well as a guiding process for issuers who want to finance energy efficiency projects to reduce GHG emissions and to be eligible for green financing. Therefore, we suggest that the EU Taxonomy delegated act should also consider the retail power activity among those with eligibility criteria by requesting retailers to apply either:

- the criteria for the electricity generation activities, for which eligibility could be analysed based on the current Origin Certificate mechanisms regulated by National Authorities or based on the energy mix of the producers to which retailers acquire the electricity in the wholesale market.
- the criteria for the electricity distribution activities - where applicable and when retailers sell electricity to customers - so that the eligibility condition is the same.

- **Further alignment between the Do no significant harm (DNSH) criteria and the European regulation on environmental protection, in particular when it comes to hydropower**: We welcome the improved alignment between DNSH criteria and the European regulation on environmental protection, as it reduces the uncertainty on the level of compliance of the DNSH criteria published in these delegated act. However, significant discrepancies still exist. For some content where this alignment is still not explicit, we recommend better clarification on what is the level of compliance expected under the European Regulation on Environmental Protection and what are additional requirements. The same principles for assessment must apply for all renewable electricity generation technologies, whereas criteria should be set in accordance with existing EU law. We particularly identified this lack of clarity in the Hydropower Generation DNSH- Sustainable use and protection of water and marine resources, where there is no mention of the Water Framework Directive. Finally, we would also raise the fact that the DNSH criteria stemming from the adaptation objective, as it is stated in Appendix E of Annex 1, will substantially and disproportionally increase the compliance work to be carried out by companies, which will result in an unjustified administrative burden for the industry.

- **DNSH test-levels for climate adaptation requirements under Annex 1 Appendix E on climate change mitigation are unproportioned:** As a basic obligation, climate risk mitigation activities also need to be 'tested' for negative impact from "the physical climate risks that are material to that activity". Thus, acknowledged risk mitigation activities shall be assessed in this regard and a plan to implement adaptation solutions to reduce material physical climate risks to the activity shall be developed. However, such a climate change adaptation risk assessment criteria and compliance needs are disproportionally wide-ranging as they are build-in via DNSH criteria listed in Annex E to Annex 1. While Eurelectric understands the need for a comprehensive climate adaptation test for risk mitigation activities, the current level of requirements in the delegated act is unproportioned both in terms of details and scope. Investors only need this information on a general level.

Also having in mind that criteria for the four remaining objectives will be issued next year, such a comprehensive test is unreasonable. Hence, there is currently close to no difference between the requirements for "substantial contribution" to climate change adaptation (Annex 2, e.g. "Electricity generation from wind power", p. 97) and "DNSH" to climate change adaptation under climate change mitigation (Annex 1, pp. 231-232). We highly advise that the DNSH requirements to climate change adaptation for risk mitigation activities are made significantly lighter than for activities having a substantial contribution to risk adaptation. Thus, the costs related to compliance of these DNSH criteria should have a reasonable level in order not to lead to a negative impact for green companies/activities as well as for the competitiveness of European 'real economy'.

On this background, it would be helpful if companies could understand the level of commitment expected for the disclosure proposed to climate change adaptation (physical risks). The information requested (weather variability, climate date projections and future scenarios) may not be available at a national or regional scale, outside the EU borders, and the level of uncertainty may be so important that any cost of adaptation may not have any economic rationale.

- **A phase-in approach is needed also for *existing* and *new* activities**: It is stated that for activities *upgrading* or *altering existing* assets or processes, the adaptation solutions identified need to be implemented within five years from the start of the activity. Similar phase-in approach should apply for *existing* (already running) activities when the delegated act comes into application as well as for *new* activities established after this delegated act comes into application.

SPECIFIC COMMENTS

1. Hydropower

We welcome that hydropower is considered as a sustainable renewable technology that contributes to the mitigation and adaption. However, **we are concerned about the technical screening criteria and the general assessment of hydropower. Hydropower risks to be considered not fully sustainable if the draft delegated act does not change substantially.** Hydropower is not only renewable itself – it also balance the load from other renewables such as wind- and solar power. By regulating water and counteracting the effects of droughts and floods, it also contributes significantly to climate change adaption.

The draft delegated act and its Annexes do not follow the technology neutrality principles laid out in the mother regulation and the principles in the preface of the draft delegated act as regards to the general assessment of hydropower as sustainable electricity generation technology as well as failing to include hydropower into the section on installation, maintenance and repair of renewable generation technologies.

The current version bears the risk of creating a double-standard for hydropower. The proposed DNSH criteria for hydropower, especially those for "Sustainable use and protection of water and marine resources" should be shortened and reference shall be made only to the current EU water acquis as it is already the case in other activities of the Annexes, such as for wind power offshore requirements**.** Therefore, we urge the Commission to replace the current text under DNSH 3 on water to: "*The activity complies with the provisions of Directive 2000/60/EC and in the Directive 2008/56/EC)".* **We strongly recommend setting the same standard of reference to existing EU law for all renewable electricity generation technologies**

The Commission should treat all renewables equally and replace the current "substantial contribution" criteria for hydropower to *"The activity generates electricity from hydropower."* This would streamline the criteria to all renewable technologies in the annexes according to RED II.

2. Storage

The draft delegated act and its Annexes fail to put forth a technology-neutral approach for electricity storage technologies. At this stage in the path towards 2050, **all electricity storage technologies, should be categorised as economic activities making a substantial contribution based on their own performance, and not only as enabling activities.** The European energy transition requires substantial investments in storage technologies in order to fulfil both the requirements to reduce CO2 emissions and to keep the high levels of security of supply, grid stability while ensuring all environmental standards.

See annex for further details with regards to Eurelectric response on hydropower and electricity storage.

3. Bioenergy

3.1. Bioenergy related economic activities considered as transitional activity

In the Taxonomy Regulation, a distinction is made between technologies that are to be considered a "*substantial contribution to climate change mitigation*" in article 10.1 (a) and those that "*support the transition to a climate-neutral economy*" in article 10.2. Article 10.1 of the Taxonomy Regulation also clearly mentions "*generation, transmission, storage and distribution or use of renewable energy in line with Directive (EU) 2018/2001 (RED II) as environmental sustainable activity, contributing to climate change mitigation*". On this background, bioenergy is strangely classified as "transitional" in section 4.8 (electricity generation), 4.20 (cogeneration), 4.24 (heating and cooling) in the proposed delegated act.

