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Position paper

Recommendations for Technical Screening Criteria (TSC)

Contribution to the public consultation of the European Commission

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Content

Summary

The German Energy and Water Industry supports the overall objective of the Taxonomy Regulation. It is crucial that the Technical Screening Criteria (TSC) are fit for purpose and do not hamper the decarbonisation of the energy sector towards 2050, while ensuring an affordable and secure energy supply. Therefore, the Commission should rely on existing regulatory frameworks when defining the criteria (e.g. RED II, EED, BAT, WFRD etc.).

To ensure that the TSC incentivise investments into sustainable and transitional activities that contribute to achieving the Green Deal targets and climate neutrality by 2050, BDEW recommends the following general changes:

- The creation of a **dedicated section for transitional activities**, with distinct criteria and thresholds from green activities, in line with article 10 (2) of the Taxonomy Regulation. The current approach does not differentiate between the thresholds for electricity generation for green and for transitional activities, which contradicts article 10 (2). Furthermore, all activities that comply with the criteria set out in article 10 (2) should be taxonomy-eligible under the category of 'transitional activities'.
- **Clarification on the exact implementation of life-cycle assessments (LCA) for electricity generation and heat/cool production** is needed, as the current criteria do not allow for an unequivocal calculation of life-cycle emissions. To simplify LCA, the utilisation of standard reference values should be possible, wherever they are available.

On the more specific TSC for the generation and transmission of energy, BDEW recommends the following:

- The p**ossibility of a classification of highly-efficient CHP and gas power plants as 'transitional activities'** by introducing distinct thresholds for transitional activities of 200g CO_2e per 1 kWh of energy input over the life-cycle based on the calorific value for CHP plants and 250g CO_2e per kWh electricity output over the life-cycle for gas-fired power plants.
- An **adaptation of the "do no significant harm"-criterion for CHP and gas-fired power plants** to reflect the 'best available technique' approach.
- The **establishment of a level-playing field between electricity generation from hydropower and from geothermal energy** and other electricity energy sources (wind and PV), applying a technology-neutral approach. Furthermore, the DNSH criteria for (3) should reflect the existing requirements under EU law (Water Framework Directive).
- The classification of the **expansion and retrofit of gas infrastructure as a transitional activity** in line with article 10 (2).
- The adaptation of the criteria for the **manufacturing of hydrogen** to enable the achieving of the ambitious objectives set out in the EU hydrogen strategy.

The **TSC for drinking water and waste water** also go far beyond existing regulatory requirements: The quality and hygiene requirements for water and waste water are specified by the relevant European legislative framework (Drinking Water Directive, Water Framework Directive, Urban Waste Water Treatment Directive, etc.):

- The leakage rate requirements should be aligned with Art. 4 of the new Drinking Water Directive. A demand for a 20% reduction of leakage rates is not realistic.
- We advise against a general and very concrete limit value for energy efficiency targets, as the energy demand is influenced by various factors.
- Further demands on waste water treatment plants (like the introduction of a fourth treatment stage) lead directly to increased electricity demand.
- An improvement of energy efficiency by 10 % cannot be demanded across-the-board. The prevention of infections and health protection must be the first priority.
- **Sewage sludge incineration should be defined as a sustainable economic activity** that makes an essential contribution to the transition to a circular economy, as e.g. Germany has already made it legally binding.

The **German Association of Energy and Water Industries (BDEW e. V.)** supports the objective of the European Commission to mobilise additional private investments for sustainable activities that contribute to the realisation of the EU's climate ambitions to become climate neutral by 2050 and to achieve net-GHG reductions of at least 55 percent until 2030. According to the Commission Communication "Stepping up Europe's 2030 climate ambition", an additional €350 billion in investments per year is needed to achieve an increased 2030-climate target. To encourage the necessary sustainable investments, the EU must send clear and long-term signals to economic sectors. By creating a common classification system for green investments, the Taxonomy Regulation establishes the necessary common understanding of which investments are to be considered as sustainable.

As the classification of economic activities via the technical screening criteria (TSC) will have a significant impact on their financing options on the financial markets, the criteria must be thoroughly assessed. While the Taxonomy Regulation can be an efficient tool to further facilitate financing of investments into renewable electricity and heat generation technologies in the energy sector, it is important that the technical screening criteria do not rule out technologies, that can contribute to the achievement of the EU's climate targets. Furthermore, to ensure planning security, the criteria should be based on existing regulatory requirements wherever possible, for example the Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources (RED II), the Water Framework Directive (2000/60/EC), the Drinking Water Directive or the BAT-AEEL-approach (Implementing decision (EU) 2017/1442). Especially in the field of renewable energy (including hydropower), being the pivotal enablers of decarbonisation, it would create a major misperception and barrier if installations that comply with the high EU standards of planning and permitting were classified as not being sustainable. If a further differentiation is desired for investors it should be rather framed as defining a "gold standard" of highly sustainable activities which even exceed high EU standards.

BDEW acknowledges the work by the Technical Expert Group (TEG) and the European Commission in preparing and drafting an extensive list of technical screening criteria for economic activities. However, the draft criteria proposed by the Commission are not always in line with the Taxonomy Regulation and in some areas risk setting standards that are too difficult to achieve and therefore do not lead to the desired effect of directing investments towards activities that can contribute to achieving the Green Deal targets. BDEW thus proposes a number of changes to the current criteria before the final adoption of the delegated act and calls on the Commission to take the necessary time to assess all input received during the consultation.

General remarks

Transitional activities

In many economic sectors, the necessary technologies for an instant switch to zero emissions are not yet available. Transitional activities will therefore play a crucial role for the stepwise decarbonisation of the European economy until 2050, as they can often achieve quick and significant emission reductions that are necessary to achieve an increased 2030-target.

The Taxonomy Regulation recognises the importance of securing investments in such activities by explicitly providing for a category for so-called transitional activities (Art. 10 (2)), which can be classified as sustainable if they have emission levels that correspond to the best performance of the sector, do not hamper low-carbon alternatives and do not lead to lock-in effects. While the TSC include transitional activities, BDEW believes that the current approach to transitional activities is not consistent with the Taxonomy Regulation as the same threshold of 100g CO2e/kWh life-cycle emissions for electricity/ heat/ cool generation is applied for green and for transitional activities.

BDEW calls on the Commission to properly implement article 10 (2) of the Taxonomy Regulation by

- creating a **dedicated section for transitional activities** in the delegated act, with distinct criteria from green activities;
- applying a more **realistic threshold for life-cycle emissions of transitional activities** that generate electricity and/or produce heat/cool, that incentivises operators to significantly reduce emissions over the lifetime of a plant by gradually increasing the share of renewable and low-carbon energy carriers, which are not yet available in sufficient amounts today;
- allowing for **all activities to be classified as transitional activities, that comply with the criteria set out in article 10 (2) of the Taxonomy Regulation**, that can present a credible transition pathway consistent with a climate-neutral economy and that are possible to adapt (e.g. by retrofitting or repurposing) to future technologies and solutions for the deployment of climate neutral technologies (e.g. hydrogen, biomethane).

As per the requirements of articles 10 (3) and 19 of the Taxonomy Regulation, the list of activities included in the dedicated section for transitional activities could be reviewed every three years, to assess whether they still meet the criteria of best available technologies in their sector. To avoid carbon lock-in, direct emissions of transitional activities should reach the emissions threshold for 'green' activities in 2050.

Furthermore, as a general aspect, compatibility with article 19.1 (a) of the Taxonomy Regulation must be ensured. It highlights that the principle of technology neutrality has to be respected. That means **that all technologies are to be treated as sustainable as long as they are below the threshold of 100 gCO_2e/kWh for electricity generation and 100 gCO_2e per 1 kWh**

energy input for cogeneration life-cycle emissions, including electricity generation from renewable and low-carbon gaseous fuels.

"Do no significant harm"-criteria

The "do no significant harm" (DNSH) criteria for "Climate change adaptation" should be reassessed very carefully, as they apply to almost all technologies. As almost all new or upgraded activities have a lifespan of more than 10 years, "high resolution, state-of-the-art climate projections" will have to be carried out.

The stipulated requirements entail a high risk of creating an excessive evaluation and auditing burden, which will be disproportionate especially for smaller projects and market participants. Proportionality with regard to scale is missing, clearly a de-minimis-threshold is needed here.

Furthermore and independent of scale, a two-step approach can reduce disproportional burden and waste of resources. In a first step a materiality screening should be performed based on the project characteristics and publicly available assessments on climate change (national or regional). Only in case of material risks identified a more in-depth analysis shall be undertaken. For the taxonomy auditing, the results of the materiality screening, summary of potential in-depth analysis of specific risks and a description of relevant mitigation measures should be sufficient. A wider scope including potential impacts on climate adaption for third parties seem generally disproportionate. Firstly, it will be very difficult to obtain the necessary third-party information for a neutral evaluation. Secondly, if the activity has a significant negative impact on climate adaption this would be reflected already in the permitting process or subsequent ordinances from authorities.

Life cycle assessments for electricity/ heat/ cool generation and hydrogen production

Further clarification as to how exactly the life cycle assessments (LCA) for electricity/ heat/ cool generation and hydrogen are to be carried out is needed. The Commission should therefore clarify that the proposed thresholds designate an average value over the lifetime of a project. BDEW considers LCA to be an important contribution to assessing the emissions of all electricity and heat / cool generating technologies as well as hydrogen production. However, a science based, uniform LCA methodology / application to ensure comparability and reliability is not publicly available today.

Furthermore, it should be clarified, that where standard reference values for the life-cycle emissions of different energy carriers exist (e. g. from the German Environment Agency, UBA),

it should be possible to use them instead of requiring project-specific data that must be assessed individually for each project, which would pose an investment barrier. Such an approach would also lead to easier comparability between different projects. In any case, the supplier should retain the option to demonstrate lower life cycle emissions than based on standard values.

Additionally, the requirement to have LCA verified by "an independent third party" causes disproportionate efforts and costs. BDEW therefore suggests requiring companies to present their LCA in a transparent and comprehensible manner, referencing a science-based approach, without the requirement of third-party verification to limit the administrative and financial burden for companies. Third party verification should be limited to cases, where no standard reference values can be used.

Lastly, the uncertainty arising from the combination of yet unclear provisions in the draft delegated act for the LCA methodology and the current definition of transitional activities poses a risk of creating investment gridlock as sustainable projects are classified as unsustainable because they necessarily depend on e.g. upstream assets which are not sustainable but comply with the transitionality criteria set out in article 10 (2) of the Taxonomy Regulation. This may be the case even if these assets are classified as transitional. At the moment, even investment in renewable electricity production could be considered unsustainable based on their life-cycle emissions.

Cogeneration of heat/cool and power using gaseous and liquid fuels (4.19.)

ANNEX I: Climate change mitigation (p. 137 – 139)	
Commission proposal	**BDEW recommendation**
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. Substantial contribution to climate change mitigation 1. The life-cycle GHG emissions from the cogeneration of heat/cool and power from gaseous and liquid fuels are lower than	~~**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.**~~ Substantial contribution to climate change mitigation 1. The life-cycle GHG emissions from the cogeneration of heat/cool and power from gaseous and liquid fuels are lower than 100g

100gCO_2e per 1 kWh of energy input to the cogeneration. 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_2 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_2 is transported and stored underground in a way that meets the technical screening criteria for transport of CO2 and storage of CO_2 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.	CO_2e per 1 kWh of energy input to the cogeneration **based on the calorific value**. Life-cycle GHG emissions are calculated based on **standard reference values**, 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 **presented by the companies in a transparent and comprehensible manner, applying a science-based approach**. 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_2 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_2 is transported and stored underground in a way that meets the technical screening criteria for transport of CO_2 and storage of CO_2 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.

	4. The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with all of the following criteria: **(a) The average life-cycle GHG emissions from the cogeneration of heat/cool and power from gaseous and liquid fuels are lower than 200g CO_2e per 1 kWh of energy input to the cogeneration based on the calorific value;** **(b) To avoid carbon lock-in, direct emissions need to reach the emissions threshold outlined in 4.7 (1) in 2050.** **(c) New cogeneration plants need to be** **1. hydrogen- ready based on European technical specifications or norms, as soon as they are available, or** **2. ready for renewable, low carbon and/or decarbonised gases.** **(d) Operators need to have a credible plan about how to reach the emissions threshold in (4a). The implementation of such plan being verified at regular intervals by an independent third party.** **(e) Cogeneration plants reach the energy efficiency levels associated with the best available techniques (BAT-AEELs) set out in IMPLEMENTING DECISION (EU) 2017/1442 for large combustion plants for different fuels, plant sizes and technologies.** **For gas combustion <50MW, efficiency ranges of gas combustion ≥ 50MW should transitionally apply until the efficiency standards for medium combustion plants**

	have been defined as per Article 12 of DIRECTIVE (EU) 2015/2193.

ANNEX II: Climate change adaptation (p. 143)	
Commission proposal	**BDEW recommendation**
Do no significant harm ('DNSH') (1) Climate change mitigation **The direct GHG emissions of the activity are lower than 270gCO2e/kWh.**	Do no significant harm ('DNSH') (1) Climate change mitigation **Cogeneration plants reach the energy efficiency levels associated with the best available techniques (BAT-AEELs) set out in IMPLEMENTING DECISION (EU) 2017/1442 for large combustion plants for different fuels, plant sizes and technologies.** **For gas combustion <50MW, efficiency ranges of gas combustion ≥ 50MW should transitionally apply until the efficiency standards for medium combustion plants have been defined as per Article 12 of DIRECTIVE (EU) 2015/2193.**

Justification

The proposed threshold of 100g CO_2e related to the fuel input over the life-cycle cannot be met even by highly efficient gas cogeneration plants under the current conditions. A concrete example illustrates that: A new combined heat and power unit (CHP) is to be operated for 20 years. If it were operated with natural gas (247g/kWh according to GEMIS 4.94/5.0) for the first 10 years and with 100 % biomethane from corn (147g/kWh) for the last 10 years from 2030, the average emission value over the life cycle would be approx. 197g CO_2/kWh energy input. However, it is still unclear how and with which values can be expected in the "life-cycle analysis". Therefore, it should be possible to calculate with already known standard values, if they are available, instead of prescribing the determination of project-specific values.