Having the criteria for biomass-based energy production in mind, Eurelectric does not see such a clarification as justified. Indeed, the use of bio-energy, meeting the sustainability and GHG emissions savings set forth under RED II are low-carbon and, hence, are environmental sustainable activities and not transitional activity. Indeed, bioenergy is generally using waste and forest residues materials left from other activities and thereby fits well into the thinking of recycling and use of all bits of a source in order to be climate

friendly. Additionally, there are strict requirements securing only sustainable biomass is used to produce electricity, heat and cold, thus, sustainable energy.

Overall, we believe that bioenergy should be seen as a long term renewable energy source that meet sustainability criteria set in the RED II and thus, be recognised as "substantial contribution to climate change mitigation".

3.2. GHG emission savings from the use of biomass to be at least 80% in relation to the GHG saving methodology and the relative fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001 (REDII)

Eurelectric welcomes the fact that the delegated act proposal establishes a clear reference to the requirements of the RED II, Industrial Emissions Directive and the implementing decision on Large Combustion Plants (LCP) Best Available Techniques (BAT) conclusions. These improvements sets the ground for a coherence with EU acquis.

Nevertheless, we call on the European Commission to ensure the **full alignment between the requirements set in the different legislations**. In this regard, for the production of electricity from bioenergy, an alignment between existing requirements and the proposed threshold is needed.

According to article 29.1 "*Biomass fuels shall fulfil the sustainability and greenhouse gas emissions saving criteria laid down in paragraphs 2 to 7 and 10 if used in installations producing electricity, heating and cooling or fuels with a total rated thermal input equal to or exceeding 20 MW in the case of solid biomass fuels*". According to Article 29.10 in RED Directive: "*The greenhouse gas emission savings from the use of biofuels, bioliquids and biomass fuels taken into account for the purposes referred to in paragraph 1 shall be at least 70 % for electricity, heating and cooling production from biomass fuels used in installations starting operation from 1 January 2021 until 31 December 2025, and 80 % for installations starting operation from 1 January 2026.*" Thus, 80% threshold is lower compared to the initial TEG proposals but is much stricter than the threshold from RED II which is 70% for installations starting operation after 2021 and 80% for installations starting operation after 2026.

In other words, the criteria proposed by European Commission, in the delegated act will go beyond provisions in RES Directive since requirements are set on plants below 20 MW and all existing plants will be included and shall apply sustainability criteria and climate savings set in RED II. In the RED Directive, all plants below 20 MW were excluded considering requirements on sustainability criteria for biomass from forest and agricultural land and climate savings criteria shall only be applied on new plants that come into operation after 2021.

Considering the above, Eurelectric believes that **the delegated act should not set stricter sustainability criteria and GHG emission saving requirements than those currently applying in recently revised sector specific legislation (RED II).** Thus, the Commission **should clarify that the limit of 20 MW applies, also that climate savings of 70 percent**

apply to plants that come into operation after 1 January 2021 and 80 percent for plants that come into operation after 1 January 2026.

3.3. Other comments related to bioenergy

We welcome the improvement that in **section 4.8 of Annex 1 and Annex 2**, it is mention that when it comes to pollution prevention and control, "*for installations falling within the scope of the Directive 2010/75/EU of the European Parliament and of the Council, emissions **are within or lower** than the emission levels associated with the best available techniques (Bat-AEL) ranges set out in the best available techniques (BAT) conclusions for large combustion plants*."

Further, in **section 4.8 of Annex 1 and Annex 2**, it is not clear if **condensation mode** is accepted for CHP installations > 100 MWth. This would need to be clarified.

Moreover, in **section 4.13 on manufacture of biomass, biofuels and biogas**, the DNSH for pollution prevention and control still mentions an obligation to apply a gas-tight cover on the digestate storage for biogas production. **With a view of harmonisation across all sections (section 4.8, 4.13, 4.20 and 4.24 related to use and/or production of bioenergy) and non-discrimination based on the use of biogas, this constraint should be removed.**

In Annex 2, Section 1.4. Afforestation, DNSH (6) Protection and restoration of biodiversity and ecosystems, the paragraph on whole tree stems ("*The use of whole tree stems for bio-energy is avoided, especially where viable, unsubsidised markets exist for their use in carbon-retaining materials or products, except where it has been authorised at the national or regional levels in exceptional circumstances, including for phytosanitary reasons or to reduce fire risks, in accordance with applicable law*.") should be removed. In practice this definition is impossible to agree with. The bioenergy industry largely utilizes residues and side streams and low-value timber assortments while continuing to ensure that the sustainability of the value chain is fully respected. The forests in the afforested areas will at some point need thinning and maintenance to take care of the forest (inlc. preventing fire risks) and to able better growth. The (usually small diameter) wood harvested when doing the thinning most often has no better use than as bioenergy. **The term "whole tree stem" is unclear and the use of such should be avoided, and instead, refer to existing specification sin the RED II**.

4. Nuclear power

We appreciate the fact the European Commission followed the TEG recommendations advising to set up a specific process assessing the role of nuclear energy under the Taxonomy. Nevertheless, **we regret that the assessment of nuclear will not be finalised and completed in 2020**, as it "*is still ongoing and the Commission will report on its results in the context of the review of this Regulation*" (recital 16 of the delegated act).

The delay in the assessment conveys uncertainty for the nuclear sector specifically, and the power sector more generally, as it prevents the industry from having a clear view on which technologies will have access to sustainable financing. This also risks undermining the ability of the Member

States to develop a pathway towards climate neutrality, taking advantage of all the carbon-neutral options available. Moreover, the lack of such an assessment could also leave some gaps in the revision process of EU legislation and policies which, next year, will be reviewed to take into consideration the Taxonomy criteria (e.g. ecolabel, EIB Lending Criteria, etc.).