BDEW assumes that relevant quantities of green and decarbonized gases will be available via the gas grid from 2030. However, even these will not be balanced with zero grams of CO_2 for the most part.

With an increasing share of renewable energies in the energy mix, CHP plants using gas as fuel will play a central role in ensuring the residual load for maintaining the security of supply for electricity and heat. Both the monitoring report on the security of supply of the German Federal Ministry for Economic Affairs and Energy, BMWi, (2019) and the associated expert reports (r2b, consentec) assume a need for an additional 12 - 17 GW of new gas CHP capacities by 2030. A threshold of 100 g CO_2e/kWh energy input would significantly impede this urgently needed increase in generation capacity.

BDEW therefore proposes to introduce a distinct threshold of 200g CO_2e per 1 kWh of energy input life-cycle emissions in average over the lifetime based of the calorific value for classifying CHP plants as 'transitional activities' in addition to the limit value of 100g CO_2e per kWh energy input for classifying sustainable energy generation plants. In BDEW's view, such an approach would also be much more in line with the requirements of Article 10 (2) of the Taxonomy Regulation than the present Commission proposal, which ignores the special role of transitional activities foreseen by the Regulation.

As such a limit value can only be achieved by gradually using significant amounts of renewable and decarbonised gases in CHP plants, this would also create a major incentive for plant operators to push ahead with the decarbonisation of electricity and heat supply as quickly as possible. If a classification of CHP plants as transitional activity were to be ruled out from the outset, this incentive would be removed.

Therefore, the classification of highly-efficiency CHP plants that will gradually switch towards an increasing share of renewable and decarbonised gases as a transitional activity does not lead to natural gas being classified as sustainable through the back door, but is required to guarantee security of supply and creates incentives for the decarbonization of the gas-based energy supply.

The threshold of 270g CO_2e/kWh with regard to direct emissions for the "do no significant harm" criterion (DNSH) in Annex II of the Commission proposal is also too ambitious in BDEW's view and contradicts the DNSH approach. All energy production activities that correspond to the best performance of the sector should be classified as "doing no harm". For this criterion, BDEW therefore proposes to use the so-called BAT approach ('best available technique') with regard to the energy efficiency of plants. In doing so, it is important to take into account the size of the plant as well as differences in the technologies applied. Furthermore, it must be recognized that the gradual decrease of full load hours of CHP plants expected in the future also has an impact on the efficiency level of the plants.

Electricity generation from gaseous and liquid fuels (4.7.)

ANNEX I: Climate change mitigation (p. 111 – 113)	
Commission proposal	**BDEW recommendation**
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. Substantial contribution to climate change mitigation 1. Life-cycle GHG emissions from the generation of electricity using gaseous and liquid fuels are lower than 100gCO2e/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.**	~~**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.**~~ Substantial contribution to climate change mitigation 1. Life-cycle GHG emissions from the generation of electricity using gaseous and liquid fuels are lower than 100 gCO_2e/kWh. Life-cycle GHG emissions are calculated based on **standard reference values**, 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 **presented by the companies in a transparent and comprehensible manner, applying a science-based approach.** **4. The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with all of the following criteria:** **(a) The average life-cycle GHG emissions from the electricity generation from gaseous and liquid fuels are lower than 250g CO_2e/kWh;** **(b) To avoid carbon lock-in, direct emissions need to reach the emissions threshold outlined in 4.7 (1) in 2050.**

	(c) New power plants need to be **1. hydrogen- ready based on European technical specifications or norms, as soon as they are available, or** **2. ready for renewable, low carbon and/or decarbonised gases.** **(d) Operators need to have a credible plan about how to reach the emissions threshold in (4a). The implementation of such plan being verified at regular intervals by an independent third party.** **(e) Power plants reach the energy efficiency levels associated with the best available techniques (BAT-AEELs) set out in IMPLEMENTING DECISION (EU) 2017/1442 for large combustion plants for different fuels, plant sizes and technologies.**

The same criteria should apply for the <u>production of heat/cool using gaseous or liquid fuels</u> (section 4.23. page 146 – 148).

ANNEX II: Climate change adaptation (p. 111)	
Commission proposal	**BDEW recommendation**
Do no significant harm ('DNSH') (1) Climate change mitigation **The direct GHG emissions of the activity are lower than 270gCO2e/kWh.**	Do no significant harm ('DNSH') (1) Climate change mitigation **Power plants reach the energy efficiency levels associated with the best available techniques (BAT-AEELs) set out in IMPLEMENTING DECISION (EU) 2017/1442 for large combustion plants for different fuels, plant sizes and technologies.** **For gas combustion <50MW, efficiency ranges of gas combustion ≥ 50MW should transitionally apply until the efficiency standards for medium combustion plants**

	have been defined as per Article 12 of DIRECTIVE (EU) 2015/2193.

The same criteria should apply for the production of heat/cool using gaseous or liquid fuels (section 4.23. page 154).

Justification

As for CHP plants, the threshold of 100g CO_2e/kWh output over the life-cycle, as proposed by the Commission, cannot be met under the current circumstances even by highly efficient gas power plants.

In the future, gas-fired power plants will be needed to maintain the residual load with an increasing share of renewably generated electricity and thus ensure a secure energy supply.

With a view to the output consideration for gas power plants proposed by the Commission, BDEW proposes a distinct threshold of an average of 250g CO_2e/kWh (output) on a life cycle basis over the lifetime of the electricity generation facility for the classification as transitional activity of electricity generation from gaseous fuels. A slightly higher limit value is necessary because, in contrast to CHP plants, emissions are measured for the electricity output over the life cycle and thus the energy losses incurred in electricity generation are included in the calculation.

Even this higher threshold can only be met, if a gas-fired power plant is operated significant amounts of renewable and/or decarbonized gases from 2030 at the latest. This will also create an incentive for a rapid decarbonization of the power supply.

Especially for OCGT gas power plants, the DNSH criterion of 270g CO_2/kWh in terms of direct emissions is currently not achievable. However, a classification of such power plants, which are urgently needed to cover peak loads and thus to maintain security of supply, as environmentally harmful would probably have strong negative effects on their construction and operation. BDEW therefore advocates to apply the BAT approach ('best available technique') for gas-fired power plants with regard to the energy efficiency of plants. In this context, the size of the plant and differences in the technologies applied must be taken into account. Furthermore, it must be recognized that the gradual decrease of full load hours of gas-fired power plants expected in the future also has an impact on the efficiency level of the plants.

Electricity generation from hydropower (4.5.)

ANNEX I: Climate change mitigation (p. 105 – 109)	
Commission proposal	**BDEW recommendation**
Construction or operation of electricity generation facilities that produce electricity from hydropower, including mixed pumped hydropower storage.	Construction or operation of electricity generation facilities that produce electricity from hydropower~~, including mixed pumped hydropower storage~~. **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.**
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 100 gCO_2e/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/m^2.	The activity **generates electricity from hydropower.**
Do no significant harm ('DNSH') (3) Sustainable use and protection of water and marine resources	Do no significant harm ('DNSH') (3) Sustainable use and protection of water and marine resources **The activity complies with the provisions of the Water Framework Directive**

1. Operation of existing hydropower plants, including refurbishment activities to enhance renewable energy or energy storage potential. […] 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.	**(2000/60/EC) and the Marine Strategy Framework Directive (2008/56/EC).**

Justification

Hydropower is a renewable electricity source and plays a major role in achieving the European climate and energy goals. It complements the increasing share of variable renewables in the European power system and provides flexibility, firm capacity and the ability to balance variable generation. BDEW therefore welcomes the decision of the Commission to allow for a classification of hydropower as "sustainable activity contributing substantially to climate change mitigation". Additionally, BDEW supports the decision not to follow the recommendation of the TEG-report to advise against the construction of new small hydropower plants as they are also a source of reliable and green energy supply. However, the extensive DNSH-criteria that go far beyond existing legislative requirements set out in section 4.5. are very questionable if qualification of hydropower should still be possible and economically viable. Especially small hydropower plants might be discouraged by these requirements.

It is not justified, that unlike other renewable technologies like wind power or PV, hydropower must carry out life cycle assessments. With worldwide median lifecycle emissions of 24g CO_2e/kWh[1], the emissions of hydropower plants are well below the proposed emission threshold of 100g CO_2e/kWh. The obligation for hydropower plants to carry out life cycle assessments therefore is unnecessary and leads to an uneven playing field between renewable electricity sources. Hydropower plant operators already face financing problems today, due to constantly increasing standards in the field of environmental protection. Requiring them to

[1] IPCC (2014): Technology-specific Cost and Performance Parameters (p. 1335)

conduct LCA verified by a third party while exempting electricity generation from wind power and PV from the requirement would further discourage investments into hydropower.

While the additional power density criterium of more than 5W / m^2 eases the situation, it is unclear how exactly this threshold is to be defined and calculated and what it is based upon. Presumably, this refers to the area of water, but questions of allocation as to where exactly the reservoir area begins, remain unclear. In the case of run-of-river plants this should be restricted to the area where the water is retained up-front. It appears particularly critical that the threshold value does not take into account the multiple use of the reservoirs and impoundments, since a reservoir may contribute to purposes other than to generate energy such as the drinking water supply, flood control and drought management to encounter climate change and these other uses also determine the size of the reservoir and hence the impounded area. A good example would be a medium sized hydropower station at a large drinking water reservoir. These synergetic multiple-use constellations need to be considered in the threshold and also the other criteria and case-by-case examinations should be avoided. A pragmatic approach could be to apply a reduced threshold e. g. (2.5W / m^2) if evidence is provided that the site is used for other important activities such as water supply or navigation.

Sustainable use and protection of water and marine resources is already regulated under the Water Framework Directive. All necessary requirements to reach the environmental objectives (including adequate implementation times) are laid down in the Programmes of measures and the River Basin Management Plans and then are adequately transposed into new and existing permits. Separate requirements or duplicating the water body and basin related planning and evaluation requirements onto the project level are therefore not appropriate and would result in additional costs (also no access to data for river basin wide analysis) without any positive effect on sustainability. In addition to higher cost, this proposed double standard would increase legal uncertainty and further hamper the implementation of the WFD as well as of the Taxonomy regulation itself.

To fully reflect the status of hydropower as a renewable electricity source and ensure a level playing field with other renewable energy technologies, the installation, maintenance and repair of hydropower turbines and the ancillary technical equipment should also be added to the list of technologies in section 7.6. “Installation, maintenance and repair of renewable energy technologies”.

Additionally, as the provisions for hydropower also apply for mixed pumped hydropower storage, they are discriminated against in comparison to other forms of electricity storage. To ensure a level playing field, no distinction should be made between closed-loop pumped storage plants and mixed pumped storage plants. All electricity storage technologies should be subsumed under the criteria for “Storage of Electricity” (section 4.10.). Storage facilities should

not be equated with electricity generation technologies, as they provide predominantly system services. If the Commission considers being connected to a natural river body as a differentiator that must be reflected in the Taxonomy, this should not be done by re-categorizing the fundamental character or purpose of an activity. Otherwise this will lead to contradictions and incoherence in EU policy and legislation.

Storage of electricity (4.10.)

ANNEX I: Climate change mitigation (p. 121 – 122)	
Commission proposal	**BDEW recommendation**
Construction and operation of facilities that store electricity and return it at a later time in the form of electricity. The activity includes closed-loop pumped hydropower storage. […] The activity has no dedicated NACE code as referred to in 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.	Construction and operation of **all** facilities that store electricity and return it at a later time in the form of electricity, **as defined in Article 2(59) of Directive (EU) 2019/944**. ~~**The activity includes closed-loop pumped hydropower storage.**~~ The activity has no dedicated NACE code as referred to in 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.**~~
Do no significant harm ('DNSH') (4) Transition to a circular economy A waste management plan is in place and ensures maximal reuse or recycling at end of life in accordance with the waste hierarchy, including through contractual agreements with waste management partners, reflection in financial projections or official project documentation.	Do no significant harm ('DNSH') (4) Transition to a circular economy **The activity assesses availability of and, where feasible, uses equipment and components of high durability and recyclability and that are easy to dismantle and refurbish.**

Justification

The Clean Energy Package (CEP) defines "energy storage" in the electricity system as "deferring the final use of electricity to a moment later than when it was generated, or the conversion of electrical energy into a form of energy which can be stored, the storing of such energy, and the subsequent reconversion of such energy into electrical energy or use as another energy carrier" (Article 2(59) of Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU). This is clearly matching the function of a pumped hydro storage irrespectively if it has natural water inflow or if the facility is connected to a river body.

BDEW therefore argues that there is no distinction to 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. Separate requirements are therefore not appropriate and would result in additional costs without any positive effect on sustainability and in increased legal uncertainty.

In context of DNSH (4) on circular economy the required contractual agreements with waste management partners for end-of-life remain challenging and could lead to disproportionate burden or inefficient solutions as it is not clear which better recycling or re-use options will be available at that point in time.

Transmission and distribution networks for gaseous fuels, including renewable and low-carbon gases (4.14.)

ANNEX I: Climate change mitigation (p. 128 – 130)	
Commission proposal	**BDEW recommendation**
4.14. Transmission and distribution networks for renewable and low-carbon gases *Description of the activity* Repurposing of gas networks for the distribution of gaseous fuels through a system of mains. Repurposing of gas networks for long-distance transport of renewable and low-carbon gases by pipelines. Construction or operation of transmission and distribution pipelines dedicated to the	4.14. Transmission and distribution networks for **gaseous fuels, including** renewable and low-carbon gases *Description of the activity* Repurposing of gas networks for the distribution of gaseous fuels through a system of mains. Repurposing of gas networks for long-distance transport of renewable and low-carbon gases **or blends of natural gas and renewable or low-carbon gases** by pipelines.