Therefore, we **urge the European Commission to accelerate the assessment process of nuclear to mitigate the risks of such a delay.** As such, **we call on the European Commission to include timeframe for inclusion of nuclear in the delegated act.** In this context, Eurelectric **suggests to introduce the following statement in the Recital 16 of the Delegated regulation**: "*In the event that the JRC work on nuclear results in nuclear being considered as sustainable, the Delegated Act will be amended within 2 months to include nuclear. In addition, all Taxonomy compliant regulation should be updated accordingly*".

Finally, Eurelectric also wishes to **reaffirm that nuclear will be part of the solution to decarbonise the EU economy by 2050** and is internationally recognised as a crucial asset in the fight against climate change. The IPCC special report[1] on how to limit the global temperature rise to 1.5°C clearly states that nuclear will be needed to achieve this goal. Further technical information on the role of nuclear in the energy transition is detailed in Eurelectric's paper on the TEG report.

5. Electricity generation – gaseous and liquid fuels

5.1. Under Annex 1 on Mitigation

Electricity generation from gaseous and liquid fuels is Taxonomy-eligible if life-cycle assessment (LCA) GHG emissions are lower than 100gCO2e/kWh. In this regard, electricity generation from gaseous and liquid fuels is considered as contributing substantially to climate change mitigation if complying with the threshold of 100gCO2e/kWh.

Taking into account the ongoing effort to reduce the carbon intensity of electricity produced from gas-fired power plants, the proposed value of LCA GHG emissions below 100gCO2e/kWh is unrealistic, foregoing current best available technologies until full use of renewable or low carbon molecules in the gas-fired plants. Currently, BAT-GHG emissions values for a highly-efficient CCGT are around 350g CO2e/kWh and scaling up the production of renewable and low-carbon gases will take several years.

In this context, Eurelectric would suggest that power generation from gaseous and liquid fuels to be qualified a **transitional activity in the sense of article 10 (2) of the Regulation (EU) 2020/852 if LCA GHG emissions are lower than 250gCO2e/kWh in average over economic the lifespan of the plant** (following especially the integration of an increased share of renewable or low-carbon gases, hence avoiding any lock-in or stranded assets). This criterion should be reduced according to technological progress on a regular basis.

[1] https://www.ipcc.ch/sr15

Such threshold should be distinct from the DNSH criteria under the climate change adaptation category.

Having said that, we would also suggest that once CCGTs are 100% using renewable or low-carbon gases, hence dropping below the 100gCO2e/kWh GHG emissions value, electricity generation from gaseous and liquid fuels should no longer be a transitional activity but as an activity contributing substantially to climate change mitigation. Indeed, **equal treatment of sustainable activities must be ensured.** The delegated act should clearly label **electricity generation activities from renewable or low-carbon gaseous and liquid fuels, once they are considered as sustainable with LCA GHG emissions below 100gCO2e/kWh, as environmental sustainable activity** contributing to climate change mitigation and no longer as transitional activity.

Nonetheless, in order to avoid locking the energy system in assets that aren't contributing to the objective of achieving net zero greenhouse gas emissions for EU countries as a whole by 2050, additional criteria should be included:

- Direct emissions need to reach the threshold of 100gCO2e/kWh before 2050.
- Operators need to have a credible plan about how to reach the emissions threshold for transitional activities (250 gCO2e/kWh).
- Taking into account the flexibility and balancing role they will play in the medium to long term, any new natural gas-fired units must not be developed in replacement of generation units with less carbon emissions and must not be built if alternatives with less carbon emissions are economically and technically more viable while ensuring the security of supply.
- Gas-fired power plants need to be ready for renewable or low-carbon gases, including hydrogen, based on European technical specifications or norms, as soon as they are available.
- Such set up should be used for highly efficient natural gas-fired units (both Combined Cycle Gas Turbines and Open Cycle Gas Turbines) according to EU Best Available Techniques reference documents (BREFs).

5.2. Under Annex 2 on Adaptation

The DNSH for climate change activities is set at having GHG emissions being lower than **270 gr CO2e/kWh direct emissions.**
However, Eurelectric believes that the DNSH criteria of 270 grCO2e/kWh should not be a static value to be considered at one specific moment in time (i.e. at investment decision), but averaged over the lifetime of the asset.
Therefore, we suggest that the **DNSH value should be GHG emissions below 270 grCO2e/kWh in average over the (remaining) economic lifespan of the asset.**

6. Manufacture of Hydrogen

Eurelectric stresses that given the decarbonisation challenges at hand, Europe should strive to maintain leadership in emerging energy carriers such as sustainable hydrogen, sustainable biomethane and synthetic methane, as well as renewable power-to-gas which could play a role to decarbonise specific segments of industrial activity and heavy-duty transport where no electric alternative to fossil fuels exist. This is a multifaceted and complex matter and the uncertainty around future innovations, the expected potential for future commercial availability/ maturity of biomethane, sustainable hydrogen and renewable power-to-gas must be acknowledged.

However, section 3.9 of the Annex 1 on mitigation sets that manufacturing of hydrogen would be recognised as substantially contributing to climate change mitigation if complying with "***LCA GHG emissions savings requirement of 80 % relative to a fossil fuel comparator of 94g CO_2e/MJ [resulting in 2.256 tCO_2eq/tH2]*** *in analogy to the approach set out in Article 25(2) and Annex V of Directive (EU) 2018/2001 of the European Parliament and of the Council. Life cycle GHG emissions savings are calculated using the methodology referred to in Article 28(5) of Directive (EU) 2018/2001 or, alternatively, using ISO 14067 or ISO 14064-1"*.

Moreover, based on a LCA approach, **the proposed threshold rules out 'brown' production methods to the limits of energy sources used for the production of clean hydrogen, such as production of H2 produced by electrolysis from solar electricity**. In general, the production of hydrogen from renewable energy sources should clearly be exempted from proving compliance with any kind of carbon intensity threshold, in accordance with the provisions of Regulation (EU) 2020/8522 (in particular, Article 10.1.(h) and the sections 4.1, 4.2, 4.3, 4.4 and 4.5 (with conditions) of Annex 1.