transport of hydrogen **or other low-carbon gases.** The activity is classified under NACE codes D35.21, F42.21 and H49.50 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.	Construction or operation of transmission and distribution pipelines dedicated to the transport of hydrogen**, other low-carbon gases or blends of natural gas and hydrogen or other low-carbon gases.** The activity is classified under NACE codes D35.21, F42.21 and H49.50 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.
1. The activity consists in one of the following: (a) construction or operation of new transmission and distribution networks dedicated to hydrogen or other low-carbon gases; (b) conversion/repurposing of existing natural gas networks to 100 % hydrogen **and retrofit of gas transmission and distribution networks, where the main purpose is the integration of hydrogen and other low-carbon gases, including any gas transmission or distribution network activity, which enables the network to increase the blend of hydrogen or other low carbon gasses in the gas system;**	1. The activity consists in one of the following: (a) construction or operation of new transmission and distribution networks dedicated to hydrogen or other low-carbon gases; (b) conversion/repurposing of existing natural gas networks to 100 % hydrogen; **(c) retrofit of gas transmission and distribution networks, where the main purpose is to increase the blend of hydrogen or other low carbon gases in the gas system;** **(d) operation of repurposed gas transmission and distribution networks.**
New	**The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with one of the following criteria:** **(a) retrofit and expansion activities for the transmission and distribution of natural gas, if they are hydrogen-ready and/or ready for other renewable or low-carbon gases.;** **(b) operation of gas transmission and distribution networks that are hydrogen-ready**

	with a blend of natural gas and hydrogen or other low-carbon gases; **(c) operation of interconnectors between gas systems.**

ANNEX II: Climate change adaptation (p. 132)	
Commission proposal	**BDEW recommendation**
4.14. Transmission and distribution networks for renewable and low-carbon gases *Description of the activity* Repurposing of gas networks for the distribution of gaseous fuels through a system of mains. Repurposing of gas networks for long-distance transport of renewable and low-carbon gases by pipelines. Construction or operation of transmission and distribution pipelines dedicated to the transport of hydrogen **or other low-carbon gases.** The activity is classified under NACE codes D35.21, F42.21 and H49.50 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.	4.14. Transmission and distribution networks for **gaseous fuels, including** renewable and low-carbon gases *Description of the activity* Repurposing of gas networks for the distribution of gaseous fuels through a system of mains. Repurposing of gas networks for long-distance transport of renewable and low-carbon gases **or blends of natural gas and renewable or low-carbon gases** by pipelines. Construction or operation of transmission and distribution pipelines dedicated to the transport of hydrogen**, other low-carbon gases or blends of natural gas and hydrogen or other low-carbon gases.** The activity is classified under NACE codes D35.21, F42.21 and H49.50 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.
Do no significant harm ('DNSH') (1) Climate change mitigation **The repurposing does not increase gas transmission and distribution capacity.**	Do no significant harm ('DNSH') (1) Climate change mitigation ~~**The repurposing does not increase gas transmission and distribution capacity.**~~

The repurposing does not extend the lifespan of the networks beyond their pre-retrofit projected lifespan, unless the network is dedicated to hydrogen, or other low-carbon gases.	The repurposing does not extend the lifespan of the networks beyond their pre-retrofit projected lifespan, unless the network is dedicated to hydrogen, ~~**or**~~ other low-carbon gases **or blending thereof.**

Justification

The criteria for the construction and retrofit of gas transmission and distribution networks have been slightly modified compared to the final TEG-report. BDEW welcomes the following changes:

- The deletion of the requirement for the entire system to be in place for five years.
- The eligibility of the construction and operation of all new transmission and distribution networks dedicated to hydrogen or other low-carbon gases. In this context BDEW calls on the Commission not to exclude the construction of hydrogen transmission and distribution networks that in the first years after their construction transport hydrogen that is not classified as 'sustainable' under the Taxonomy-Regulation as set out in Section 3.9. To achieve the goals set out in the EU Hydrogen Strategy, the construction of dedicated hydrogen infrastructure must begin as soon as possible and cannot wait until sufficient amounts of renewable and low-carbon hydrogen are available.
- The eligibility of conversion/repurposing of existing natural gas networks to 100 % hydrogen – besides the eligibility of retrofit of gas transmission and distribution networks to increase the blend of hydrogen or other low carbon gases in the gas system.

Further clarification is needed regarding the operation of repurposed gas networks as well as the retrofit of gas infrastructure to increase the technically viable blend of hydrogen:

- The future hydrogen network will be comprised largely of repurposed natural gas infrastructure – as presented for the transmission system by the European Hydrogen Backbone project and the German Visionary H2-Network of FNB Gas. Defining the operation of such a network as taxonomy-eligible is essential to enable an economic operation and to create alignment with the Commission's position on the operation of newly constructed hydrogen networks. BDEW therefore urgently calls for the Commission to define the operation of repurposed gas networks as an eligible activity.
- Blending of hydrogen and other low-carbon gases substantially contributes to the stepwise decarbonisation of the gas supply. Increasing the technically viable blend of hydrogen via infrastructure investment will allow greater uptake of hydrogen via the natural gas network, thereby contributing to a reduction of CO_2 emissions in the gas sys-

tem. Furthermore, the investments do not lead to carbon lock-in effects, as the ultimate goal is to achieve a hydrogen-only network, as soon as sufficient amounts of hydrogen are available. BDEW therefore calls on the Commission to recognise the redevelopment of natural gas infrastructure as an eligible activity where this redevelopment allows hydrogen blending at rates higher than current technical limitations.

Before hydrogen will prevail in the gas grids, grid operators must retrofit natural gas infrastructure to enable hydrogen blending and expand their grids with new natural gas infrastructure, to ensure the safe and reliable gas supply to existing household and industrial customers (e. g. efficient gas-fired units for the electricity production with comparably low CO_2 emissions). In the future, these existing and new customers will be supplied with hydrogen. Yet, to meet the demand of today, they have to be supplied with the current gas mixture. In order to enable continuous secure and reliable gas supply, gas distribution and transmission system operators must be able to retrofit and to expand their grids and household costumers, already before the "H2 / low carbon gases age".

An appropriate way to take this into account would be to classify investments into the expansion of gas transmission and distribution networks as transitional activities. From BDEW perspective, the provisions of article 10 (2) of the Taxonomy Regulations are fulfilled: Gas grid retrofit and expansion activities do not hamper the development or deployment of low-carbon alternatives because the future hydrogen and low-carbon gases will use the grids as well, thus they will benefit from today's investments. As long as the investments support hydrogen-readiness, there is no risk of a lock-in effect. Thus, the same reasoning used for electricity grids in which the share of renewable electricity rises continuously should apply for investments in gas grids which are being prepared for an increasing share of hydrogen and low-carbon gases.

Manufacture of hydrogen (3.9.)

ANNEX I: Climate change mitigation (p. 80 – 81)	
Commission proposal	**BDEW recommendation**
The activity complies with the life cycle 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) of and Annex V to Directive (EU) 2018/2001 of the European Parliament and of the Council.	**The following thresholds need to be met:** **(a) The direct CO_2 emissions from manufacturing of hydrogen are at or lower than 5.8 tCO_2e/t Hydrogen.** **(b) Electricity use for hydrogen produced by electrolysis is at or lower than 58 MWh/t Hydrogen.**

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 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emission savings are verified in line with Article 30 of Directive (EU) 2018/2001 where applicable, or by an independent third party. Where the CO_2 emitted from the manufacturing process is captured, the CO2 is transported and stored underground, in accordance with the technical screening criteria set out in Section 5.11 and 5.12 of this Annex.	**(c) Average carbon intensity of the electricity produced that is used for hydrogen manufacturing is at or below 100 gCO_2e/kWh.** Where the CO_2 emitted from the manufacturing process is captured, the CO_2 is transported and stored underground, in accordance with the technical screening criteria set out in Section 5.11 and 5.12 of this Annex.