Therefore, Eurelectric recommends that to support the development of decarbonised hydrogen and the early deployment of projects, it would be relevant to set criteria which allow sufficiently decarbonised electricity mixes to produce low carbon hydrogen which would qualify as sustainable. Sources of **electricity emitting less than 100 gCO2e/kWh as defined by the Taxonomy should be allowed to produce low carbon H2 in order to qualify as sustainable (i.e. 5,8kgCO2eq/KgH2)**.

7. Transmission and distribution networks for renewable and low-carbon gases

Given the decarbonisation challenges at hand, Europe should strive to maintain leadership in emerging energy carriers, in particular renewable and low-carbon gaseous and liquid fuels such as hydrogen, biomethane and synthetic methane. In an integrated energy system (as presented by the EC Strategy on Energy System Integration) renewable and low-carbon fuels could play a role to decarbonise specific segments of industrial activity and heavy-duty transport where no electric alternative to fossil fuels exist as well as to provide additional flexibility solutions. This is a complex matter and the uncertainty around future innovations, the expected potential for future

[2] Regulation (EU) 2020/852 of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088

commercial availability/maturity of biomethane, hydrogen and synthetic methane must be acknowledged.

In this context, the Taxonomy and its technical screening criteria should better reflect the complexity, uncertainty and ongoing innovation around different types of renewable and low-carbon gases, the related gas infrastructure adaptation needs and the challenges and opportunities of synergies with the electricity system. **The European Commission should engage a realistic and justified assessment for the development of an adequate transmission and distribution hydrogen network within an integrated energy system while looking at the specificities of each national grids**. As long as it's transporting renewable and low-carbon gases and enhancing the integration of the energy system as a whole, the transmission and distribution network should be classified as "sustainable". The availability of adequate infrastructure for the transport of renewable and low-carbon gases is a prerequisite to ramp them up. Eurelectric fully supports the fact that a cost-effective and future-proof approach to infrastructure investments should be ensured to avoid investment in assets that do not contribute to a cost-effective and energy efficient decarbonisation path.

8. Transmission and distribution

Together with other European electricity distribution system operators, we already raised the crucial role of electricity distribution networks to achieve the environmental objectives[3]. Eurelectric supported the view of the TEG Report to **include in the taxonomy all electricity T&D infrastructure or equipment in systems, which are on a trajectory to full decarbonisation**. Also, Eurelectric believes that **all investments in the electricity grid infrastructure (both at transmission and distribution level) should therefore be defined as sustainable** to support the energy transition by enabling further electrification of different sectors of society and the growth of renewable and carbon-neutral energy by 2050. Eurelectric stresses that the **delegated act conflicts with the wording of article 10 of the Taxonomy regulation** (Regulation (EU) 2020/852). The delegated act qualifies transmission and distribution of electricity as "enabling activities", whereas the above-mentioned **article 10 expressly recognises that transmitting and distributing renewable energy contribute substantially to climate change mitigation** (1.(a)). Eurelectric also sees a **need for clarification regarding the implication for an activity to be labelled as "contributing" or "enabling"** in terms of investments. On that matter, Eurelectric recalls that the TEG report from March 2020 recognises both the "contributing" and "enabling" roles of transmission and distribution of electricity.
Overall we welcome the approach proposed in the delegated act, however, we believe that there are some improvements which would be incorporated in the final delegated act:

8.1. Under Annex 1 on mitigation

The first technical screening criterion reads as follows: "*The transmission and distribution infrastructure or equipment in the system is the interconnected European system, i.e. the interconnected electricity system covering the interconnected control areas of Member States, Norway, Switzerland and the United Kingdom, and its subordinated systems".* **Eurelectric welcomes the non-cumulative list of TSC and calls for confirmation that the**

[3] E.DSO, Eurelectric and GEODE Joint letter, 31 October 2019

"interconnected European System" encompasses any transmission or distribution line or equipment interconnected in the EU. Moreover, we would welcome some clarifications on the meaning of "subordinated systems".Eurelectric stresses that **the consideration of transmission and distribution activities as enabling activities can neither depend on the carbon content of the electricity that circulates in the grid, nor on the GHG emissions level of the power plants connected to the grid.** In this regard, **technical screening criteria 2 and 3 (p.117-118) conflict with the mission of TSOs and DSOs as defined in Regulation (EU) 2019/943** on the internal market for electricity, which states that "*market participants shall have a right to obtain access to the transmission networks and distribution networks on objective, transparent and non-discriminatory terms*" (article 3 (q)). The current requirements would hamper the development of the system operators' grids as neutral market facilitators and prevent the energy transition towards a fully decarbonised economy.

Moreover, subsection 6. (a) mentions "*the rolling five-year (average) period used in determining compliance with the thresholds*". Nevertheless, this **rolling five-year period** is not explicitly foreseen in the document. In addition, it **does not match with heavy investments needed** for these infrastructures. Indeed, the EU power sector has a proven track record of continuous emissions reductions and has pledged to become carbon neutral well-before mid-century. As electrification is broadly recognized as a key tool to decarbonise the economy, strengthening electricity networks does support the transition and should therefore be reflected in the delegated act. Instead, the requirements in the delegated act could lead to **instability and uncertainty for investors**. Therefore, one potential alternative criteria could be to refer to the variation in the average system emissions factor, not to the absolute value in order to recognize the different starting points in the decarbonisation pathways of different countries.

Eventually, Eurelectric stresses the need to ensure the stability of the "**Taxonomy compliant" labelling to secure long-term investments in networks infrastructures needed to reach Green Deal objectives.** Regarding point 6. (e), in case of changes in criteria to be "Taxonomy compliant", the **new criteria should not apply retroactively.** Therefore, Eurelectric proposes the following addition in the point 6.e) of section Substantial contribution to climate change mitigation (page 119): "*it is possible for a system to become ineligible after having previously been eligible. In systems that become ineligible, no new transmission and distribution activities are eligible from that moment onward, until the system complies again with the threshold (except for those activities which are always eligible, see above). Activities in subordinated systems may still be eligible, where those subordinated systems meet the criteria of this Section*. ***Updated criteria cannot apply retroactively to investment decisions***."