Justification

The life cycle GHG emission threshold for the manufacturing of hydrogen has been significantly lowered compared to the final TEG-report, from 5.8 tCO_2/t H2 to 2.256 tCO_2/t H2. This new proposed threshold might even rule out hydrogen production through electrolysis from solar electricity, as the life-cycle carbon balance of solar electricity assessed in Germany by the German Environment Agency (UBA) is for example at 66 gCO_2e/kWh[2]. The carbon intensity of hydrogen produced by photovoltaic sources in Germany is 3.1 kg CO_2/kg H2

The GHG threshold for manufacturing hydrogen therefore risks undermining the EU Hydrogen Strategy as overly restrictive technical criteria might disincentivize investments in certain green hydrogen production technologies. However, to achieve the ambitious goals of the Commission to significantly ramp-up hydrogen production until 2030, all technologies to produce renewable and low-carbon hydrogen should be Taxonomy-eligible.

BDEW therefore calls on the Commission to re-establish the previous criteria of the TEG for the manufacturing of hydrogen.

[2] Umweltbundesamt (2019): Emissionsbilanz erneuerbarer Energieträger

Storage of hydrogen (4.12.)

ANNEX I: Climate change mitigation (p. 124)	
Commission proposal	**BDEW recommendation**
Construction and operation of facilities that store **hydrogen** and return it at a later time. […] 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.	Construction and operation of facilities that store **hydrogen, blends of hydrogen or synthetic natural gas (SNG) produced from hydrogen** and return it at a later time. […] ~~**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.**~~
The activity is one of the following: (a) construction of hydrogen storage facilities. (b) operation of hydrogen storage facilities where the hydrogen stored in the facility meets the criteria for manufacture of hydrogen set out in Section 3.9. of this Annex.	The activity is one of the following: (a) construction of hydrogen storage facilities, **or storage facilities for synthetic natural gas produced from hydrogen in combination with CO_2 from biogas, direct air capture or from not substitutable industrial processes;** (b) operation of hydrogen storage facilities where the hydrogen stored in the facility meets the criteria for manufacture of hydrogen set out in Section 3.9. of this Annex; **(c) construction of storage facilities for blends of natural gas and hydrogen, if the facilities are hydrogen-ready.** **(d) operation of storage facilities for blends of natural gas and hydrogen if the facilities are hydrogen-ready.** **(e) operation of storage facilities for synthetic natural gas produced from hydrogen in combination with CO_2 from biogas, direct air capture or from not substitutable industrial processes.**

Justification

Energy storage is going to play a crucial role in the transition towards an energy supply based on renewable energies, by providing the necessary flexibilities needed in the system in times of peak demand and/or low renewable electricity production. The production of hydrogen via electrolysis is an important means to store electricity over long time periods. Considering this, it is not understandable, why the storage of hydrogen that is manufactured in a sustainable way respecting the criteria set out in section 3.9. is not also being classified as sustainable but only as an enabling activity.

In addition to recognizing the storage of hydrogen as a sustainable activity, the Commission should also recognize the storage of blends of natural gas and hydrogen as a transitional activity if they are hydrogen-ready, as blending hydrogen will be necessary in a transitional phase, until sufficient amounts of hydrogen are available to allow for a competitive operation of hydrogen-only infrastructure.

Finally, the storage of synthetic natural gas (SNG) produced from renewable hydrogen and CO_2 from biogas plants or from direct air capture as well as CO_2 from not substitutable industrial processes (e. g. in the cement industry) should also be recognised in this section. SNG has the same chemical characteristics as fossil methane and offers the possibility to supply renewable gas to customers who are sensitive to an increasing hydrogen blending or who need the specific energy content of methane for their industrial processes. As captured CO_2 or CO_2 from biogas is being used, the production of SNG is carbon neutral.

Electricity generation from wind power (4.3.)

ANNEX I: Climate change mitigation (p. 101 – 103)	
Commission proposal	**BDEW recommendation**
Do no significant harm ('DNSH') (3) Sustainable use and protection of water and marine resources In case of construction of offshore wind, the activity complies with the requirements of Directive 2008/56/EC of the European Parliament and of the Council in relation to its Descriptor 11 (Noise/Energy), laid down in Annex I to that Directive, and	Do no significant harm ('DNSH') (3) Sustainable use and protection of water and marine resources In case of construction of offshore wind, the activity complies with the requirements of Directive 2008/56/EC of the European Parliament and of the Council in relation to its Descriptor 11 (Noise/Energy), laid down in Annex I to that Directive, and

Commission Decision (EU) 2017/848 in relation to the relevant criteria and methodological standards for that descriptor.	Commission Decision (EU) 2017/848 in relation to the relevant criteria and methodological standards for that descriptor. **For activities in third countries, equivalent national provisions or international standards regarding noise must be respected.**

Justification

BDEW welcomes the change of the DNSH-criteria for the environmental objective "Transition to a circular economy" for electricity generation from Wind Power to a more realistic requirement to "assess the availability of and, where feasible, use equipment and components of high durability and recyclability and that are easy to dismantle and refurbish".

These requirements are sufficient to ensure that wind power installations respect the criteria of a transition to a circular economy without putting an unnecessary administrative burden on wind farm operators that might discourage investors.

With regard to the DNSH criterion (3) it is not clear whether the referenced requirements regarding noise would also apply to installations in third countries. In analogy to the environmental impact criteria it should include also a reference to "equivalent national provisions or international standards".

Electricity/ heat generation / cogeneration from geothermal energy (4.6. / 4.18.)

ANNEX I: Climate change mitigation (p. 109 – 111)	
Commission proposal	**BDEW recommendation**
Life-cycle GHG emissions from the generation of electricity from geothermal energy are lower than 100gCO2e/kWh. Life-cycle GHG emission savings are calculated 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.	The activity **generates electricity / produces heat/cool from geothermal energy.**

Justification

Electricity and heat generation from geothermal energy is a fully renewable energy source, as the tapped heat from an active reservoir is continuously restored by natural heat production, without any real consumption of the resource. As for electricity generation from hydropower, it is therefore questionable why geothermal energy must carry out life cycle assessments unlike almost all other renewable energy sources. We believe this unequal treatment leads to an uneven playing field between renewable energy sources.

In this context, it shall also 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 GHG emissions, impacts relevant to adaptation) and the vulnerability of the project to climate change are already an essential and mandatory part of the environmental impact assessment report.

Electricity/ heat generation and cogeneration from bioenergy (4.9.)

ANNEX I: Climate change mitigation (p. 114 – 117)	
Commission proposal	**BDEW recommendation**
[…] 2. The greenhouse gas emission savings from the use of biomass are at least **80 %** in relation to the GHG emission saving methodology and fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001. […]	[…] 2. The greenhouse gas emission savings from the use of biomass are at least **70 %** in relation to the GHG emission saving methodology and fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001. […]

Justification

The production of electricity from biogas should be assessed in relation to the respective fossil fuel comparator for electricity set out in the Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources (RED II). Therefore, the threshold should be determined analogously to RED II. This means that RED's reduction targets, with 70 instead of 80 percent GHG reduction compared to the applicable fossil fuel comparator should be applied for all sections on the use of bioenergy.

Transmission and distribution of electricity (4.9.)

ANNEX I: Climate change mitigation (p. 117 – 121)	
Commission proposal	**BDEW amendment proposal**
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.	**Delete**
Do no significant harm ('DNSH') (4) Transition to a circular economy A waste management plan is in place and ensures maximal reuse or recycling at end of life in accordance with the waste hierarchy, including through contractual agreements with waste management partners, reflection in financial projections or official project documentation.	Do no significant harm ('DNSH') (4) Transition to a circular economy **The activity assesses availability of and, where feasible, uses equipment and components of high durability and recyclability and that are easy to dismantle and refurbish.**
(6) Protection and restoration of biodiversity and ecosystems An Environmental Impact Assessment (EIA) or screening has been completed, for activities within the Union, in accordance with Directive 2011/92/EU.	(6) Protection and restoration of biodiversity and ecosystems An Environmental Impact Assessment (EIA) or screening has been completed for activities within the Union, in accordance with Directive 2011/92/EU**, where applicable.**

Justification

With a view to a climate neutral EU by 2050, many countries have already adopted ambitious targets to increase the renewable share in their electricity system. In order to realise this objective, new grid investments are necessary. In this respect, a sound coordination between generation and network investments is essential. The successful deployment of variable renewables and electrification of carbon intensive energy uses are key dimensions of this policy and require a timely and effective development of grid infrastructure. This objective implies structural changes in Member States' electricity generation mix that national grid development plans will have to address. Moreover, unlike conventional energies, renewable energies

are not necessarily produced where required, but rather where the respective natural resources are available. This entails an increased need for grid infrastructure.

While BDEW supports the TSC for the transmission and distribution of electricity, we find it relevant to clarify in the description that this activity qualifies as contributing substantially to climate change mitigation, as in accordance with Article 10(1), point (a) (*generating**, transmitting,** storing, distributing or using renewable energy in line with Directive (EU) 2018/2001, including through using innovative technology with a potential for significant future savings or **through necessary reinforcement or extension of the grid***) and point (g) (***establishing energy infrastructure** required for enabling the decarbonisation of energy systems*). The current text states that "*the activity is an enabling activity in accordance with Article 10(1), point (i), of Regulation (EU) 2020/852*". We appreciate the clarification and further inclusion in the description of Annex 1 chapter 4.9 that this is an activity that makes a substantial contribution.

"Do no significant harm"-criteria

It is unclear why the Commission choses not to follow the TEG-recommendation for the DNSH-criterion for the environmental objective (4) "Transition to a circular economy", instead proposing to impose much higher requirements for waste management.

This obligation creates a not negligible risk for TSOs and DSOs with regard to the recycling requirements, because a wide range of degrees of severity seems possible here. The exact requirements the Commission establishes on the basis of the examples given are crucial. BDEW calls on the Commission to neglect the introduction of contractual agreements with recycling companies. It would be very difficult for all TSOs and DSOs to comply with such binding contractual agreements. Instead, the Commission should apply the same DNSH-criteria as for electricity generation technologies.

On the further DNSH criteria, we would like to stress that the EIA requirement as put forward in number *(6) Protection and restoration of biodiversity and ecosystems*, the *Environmental Impact assessment (EIA) or screening* should not be mandatory for all TSO and DSO activities, but only for those, where the law requires either an EIA or screening. For example, the *installation of equipment to carry information to users for remotely acting on consumption, including customer data hubs*, as included in the list of eligible activities, could be a purely digital project, thereby not requiring an EIA.

Manufacture of biogas and biofuels for use in transport (4.13.)

ANNEX I: Climate change mitigation (p. 126 – 128)	
Commission proposal	**BDEW amendment proposal**
1. Agricultural biomass used in the activity for the manufacture of biogas or biofuels for use in transport complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used in the activity for the manufacture of biogas or biofuels for use in transport complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive. Food-and feed crops are not used in the activity for the manufacture of biofuels for use in transport.	1. Agricultural biomass used in the activity for the manufacture of biogas or biofuels for use in transport complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used in the activity for the manufacture of biogas or biofuels for use in transport complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive. ~~**Food-and feed crops are not used in the activity for the manufacture of biofuels for use in transport.**~~

Justification

BDEW calls for a reassessment of biomethane from energy crops. The technical screening criteria should recognise the positive potential from biomethane from energy crops for GHG reductions.

Manufacture of low carbon technologies for transport (3.3.)

The currently proposed thresholds of 50g CO_2e / pkm until 2025 and 0g CO_2e / pkm inhibit further development of gas-related mobility. The Taxonomy needs to consider the contribution of new technologies to GHG-reduction more carefully. For example, biomethane or renewable power-to-x ("green gas") can reduce GHG-Emissions in the transport sector not only in fuel cell drives, but also in CNG and LNG technology drives. Thus, CNG and LNG drives can be used with 100 percent fossil methane as well as with 100 percent renewable gas (methane / hydrogen). Therefore, it is important for the Taxonomy to set the right incentives towards reducing GHG-emissions, without discriminating technologies that are currently on their way towards GHG-neutrality

Infrastructure enabling low-carbon road transport (6.15.)

The current framework still does not clarify how stated criteria can be applied to road and railway construction. It remains unclear how purchasers such as municipalities can prove that the criteria are met, as it is not realistic to exclude users of conventional fuels from using the general infrastructure.

In addition to infrastructure that is dedicated to the operation of vehicles with zero tailpipe CO_2 emissions (like electric charging points or hydrogen refuelling stations), also infrastructure that is required for low-carbon emission transport should be included as long as those transport options can have a positive impact on reducing the CO_2-emissions and do not pose risks of carbon lock-in. Furthermore, the infrastructure itself is not responsible for the fuel emissions. It is important to primarily set incentives for reducing CO_2-emissions of the fuel, not the infrastructure. This is valid especially in the case of gas, where the infrastructure can be compatible with 100 percent renewable gas (biomethane / hydrogen).

Drinking Water Industry (p. 128 – 131)

The quality and hygiene requirements for water and waste water are specified by the relevant European directives (including the Drinking Water Directive, Water Framework Directive, Nitrate Directive, etc.) The regulations contained therein should therefore be the guideline for the assessment of financing issues.

DG FISMA's coherence check with existing sectoral legislation should have established that the recently adopted European Drinking Water Directive provides realistic and feasible requirements for the efficiency and transparency of water supply.

<u>On leakage rates:</u>

The new Drinking Water Directive stipulates that the EU Commission must determine an average eu-widewater leakagerate" three years after the implementation of the directive. For leakage rates that are higher than the established threshold, member states are then obliged to present an action plan within two years. The regulation applies to water suppliers covering at least 10 000 m3 per day or a population of 50,000 people or more.

This regulation is proportionate and takes into account investments already made in infrastructure and thus also in resource protection.