8.2. Under Annex II on adaptation

Eurelectric does not support the use of the mitigation technical screening criteria (TSC) in the section "description of the activity" (p.115-116) to qualify the activity for the adaptation objective, **and calls for their removal, for two main reasons:**

- **There are strong incoherencies in this section.** The TSC mentioned could be understood as being **cumulative**, creating stricter criteria to qualify for the adaptation objective than for the mitigation objective. In addition, the criteria set in the "description of the activity" section **conflict with the DNSH (1)**: criterion 3 mentions a threshold of 100gCO2e/kWh, whereas the DNSH criteria regarding the mitigation objective mentions a threshold of 270gCO2e/kWh.
- **Moreover, this approach is not legitimate:** TSC from Annex I are not mentioned in the "description of the activity" section for any other activity in the "Energy" section of Annex 2.

The DNSH-criteria for "transition to a circular economy" risks leading to financial and legal uncertainties. It would be very difficult for DSOs to comply with binding contractual agreements for recycling. Therefore, Eurelectric recommends the application of the same criteria as for electricity generation technologies to the transmission and distribution of electricity.

9. Geothermal

With respect to geothermal energy, it has to be considered that this resource is fully renewable because the tapped heat from an active reservoir is continuously restored by natural heat production, without any real consumption of the resource.

With respect to GHG emissions from Geothermal Power plants, the CO2 emitted has a natural origin, as there is no combustion of fossil fuels. In fact, all geothermal fields are characterised by a minor (compared to emissions of other technologies) and naturally occurring gas emission from the ground that originates from the reservoir and from the mantle. For this reason any GHG emissions from geothermal power plant can be considered as substitutive of the natural emissions.

This has been confirmed by the recent UN's Intergovernmental Panel on Climate Change (IPCC) data[4], where Geothermal Power Plants are not accountable for any direct emissions.

In section 4.6 of the Annex 1 on mitigation, it is indicated that geothermal power plants should conduct the LCE.

Based on the above consideration, Eurelectric recommends that geothermal power plants are exempted from conducting the LCE analysis also for new projects. Indeed, only technologies potentially close to the threshold of the Emission Performance Standard (EPS) should be subject to a requirement of conducting an individual LCE analysis for individual projects. Having the decline of the EPS threshold in mind – and the general development both for existing and new technologies

[4] Schlömer S., T. Bruckner, L. Fulton, E. Hertwich, A. McKinnon, D. Perczyk, J. Roy, R. Schaeffer, R. Sims, P.Smith, and R. Wiser, 2014: Annex III: Technology-specific cost and performance parameters. In: Climate Change 2014:Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of theIntergovernmental 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., https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_annex-iii.pdf

– a dynamic approach must prevail in terms of identifying which technologies should be subject to obligatory LCE analysis and which technologies should be exempt from conducting LCE analyses.

In this context, **it shall be kept in mind that for most power plants in the EU, an environmental impact assessment is mandatory**. According to the Environmental Impact Assessment Directive (2011/92/EU), environmental as well as climate factors (for example greenhouse gas emissions, impacts relevant to adaptation), the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change are already an essential and mandatory part of the environmental impact assessment report.

10. Installation, maintenance and repair of renewable energy technologies

The list in Annex I, Section 7.6 should include all renewable technologies according to the RED II. The list is limited to wind, solar, heat pumps, storage and micro CHP.

We call on the European Commission to clarify the absence of any reference to hydropower and bioenergy in this section, which seems contrary to the purpose of promoting sustainable solutions.

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Economic Development

- Growth, added-value, efficiency

Environmental Leadership

- Commitment, innovation, pro-activeness

Social Responsibility

- Transparency, ethics, accountability

Union of the Electricity Industry - Eurelectric aisbl
Boulevard de l'Impératrice, 66 – bte 2 - 1000 Brussels, Belgium
Tel: + 32 2 515 10 00 - VAT: BE 0462 679 112 • www.eurelectric.org
EU Transparency Register number: 4271427696-87

EC Draft Taxonomy Delegated Regulation on climate mitigation & climate adaption

Eurelectric dedicated hydropower response

December 2020

Eurelectric represents the interests of the electricity industry in Europe. Our work covers all major issues affecting our sector. Our members represent the electricity industry in over 30 European countries.

We cover the entire industry from electricity generation and markets to distribution networks and customer issues. We also have affiliates active on several other continents and business associates from a wide variety of sectors with a direct interest in the electricity industry.

We stand for

The vision of the European power sector is to enable and sustain:

- A vibrant competitive European economy, reliably powered by clean, carbon-neutral energy
- A smart, energy efficient and truly sustainable society for all citizens of Europe

We are committed to lead a cost-effective energy transition by:

investing in clean power generation and transition-enabling solutions, to reduce emissions and actively pursue efforts to become carbon-neutral well before mid-century, taking into account different starting points and commercial availability of key transition technologies;

transforming the energy system to make it more responsive, resilient and efficient. This includes increased use of renewable energy, digitalisation, demand side response and reinforcement of grids so they can function as platforms and enablers for customers, cities and communities;

accelerating the energy transition in other economic sectors by offering competitive electricity as a transformation tool for transport, heating and industry;

embedding sustainability in all parts of our value chain and take measures to support the transformation of existing assets towards a zero carbon society;

innovating to discover the cutting-edge business models and develop the breakthrough technologies that are indispensable to allow our industry to lead this transition.

Dépôt légal: D/2020/12.105/71

Markets & Investments Committee
Electrification & Sustainability Committee
Generation & Environment Committee

Contacts:
Stella BENFATTO, Advisor - Wholesale Markets –
sbenfatto@eurelectric.org
Eivind STEEN, Senior Advisor Hydropower –
esteen@eurelectric.org

We are concerned about the technical screening criteria and the general assessment of hydropower. **It risks to be considered unsustainable if the draft delegated acts do not change substantially.** Hydropower is not only renewable itself – it also balance the fluctuations from other renewables such as wind- and solar power and is by far the most important provider of renewable flexibility. By regulating water flows and counteracting the effects of droughts and floods, it also contributes significantly to climate change adaption.

Our main concerns with regards to hydropower are the following:

- **Creating a double standard for Hydropower.** "Do No Significant Harm "(DNSH) criteria for hydropower should be defined for hydropower along the same principles as for other renewable technologies with direct reference to current EU legislation. Therefore, DNSH criteria for hydropower need only to refer to the Water Framework Directive and the Marine Framework Strategy Directive as the main EU-wide environmental legislation for hydropower without further specifications.
- The Draft Delegated Act and its Annexes **do not follow the technology neutrality** principles laid out in the mother regulation and the principles in the preface of the draft delegated act. According to TFEU[1], a delegated act cannot go further than its mother regulation. Eurelectric is worried that the Commission is treading beyond its mandate provided by the Parliament and Council by deviating on the concerns mentioned above.

  We strongly recommend to set the same standard of reference to existing EU law for all renewable electricity generation technologies.

As a solution, we suggest the following changes to be made:

1. DNSH for Objective 3 for sustainable use and protection of water and marine resources: A singular reference to the Water Framework directive and the Marine Strategy Framework Directive

Original text from Section 4.5 in ANNEX I – Climate Change Mitigation. Equivalent in ANNEX 2 – Climate Change Adaption.

(3) Sustainable use and protection of water and marine resources

1 Article 290

1. Operation of existing hydropower plants, including refurbishment activities to enhance renewable energy or energy storage potential.

All technically feasible and ecologically relevant mitigation measures have been implemented to reduce adverse impacts on water as well as on protected habitats and species directly dependent on water.

The effectiveness of those measures is monitored in the context of the authorisation or permit setting out the conditions aimed at achieving good status or potential of the affected water body.

The operation of the hydropower plant fully complies with that authorisation or permit issued by the competent authority, and sets out all relevant mitigation measures necessary to:

(a) ensure conditions as close as possible to undisturbed continuity in the specific water body the plant relates to, including state-of-the-art and fully functional fish passes and turbines preventing fish kill, measures to ensure minimum ecological flow and sediment flow, adaptation of the operation of the plant;

(b) reduce the impact of hydropeaking;

(c) protect or enhance habitats for aquatic species;

(d) reduce adverse impacts of eutrophication.

2. Construction of new hydropower plants

The plants are conceived, by design and location and by mitigation measures, so that they comply with one of the following:

(a) the plants do not entail any deterioration nor compromise the achievement of good status or potential of the specific water body they relate to, as demonstrated by a cumulative impact assessment referred to in this Section;

(b) the plants do neither significantly deteriorate nor compromise the achievement of good status/potential of the specific water body they relate to and are justified by overriding reasons in the public interest.

The plants are conceived, by design and location and by mitigation measures, so that they do not permanently compromise the achievement of good status/potential in any of the water bodies in the same river basin district.

A cumulative impact assessment has been performed that identifies and addresses any significant regional or basin-level environmental impacts. The assessment:

(a) addresses all potential impacts on water bodies, as well as on protected habitats and species directly dependent on water, considering in particular:

(i) migration corridors, free-flowing rivers or ecosystems close to undisturbed conditions;

(ii) all impacts of existing and of already authorised and planned infrastructure developments in the basin, for

example as part of a hydropower cascade or of other activities (for example agriculture, transport etc.);

(b) is based on recent, comprehensive and accurate data, including monitoring data on biological quality elements that are specifically sensitive to hydrological alterations, and on the expected status of the water body as a result of the new activities, as compared to its current one.

The cumulative impact assessment demonstrates that the project does not permanently exclude the achievement of the objectives of good status/potential in other water bodies or connected ecosystems within the same river basin district.

Where the cumulative impact assessment demonstrates that the envisaged project neither deteriorates nor compromises the achievement of good status/potential of the specific water body, as a result of site-specific conditions or the use of state-of-the-art technology, the operation of the new hydropower plant fully complies with its authorisation or permit setting out the conditions aimed at achieving good status or potential of the affected water body. The plant respects appropriate environmental standards in terms of flow management and flood regime (magnitude, frequency, duration, timing and rate of change) and of mitigation measures, including controlled releases, state of the art and fully functional fish passages, state of the art turbines preventing fish kill, controlled temperature, appropriate ecological flow, sediment flow, timing of operation of turbines.

Where the cumulative impact assessment demonstrates that the envisaged project could deteriorate or compromise the achievement of good status/potential of the specific water body it relates to, a further in-depth cost-benefit assessment is performed. That in-depth cost-benefit assessment demonstrates that such deterioration will not be significant and will comply with all of the following criteria:

(a) the beneficial objectives served by the planned hydropower plant in terms of renewable energy generation and energy storage cannot, for reasons of technical feasibility or disproportionate cost, be achieved by alternative means that would lead to a better environmental outcome (alternative location, rehabilitation/refurbishment of existing hydro-power plants or infrastructures, use of technologies not disrupting river continuity, where relevant, consideration of other potential sources of electricity, which may offer in the particular case a better environmental alternative; the beneficial objectives served by the planned hydropower

plant are justified by overriding reasons in the public interest;

(b) the benefits expected from the planned hydropower plant outweigh the costs from deteriorating the status of water that are accruing to the environment and to society. The in-depth cost-benefits analysis considers the following aspects:

(i) the marginal quantity of energy generated and its contribution to increasing the share of renewable energy in the energy mix, in accordance with the national renewable energy strategy when relevant;

(ii) impacts on water status or potential upstream and downstream;

(iii) impacts on biodiversity, in particular on Protected Areas (such as Natura 2000 sites in the Union, areas relied upon for drinking water, areas with bathing water);

(iv) the benefits of ecosystem services (quantitatively where possible);

(c) all technically feasible and ecologically relevant mitigation measures are included in the permit or authorisation and are implemented to reduce the adverse impacts on the status of the water body the planned hydropower plant relates to. Those measures:

(i) ensure conditions as close as possible to undisturbed continuity (including state-of-the-art and fully functional fish passes and turbines preventing fish kill, measures to ensure minimum ecological flow and sediment flow, adaptation of the operation of the plant);

(ii) reduce the impact of hydropeaking;

(iii)protect or enhance habitats for aquatic species;

(iv) reduce adverse impacts of eutrophication;

(d) in addition to the mitigation measures referred to in point (d) and where relevant, compensatory measures are implemented to ensure that the project does not increase the fragmentation of water bodies in the same river basin district. This is achieved by restoring continuity within the same river basin district to an extent that compensates the disruption of continuity, which the planned hydropower plant may cause. Compensation starts prior to the execution of the project.