Consequently, from BDEW's point of view, a demand for a 20% reduction of leakage rates compared to the ILI index of 1.5 is neither realistic nor feasible.

On energy demand:

The energy demand is influenced by various factors such as the size of the plants, structural circumstances and geological conditions. Therefore, we advise against a general and very concrete limit value, such as the proposed introduction of 0,5 kWh/m³ er cubic meter billed/unbilled authorised water supply. With increased and extended hygienic requirements for drinking water plants, the energy demand will also increase. The priority is to supply the population with clean drinking water that meets hygienic requirements. As warm water is more appropriate for purification and cleaning purposes than cold water, the benchmark for the drinking water supply is not the energy efficiency but the health protection of the population – which is especially relevant in times of the COVID-19 pandemic.

Commission proposal	BDEW amendment proposal
5.1 Construction, extension and operation of water collection, treatment and supply Systems Substantial contribution to climate change mitigation a) the average energy consumption of that system, including abstraction, treatment and distribution, equals to or is lower than 0.5 kWh per cubic meter billed/unbilled authorised water supply; b) the leakage level, calculated using the Infrastructure Leakage Index (ILI)288 rating method, equals to or is lower than 1.5.	**5.1 Construction, extension and operation of water collection, treatment and supply Systems** Substantial contribution to climate change mitigation a) **Where possible,** the average energy consumption of that system, including abstraction, treatment and distribution, equals to or is lower than 0.5 kWh per cubic meter billed/unbilled authorised water supply, **under the condition that increased and extended hygienic requirements for drinking water plants, the size of the plants, structural circumstances and geological conditions, are taken into account.** b) ~~the leakage level, calculated using the Infrastructure Leakage Index (ILI)288 rating method, equals to or is lower than 1.5.~~ **In accordance with the new Drinking Water Directive and the eu-wide average leakage rate, the following shall apply:**

	a) Drinking water operators supplying at least 10 000 m3 per day or serving at least 50 000 people, which are exceeding the European threshold, shall implement the necessary measures within two years, in order to reduce their leakage rates. **b) Member States will present a holistic overview on the implemented action plan to the Commission.**

Waste Water Industry (p. 132 – 138)

Regarding the energy efficiency of waste water treatment plants it has to be noted that

- Plant operators, while maintaining their sovereign duties (wastewater and sludge treatment), generally already seek to design energy-efficient processes.
- Efficiency measures can be implemented in the short, medium and long term - whereby the latter two are linked to (re-)investments.
- An improvement of energy efficiency by 10 % cannot be demanded across-the-board, as operators – which have been very efficient so far – can only achieve these improvements with considerably higher costs or are otherwise unable to achieve them at all. Therefore, efficiency efforts that have already been made and implemented must also be considered.

It is contradictory that the Commission is discussing the introduction of a fourth treatment stage from an environmental policy point of view but is at the same time calling for a reduction in electricity consumption. Further demands on waste water treatment plants lead directly to increased electricity demand. This should be considered when discussing energy reduction targets. Further treatment stages should only be introduced where they are technically and ecologically sensible.

The energy demand is influenced by various factors such as the size of the plants, structural circumstances and geological conditions. Any demand for increased energy efficiency reaches its limits where the prevention of infections and health protection is concerned, as they have to be the priority. The Corona pandemic has shown that the implementation of hygiene measures is essential to prevent infections. This means, for example, that hands and laundry must not be washed with cold water in order to ensure sufficient cleaning. The same applies to the increasingly fine flow of water in shower heads. The corona pandemic has shown that

aerosols are significant carriers of germs. This must be taken into account, for example, in the context of possible Legionella infections, which can be promoted by certain shower heads.

If the European Commission (DG FISMA) sets unrealistic requirements, which are not based on studies and specific guidelines/regulations of the Commission, there is a risk that investments in waste water treatment will not be made. Hygienic requirements that affect human health (see also avian flu and COVID-19 pandemic) could then no longer be implemented.

On methane emissions:

The European Commission has to determine a reference value for the current level of methane emissions in the waste water sector. It is important to understand to what extent and in which process steps emissions occur.

No data or comprehensive studies are so far available on methane emissions in waste water treatment. Hence no statement can be made on whether and how energy efficiency measures will affect methane emissions. Before DG FISMA makes a statement within the framework of the Taxonomy Regulation, a coherence check should be carried out considering in particular the Urban Waste Water Directive. The directive explicitly demands further treatment stages for waste water treatment plants, which in turn are associated with considerable additional energy requirements. With additional treatment stages, energy demand cannot be reduced. However, it could be covered by renewable energies (sewage gas use, wind and solar energy).

Thus, BDEW would argue for a change of the DNSH-criteria for the environmental objective towards “Transition to a circular economy” , because Waste Water Management and sewage sludge utilization can in the near future utilize technologies such as methane pyrolysis, avoiding emissions and transform them into clean hydrogen (< below Taxonomy criteria)[3]. Contributing to the logic of a circular economy while providing clean hydrogen and solid carbon (graphite) as a valuable by-product for growing needs of renewable energy system.

On the Taxonomy Regulation (substantial contribution to the transition to the circular economy)

Art. 13 provides that "an economic activity makes a significant contribution to the transition to a circular economy if it (...) reduces **waste incineration** as far as possible".

[3] See for example https://www.graforce.com/en/technologies/plasmalysis-of-dirty-water

Germany has already made sewage sludge incineration legally binding, as disposal safety is of the highest importance for public sewage disposal. Other uses of sewage sludge are therefore no longer available in the medium term. This approach follows the logic of a circular economy, by reducing further spreading of sewage sludge on agricultural areas, in order to prevent absorption into soil and water.

There is therefore no political alternative to the incineration of sewage sludge, particularly when valuable materials (including phosphorus) are also meant to be recovered from the sludge. The only alternative consists of large landfill sites being made available for dried sewage sludge. This is, however, not a viable option. Consequently, the use of sewage gas (as a by-product) should be considered as a renewable energy source when used for electricity generation or when blended into a gas network.

From BDEW's point of view, sewage sludge incineration would therefore have to be defined as a sustainable economic activity that makes an essential contribution to the transition to a circular economy.

Commission proposal	BDEW amendment proposal
5.4 Renewal of waste water collection and treatment Substantial contribution to climate change mitigation The renewal of the front-to-end wastewater system, including collection, treatment and discharges of wastewater, improves energy efficiency by decreasing the average energy use of the system by at least 10 % compared to own baseline performance averaged over 3 years, demonstrated on an annual basis.	**5.4 Renewal of waste water collection and treatment** Substantial contribution to climate change mitigation The renewal of the front-to-end waste water system, including collection, treatment and discharges of waste water, improves energy efficiency by decreasing the average energy use of the system by at least 10 % compared to own baseline performance averaged over 3 years, demonstrated on an annual basis, **or, if the operator has already decreased its average energy use of the system by at least 10 % during the last 10 years, to further decrease the energy use by 1 % compared to own baseline performance.**
(4) Transition to a circular economy N/A	(4) Transition to a circular economy Sewage sludge incineration provides an essential contribution to the transition to a cir-

	cular economy, by reducing further spreading of sewage sludge on agricultural areas, in order to prevent absorption into soil and water.

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