Proposed new text

(Delete all original wording and replace with)

The activity complies with the provisions of Directive 2000/60/EC and in the Directive 2008/56/EC).

Argumentation

Electricity generation technologies are treated differently even though they fall under the same economic activity under the NACE code system. (D35.1.1 – "production of electricity").

The preface of the draft delegated act specifically refers to the principle of technology neutrality on the NACE classification: "*In order to ensure a level playing field, the same economic activities should be subject to the same technical screening criteria for each climate objective. It is therefore necessary that the technical screening criteria, where possible, follow the classification of economic activities laid down in the NACE Revision 2 classification system of economic activities established by Regulation (EC) No 1893/2006 of the European Parliament and of the Council*."

This double standard is done by applying either no criteria to one renewable technology versus multiple different criteria for another renewable technologies. The level of specification in the DNSH-criteria for hydropower goes far beyond what is determined in the rest of the delegated acts, esp. as regards DNSH principle 3 on the sustainable use and the protection of water and marine resources.

Article 17 (1c) of the Taxonomy Regulation states that the activity "*shall be considered to significantly harm (…) where that activity is detrimental to the good status or the good ecological potential of bodies of water, including surface water and groundwater*." At the same time the Water Framework Directive (WFD) states in Article 1 "*that purpose of this Directive is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater*" and "*promotes sustainable water use based on a long-term protection of available water resources*".

The Commission concluded in the 2019 Fitness Check of the Water Framework Directive that the directive itself was still fit for purpose and the question at hand was regards to the implementation in each Member State.

To uphold to the principle set out by the commission and the regulation itself, a singular reference as proposed by Eurelectric to the WFD and the MSFD would cover the full scope of the DNSH for Objective 3 for sustainable use and protection of water and marine resources.

Referencing clearly to WFD will also avoid double regulatory standards within the water protection which could even further increase legal uncertainty and hamper the implementation.

Additional and more specific criteria at EU level will contribute to contradiction in EU policy goals and will impede a coherent implementation of the Taxonomy regime throughout the EU. It may even lead to a loss of flexible clean electricity needed in keeping the level of security of supply high, increasing other renewable electricity generation and ensuring a safe energy transition.

Eurelectric points out that the Commission refers via footnote 255 to its own opinion in the delegated act. We believe the Commission do not have the legal competence to introduce a Commission notice C/2018/2619 in footnote 255 of Annex I of the delegated act (page 109) which in its first sentence clearly states: "*This document reflects the view of the European Commission and is not of a binding nature*".

2. Apply the same technical screening criteria for all renewable electricity generation technologies

Original text in Annex 1 climate mitigation, chapter 4.5.

The activity complies with either of the following criteria:

(a) the life-cycle GHG emissions from the generation of electricity from hydropower, including mixed pumped hydropower storage connected to a free-flowing water source are lower than 100gCO2e/kWh.
The life-cycle GHG emissions are calculated using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018, ISO 14064-1:2018 or the G-res tool250. Quantified life-cycle GHG emissions are verified by an independent third party.

(b) the power density of the electricity generation facility is above 5 W/m2.

Proposed new text

~~*The activity complies with either of the following criteria:*~~

~~*(c) the life-cycle GHG emissions from the generation of electricity from hydropower, including mixed pumped hydropower storage connected to a free-flowing water source are lower than 100gCO2e/kWh.*~~

~~*The life-cycle GHG emissions are calculated using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018, ISO 14064-1:2018 or the G-res tool250. Quantified life-cycle GHG emissions are verified by an independent third party.*~~

~~*(d) the power density of the electricity generation facility is above 5 W/m2.*~~

The activity generates electricity from hydropower.

Argumentation

The draft is not compliant with Article 19 of the mother regulation which requires screening criteria to be "respecting the principle of technological neutrality".

This principle must be implemented for all renewable electricity generation technologies according to RED II. Hydropower – even though properly defined as contributing substantially to climate change mitigation – is required to prove this evidence by proving its life-cycle-emissions being below 100 g CO2/kWh or by proving its power density being above 5 W/km². For other renewable technologies, such as wind power and solar photovoltaic, no criteria for proving this evidence is required. Technology neutrality as required by the mother regulation would mean that either no or all technologies of the same economic activity (i.e. generation of electricity) are subject to the same technical screening criteria.

Article 19 (1k) of the Taxonomy Regulation requires that screening criteria are "*easy to use and be set in a manner that facilitates the verification of their compliance*". This is not the case for the proposed methods for calculating the life-cycle GHG emissions and the power density factor. The application of the power density factor for hydropower plants will give misrepresented results in European climate zones. Some reservoirs in tropical climate zones have shown significant carbon footprint due to the methane gas caused by flooding large areas of vegetation. However, this is not the case for hydropower installations in Europe due to cooler climatic conditions. . It is not justified, that hydropower must carry out life cycle assessments, unlike other renewable technologies. With worldwide median lifecycle emissions of 24g CO2e/kWh, the emissions of hydropower plants are well below the proposed emission threshold of 100g CO2e/kWh.

Hydropower schemes are complex by nature. Common setups include one reservoir supplying water to several hydropower plants or one hydropower plant being supplied by multiple cascading reservoirs. In addition, hydropower installations often serve multiple purposes beyond electricity generation such as flood control, drinking water supply and irrigation. The power density factor is simple in form, but does not manage to encompass these complex factors of hydropower scheme. These complicating factors have not been assessed in the TEG report nor in the draft delegated regulation. Therefore, it is not easy to use as specified in the mother regulation.

Data to calculate the correct power density is difficult to obtain as regards the surface of the reservoir. A precise calculation requires a net approach; subtracting the pre-impoundment (before regulation) surface area from current surface area (after regulation). This would address flooded area due to the hydropower installation and not the natural flooded lake. However, data for pre-impoundment surface area are very difficult to obtain, since many were built several decades, even centuries ago. There is the risk that the application of the power density factor will give misrepresented results.

3. All electricity storage technologies should be categorised as economic activities substantially contributing to climate change mitigation and not as enabling activities

Original text chapter 4.10

The activity is the construction and operation of electricity storage facilities including closed-loop pumped hydropower storage, defined as hydro plants with no natural water inflow into the upper reservoir, where the water that generates electricity was previously pumped uphill. Pumped storage connected to river bodies are not eligible.

Proposed text

The activity is the construction and operation of electricity storage. ~~facilities including closed-loop pumped hydropower storage, defined as hydro plants with no natural water inflow into the upper reservoir, where the water that generates electricity was previously pumped uphill. Pumped storage connected to river bodies are not eligible.~~

Argumentation

The European energy transition requires substantial investments in storage technologies in order to fulfil the requirements to reduce CO2 emissions and to keep the high levels of security of supply and grid stability.

Hydropower is the only large-scale renewable generating option to offer storage of energy which can be transformed into electricity instantaneously. This applies for river basins with natural inflow, pumped storage and reservoir storage. All these are substantial contributions to climate change mitigation as described in Article 19 (1a) and 19 (1j) or the regulation, but it is not reflected in the draft delegated act.

Closed-loop hydropower storage is a niche in Europe, nearly all existing pumped storage assets have either natural inflow or are connected to river bodies. They can provide valuable grid services, yet only on a very limited scale due to their very limited existence. The existing hydropower reservoirs especially in the Alps, the Pyrenees and in Scandinavia provide multiannual storage capacity on a large scale already today. We see the differentiation between and the resulting different criteria to be applied for closed-loop pumped hydropower storage and for mixed pumped hydropower storage as artificial without any contribution to sustainability. See Eurelectric storage report for further details[2]

Mixed-pump storage is currently considered under section 4.5 “Electricity generation from hydropower”, and is therefore subject to a threshold of GHG emissions of not more than 100 gCO2 per kWh. This threshold is required for the “turbine mode", hence for the activity of generation of electricity. This evokes difficulties of practical implementation. Any electricity storage technology does not produce electricity by itself but consumes it (the quantity of electricity taken out of the grid for pumping a given volume of water up in a higher reservoir) and gives it back to the grid when the system service is needed. Due to technical constraints, the amount of electricity given back to the grid is in any case smaller than the amount taken out.

[2] Eurelectric storage paper

At this stage in the path towards 2050, all electricity storage technologies, should be categorised as economic activities making a substantial contribution based on their own performance, and not only as enabling activities. All dedicated electricity storage technologies should be listed in 4.10. including respective specifications in the DNSH criteria.

We urge the Commission to use definitions of storage in line with the Clean Energy Package. No distinction should be made between pumped storage power plants in general and "closed looped pump storage plants". Sustainable use and protection of water and marine resources is already regulated under the Water Framework Direction.

4. The activity 'Installation, maintenance and repair of renewable energy technologies' must include all renewable electricity generation technologies as defined by RED II

Original text Section 7.6 annex 1

[No text under hydropower section]

The activity consists in one of the following individual measures, if installed on-site as technical building systems:

(a) installation, maintenance and repair of solar photovoltaic systems and the ancillary technical equipment;

(b) installation, maintenance and repair of solar hot water panels and the ancillary technical equipment;

(c) installation, maintenance, repair and upgrade of heat pumps contributing to the targets for renewable energy in heat and cool in accordance with Directive (EU) 2018/2001 and the ancillary technical equipment;

(d) installation, maintenance and repair of wind turbines and the ancillary technical equipment;

(e) installation, maintenance and repair of solar transpired collectors and the ancillary technical equipment;

(f) installation, maintenance and repair of thermal or electric energy storage units and the ancillary technical equipment;

(g) installation, maintenance and repair of high efficiency micro CHP (combined heat and power) plant;

(h) installation, maintenance and repair of heat exchanger/recovery systems;

Proposed text for including hydropower in installation, maintenance and repair chapter 7.6. Annex 1

(i) installation, maintenance and repair of hydropower turbines and the ancillary technical equipment.

Original text for cross-reference chapter 4.5.

[No text under hydropower section]

Proposed text for cross-reference chapter 4.5.

[*Insert under description of the activity in chapter 4.5] Where the activity is an integral element of the activity 'Installation, maintenance and repair of renewable energy technologies' as referred to in Section 7.6 of this Annex, the technical screening criteria specified in Section 7.6 apply.*

Argumentation

We call for including hydropower and bioenergy as any other renewable electricity generation technology in the references made to installation, maintenance and repair of assets.

Hydropower has to be treated as any other renewable electricity generation technology falling under the provisions of RED II.

Hydropower technologies hold a strong competitive position in the EU, a fact that has been confirmed by the recent Commission Staff working document on the Clean Energy Transition – Technologies and Innovations.[3]

The text in the draft delegated act is not compliant with Article 19 of its mother regulation which requires screening criteria to be "respecting the principle of technological neutrality". Technology neutrality as demanded by the mother regulation would mean that either no or all technologies of the same economic activity (i.e. generation of electricity) have to fall under the provisions for Installation, maintenance and repair of the assets

[3] 14.10.2020 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020SC0953

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Boulevard de l'Impératrice, 66 – bte 2 - 1000 Brussels, Belgium
Tel: + 32 2 515 10 00 - VAT: BE 0462 679 112 • www.eurelectric.org
EU Transparency Register number: 4271427696-87